



ASH MANOR SCHOOL
Aspire & Achieve

Year 10 Summer Term Knowledge organiser

Name:

Tutor group:

Tutor:

Tutor room:

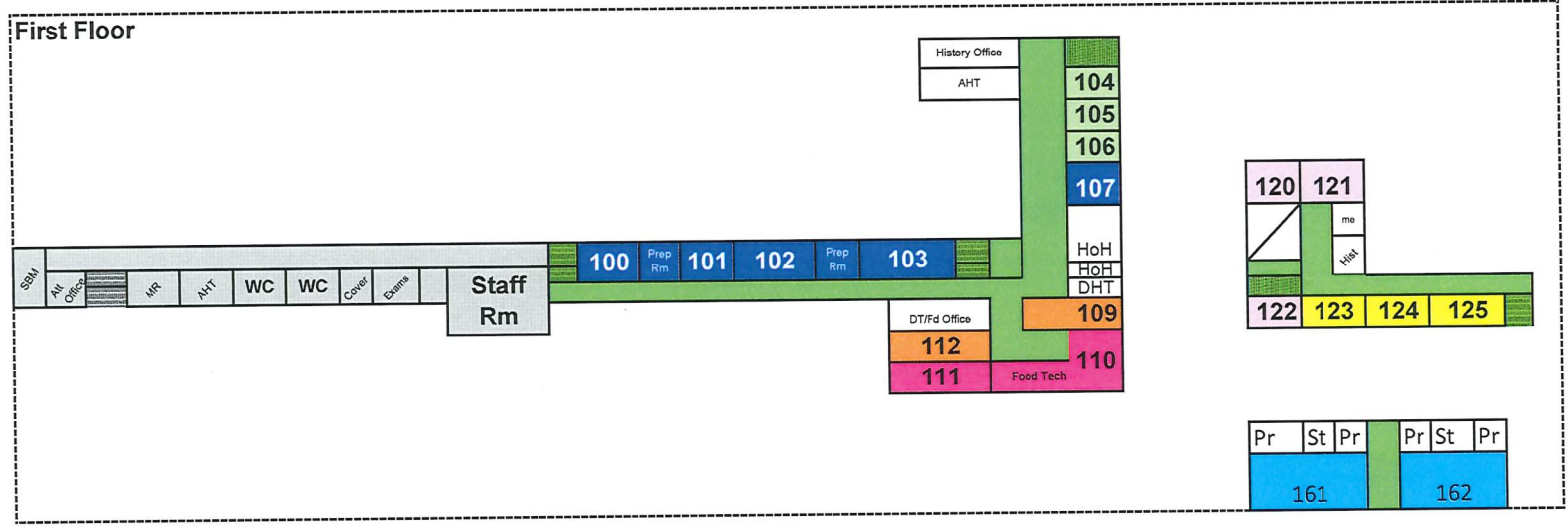
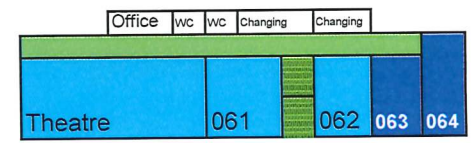
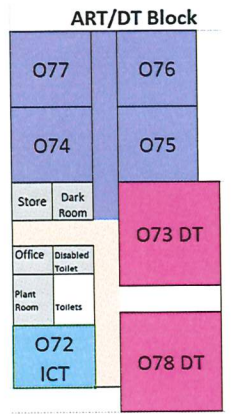
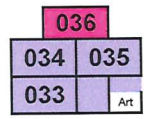
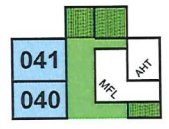
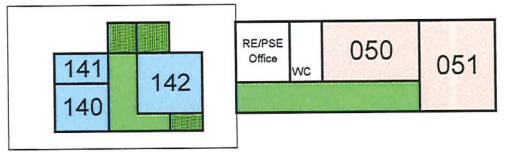
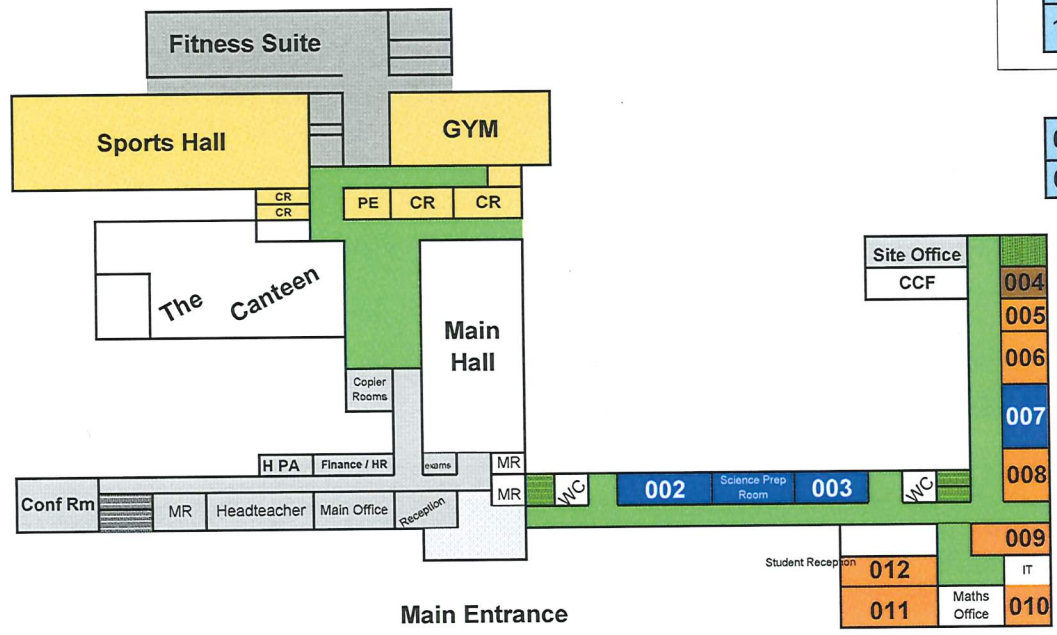
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Key School information

Times of the school day	
8.00am – 8.30am	Breakfast in canteen
8.35am	Pre-lesson 1 bell
8.40am-9.30am	Lesson 1
9.30am-10.20am	Lesson 2
10.20am-10.40am	Morning break
10.40am-11.30am	Lesson 3
11.30am-12.20pm	Lesson 4
12.20pm-1.00pm	Lunch
1.00pm-1.20pm	Tutor time / Assembly
1.20pm-2.10pm	Lesson 5
2.10pm-3.00pm	Lesson 6
3.00pm-4.00pm	Extended learning and extra-curricular clubs

Term dates	
Autumn term	Y7: 04/09/23 to 15/12/23 Y8-11: 05/09/23 to 15/12/23
Half term	23/10/23 to 27/10/23
Spring term	03/01/24 to 28/03/24
Half term	12/02/24 to 16/02/24
Summer term	15/04/24 to 19/07/24
Half term	27/05/24 to 31/05/24

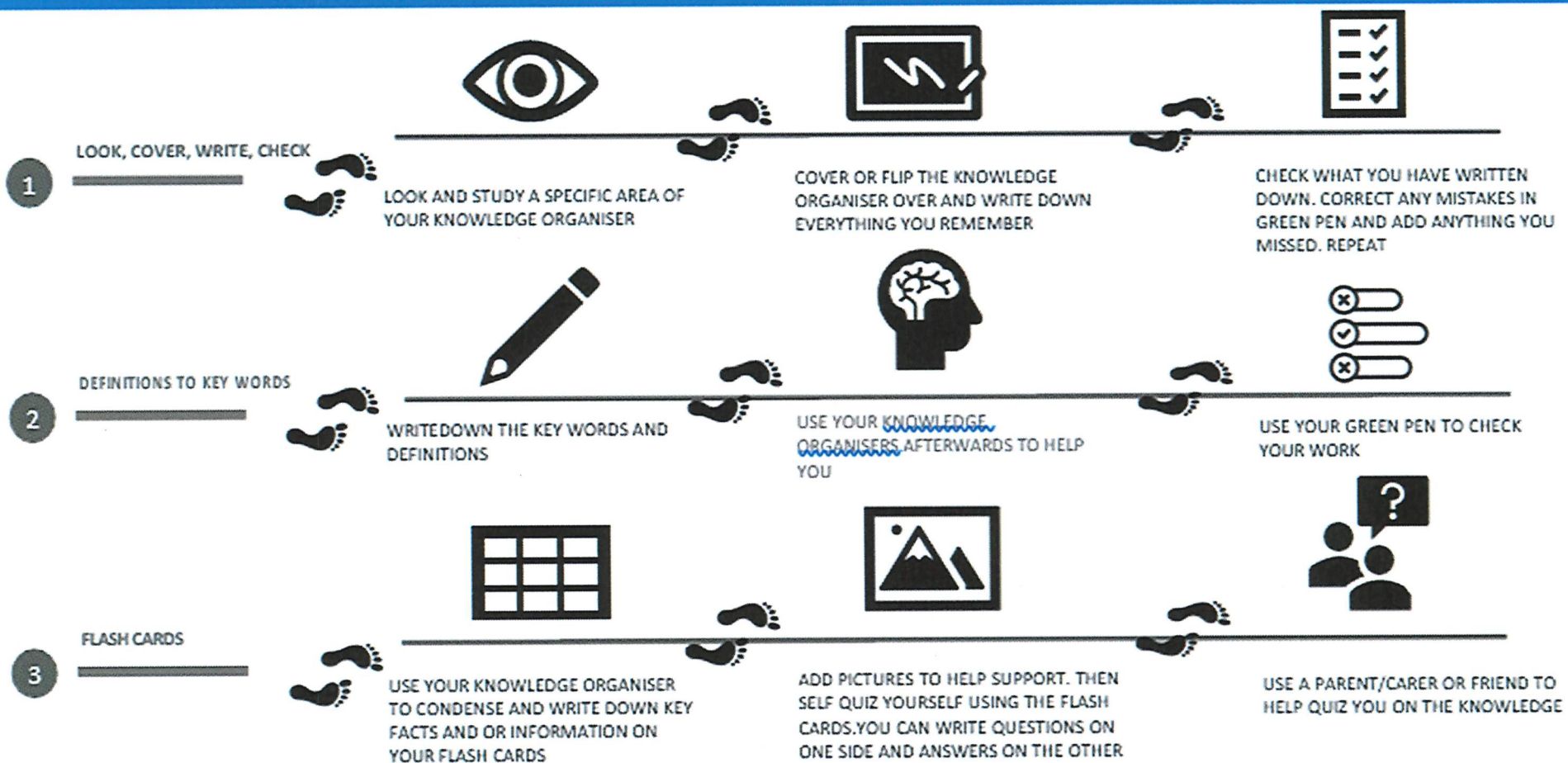
Important IT details	
Username	
Password reminder	



- Science
- Maths
- English
- Art
- Computing Studies
- MFL
- History / Classics
- Geography
- Performing Arts
- PE
- SEND
- RE
- DT/Food
- Business studies
- non student areas

How to use Knowledge Organisers – a step by step guide

Knowledge organisers contain critical knowledge you must know. This will help you recap, revisit and revise what you have learnt in lessons in order to remember this knowledge for the long term. You must have this for every lesson – it is part of your equipment.



KNOWLEDGE ORGANISERS ARE ALSO AVAILABLE ON THE SCHOOL'S WEBSITE:
<https://www.ashmanorschool.com/>

How to use Knowledge Organisers – a step by step guide

Knowledge organisers contain critical knowledge you must know. This will help you recap, revisit and revise what you have learnt in lessons in order to remember this knowledge for the long term. You must have this for every lesson – it is part of your equipment.

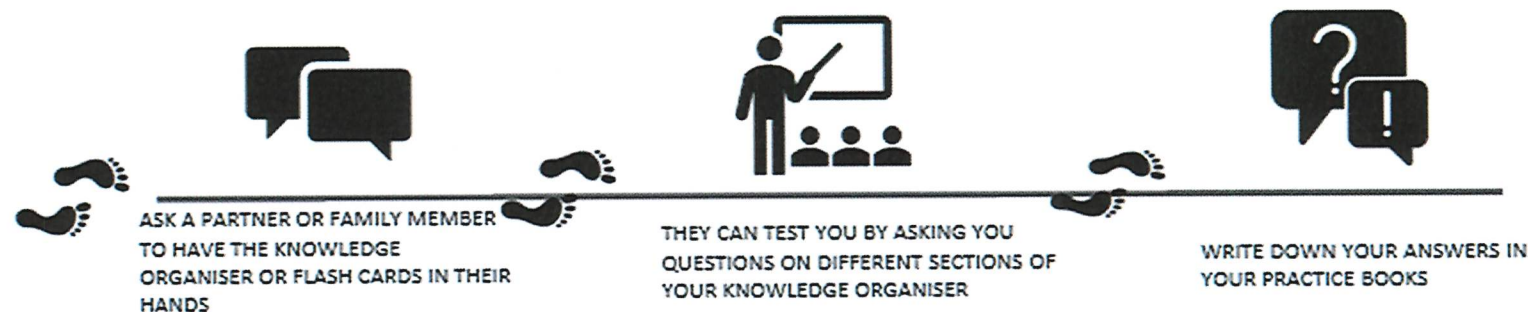
4 SELF QUIZZING



5 MIND MAPS



6 PAIRED RETRIEVAL



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Punic Wars – The name of the series of wars fought between Rome and Carthage. Carthage lost all of them.

Carthage – The name of a rival civilisation to the Romans. They were from North Africa (modern-day Tunisia) and were a powerful and wealthy trading influence in the Mediterranean.

Causes of the Second Punic War

The First Punic War	Carthage lost the First Punic War in Sicily to Rome. Hannibal's father, Hamilcar Barca, was angry at the loss of the war.
The Treaty of Lutatius	Peace treaty between Rome and Carthage after the First Punic War. It represented a huge shift in power in the Mediterranean. Carthage was forced to leave the island of Sicily, and pay 3,200 talents of silver over 20 years.
The Blood Oath	Hamilcar Barca got his son, Hannibal, to swear that he would never be a friend to the Romans.
Ambition of Hasdrubal the Fair	Brother-in-law of Hannibal who took over command in Spain (Iberia) once Hamilcar died. He was very ambitious and had a large influence on Hannibal.
Saguntum	Saguntum was a city in Iberia (Spain) that was an ally of the Romans. Hannibal attacked and besieged the city. He destroyed the walls, set fire to the city and survivors were sold into slavery.
Rome's choice	By attacking Saguntum, Hannibal got Rome to declare war on Carthage, ensuring their support.

The Second Punic War

The Battle of the River Rhone – A battle between Hannibal's troops and the Volcae tribe. He used an ambush to surround his enemy.

The Alps – Hannibal's route into Italy. He faced many obstacles including: enemy tribes, the weather, low morale, supplies, and rock falls.

The Battle of Ticinus – A skirmish with Rome which the Carthaginians won. The consul, Publius Scipio, was injured and saved by his son during this battle.

The Battle of the River Trebia – A battle where Hannibal was victorious over the Romans and their consul, Sempronius Longus. Hannibal had woken his enemy early and lured them across the Trebia, meaning his enemy were cold and wet, before he ambushed them.



The Battle of Lake Trasimene – A battle where Hannibal was victorious over the Romans and their consul, Flaminius. Hannibal had lured his enemy into a trap.

The Battle of Cannae – The biggest defeat of Rome by Hannibal in the Second Punic War.

The Battle of Zama – The final battle of the Second Punic War (which Rome won).



Livy - A Roman 'armchair' historian, writing around 200 years after the war. He was trying to write a 'best seller' for his Roman audience, so would often exaggerate or make Hannibal look good so Rome's ultimate victory was even more impressive.



Polybius – A near-contemporary historian who was under the patronage of the Scipio family. He used a variety of sources including interviews with eyewitnesses and his own travels to the locations he described.



Plutarch – Writing around 300 years after the war, Plutarch was a Roman biographer who compared the lives of famous Greeks to famous Romans. He focused on personality and compared Fabius Maximus to Pericles, the 'Saviour of Athens'.

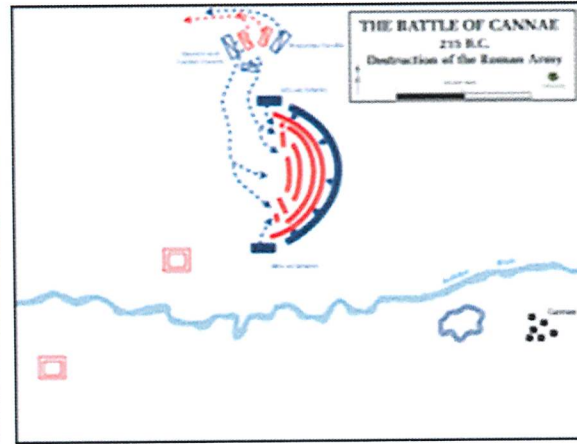
Fabian Strategy

Dictator – A Roman who was elected to hold all power over the army for 6 months in times of national crisis.

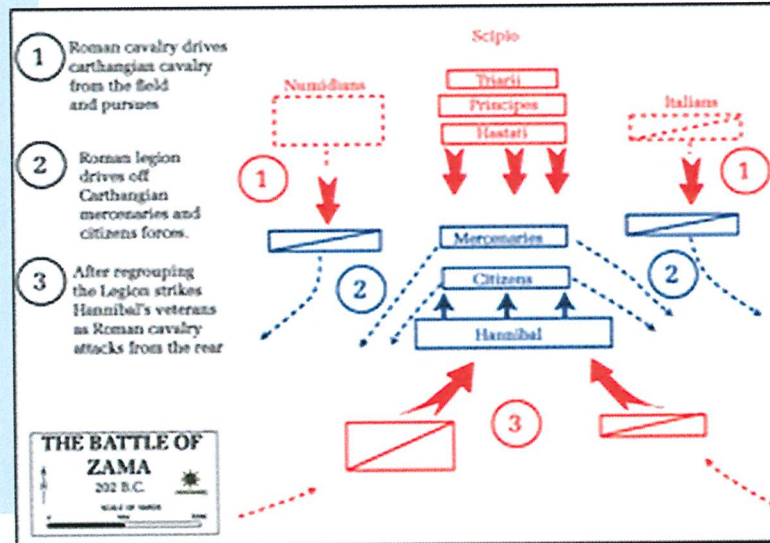
Fabius Maximus' dictatorship – Fabius was elected dictator after the disaster for the Romans at Trasimene. Fabius followed Hannibal's army wherever he went, without directly engaging him in battle; instead, he attacked Hannibal's raiding parties and cut off Hannibal's supply lines. This was unpopular with the Romans who eventually removed his power.

Consequences of Fabian Strategy – Fabius' time as dictator had allowed Rome time to rebuild after the disaster at Trasimene. Enough men for eight legions were assembled (around 40,000 troops), and together it was the largest army Rome had ever seen.

Plutarch, Parallel Lives: Life of Fabius Maximus - Plutarch was a Roman biographer (someone that tells the story of people's lives) who lived c. AD 46-120. His aim was not to be historically accurate but to examine what the actions of historical individuals revealed about their character and personality. His focus was Fabian strategy and portraying Fabius as the 'saviour of Rome'.



Battle of Cannae – A battle fought between Hannibal troops and the Roman army led by consuls Varro (who was keen to engage Hannibal in battle) and Paullus (who thought it was a bad idea). At Cannae, Hannibal used a 'crescent moon formation' to surround the Roman troops. Livy describes a massacre.



Roman strategy after Cannae – The Romans returned to Fabian Strategy. This gradually wore Hannibal and his army down over the next decade.

Scipio 'Africanus' – The son of Publius Cornelius Scipio. He volunteered to take over his father's command in Spain (Iberia) and defeated Hannibal at Zama.

Hannibal's mistake – According to Livy, Hannibal's biggest mistake was failing to march on Rome after the Battle of Cannae, which would eventually lose him the war.

Battle of Zama (202) – Rome had a superior cavalry (6,000, including Numidians) and an experienced infantry (29,000). Hannibal had more men in his army (36,000), but most were new and lacked experience.

When the Carthaginian elephants charged, the Romans moved into columns and attacked the elephants from the side while blowing their horns to scare the elephants.

The Numidians chased off Hannibal's veteran cavalry, before returning and surrounding the Carthaginian army.

Capture of New Carthage (Carthago Nova) – By using the type of tactics which he had previously observed Hannibal using, Scipio used local knowledge of the area to realise that when the tide was low, he could cross the seabed to surround New Carthage from behind. Carthage lost their Spanish stronghold.

Alliance with the Numidians – On his way back to Rome, Scipio met with the Numidian princes Syphax and Masinissa in Africa. Masinissa, seeing that Rome was likely to win the second Punic War,

Why Hannibal lost the Second Punic War

Peace Terms for Carthage:

- 10,000 talents to Rome
- 10 warships
- No elephants
- Permission needed from Rome to go to war

ART

Media Experiment Annotation Checklist

What media have you used?

How have you used the technique?
(describe the method)

What/who inspired you?

What else did you try?

Why was it successful/why?

Is there anything you would change/need to do now?

Tick list:

- ✓ Title page Mind map
- ✓ Initial ideas
- ✓ Statement of intent
- ✓ Experiments
 - Experimental drawings
 - Potassium permanganate
 - Quink ink and bleach
 - etc.....

- ✓ Artist research pages
- ✓ Development of ideas
- ✓ Final piece planning
- ✓ Creation of final piece.

Make sure you are up to date with the tick list as you move through the project.

Artist research page

- Facts
- Opinions
- Images
- Artist copy
- Presentation

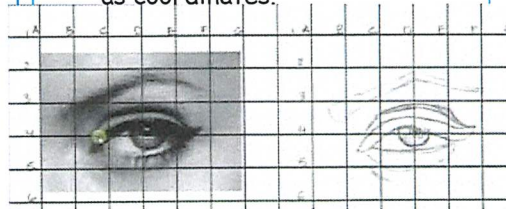


AQA GCSE Assessment Objectives - you will be marked on each for your coursework

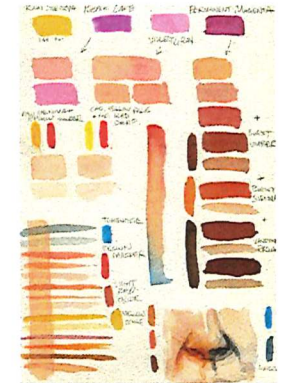
AO1 (24)	AO2 (24)	AO3 (24)	AO4 (24)
Develop your ideas through investigating artists, designers and other appropriate sources. Demonstrate critical understanding of sources.	Refine your work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.	Record your ideas, observations and insights that are relevant to your project intentions as work progresses. Annotate work and include drawings within your sketchbook.	Present a personal and meaningful response that realises your project intentions and demonstrates understanding of visual language.

Grid drawing

- Carefully measure to get straight lines - line it up with the edge of the paper.
- Add letters across the top and numbers down the side to use as coordinates.



Portrait Experiments



Final Piece Planning

I have done the following:

- ✓ Sketched and planned what my final piece will look like
- ✓ Experimented with different techniques and annotated them.
- ✓ Included colour where appropriate
- ✓ Annotated with a statement of intent to show where my idea has come from

Skin Tone Colour Mixing



Brush Control /Techniques

- Wash
- Dry brush
- Stippling
- Blending



Year 10 – GCSE Business – Term 3

Theme 2 Growing a business Paper 2

The Environment and business

Sustainability – acting in a way that will not harm the earth for the future

Businesses can be sustainable by:

- Using less packaging and recycling
- Disposing of hazardous waste in the correct way
- Using efficient machinery
- Using renewable energy sources such as solar

Benefits of being environmentally friendly:

- ✓ Positive brand image
- ✓ Being “green” can be a USP and give competitive advantage

Drawbacks of being environmentally friendly:

- x being environmentally friendly can be expensive, such as buying new energy efficient equipment.

A **pressure group** is an organisation that persuades a business to change its decision making. They can run campaigns on businesses that are not environmentally friendly and ruin their brand image.

Business operations

Productivity

Productivity is output per worker. It measures how much each worker produces over a period of time.

Economies of scale

Economies of scale is a term that describes the situation where the average costs of production falls as the volume of production increases. This is an advantage that businesses gain as they grow in size.

Production methods

Job production

Making a one-off item to meet specific customer needs e.g. a house extension

Benefit	Drawback
Tends to have the highest level of employee motivation	Is the most labour intensive and is therefore expensive

Batch production

When groups, or batches, of similar items are produced together e.g. a batch of cupcakes

Benefit	Drawback
Has the flexibility to produce different products in different groups	Takes time to reset machinery when a new group of products are made

Flow production

When identical products are produced continuously e.g. a mass-produced laptop

Benefit	Drawback
Of all production processes, flow has the lowest cost of making one unit	Has the highest set up costs e.g. machinery

The impact of technology on operations

- ✓ Speeds up the production process
- ✓ Keeps businesses in touch with their customers
- ✓ Lowers production costs
- ✓ Ensures fewer mistakes and defects
- x Can involve a costly initial investment
- x Can quickly become obsolete
- x Requires employees to be trained to use new technology

Managing stock

Benefits of holding stock

- ✓ Any unpredicted increases in demand can be met
- ✓ Faulty or damaged goods can be replaced
- ✓ Businesses can receive discounts for bulk buying
- ✓ Limited risk of problems supplying customer demand

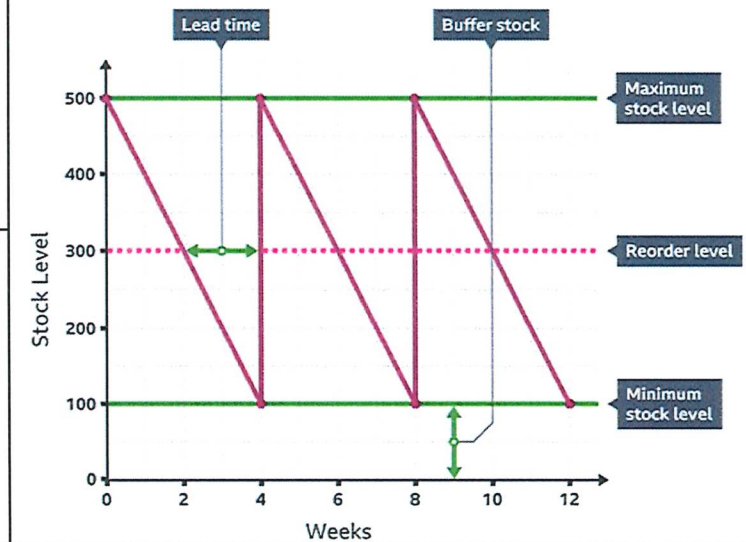
Benefits of holding little or no stock

- ✓ Cost saving in not having to store stock
- ✓ Less change of stock being damaged or stolen
- ✓ Employees can focus on tasks other than managing stock

Just In Time (JIT)

Just in time (JIT) is a method used by businesses to manage stock. It aims to keep stocks to an absolute minimum, with supplies arriving just when they need to be used in the production process e.g. restaurants that require fresh produce

Bar gate stock graph



Year 10 – GCSE Business – Term 3

Theme 2 Growing a business Paper 2

Making human resource decisions

Internal recruitment involves appointing a person from within the business to fill a job vacancy

- ✓ It tends to be a quicker method of recruitment
- x Existing employees may not have the experience and skills required

External recruitment involves appointing a person from outside the organisation and its current employees

- ✓ New ideas and skills are brought into the business
- x More expensive than internal recruitment

Training – Giving employees the skills and knowledge to do their jobs effectively

Employees may need training because:

- The business introduced new technology
- To develop their skills

Benefits of training the workforce:

- ✓ Makes staff more productive
- ✓ Staff stay up to date with changes in the business
- ✓ Staff are more motivated
- ✓ Encourages staff retention (continuing to be an employee)

Type of contract	Benefits	Drawbacks
Permanent contract - a contract that will not expire but will remain valid until either employer or employee chooses to end the contract.	<ul style="list-style-type: none"> - Provides employees with more job security - More motivated employees can lead to higher levels of productivity - Can save the business time and money on training 	<ul style="list-style-type: none"> - Potentially less flexibility with permanent employees
Temporary contract - has a start and end date.	<ul style="list-style-type: none"> - Can help the employer to fill gaps caused by employee absence - Can be used for specific jobs where the business has little expertise e.g. website design 	<ul style="list-style-type: none"> - Employee loyalty to the business may be lower - Training costs may be higher if temporary workers are regularly hired
Freelance contract - An agreement between a freelancer and a business, clarifying the freelance work that will be carried out and how much the business will pay.	<ul style="list-style-type: none"> - Gives the employer access to specialist skills without having to employ someone permanently - Flexible as freelance workers do not have to be guaranteed work after the job for which they were hired ends 	<ul style="list-style-type: none"> - May have less understanding of the business and its customers - May display a lower level of commitment and motivation to the business

Motivation

Businesses need motivated staff because:

- Motivated staff are more productive
- They are more likely to stay at the business so reduces recruitment costs
- Attracts new employees to the business

Financial methods of motivation

Remuneration	The financial rewards an employee receives in return for working for the business e.g. salary
Bonus	An additional payment over and above the regular wage or salary of an employee
Commission	When an employee receives a percentage of the amount they sell
Promotion	When an employee is given a position of higher responsibility in the business (so a higher salary)
Fringe Benefits	Rewards an employee receives other than actual monetary payment e.g. a company car

Non-financial methods of motivation

Job Rotation	When an employee moves through a range of jobs to increase interest and motivation
Job Enrichment	When an employee is given more responsibility and the job is made more interesting and challenging
Autonomy	When an employee is given the independence and power to make decisions in the workplace

Calculating Gross profit and Net profit

$$\begin{aligned} & \text{Revenue} \\ & - \text{Cost of sales} \\ & = \text{Gross profit} \end{aligned}$$

Sales revenue	£625 000
Cost of sales	£145 000
Other operating expenses and interest	£200 000

$\text{Gross profit} = £625\,000 - £145\,000$
 $\text{Gross profit} = £480\,000$

$$\begin{aligned} & \text{Gross profit} \\ & - (\text{Other operating expenses and interest}) \\ & = \text{Net profit} \end{aligned}$$

$\text{Net profit} = £480\,000 - £200\,000$
 $\text{Net profit} = £280\,000$

Key Words

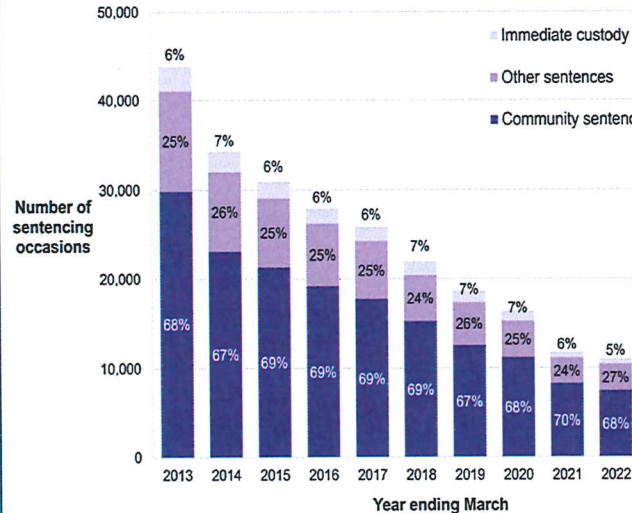
Punishment: The imposition of a penalty in response to an offence or wrongdoing.

Sentencing: The process by which a judge imposes a punishment on a person convicted of a crime.

Youth Justice System: The system of law enforcement, courts, and social services designed to handle juvenile offenders.

Rehabilitation: The process of helping someone to return to a normal life after imprisonment.

Restorative Justice: An approach that focuses on the rehabilitation of offenders through reconciliation with victims and the community.



AGED 18 YEARS AND OVER

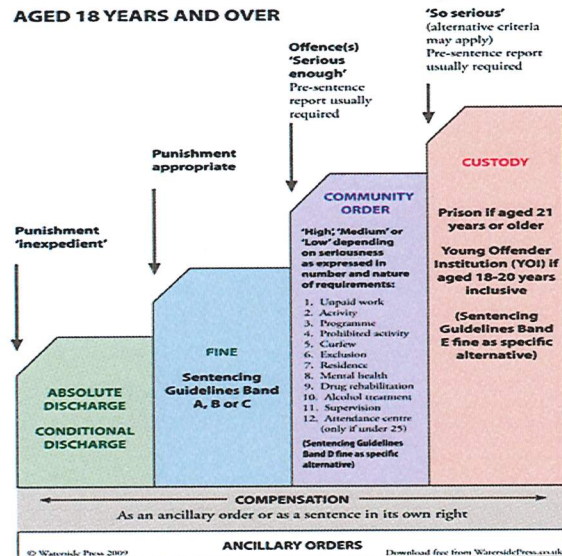
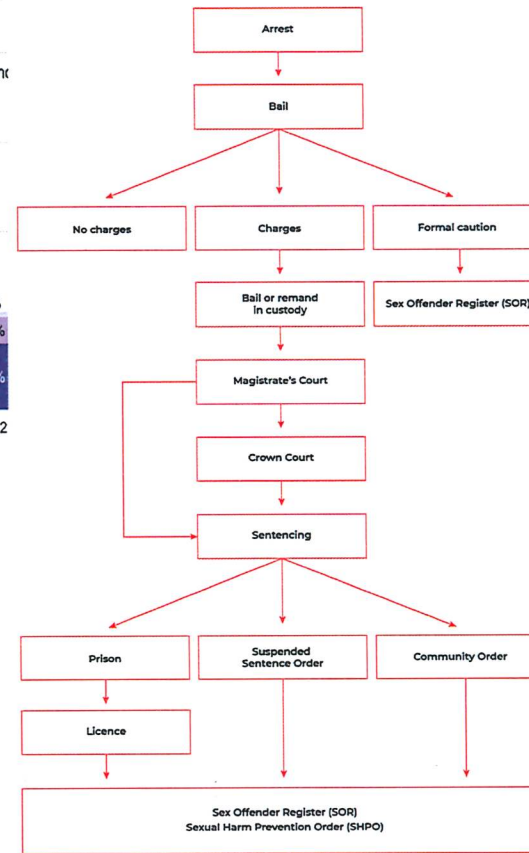


Figure 1: The Sentencing Framework in outline



Useful Websites

- www.gov.uk/browse/justice/young-people
- www.howardleague.org/
- www.sentencingcouncil.org.uk/

Timeline of Important Events or Concepts

1829: The Metropolitan Police Act created the first organized police force in London.

1965: The abolition of the death penalty for murder in the UK.

1984: The establishment of the Youth Justice Board to oversee the youth justice system.

1991: The introduction of the Criminal Justice Act, which reformed sentencing laws in the UK.

2000: The Youth Justice and Criminal Evidence Act introduced the concept of Youth Offending Teams.

Key Words

Human Rights:

Rights inherent to all human beings, regardless of nationality, race, sex, religion, or any other status.

International Agreement:

A legally binding treaty between countries that sets out obligations and responsibilities.

International Humanitarian Law:

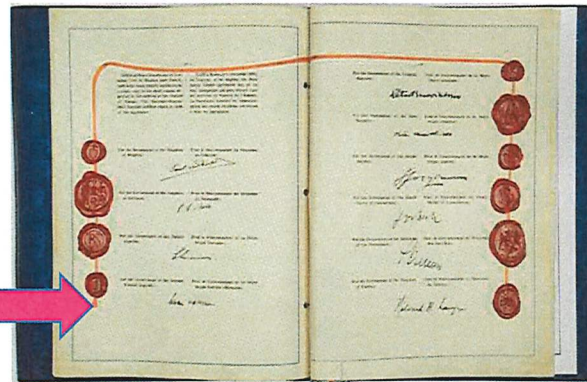
Rules that seek to limit the effects of armed conflict and protect non-combatants.

UN Universal Declaration on Human rights – 10 Nov 1948, Paris

European Convention on Human rights – 4 Nov 1950, Rome

UN Convention on the Rights of the Child – 2 Sept 1990, New York

Human Rights Act 1998 (UK)



Useful websites
www.un.org/en
www.echr.coe.int/home
www.legislation.gov.uk

Timeline of Important Events or Concepts

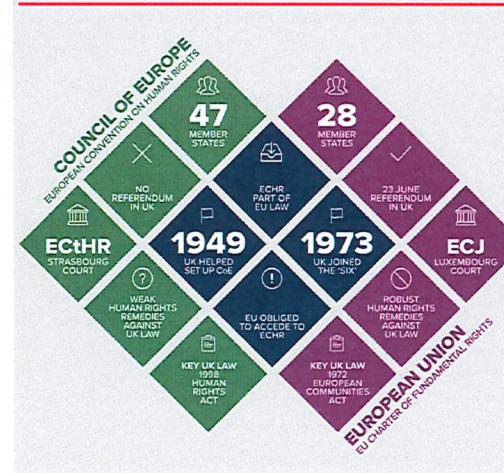
1948: Adoption of the UN Universal Declaration on Human Rights.

1950: Introduction of the European Convention on Human Rights.

1989: The UN Convention on the Rights of the Child was adopted.

1998: The Human Rights Act was incorporated into UK law.

Europe's overlapping human rights map



COMPUTING YEAR 10 SUMMER 2

Computer networks, connections and protocols

Computer Networks

A network is a set of computers that are connected to one another.

Standalone computers are isolated from other devices.

Advantages of a network

- ✓ Share resources, such as software applications, files and hardware (eg printers).
- ✓ Allows communication (eg email) and can transfer files easily.
- ✓ Easier network management (eg can backup data onto a central fileserver; updates can be sent to all computers; users on a network can login to any computer)

Disadvantages of a network

- ✓ Greater security risk as computers can be hacked if they are connected to the internet.
- ✓ Worms can spread from one computer to another
- ✓ A problem with any shared resource, (eg file server goes down) can impact the whole network.

Wired and Wireless

Computers can be connected using wired or wireless methods

Wired transmission methods use cables to communicate

Wireless transmission use radio waves communicate (eg Wi-Fi).

Advantages of wireless

- ✓ Can use computer anywhere and not constrained by cables

Disadvantages of wireless

- ✓ Packets can be intercepted more easily than wired connections
- ✓ Security is a much more difficult challenge, as the network can be accessed from outside the confines of a building.
- ✓ Slower than wired methods
- ✓ Signal can be interfered with by other electronic devices.

Advantages of wired

- ✓ Allows more control, security and reliability. Can restrict who has access to the network.
- ✓ Wired methods have greater speeds than wireless methods.

Disadvantages of wired

- ✓ Cables can be difficult to maintain in big organisations

Types of Computer Networks

Personal Area Network (PAN) set up around an individual person. Many people have multiple devices such as tablets, phones and computers that can be interconnected using a PAN. A Bluetooth PAN uses radio waves to communicate wirelessly between devices over a range of a few metres.

Local Area Network (LAN) covers a relatively small geographical area typically extends over the range of a single organisation such as a university campus, school site. LANs are usually managed by a single organisation.

Wide Area Network (WAN) made up of many local area networks and covers a much wider geographical area. The internet the ultimate WAN. It is a network of networks with billions of interconnected devices. No single person or organisation has control over a WAN.

Methods of Network Security

Authentication allows us to confirm the identity an individual.

There are lots of ways of confirming the identity of an individual that come under one of three factors:

- ✓ Knowledge factor: Something the user knows, eg a password
- ✓ Possession factor: Something the user owns eg a mobile phone
- ✓ Biometric factor: eg Fingerprint, iris scan

Encryption The message is garbled so if it gets intercepted during transmission it will be almost impossible for anyone without the key to read the original message.

Firewall prevents packets containing malware getting on to the computer

MAC address filtering A MAC (Media Access Control) address is a unique identifier for any device that is connected to a network. Each network interface card has a unique MAC address that is a 12 digit hexadecimal code (e.g. 12-F3-EE-56-44-A1).

- ✓ *White list filtering* only allows devices on a list to connect to the network.
- ✓ *Black list filtering* devices in a black list blocked from accessing the network.

Network Protocols

A **network protocol** is a set of rules that allow computers to communicate and exchange information over a network. There are many types of protocols depending on the application.

HTTP (Hypertext transfer protocol) is the protocol used for the World Wide Web. An exchange begins with a request for a web page from a client web browser to a web server. The server then sends the web page to the client.

HTTPS (Secure Hypertext transfer protocol) is a secure way of transferring data between a web browser and a server because the data are encrypted during transfer. Used for e-commerce and online banking.

FTP (File Transfer Protocol) is usually used to download or upload large files from a server to a client.

Ethernet is not a single protocol but a collection of related protocols. LANs most commonly use ethernet. The following is a simplified procedure:

- 1) Check whether there is any traffic on the ethernet
- 2) If so wait for traffic to clear
- 3) Send the packet
- 4) If collision detected, go to step 1 to resend.

Wi-Fi is a collection of protocol that use radio waves to transmit data between devices. Wi-Fi is a trademark and WLAN (Wireless LAN) is the generic term. Data are transmitted when the medium is clear, and an acknowledgement is received if the transmission was successful. If no acknowledgement is received, then the data are resent as it is assumed that a collision occurred, and the packets did not reach their destination.

Email protocols

SMTP (simple mail transfer protocol) Sends the mail from the user onto the mail server.

IMAP (Internet Message Access Protocol) Retrieves the mail from the mail server to the client (user) and allows access from anywhere on any device because the email remains on the server.

TCP (Transport Control Protocol) When files are sent over the internet they are broken up into small chunks called packets. When they arrive at the destination computer they are reassembled back into the original format. TCP handles and controls all this. TCP waits for acknowledgements to verify whether the packets have reached their destination. TCP will also retransmit packets if they have not arrived at the destination or become corrupted.

IP (Internet Protocol) The internet protocol is a set of rules that govern the transmission of data across the internet.

TCP/IP

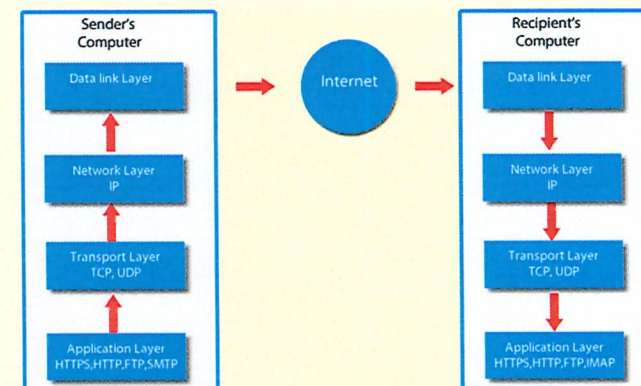
The TCP and IP protocol work closely together and are referred to as TCP/IP. The TCP/IP model consists of four layers that pass data between each layer.

Application layer contains protocols related to the application such as HTTP, HTTPS for web browsers, FTP for file transfer and SMTP and IMAP for email. The application layer interacts with the user via appropriate application software (eg web browser / ftp client).

The **transport layer** establishes the end to end connection. When files are sent over the internet, they are broken up into small chunks called packets. When they arrive at the destination computer they are reassembled back into the original format. It is the role of the transport layer to split the data into packets and pass the data onto the network layer. On the recipient's computer the transport layer reassembles the packets into the original form. The packets are numbered by this layer to allow them to be reassembled. The transport layer chooses the port number for sender and receiver. TCP and UDP are the main protocols used in this layer.

The **network layer** adds the source and destination IP address and route the packets over the network. At the destination the network layer strips out the IP addresses. The IP operates on this layer.

The **data link layer** has a network card and deals with the physical connection and adds the physical addresses (MAC address) of the hardware to the packets that it receives from the network layer. For each step the sender and receiver MAC address is removed then a new sender and receiver MAC address is added. The receiver MAC address becomes the sender MAC address.

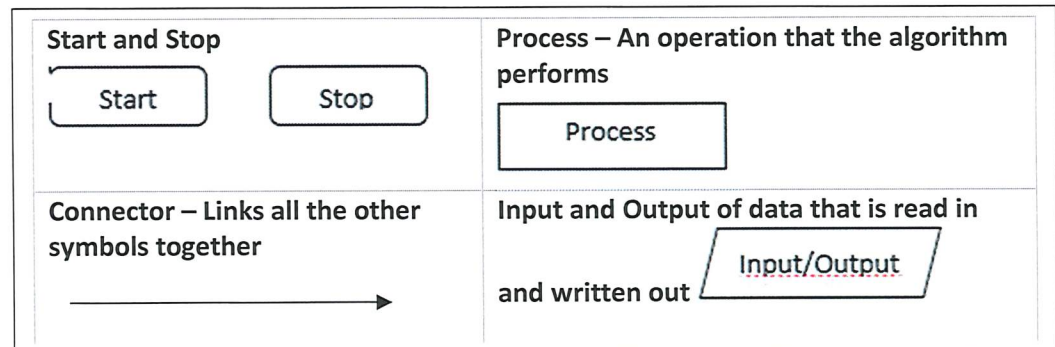


COMPUTING YEAR 10 SUMMER 2

We can represent algorithms using pseudocode

	Python equivalent
Variable assignment	<code>a = 10</code>
Constant assignment	<code>PI = 3.142</code>
Input	<code>a = input()</code>
Output	<code>print("Bye")</code>
Arithmetic Operators	
Add	<code>+</code>
Multiply	<code>*</code>
Divide	<code>/</code>
Subtract	<code>-</code>
Integer division	<code>a= 7 // 2</code>
Modulus (remainder)	<code>a = 7 % 2</code>
Relational Operators	
Less than	<code><</code>
Greater than	<code>></code>
Equal to	<code>==</code>
Not equal to	<code>!=</code>
Less than or equal to	<code><=</code>
Greater than or equal to	<code>>=</code>
Selection	
if ..	<pre>if i > 2: j=10</pre>
if .. else ...	<pre>if i > 2: j=10 else: j=3</pre>

Iteration While loops	<pre>while a<4: print(a) a=a+1</pre>
For loops	<pre>for a in range(3): print(a)</pre>
Subroutines procedure	<pre>def hello(): print("hello")</pre>
Function (with paramerters and return)	<pre>def add(n): a=0 for a in range(n+1): a=a+n return a</pre>
Built-in functions Length of array	<code>len(a)</code>
Random integer	<pre>import random random.randint(0,9)</pre>



Dance Component Two: Section A Knowledge Organiser

HYPOTHETICAL CHOREOGRAPHY

THE QUESTIONS WILL BE STRUCTURED LIKE THIS

Section A – Knowledge and understanding of choreographic processes and performing skills

You must answer all questions in this section.

37.5% (30 marks) – you should spend about 30 minutes on this section.

You are choreographing a group dance for two dancers using the image below as a stimulus.

All answers in questions 1-7 must relate to this stimulus.

What will the question ask?

The question will give you a stimulus. This could be an image, text, an object, and idea.

You will be asked for a dance idea/choreographic intent based on this stimulus.

You will then be asked a range of questions about how you might choreograph a dance based on the dance idea



How do I need to answer?

Short and to the point.

No extended writing in this section.

1-4 mark questions.

Don't waste time on being over creative.

Motif writing can be just two sentences.

TIP! Always link back to the dance idea

Outline a dance idea or theme that you could consider from this stimulus. [1 mark]

Describe a motif you could choreograph for this dance. Your answer should refer to actions, space and dynamics. [3 marks] TIP! Describe this step by step

Give three ways you could develop the motif you have described. [3 mark]

Describe the climax of your dance. Your answer should refer to action, space and dynamics. [3 marks] TIP! Show the build up as well as the climax itself.

Give one way in which this climax communicates your choreographic intent. [1 mark]

Identify the type of structure that could be appropriate for your dance. [1 mark]

Give two ways in which this structure links to your chosen dance idea. [1 mark]

ACTION

Travel
Turn
Elevation
Gesture
Stillness
Use of different body parts
Floor work
Transfer of weight

DYNAMICS

Fast/slow
Sudden/sustained
Acceleration/ deceleration
Strong/light
Direct/indirect
Flowing/abrupt

SPACE

Pathways
Levels
Directions
Size of movement
Patterns
Spatial design

RELATIONSHIPS

Lead and follow
Mirroring
Action & reaction
Accumulation
Complement & contrast
Counterpoint
Contact
Formations

CHOREOGRAPHIC DEVICES

Motif and development
Repetition
Contrast
Highlights
Climax
Manipulation of numbers
Unison and canon

STRUCTURE

Binary
Ternary
Rondo
Narrative
Episodic
Beginning/middle/end
Unity
Logical sequence
Transitions

AURAL SETTINGS

Song
Instrumental
Orchestral
Spoken word
Silence
Natural sound
Found sound
Body percussion

PERFORMANCE ENVIRONMENTS

Proscenium arch
End stage
Site-sensitive
In-the-round

PERFORMANCE SKILLS

THE QUESTIONS WILL BE STRUCTURED LIKE THIS

The following questions refer to your knowledge and understanding of performing skills.

What will the question ask?

A range of questions about performance skills.

These could include:

Definitions

Exercises

Rehearsal methods

Advice to dancers

Phrase description

Safe practice

How do I need to answer?

Short and to the point.

No extended writing in this section.

1-4 mark questions.

Phrase descriptions can be just two sentences.

Which of the words below is a physical skill? [1 mark]

Alignment Turn Mobility

Define the physical skill you identified [1 mark]

Describe a short movement phrase that includes the physical skill identified. Your answer should refer to action, space and dynamics. [3 mark]

What advice would you give to a dancer that needs to improve their musicality. [1 marks]

Place a tick in the box next to the correct definition of projection in performance [1 mark]

The overall shape and structure of the dance.

The energy the dancers uses to connect with and draw in the audience.

The use of eyes to enhance performance.

Dance that tells a story.

Outline one rehearsal method that would improve projection. [1 mark]

PHYSICAL SKILLS

Posture
Alignment
Balance
Coordination
Control
Flexibility
Mobility
Strength
Stamina
Isolation
Extension

EXPRESSIVE SKILLS

Projection
Focus
Spatial awareness
Facial expression
Phrasing
Musicality
Sensitivity to other dancers
Communication of choreographic intent

TECHNICAL SKILLS

Action
Space
Dynamics
Relationships
Timing
Rhythmic content
Moving in a stylistically accurate way

MENTAL SKILLS

DURING PERFORMANCE

Movement memory
Commitment
Concentration
Confidence

MENTAL SKILLS

PREP FOR PERFORMANCE

Systematic repetition
Mental rehearsal
Rehearsal discipline
Planning for rehearsal
Response to feedback
Capacity to improve

SAFE PRACTICE

DURING PERFORMANCE

Safe execution
Appropriate dancewear, including:
Footwear
Hairstyle
Absence of jewellery

SAFE PRACTICE

PREP FOR PERFORMANCE

Warming up
Cooling down
Nutrition
Hydration

Dance Component Two: Section B Knowledge Organiser

EXPLAINING YOUR OWN PERFORMANCE

What will the question ask?

The question could ask you to talk about: EITHER your performance in a duet or trio OR your performance of the set phrases

What will the question ask?

All performance skills.

How do I need to answer?

Extended writing worth 6 marks per question.

1. State your dance idea [or state your set phrases]
2. Give an example of where you used the skill the question asks for
3. Explain how the skill made your dance effective
4. Evaluate why it was effective
5. Repeat 2-4 times

HOW TO ANSWER

6 marks

4-6

Explain why skill 3 was effective
3rd skill and detailed example

2-3

Explain why skill 2 was effective
Skill 2 and detailed example

Explain why skill 1 was effective

1

Skill 1 and detailed example
State set phrase or dance idea

PERFORMANCE SKILLS

PHYSICAL SKILLS

Posture
Alignment
Balance
Coordination
Control
Flexibility
Mobility
Strength
Stamina
Isolation
Extension

TECHNICAL SKILLS

Action
Space
Dynamics
Relationships
Timing
Rhythmic content
Moving in a stylistically accurate way

EXPRESSIVE SKILLS

Projection
Focus
Spatial awareness
Facial expression
Phrasing
Musicality
Sensitivity to other dancers
Communication of choreographic intent

MENTAL SKILLS

DURING PERFORMANCE

Movement memory
Commitment
Concentration
Confidence

MENTAL SKILLS

PREP FOR PERFORMANCE

Systematic repetition
Mental rehearsal
Rehearsal discipline
Planning for rehearsal
Response to feedback
Capacity to improve

SAFE PRACTICE

PREP FOR PERFORMANCE

Warming up
Cooling down
Nutrition
Hydration

SAFE PRACTICE

DURING PERFORMANCE

Safe execution
Appropriate dancewear, including:
Footwear
Hairstyle
Absence of jewellery

EXAMPLE

My performance duet was about a factory, involving fast working machinery.

It was very important that we planned our rehearsals carefully. We made sure that we had two rehearsals a week to practise the dance. The regularity of rehearsals meant that our stamina and strength increase. This was vital for being able to perform the dance with high energy required.

There was a fast unison section where there was a sharp gesture on each beat and we have to work for precision. Concentration was very important here because if we were distracted we would miss several movements and the robotic effect would be lost. By ensuring I was fully concentrated I was able to execute the movements effectively.

The other difficulty in this section was that there were so many different gestures that I struggled to get it right. I knew in rehearsal I needed to increase my movement memory. I repeated the section over and over again to ensure that I had fully memorised them in order and on the count. This was important for the performance because I could then perform at speed on stage with accuracy and on time with the music.

I found I kept forgetting the dance and it looked messy. This has a detrimental effect on my confidence. I therefore started to go through the dance in my head every night to keep it fresh. My confidence improved and the performance was of a high standard.

Overview

Skill - Rehearsal

Example

Explanation

Evaluation

Example

Skill - Concentration

Explanation

Evaluation

Example

Skill - Movement

Memory

Explanation

Evaluation

Example

Skill - Confidence

Explanation

Evaluation

Dance Component Two: Section B Knowledge Organiser

EXPLAINING YOUR OWN CHOREOGRAPHY

What will the question ask?

The question could ask you to EXPLAIN:

- How one of the choreographic skills you used supported your dance idea.
- How a different choreographic skill supported the overall effectiveness of your dance.

What will the question ask?

All choreographic skills.

How do I need to answer?

Extended writing worth 6 marks per question.

1. State your dance idea
2. Give an example of where you used the skill the question asks for
3. Explain how it supported your dance idea
4. Evaluate why it was effective
5. Repeat 2-4 times



4-6

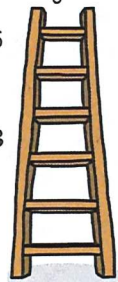
Explain why skill 3 was effective
3rd skill and detailed example

2-3

Explain why skill 2 was effective
Skill 2 and detailed example

1

Explain why skill 1 was effective
Skill 1 and detailed example
State your choreographic intent



CHOREOGRAPHY SKILLS

ACTION	DYNAMICS	SPACE	RELATIONSHIPS	CHOREOGRAPHIC DEVICES	STRUCTURE
Travel Turn Elevation Gesture Stillness Use of different body parts Floor work Transfer of weight	Fast/slow Sudden/sustained Acceleration/ deceleration Strong/light Direct/indirect Flowing/abrupt	Pathways Levels Directions Size of movement Patterns Spatial design	Lead and follow Mirroring Action & reaction Accumulation Complement & contrast Counterpoint Contact Formations	Motif and development Repetition Contrast Highlights Climax Manipulation of numbers Unison and canon	Binary Ternary Rondo Narrative Episodic Beginning/middle/end Unity Logical sequence Transitions
AURAL SETTINGS Song Instrumental Orchestral Spoken word Silence Natural sound Found sound Body percussion			PERFORMANCE ENVIRONMENTS Proscenium arch End stage Site-sensitive In-the-round		

EXAMPLE

The choreographic intention for my dance was magnetic force.

One of the main ways I used space was to use a variety of different levels. For example, at the beginning of the dance, one dancer stood up with the arms pushed downwards and the second dancer crouched in front of her on the floor with head low. This was to show the force of a magnet pushing down and repelling an object.

Using direction was also important. In the second section both dancers started at opposite ends of the diagonal, upstage right and downstage left. They then slowly turned towards each other until they met in the centre. This create impact because it brought power to the dance and showed how magnets pull objects together across distance.

The size of the movement was also important. After the diagonal pull both dancers stood wide with feet apart and arms outstretched and then slowly curled into the body. This was to show a magnet drawing an object tightly close to it. It was effective for showing contrast.

Towards the end of the dance we performed a chaotic travelling section in canon. We used zig zag pathways from upstage left. This was to symbolise five magnets stage right and left pulling us this way and that and came as a sudden surprise for the audience.

CHOREOGRAPHIC INTENT

LEVELS
EXAMPLE
EXPLANATION/DANCE IDEA

DIRECTION
EXAMPLE
EVALUATION
EXPLANATION/DANCE IDEA

SIZE
EXAMPLE
EXPLANATION/DANCE IDEA
EVALUATION

PATHWAY
EXAMPLE
EXPLANATION/DANCE IDEA
EVALUATION

Dance Component Two: Section C Knowledge Organiser



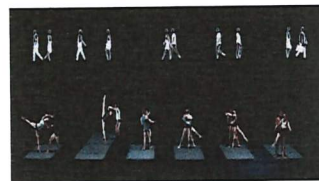
A Linha Curva



Artificial Things



Emancipation of Expressionism



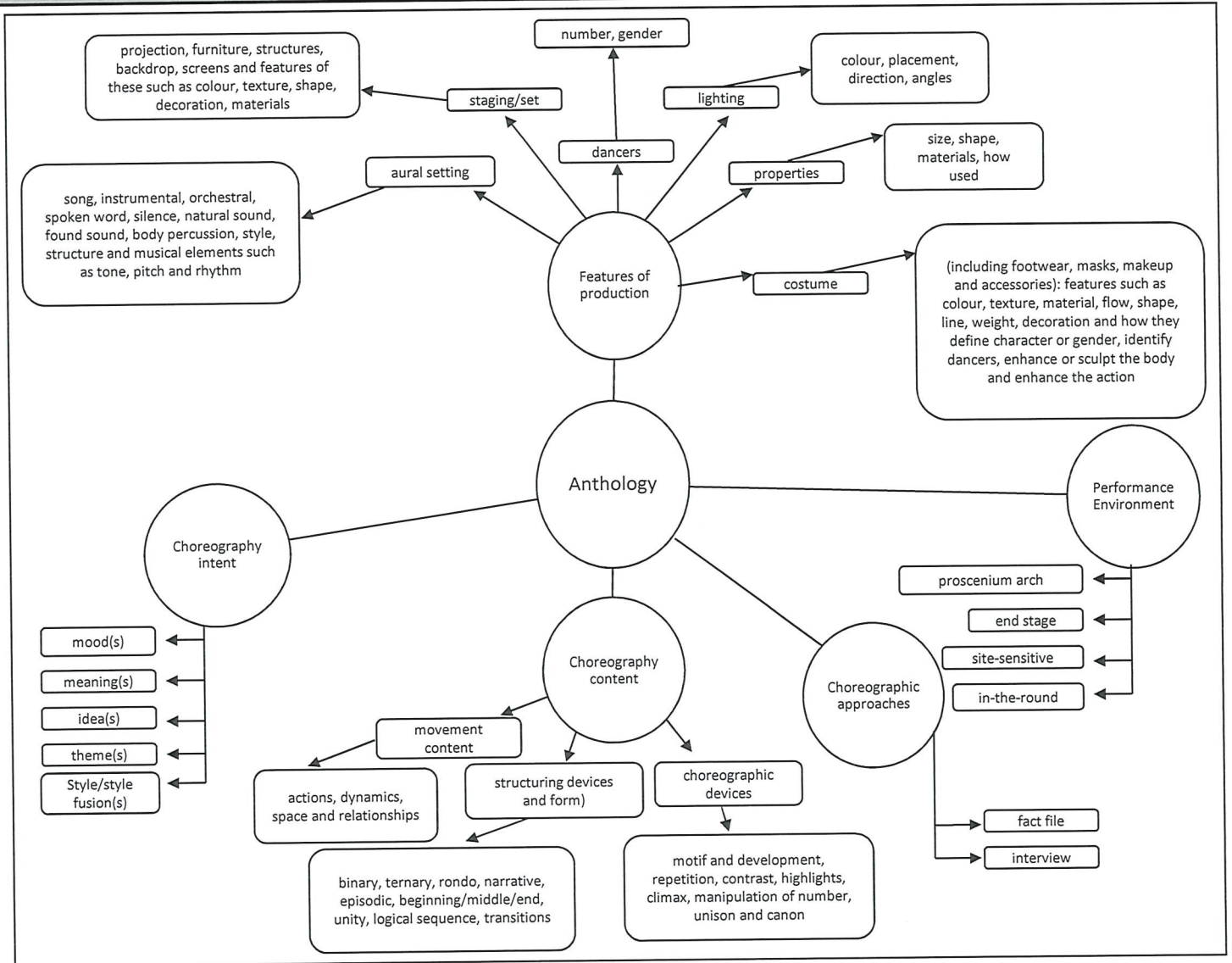
Infra



Shadows



Within Her Eyes



Evaluating Performance

IDEA

Use this 'formula' whenever you evaluate a performance you have

GIVEN or one you have

EXPERIENCED

Identify the skill

Describe how you/they used it

Explain why focussing on...

Audience Impact

Vocal skills

- pitch
- pace/tempo
- pause
- power/volume
- tone
- Intonation
- emphasis

Spatial Skills

Use of space

- positioning *on stage*
- movement *across stage*
- levels
- proxemics

Physical Skills

- facial expression (face)
- gesture (arms/hands)
- posture(back/shoulders)
- stance (feet)
- eye contact/gaze (eyes)
- gait (walking style)

Evaluation Words

Successful

Effective

Engaging

Powerful

What did the audience
THINK?
FEEL?
EXPERIENCE?

VOICE				
Pitch	Pace	Volume	Tone	Accent
High, Low, Squeaky, Husky, Deep, Whiny, Croaky, Brittle, Grating, Gravelly.	Fast, Slow, Halting, Abrupt, Stuttering, Stilted, Hesitant, Controlled.	Soft, Quiet, Loud, Whisper, Shout.	Harsh, Gentle, Sarcastic, Forceful, Firm, Trusting, Derogatory, Cold, Angry, Persuasive, Authoritative, Proud, Assertive, Submissive, Sly, Abrasive, Quivery, Warm, Cheeky, Anxious, Seductive, Enthusiastic, Timid, Assured, Cautious, Fierce, Fond, Nervous, Joking, Sensitive.	Liverpudlian, Northern, West country, Cockney, Upper Class British, Scottish, Irish, Australian, American.

FACIAL EXPRESSIONS			
Emotion	Eyes	Eyebrows	Mouth
Happy, Cheerful, Upset, Hurt, Eager, Anxious, Untrusting, Fearful, Rejected, Smug, Defiant, Distressed, Thoughtful, Sly, Seductive, Distraught, Spiteful, Aggressive, Friendly.	Wide, Glaring, Squinting, Teary, Hopeful, Suspicious, Tightly Shut.	Raised, Lowered, Furrowed, Inquisitive, Frown.	Opened, Jaw-dropped, Closed, Smile, Quivering, Lip-biting, Pursued Lips, Clenched.

KEYWORDS
Actor, Appropriate, Atmosphere, Audience, Believable, Character, Creativity, Dialogue, Effect, Emphasize,, Genre, Impact, Improvisation, Interaction, Interpretation, Monologue, Non-Naturalistic, Original, Performance, Piece, Physical, Rehearsal, Scene, Status, Tension, Tone.

BODY LANGUAGE			
Posture	Gesture	Gait	Mannerisms
Upright, Slouched, Relaxed, Grotesque.	Clenched Fists, Pointing, Open handed, Closed, Strong, Measured, Hesitant, Energetic.	Rapid, Sluggish, Gentle, Smooth, Direct, Rushed, Purposeful, Hasty.	Twitchy, Decisive, Indecisive, Formal, Jerky, Secretive, Wild, Controlled, Dismissive, Aggressive, Nervous, Informal.

IMPACT		
Atmosphere	Audience Response	Believability
Tense, Dangerous, Intriguing, Awe, Amazement, Anticipation, Surprising, Shocking, Awareness of Society, Comic, Pathos.	Applause, Laughter, Sympathy, Anger, Disappointment, Anti-climax, Amusement, Admiration, Distaste, Contempt, Delight, Horror, Empathy, Irritation.	Natural, Believable, Realistic, Exaggerated,

Summer English Language YEAR 10

Paragraphing:

Always start a new paragraph whenever you change:

- Time
- Place
- Topic
- Person

Remember **TiPToP**

Imaginative Writing: creating an engaging narrative

Sentence types:

- Declarative** - make statements (most likely to be fact or opinion statements)
- Exclamative** - express emotion (most likely to end with an exclamation mark)
- Imperative** - give commands (include imperative verbs)
- Interrogative** - ask questions (end with a question mark)

Punctuation

- . **Full stop** – ends a sentence
- , **comma** – separates ideas
- : **Colon** – introduces a list
- ; **semi-colon** – separates clauses
- ! **Exclamation mark** – adds emphasis
- ? **Question mark** - interrogative
- “ **Speech marks** – indicates speech
- **Hyphen** – shows connection
- ... **Ellipsis** – creates mystery/intrigue

Word bank

Ways to start sentences

- Start your sentence with an 'ed' word:** Alarmed, Angered, Abandoned, Astonished, Bewildered
- Start your sentence with an 'ing' word:** Hiding Jumping Knowing Riding Praying Thinking Stopping
- Start your sentence with an adverb:** Accidentally, Bravely, Cheerfully, Defiantly, Fortunately, Menacingly
- Adverbial phrase for when something happens:** After running up the hill, Before charging into battle,
- Adverbial phrase for how something happens:** With her feet squelching in the mud, Jane trudged...
- Adverbial phrase for where something happens:** Around Behind Beneath Beside In On Over Past
- Start with a simile.** (A simile compares two things): As dark as... As busy as... As clear as...
- A drop in clause adds in extra information:** The dragon, who had fearsome talons, flew off into the sky.
The brave knight, who was wearing a coat of armour, strode through the castle doors.

Word types

- Noun** – Person, place, thing
- Pronoun** – In place of a noun 'you'
- Verb** – an action or state
- Adjective** – describes a noun
- Adverb** – describes a verb
- Preposition** – shows the relationship between objects
- Determiner** – used in front of a noun to show the type 'the' 'a'
- Conjunctions** – joining words

Top tips

- Remember that all sentences and names start with a **capital letter**.
- Always write in complete sentences.
- Include descriptive detail to set the scene for the reader.
- Use a variety of sentence starters and vocabulary.
- Write with a range of punctuation.

Writing in timed conditions

1. **Drop** – where are you?

Describe the setting



2. **Characters** – who are you with?



3. **Zoom** – what's happening?

Link to the task focus



4. **Flashback** – when it happened to you



5. **Ending** – create a cliff-hanger or surprise

Common Errors

- **There/their/they're** – there= place, their=belongs, they're=they are.
- **Which/witch** – which=choice, witch=supernatural
- **To/too/two** – to=the direction, too=a lot, two=2

Summer

English Literature

Poetry

YEAR 10

Paper 2 Section B
 'Time and Place' Poetry
 Comparison question
 (closed book)
20 marks

- ✓ Compares and contrasts the poems
- ✓ Analysis of language, form and structure
- ✓ Explores the effect on the reader
- ✓ Comments on the relationship between the poem and context.


Comparison: consider the similarities and differences between two things

Question style: 'Question: 'Compare how... is presented in the two poems'


What?	What is the writer trying to tell us about the character/theme/setting?	<i>London is presented as... Afrika presents District 6 as ... and ...</i>
How?	How do they use language/structure to do this? How do key words/phrases show this?	<i>The adjectives/noun/verb/phrase/image ... The ... suggests/implies/indicates/demonstrates...</i>
Why?	Why are they doing this? Why did they choose that language?	<i>Keats wants us to understand the significance of ... It can be seen that/it might be thought that/some readers might think</i>

The reader feels: empathy, sympathy, resentment, indignation, respect, disapproval, horrified, anticipation, admiration, relief, apprehension, critical, disappointment, anxious, disillusioned, impatient.


Themes



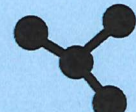
Identity



Nature



Death/Loss



Connection

Key Quotes:			
"mind forged manacles" – 'London' (1794)	"Earth has not anything to show more fair" – 'Composed' (1802)	" hot, white, inwards turning/anger" – 'Nothing's Changed' (1994)	
"Seasons of mists and mellow fruitfulness" – 'To Autumn' (1820)	"I slowly climb/Through winter mire" – 'Where the Picnic Was' (1914)	"fearful and reassuring" – 'Hurricane Hits England' (1996)	
"While the chaffinch sings" – 'Home Thoughts' (1845)	'unwontedly', 'hissed', 'bare' – 'Adlestrop' (1917)	"small minded package philistine abroad" – 'Postcard' (1996)	
"Presuming Me to be a Mouse" – 'I Started Early' (1862)	"the upper air like sapphire glowed" – 'In Romney Marsh' (1920)	"I don't like the feel of it" – 'First Flight' (1988)	"My costume clung to me" – 'Presents' (2000)

- Terminology:**
1. **Ode** – lyric poem addressed to a particular subject
 2. **Sonnet** – a poem of fourteen lines using any of a number of formal rhyme schemes, in English typically having ten syllables per line.
 3. **Elegy** – a poem of serious reflection, typically a lament for the dead.
 4. **Regular rhyme** – similar sounds at the end of a line, used in a clear pattern across a poem.
 5. **Blank verse** – no regular rhyming pattern, but may have a rhythm.
 6. **Free verse** – no rhyme scheme or rhythmic pattern.
 7. **Enjambment** – the continuation of a sentence without a pause beyond the end of a line, couplet, or stanza.
 8. **Caesura** – a break between words or phrases.
 9. **Repetition** – repeating something that has already been written.
 10. **Stanza** – a group of lines forming the basic recurring metrical unit in a poem; a verse

Food and Nutrition

Food Security

The aim of food security is to make sure that all people, at all times have the ability to buy enough safe, nutritious, affordable food to meet their dietary needs.



The world's population is forecast to exceed 9 billion people by the year 2050. This means that the demand for food is constantly increasing and more food must be produced with;

- Less land available
- Fewer resources like water, energy and fertile soil
- The effects of climate change
- Environmental damage from pollution, weather and human activity.

The Pros of Seasonal Foods

1. Food in season require less energy, water and fertiliser.
2. The produce compliments the time of year. E.g. salads and berries during the summer months
3. Food can be sold to strengthen the economy.

The Cons of Seasonal Foods

1. Eating food out of season increases your **food miles**
2. At certain times of the year, there could be food shortages, or shortages of a particular product,
3. Large industrial glasshouses are required for out of season production which require large energy inputs like water, electricity etc.

Food & Sustainability



The Red tractor

The Red Tractor logo is only found on British food and drink products. The food you buy with this logo has been responsibly sourced, safely produced and comes from crops and animals that have been well cared for



Fairtrade

This foundation was established to support farmers and workers in under developed countries and encourage sustainable food production. Fairtrade aims to make it fairer for small businesses by improving working conditions and agreeable prices.



RSPCA Assured

This logo can be found on eggs, fish and meat. It is given to producers of these animals who follow strict RSPCA standards. These standards cover every aspect of an animals life including lighting, diet, bedding and how they are transported.



The Marine Stewardship Council

A non-profit organisation helping to stop overfishing. They work with seafood companies and scientists to help protect the oceans, and safeguard seafood supplies.

Technological Developments



Food manufacturers are able to **modify** the **nutritional profile** of some foods to meet the requirements of current dietary guidelines.

Fortification

Foods can be fortified with ingredients. This means adding extra nutrients to a food that were not naturally present in the food before. E.g. vegetable spreads are fortified with Vitamin A.

Food Additives

Food additives are natural or man made chemical substances that are added to foods during the manufacturing process to help improve flavours, textures, quality and stability.

Factors that Influence Food Choices

Physical Activity Level (PAL)

- How active are people?
- How much energy do they need each day?
- What life stage are they?

Enjoyment & social aspects

- Why is food important to celebrations and occasions?
- Why are particular foods celebrated for certain occasions?

Food availability

- How many food miles has the food travelled?
- Is the food seasonal?
- How people feel about the amount of food wasted by the food industry

Lifestyle

- What work do people do?
- Do they cook food from fresh?
- How social are they?
- How much time do they have?

Time of day

- What time do we eat?
- How much are we snacking?
- Family members food preferences
- Are you eating on the move?

Cost of food

- What prices are available from different food shops?
- Ready made meals compared to home cooked foods
- The cost of food waste

Waste Food & Packaging

Wasted food has a significant environmental impact because it is usually put into landfill sites where it produces large amounts of the greenhouse gas methane as it rots. There are some schemes being developed to collect the methane to produce energy for households like electricity, but they are expensive to run.

Cut down on waste by;

- Planning meals and portion sizes
- Pay attention to use by dates
- Use leftovers in other meals or freeze for another time
- Donate unwanted food to food banks.



Food and Nutrition

The Legal Requirements for Food Labels;

- Manufacturer's name and contact details
- Name of the product
- Description of the product
- Weight (some foods are exempt, for example bread)
- Ingredients (listed in descending order of weight)
- Cooking/heating instructions
- Storage instructions
- Shelf life
- Place of origin
- Allergy information

Colour-coded nutritional information tells you at a glance if the food has high, medium or low amounts of fat, saturated fat, sugars and salt:

Red means high
Amber means medium
Green means low

Each 100g contains:	FAT	SATURATED	SUGARS	SALT
ENERGY 924kJ 220kcal	13g	5.9g	0.8g	0.7g
11%	MED	HIGH	LOW	MED
	19%	3%	<1%	12%

% all on adults reference intake.
Typical values per 100g; Energy 966kJ/230kcal

Food Miles

Many foods travel a long way before they reach us in the UK. The distance that food travels from other countries is measured in **food miles**. There is a concern about the impact of food miles as it uses a lot of **non renewable energy** (oil, gas etc.)

Food miles have increased because of; more food being exported globally, more food transported by air, consumers usually drive buy out of town foods from supermarkets rather than local shops.



From Farm to Fork

Our food comes from a variety of different places around our country and the world **before** it reaches food manufacturers, supermarkets, restaurants and our plates. The production of food can have significant impacts on the **environment**. It is important for people to have an understanding of what these impacts are in order for them to make **informed food choices**.



GROWN

Plants are an essential part of our food supply. They are usually grown by a method called **intensive farming**. These foods are usually grown on a large scale. This makes them vulnerable to pests like insects and animals. For this reason they require fertilizers which help the growth of the crops. However, fertilizers are also seen to pollute the land, sea and air for future crops.



REARED

Many types of animals are reared in large numbers for us to eat. These animals are the likes of pigs, sheep, cows, chickens etc. There are many large farms that intensively rear these animals in their hundreds of thousands. It costs less money to keep these animals in a small place at any one time. This can be seen as inhumane. However, costs are lower for farmers who can then make more profit.



CAUGHT

Humans have hunted birds and animals for thousands of years for food and other things like clothing etc. These days, fish are farmed because of the concerns of overfishing and by catching which means that a lot of damage is caused to our seas and oceans. Companies like the Marine Stewardship Council help to regulate these practices.



GATHERED

When farming started, certain crops were selected to be grown on a large scale. This meant that the gathering of foods (otherwise known as foraging) declined. Many people still gather wild foods like mushrooms, berries and herbs. The gathering of foods is a natural way of eating and promotes the eating of seasonal produce.

Organic & GM Foods



Organic farming is a method of producing crops in which; Artificial fertilisers are not allowed to be used. Farmers develop healthy, fertile soil by adding organic matter (e.g. manure) and compost (plant waste) so the plants receive plenty of natural nutrients. Farmers rotate crops so that the soil doesn't have all the goodness taken out of it.



Genetically modified foods (GM foods), also known as genetically engineered foods (GE foods) A scientific technique that enables a particular characteristic from one plant or animal be inserted into the genes of another.

GM foods enable food from animals and plants to have;

- Better resistance to pests and diseases
- Faster and stronger growth rates
- A different nutritional profile (fortified)

Au Collège At school

School



Fais-moi une description de ton collège

Describe your school to me

Mon collège est assez grand et il est mixte. Il y a environ deux milles élèves et une soixantaine de professeurs.

Quelle est ta matière préférée ?

What is your favourite subject ?

Je pense que ma matière préférée est la chimie parce que je la trouve fascinante et j'en suis doué pourtant je ne supporte pas l'anglais puisque c'est tellement barbant même si c'est important

Tu voudrais étudier quelles matières l'année prochaine ?

What subjects would you like to study next year?

L'année prochaine, j'aimerais étudier le français et le latin car je trouve que les langues sont fascinantes. J'ai l'intention de voyager à l'avenir donc les langues sont un atout !

Parle-moi d'une journée typique au collège

Tell me about a typical day at school

D'habitude, les cours commencent à huit heures et ils finissent à trois heures. On a trois cours par jour, ce que je trouve assez dur car il faut se concentrer.

Parle-moi du règlement de ton collège

Tell me about the rules at your school

Il faut porter un uniforme scolaire, mais il est interdit de porter des bijoux. Je pense que c'est injuste parce que on n'est pas des bébés et. Il est aussi interdit de mâcher du chewing-gum – c'est terrible !

Est-ce que tu es pour ou contre l'uniforme scolaire? Pourquoi ?

Are you for or against school uniform ? Why ?

Je suis pour l'uniforme scolaire. Il encourage la discipline et c'est plus élégant qu'un jean pourtant il y a certains qui pensent que l'uniforme limite l'individualité, ce qui est vraiment important pour les jeunes.

Tu fais partie d'un club à l'école ?

Do you take part in a club at school ?

Je suis membre du club de foot. On joue trois fois par semaine et c'est fatigant, mais j'adore travailler en équipe. Quand j'étais plus jeune, je faisais partie de la chorale et nous avons donné un concert à Disneyland Paris – c'était incroyable !

Quels sont tes plus grands accomplissements au collège?

What are you biggest accomplishments at school?

Je suis très fier de mes notes en science. Je travaille très dur en classe. De plus, j'ai gagné un concours avec mon équipe de foot qui était très gratifiant.

Parle-moi un peu d'une visite scolaire que tu as faite

Tell me about a school trip that you have been on

En juin, je suis allé en France avec mon collègue et on a visité un parc d'attractions qui s'appelle Parc Astérix. C'était formidable ! On a visité des monuments à Paris et mon préféré, c'était la Tour Montparnasse parce que le coucher de soleil était magnifique.

Que penses-tu des échanges scolaires ?

What do you think about school exchanges?

Je pense que les échanges sont bénéfiques parce qu'on peut découvrir une autre culture et je me suis fait de nouveaux amis.

Question you will ask:

Fancy Phrases:

PERFECT TENSE ("has done/did")

Start with the present tense of *avoir/être*, then add the past participle of the second verb:

-er	-ir	-re
Remove -er Add -é	Remove -r	Remove -re Add -u
jouer → (j'ai) joué	finir → (j'ai) fini	vendre → (j'ai) vendu

VERBS USING ÊTRE e.g. je suis allé(e)

*monter entrer sortir venir aller naître
partir descendre arriver tomber rester
mourir retourner (and all reflexive verbs)*

The past participle for these verbs must agree with the subject in gender and number:

*je suis allé (m) je suis tombée (f)
on est entrés (mpl) on est entrées (fpl)*

PRESENT TENSE ("does/is doing")

Remove the *-er/-ir/-re* and add these endings:

	jouer	finir	vendre
je	joue	finis	vends
tu	joues	finis	vends
il/elle/on	joue	finit	vend
nous	jouons	finissons	vendons
vous	jouez	finissez	vendez
ils/elles	jouent	finissent	vendent

ÊTRE

je suis / tu es / il est / nous sommes / vous êtes / ils sont

AVOIR

j'ai / tu as / il a / nous avons / vous avez / ils ont

SIMPLE FUTURE TENSE ("will/shall do")

Add these endings to the infinitive:

	jouer	finir	vendre
je	joueraï	finirai	vendrai
tu	joueras	finiras	vendras
il/elle/on	jouera	finira	vendra
nous	jouerons	finirons	vendrons
vous	jouerez	finirez	vendrez
ils/elles	joueront	finiront	vendront

IRREGULAR STEMS

*être (ser-) avoir (aur-) faire (fer-)
venir (viendr-) savoir (saur-) aller (ir-)
devoir (devr-) pouvoir (pourr-) voir (verr-)*

IMPERFECT TENSE ("was doing/used to do")

Remove *-ons* from the *nous* form of the present tense, add these endings (*ais/ais/ait/ions/iez/aient*)

	jouer	finir	vendre
je	jouais	finissais	vendais
tu	jouais	finissais	vendais
il/elle/on	jouait	finissait	vendait
nous	jouions	finissions	vendions
vous	jouiez	finissiez	vendiez
ils/elles	jouaient	finissaient	vendaient

NEAR FUTURE TENSE ("is going to do")

Use the present tense of *aller* followed by the infinitive:

	je	vais	jouer finir vendre être aller vouloir etc.
	tu	vas	
	il/elle/on	va	
	nous	allons	
	vous	allez	
	ils/elles	vont	

CONDITIONAL TENSE ("would do")

Begin with the future stem, add imperfect endings:

	jouer	finir	vendre
je	jouerais	finirais	vendrais
tu	jouerais	finirais	vendrais
il/elle/on	jouerait	finirait	vendrait
nous	jouerions	finirions	vendrions
vous	joueriez	finiriez	vendriez
ils/elles	joueraient	finiraient	vendraient

IRREGULAR STEMS

Same as for the simple future

EXTRA MARKS: USE WITH THE IMPERFECT TENSE
Si j'avais le temps, j'irais... (If I had time, I'd go to...)

PLUPERFECT TENSE ("had done")

Very similar to the perfect tense, except you start with the *imperfect* tense of auxiliary verbs *avoir/être*:
e.g. *j'avais joué, il avait fini, nous étions allés, elles s'étaient brossées les dents*

Types of Waves

Constructive Waves

This wave has a **swash that is stronger** than the backwash. This therefore builds up the coast.

Destructive Waves

This wave has a **backwash that is stronger** than the swash. This therefore erodes the coast.



Case Study – Holderness Coastline

This coastline in North East England has one of the highest rates of coastal erosion in Europe. The geology is **soft boulder clay** and the rate of erosion is **1.8m a year** on average.

Holderness Coast



Protecting the Holderness Coastline:

1. Mableton village has had to be protected at a cost of **£2 million**. They installed 61,000 tonnes **rock armour** and a **stone groyne**.
2. There are also sea defences at **Hornsea** where they have placed a **sea wall** and **groynes** to absorb the power of the waves.
3. The gas terminal at **Easington** supplies 25% of the UK's gas and is right on the edge of the cliff.

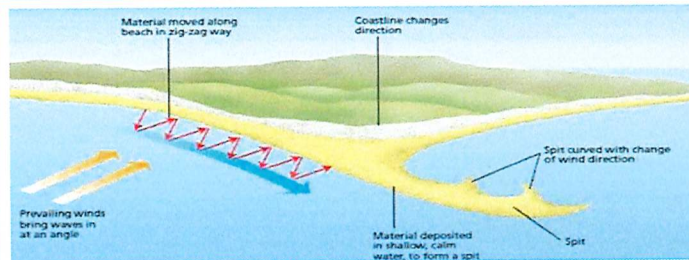
These **hard engineering** strategies do halt the process of erosion where they are installed, but **move the problem** to other parts of the coastline.

What is Deposition?

When the sea or river loses energy, it **drops the sand, rock particles and pebbles** it has been carrying. This is called **deposition**.

Formation of Coastal Spits - Deposition

Example:
Spurn Head,
Holderness Coast.



- 1) **Swash** moves up the beach at the angle of the prevailing wind.
- 2) **Backwash** moves down the beach at 90° to coastline, due to gravity.
- 3) Zigzag movement (**Longshore Drift**) transports material along beach.
- 4) **Deposition** causes beach to extend, until reaching a river estuary.
- 5) Change in **prevailing wind** direction forms a hook.
- 6) Sheltered area behind spit encourages **deposition**, salt marsh forms.



Year 10 Coasts

Erosion Processes		Transportation Processes	
The break down and transport of rocks – smooth, round and sorted.		A natural process by which eroded material is carried/transported.	
Attrition	Rocks that bash together to become smooth/smaller.	Solution	Minerals dissolve in water and are carried along.
Solution	A chemical reaction that dissolves rocks.	Suspension	Sediment is carried along in the flow of the water.
Abrasion	Rocks hurled at the base of a cliff to break pieces apart.	Saltation	Pebbles that bounce along the sea/river bed.
Hydraulic Action	Water enters cracks in the cliff, air compresses, causing the crack to expand.	Traction	Boulders that roll along a river/sea bed by the force of the flowing water.

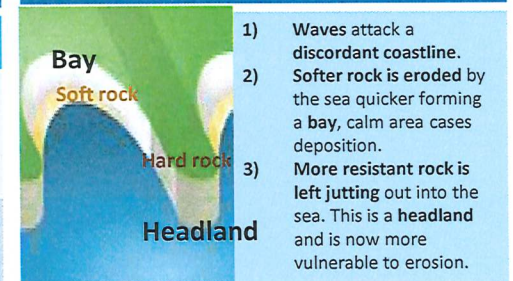


Coastal Defences

Hard Engineering Defences

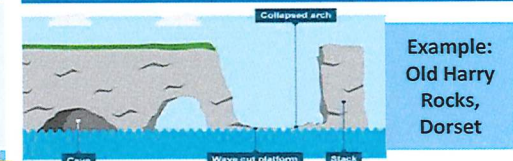
Groynes	Wood or stone barriers prevent longshore drift, so the beach can build up.	<ul style="list-style-type: none"> ✓ Beach still accessible. ✗ No deposition further down coast = erodes faster.
Sea Walls	Concrete walls break up the energy of the wave. Has a lip to stop waves going over.	<ul style="list-style-type: none"> ✓ Long life span. ✓ Protects from flooding. ✗ Curved shape encourages erosion of beach deposits. ✗ Expensive.
Gabions (or Rip Rap)	Cages of rocks/boulders absorb the waves energy, protecting the cliff behind.	<ul style="list-style-type: none"> ✓ Cheap. ✓ Local material can be used to look less strange. ✗ Will need replacing.

Formation of Bays and Headlands



- 1) Waves attack a **discordant coastline**.
- 2) **Softer rock** is eroded by the sea quicker forming a **bay**, calm area causes deposition.
- 3) **More resistant rock** is left **jutting out** into the sea. This is a **headland** and is now more vulnerable to erosion.

Formation of Coastal Stack - CASS



Example:
Old Harry
Rocks,
Dorset

Soft Engineering Defences

Beach Nourishment	Beaches built up with sand, so waves have to travel further before eroding cliffs.	<ul style="list-style-type: none"> ✓ Cheap. ✓ Beach for tourists. ✗ Storms = need replacing. ✗ Offshore dredging damages seabed.
Managed Retreat	Low value areas of the coast are left to flood & erode.	<ul style="list-style-type: none"> ✓ Reduce flood risk. ✓ Creates wildlife habitats. ✗ Compensation for land.

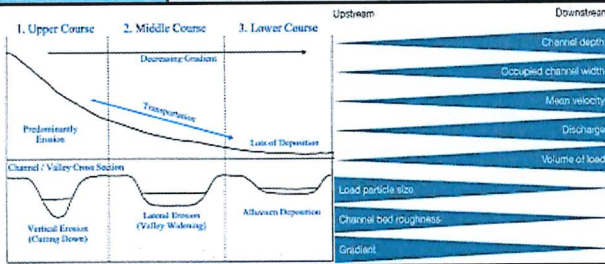
Holderness Coastline

- 1) **Hydraulic action** widens cracks in the cliff face over time.
- 2) **Abrasion** forms a wave cut notch between high tide and low tide.
- 3) Further abrasion widens the wave cut notch to form a **CAVE**.
- 4) Caves from both sides of the headland break through to form an **ARCH**.
- 5) Weather above/erosion below – arch collapses leaving **STACK**.
- 6) Further weathering and erosion leaves a **STUMP**.

Year 10 Rivers

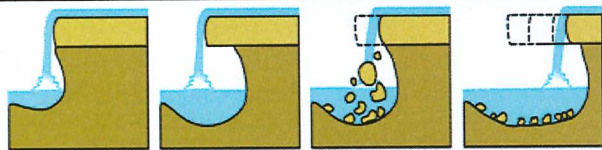
Water Cycle Key Terms

Precipitation	Moisture falling from clouds as rain, snow or hail.
Interception	Vegetation prevents water reaching the ground.
Surface Runoff	Water flowing over surface of the land into rivers.
Infiltration	Water absorbed into the soil from the ground.
Transpiration	Water lost through leaves of plants.



River Long Profile & Cross Sections

Long Profile	Shows you how the gradient of the river changes.
Cross Profile	Shows you the width/depth of the channel.
Upper Course	Steep gradient, V-shaped valley, steep sides, narrow & shallow channel.
Middle Course	Medium gradient, gently sloping valley sides, wider & deeper channel.
Lower Course	Gentle gradient, very wide almost flat valley. Very wide & deep channel.



Upper Course Landforms

Waterfalls	Form when a river flows over an area of hard rock followed by an area of soft rock . The softer rock is eroded forming a step . A steep drop is eventually created - called a waterfall . Over time the hard rock is undercut by erosion, becomes unsupported and collapses. This causes abrasion leading to the formation of a plunge pool . Over time this process repeats leaving a steep sided gorge .
Interlocking Spurs	In the upper course most of the erosion is vertical (downwards) this creates steep sided v-shaped valleys. The rivers lack the power to erode laterally (sideways) so they have to wind around steep hillsides that stick out into their paths either side. The hillsides that 'interlock' are called interlocking spurs .

River Processes

As rivers flow, they **erode** material, **transport** it & then **deposit** it further downstream.

Erosion is the wearing away of the land/sediment. There are 4 types of erosion:	Transportation is the movement of eroded material. How material is moved depends on the size of the particles:
Attrition : Rocks that bash together to become smooth/smaller.	Traction : Large particles like boulders are pushed/rolled along.
Solution : A chemical reaction that dissolves rocks.	Saltation : Pebble-sized particles are bounced along the river bed.
Abrasion : Eroded rocks picked up by the river scrape and rub the river bed and river bank.	Suspension : Small particles like silt and sand are carried along by the water.
Hydraulic Action : Water enters cracks in the channel, air compresses, causing the crack to expand and break off.	Solution : Soluble materials e.g. limestone dissolved in the water and carried along.

Deposition is when a river drops eroded material. It occurs when a river loses velocity (speed). This happens mainly in the lower course.

Physical and Human Causes of Flooding.

There are several factors that **shorten lag time** so the **peak discharge** is higher and flooding more likely to occur.

Physical: Prolonged & heavy rainfall Long periods of rain causes soil to become saturated, reducing infiltration, increasing surface runoff ... which increases river discharge.	Physical: Geology Impermeable rocks such as granite causes surface runoff as they don't allow infiltration, this leads to increased river discharge.
Physical: Relief Steep-sided valleys channels water to flow quickly into rivers causing greater river discharge.	Human: Land Use Tarmac and concrete are impermeable. This prevents infiltration & causes surface runoff.

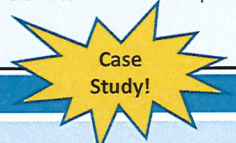
Hydrographs and River Discharge

River discharge is the volume of water that flows in a river. Hydrographs show how the discharge of a river changes in relation to rainfall.

- Peak discharge** is the discharge in a period of time.
- Lag time** is the delay between peak rainfall and peak discharge.
- Rising limb** is the increase in river discharge.
- Falling limb** is the decrease in river discharge to normal level.

River Management Schemes

Soft Engineering	Hard Engineering
<p>Afforestation: plant trees to soak up rainwater, reduces flood risk.</p> <p>Flood warnings: The Environment Agency sends out flood warning via media.</p> <p>Flood plain zoning: prevent building where floods are likely.</p> <p>River restoration: making the river more natural e.g. removing man made levees to allow floods.</p>	<p>Straightening Channel: increases velocity to remove flood water.</p> <p>Artificial Levees: heightens river so flood water is contained.</p> <p>Embankments/levees: raised banks so the river can hold more water.</p> <p>Flood relief channel: channels built to divert water around built up areas.</p>



Case Study: Boscastle Flood Defences

Location and Background: Boscastle in North Cornwall suffered a flood in 2004 which caused a million pounds worth of damage. Despite being vulnerable to flash floods, they had no modern flood defences.

Flood Management Scheme: Cost £4 million

- **Soft engineering**: a **gauge** was put in to measure river levels & improve **prediction**, dead trees & **vegetation removed**, car park has been raised, **flood plain zoning**.
- **Hard engineering**: the river **channel** has been **widened and deepened**, new **embankments built**, and old ones **strengthened**, new **bridge constructed**.

Social: the scheme will only protect residents from a **1 in 75 year flood**.
Economic: the scheme cost **£4million** but is not as good as it could be.
Environmental: **biodiversity** has increased as the river is now more **natural**.

Middle Course Landforms

Meanders	<p>Rivers develop large bends called meanders. Key features:</p> <ul style="list-style-type: none"> - The current is faster on the outside of the bend (as it is deeper) therefore erosion occurs creating a river cliff. - The current is slower on the inside of the bend (as it is shallower and there is more friction) therefore deposition happens forming a slip-off slope.
Oxbow Lakes	<p>Meanders can eventually form an oxbow lake. Key steps:</p> <ul style="list-style-type: none"> - Erosion causes the outside bends to get closer forming a narrow meander neck. - The river breaks through the neck usually during a flood and the river flows along the shortest route. - Deposition eventually cuts off the meander forming an oxbow lake.

Lower Course Landforms

Flood Plains	Flood plain is the wide valley floor on either side of the river which occasionally flood . When rivers flood the water slows down , loses energy and deposits material . This makes flood plains very fertile .
Levees	Levees are natural embankments (raised banks) along the edges of a river channel. During a flood material is deposited over the whole flood plain, the heaviest material is deposited closest to the river channel, over time the material builds up forming levees.
Estuaries	Estuaries are found at river mouths . The water here is tidal - the river level rises and falls everyday. At low tide wide mud flats of deposited material are exposed.

Health and Social Care Knowledge Organiser: Component 2 Health and Social Care Services and Values

Learning Aim A: Understand the different types of health and social care services and barriers to accessing them

Learning Aim B: Demonstrate care values and review own practice

Providing good health and social care services is very important and a set of 'care values' exist to ensure this happens. Care values are important because they enable people who use health and social care services to get the care they need and to be protected from different sorts of harm.

A1 Health and social care services

- 1. Different health care services and how they meet service user needs**
 - a. Primary care, e.g. dental care, optometry, community health care
 - b. Secondary & tertiary care, e.g. specialist medical care
 - c. Allied health professionals, e.g. physiotherapy, occupational therapy, speech and language therapy, dieticians
- 2. Different social care services and how they meet service user needs**
 - a. Services for children and young people, e.g. foster care, residential care, youth work
 - b. Services for adults or children with specific needs (learning disabilities, sensory impairments, long-term health issues) e.g. residential care, respite care, domiciliary care
 - c. Services for older adults, e.g. residential care, domiciliary care
 - d. Role of informal social care provided by relatives, friends and neighbours

B1 Care values

1. Empowering and promoting independence by involving individuals, where possible, in making choices
2. Respect for the individual by respecting service users' need, beliefs and identity
3. Maintaining confidentiality
4. Preserving the dignity of individuals to help them maintain privacy and self-respect
5. Effective communication that displays empathy and warmth
6. Safeguarding and duty of care
7. Promoting anti-discriminatory practice by being aware of types of unfair discrimination and avoiding discriminatory behaviour



A2 Barriers to accessing services

- 1. Types of barriers and how they can be overcome by the service providers and users**
 - a. Physical barriers, e.g. issues getting into and around the facilities
 - b. Sensory barriers, e.g. hearing and visual difficulties
 - c. Social, cultural and psychological barriers, e.g. lack of awareness, differing cultural beliefs, social stigma, fear of loss of independence
 - d. Language barriers, e.g. differing first language, language impairments
 - e. Geographical barriers, e.g. distance of provider, poor transport links
 - f. Intellectual barriers, e.g. learning difficulties
 - g. Resource barriers for service provider, e.g. staff shortages, lack of local funding, high local demand
 - h. Financial barriers, e.g. charging for services, cost of transport, loss of income while accessing services

B2 Reviewing own application of care values

- 1. Key aspects of a review**
 - a. Identifying own strengths and areas for improvement against the care values
 - b. Receiving feedback from teacher or service user about own performance
 - c. Responding to feedback and identifying ways to improve own performance



Year 10 History: Term 3

Medicine Through Time

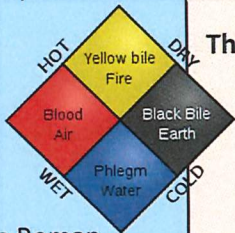
Medieval Period: 1250-1500 AD

Hippocrates:

- Born c. 460 BC on the Greek island of Cos.
- Worked as a doctor and teacher.
- Created the Theory of Four Humours. This was the idea that the four humours (blood, phlegm, black and yellow bile) caused disease.

Galen:

- Galen was a Roman physician, who lived during the 2nd century AD.
- Built on the work of Hippocrates. Thought of the 'theory of opposites' and published his ideas in around 60 books.
- The Theory of Opposites is the idea that you need to rebalance your humours by doing the opposite of your symptoms.



Renaissance Period: 1500-1700

William Harvey:

- Discovered that the heart acts like a pump and pumps blood around the body
- Disproved the idea that blood is produced in the liver
- Theorised that the body had capillaries that were too small for the naked eye to see.



Thomas Sydenham:

- Grouped symptoms together for different illness. Before this people treated the symptoms separately.
- He encouraged people to observe their patients and keep notes to help their future practice.

Andreas Vesalius:

- Wrote a book called the Fabric on the Human Body
- He found over 300 mistakes in Galen's work.
- Vesalius' work had detailed drawings of the human body (anatomy)



Industrialised Britain:

1700- 1900

Edward Jenner:

- Created a vaccine for Small pox by using the cowpox variant of the illness. He did not understand why this worked

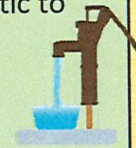
Florence Nightingale:



- A nurse in the Crimean War. Demanded that hospital wards were kept clean and orderly. Established the first school to train nurses. The mortality rate in the Crimean hospital dropped to 2%.

James Simpson:

- Discovered the use of chloroform as an anaesthetic to put patients to sleep during surgery.

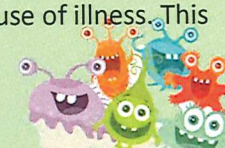


John Snow:

- Theorised that Cholera was spreading through the Broad Street water pump in London. He plotted the cases of cholera on a map to prove his idea and the pump was closed.

Louis Pasteur:

- Discovered that germs/bacteria was the cause of illness. This is known as Germ Theory.



Joseph Lister:

- Used carbolic acid as an antiseptic in surgery, reducing the number of deaths due to infection. This was unpopular at first.

Robert Koch:

- Father of bacteriology. Used Pasteur's 'germ theory' to identify the specific germs, which caused specific diseases (e.g. TB). He dyed the bacteria in petri dishes to help with this.

31

20th Century – Present Day

Rosalind Franklyn:

- Took the first photographs of DNA.

Francis Crick and James Watson:

- Discovered the structure of DNA.



Alexander Fleming:

- First discovered the potential of using penicillin as an antibiotic.

Florey and Chain:

- First tested penicillin on humans and developed it into a usable drug to be used during WWII.



How are the causes, treatments and prevention methods for disease different between the time periods in Medicine Through Time?

<u>Time Period</u>	<u>Causes of illness</u>	<u>Treatments for illnesses</u>	<u>Prevention Methods</u>	<u>Hospitals</u>
Medieval Period (1250-1500)	<ul style="list-style-type: none"> • Theory of Four Humours • God sends disease to punish the sinful • Astrology • Miasma (bad/polluted air) 	<ul style="list-style-type: none"> • Theory of Opposites • Praying to God • Planet alignments • Herbal Remedies • Purging • Bleeding 	<ul style="list-style-type: none"> • Regimen Sanitatis (instructions from your doctor on how to live a healthy life) • Bathing • Live a sin free life • Exercise • Have a good diet • Purify the air with sweet smelling herbs or flowers • Quarantine 	<ul style="list-style-type: none"> • Lazar Houses: The living place of those who suffered from leprosy. Lazar houses separated lepers from everyone else. • By 1500 there were around 1,100 hospitals on England, but they rarely treated the sick and were run by monks or nuns as a part of monasteries • They were kept clean • The sick were mostly treated at home
Renaissance (1500-1700)	<ul style="list-style-type: none"> • Miasma (bad/polluted air) • Astrology • God sends disease as a punishment 	<ul style="list-style-type: none"> • Transference: Transfer the illness to something else • Chemical Cures • Herbal Remedies 	<ul style="list-style-type: none"> • Regimen Sanitatis (instructions from your doctor on how to live a healthy life) 	<ul style="list-style-type: none"> • Pest Houses: New types of hospitals for a single disease in order to stop illness spreading e.g Small Pox. • People began to be treated for disease. Physicians could visit you in hospital. Ran by charities. • Sick were mostly treated at home
Industrial Britain (1700-1900)	<ul style="list-style-type: none"> • Spontaneous Generation: microbes were caused <i>by</i> decay. • Germ Theory: Germs caused things to decay and therefore also cause illness. 	<ul style="list-style-type: none"> • Surgery: More complicated surgeries were being performed due to the use of anaesthetics but people often died due to complications. 	<ul style="list-style-type: none"> • Vaccinations • Disinfectants e.g. Carbolic acid • Inoculations: infecting yourself with a weak form of a disease (such as smallpox) in order to avoid a more serious case of it later 	<ul style="list-style-type: none"> • By 1700, there were only 5 major hospitals However, the number began to increase because of charities and physicians began to offer their services free so they could practice their skills. • Each hospital had a pharmacy and nurses who cared for patients. • When Florence Nightingale returned from the Crimean War in 1856 she changed the hospitals in Britain. She adopted the Pavilion style, which helped increase ventilation, more windows and separate wards for different illnesses.
20 th Century – Present Day	<ul style="list-style-type: none"> • Germ Theory • Genetic Illness (DNA) • Lifestyle choices 	<ul style="list-style-type: none"> • Antibiotics/Drugs • Penicillin • Operations • Chemotherapy 	<ul style="list-style-type: none"> • Healthy Diet • Exercise regularly • Vaccinations • Government campaigns to highlight dangers of lifestyle choice e.g. smoking. 	<ul style="list-style-type: none"> • The NHS was created in 1948, making medical care free to all British Citizens

WJEC – VOCATIONAL IT YEAR 10 SUMMER TERM

STORAGE

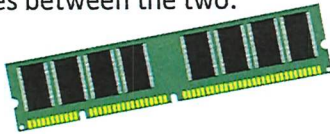
Primary storage provides fast access to the CPU. That allows active programs to deliver optimal performance to the end-user.

RAM and ROM

RAM (Random Access Memory) and ROM (Read-Only Memory) both store data but there are a number of key differences between the two.

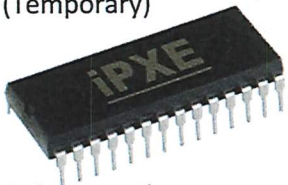
RAM

Volatile memory
 Read and write data
 Stores programs/data currently in use.
 Expandable
 Contents change frequently (Temporary)



ROM

Non-volatile memory
 Reads data
 Stores instructions required to boot up the computer (BIOS)
 Soldered onto the motherboard
 Contents hardly ever change. (Permanent)

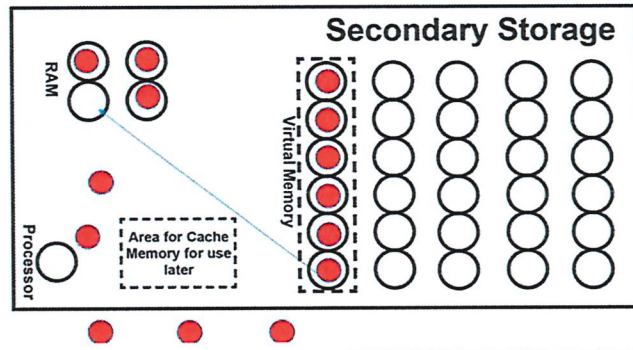


Difference between volatile and non-volatile memory.

Volatile memory means when the computer is switched off, data is lost. Whereas, non-volatile memory has the ability to retain data even when the computer is switched off.

Virtual Memory

When the RAM becomes full, the overflow of data normally stored in the RAM will be stored in Virtual Memory which is located on the hard drive. Once space becomes available, data will move from VM and back to RAM. However this is a slow process.



BIOS:

BIOS stands for Basic Input/Output System. It designed to boot up the computer using a POST (Power on self-test) and determine what hardware is connected to the system.

Secondary storage is a non-volatile form of storage which means data can be stored and accessed later on. It's not as close to the CPU as RAM therefore, it can be slower to access data.

KEY TERMS

COST	How much the device costs per MB?
CAPACITY	How much space is available on the storage device?
RELIABILITY	Longevity – how well it can maintain the same level of performance over time.
DURABILITY	How resistant it is to external factors such as being dropped, scratched and how it responds to being in extreme conditions.
PORTABILITY	How easy is it to transport from one place to another.
SPEED	How quickly the data can be read and transferred from the storage device.

MAGNETIC STORAGE

The most common example of magnetic storage is a Hard Drive. The hard drive contains a number of moving mechanical parts such as a spinning platter with a thin magnetic coating. A "head" moves over the platter, writing 0's and 1's on the platter.

Pros: Low cost per GB, It has an unlimited number of read/write cycles.

Cons: Slow to read and write data because it uses an actuator arm.
Uses more energy.



OPTICAL STORAGE

Optical storage works when lasers write data to the disc and read from it using a series of pits and lands. Examples of magnetic storage include: CD, DVD and Blu-ray

Pros: Portable as it's small, lightweight and easy to carry around.
Reliable if it's looked after properly (i.e. in a protective case)

Cons: Might not be as durable because the disk may get scratched.
Low capacity in comparison to other portable alternatives (e.g. USB flash drive)

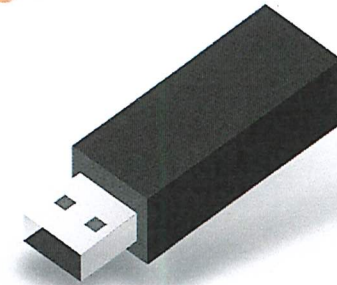


SOLID-STATE STORAGE

A solid-state drive (SSD) is a solid-state storage device that uses integrated circuit to store data persistently, typically using flash memory. Examples include Solid-State Drive, USB Flash Drive and SD Card.

Pros: No spin up time, fast access to data, silent, more robust, uses less energy and no moving parts.

Cons: High cost (compared to HDD), relatively low write speed and has a limited of read/write cycles.



CLOUD STORAGE

Cloud storage is a form of online storage that enables data to be stored and backed up over a network. Many individuals and organisations will pay cloud service providers to store their data remotely which can be accessed anywhere as long as there is an internet connection.

Pros: Data is backed up frequently and easy to recover. You can extend the amount of available storage by varying how much you pay. Since your data is stored remotely you can access it whether you are in Manchester or Madrid.

Cons: Data is held offsite by a company you do not control. If your Internet connection fails, so does your access to remotely stored data. Difficult to migrate data to another cloud provider later on.



GCSE Mathematics Command Words

PLOT

Mark a point on a graph using a cross

MEASURE

Find the length or a line or size of an angle using ...

... a ruler or protractor

CONSTRUCT

Create an accurate drawing using the correct maths equipment

Think ruler and compass

EXPAND

Remove brackets from an algebraic expression

$$3(x + 4) = 3x + 12$$

GIVE or JUSTIFY

Use reasons to explain thinking

Think angle facts
'angles at a point sum to 360°'

REPRESENT

Display information in a graph or chart

FIND

Work out an answer to a problem

Think averages - find the mode

SOLVE

Find the solution to an equation such as

$$4x - 3 = 24$$

SHOW

Give all working to get the answer

EVALUATE or CALCULATE or WORK OUT

Find the value (calculate)

Evaluate 4^3 : $4 \times 4 \times 4 = 64$

CONVERT

Change from one form to another

Think units and fractions, decimals & percentages

EXPLAIN

Give reasons to support the decision or answer

SIMPLIFY

Make an algebraic expression simpler by collecting like terms OR make a ratio or fraction simpler by cancelling common factors

ROUND

Make a number simpler but keep its value close to what it was

74.26 rounded to 1dp is 74.3

ORDER

Use a rule to arrange
Think ascending and descending

DRAW

Create a neat drawing that shows key features

FACTORISE

Put brackets into an algebraic expression

$$x^2 + 6x + 8 = (x + 2)(x + 4)$$

ESTIMATE

Give a sensible approximate answer using rounding

WRITE

Give the answer

SKETCH

Create a rough drawing that shows key features (no need to use a ruler or compass)

DESCRIBE

Use correct maths vocabulary to explain key features

Think transformations

LABEL

Attach the correct name to the diagram

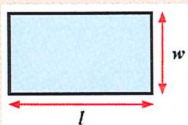
COMPLETE

Fill in missing values in a table or on a diagram

Foundation GCSE Mathematics Key Information

Area of a Rectangle

$$A = l \times w$$



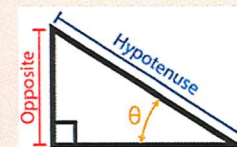
Speed



Percentage Change

$$\frac{\text{actual change}}{\text{original}} \times 100$$

Sinθ



$$\text{Sin}\theta = \frac{\text{Opp}}{\text{Hyp}}$$

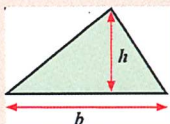
Prime Number

A number that has exactly 2 factors

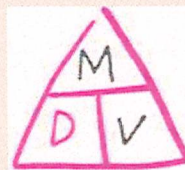
2, 3, 5, 7, 11, 13, 17, ...

Area of a Triangle

$$A = \frac{1}{2} \times b \times h$$

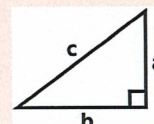


Density

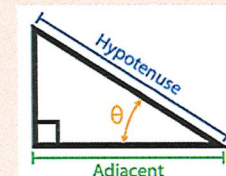


Pythagoras' Theorem

$$a^2 + b^2 = c^2$$



Cosθ



$$\text{Cos}\theta = \frac{\text{Adj}}{\text{Hyp}}$$

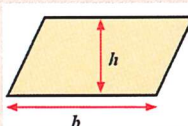
Square Number

A number multiplied by itself

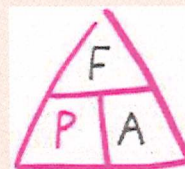
$$5^2 = 5 \times 5 = 25$$

Area of a Parallelogram

$$A = b \times h$$



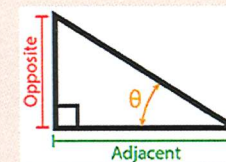
Pressure



Metric Length Conversions

1km = 1000m
1m = 100cm
1cm = 10mm

Tanθ



$$\text{Tan}\theta = \frac{\text{Opp}}{\text{Adj}}$$

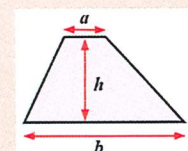
Cube Number

A number multiplied by itself and then itself again

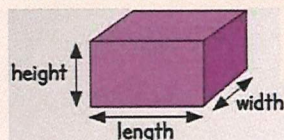
$$5^3 = 5 \times 5 \times 5 = 125$$

Area of a Trapezium

$$A = \frac{1}{2} \times (a + b) \times h$$



Volume of a Cuboid



$$V = l \times w \times h$$

Metric Mass Conversions

1 tonne = 1000kg
1kg = 1000g
1g = 1000mg

Exact Values of Sin

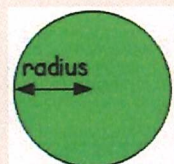
θ	0°	30°	45°	60°	90°
sinθ	0	1/2	√2/2	√3/2	1

Multiple

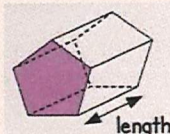
The first 5 multiples of 12 are 12, 24, 36, 48 and 60

Area of a Circle

$$A = \pi \times r^2$$



Volume of a Prism



$$V = \text{area of cross-section} \times \text{length}$$

Metric Capacity Conversions

1l = 1000ml
1l = 100cl
1cl = 10ml

Exact Values of Cos

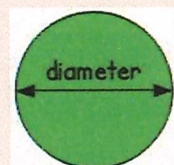
θ	0°	30°	45°	60°	90°
cosθ	1	√3/2	√2/2	1/2	0

Factor

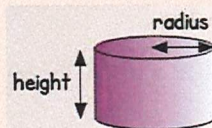
The factors of 12 are 1, 2, 3, 4, 6 and 12

Circumference of a Circle

$$C = \pi \times d$$



Volume of a Cylinder



$$V = \pi \times r^2 \times h$$

Error Interval

7.4 rounded to 1dp

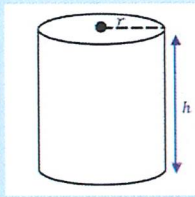
$$7.35 \leq x < 7.45$$

Exact Values of Tan

θ	0°	30°	45°	60°	90°
tanθ	0	1/√3	1	√3	

Higher GCSE Mathematics Key Information

Cylinder



$$Vol = \pi r^2 h$$

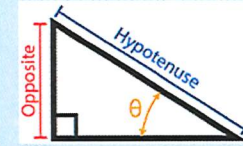
Speed



Percentage Change

$$\frac{\text{actual change}}{\text{original}} \times 100$$

Sinθ



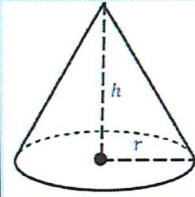
$$\sin\theta = \frac{\text{Opp}}{\text{Hyp}}$$

Quadratic Formula

$$ax^2 + bx + c = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Cone



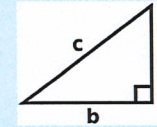
$$Vol = \frac{1}{3} \pi r^2 h$$

Density

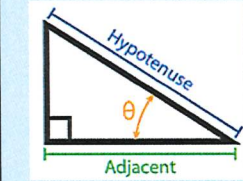


Pythagoras' Theorem

$$a^2 + b^2 = c^2$$



Cosθ



$$\cos\theta = \frac{\text{Adj}}{\text{Hyp}}$$

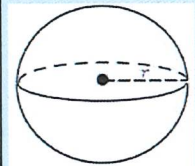
Surds

$$\sqrt{a} \times \sqrt{a} = a$$

$$\sqrt{a} \times \sqrt{b} = \sqrt{ab}$$

$$\frac{\sqrt{a}}{\sqrt{b}} = \sqrt{\frac{a}{b}}$$

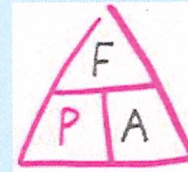
Sphere



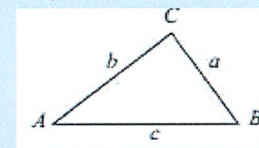
$$Vol = \frac{4}{3} \pi r^3$$

$$S.A. = 4\pi r^2$$

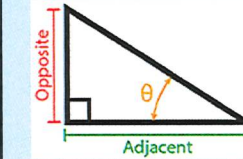
Pressure



Trigonometry Non-right angled triangles



Tanθ



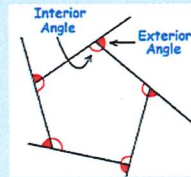
$$\tan\theta = \frac{\text{Opp}}{\text{Adj}}$$

Error Interval

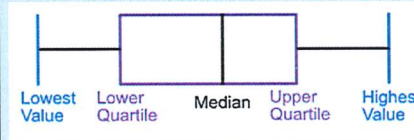
7.4 rounded to 1dp

$$7.35 \leq x < 7.45$$

Angles in Polygons



Box Plots



Sine Rule

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

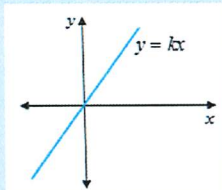
Exact Values of Sin

θ	0°	30°	45°	60°	90°
sinθ	0	1/2	√2/2	√3/2	1

Direct Proportion

$$y \propto x$$

$$y = kx$$



sum interior angles = $(n - 2) \times 180^\circ$

sum exterior angles = 360°

interior + exterior = 180°

Histogram

bar chart with unequal bar width and frequency density on vertical axis
Frequency density = frequency ÷ class width

Cosine Rule

$$a^2 = b^2 + c^2 - 2bc \cos A$$

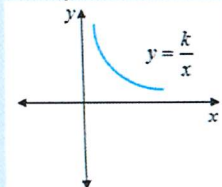
Exact Values of Cos

θ	0°	30°	45°	60°	90°
cosθ	1	√3/2	√2/2	1/2	0

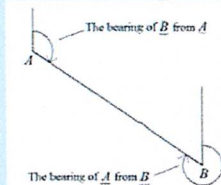
Inverse Proportion

$$y \propto \frac{1}{x}$$

$$y = \frac{k}{x}$$



Bearings



Rules of Indices

Rule 1 $a^0 = 1$	Rule 4 $(a^m)^n = a^{m \times n}$
Rule 2 $a^m \times a^n = a^{m+n}$	Rule 5 $a^{-m} = \frac{1}{a^m}$
Rule 3 $a^m \div a^n = a^{m-n}$	Rule 6 $a^{n/m} = \sqrt[m]{a^n}$

Area Triangle

$$\text{Area} = \frac{1}{2} ab \sin C$$

Exact Values of Tan

θ	0°	30°	45°	60°	90°
tanθ	0	1/√3	1	√3	



Media Studies

Key Words

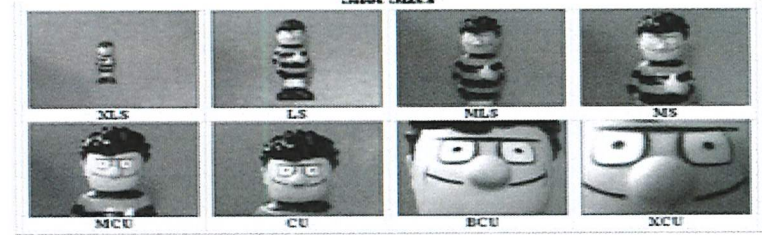
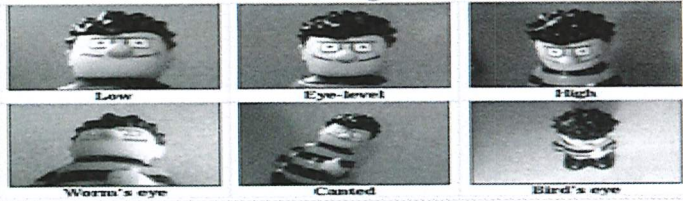
Blockbuster	a Hollywood movie that's made with a large budget and big stars.
Independent Film	An indie film is any feature-length or short film that is made without a major studio or big production company attached.
Marketing	the action or business of promoting and selling products or services, including market research and advertising.
Vertical Integration	Vertical integration refers to the process of acquiring business operations within the same production vertical. A company that opts for vertical integration takes complete control over one or more stages in the production or distribution of a product.
Conglomerate	a large corporation.
Subsidiaries	a company controlled by a holding company.
Horizontal Integration	Horizontal integration and vertical integration are competitive strategies that companies use to consolidate their position among competitors. Horizontal integration is the acquisition of a related business. A company that opts for horizontal integration will take over another company that operates at the same level of the value chain in an industry.
Zeitgeist	the defining spirit or mood of a particular period of history as shown by the ideas and beliefs of the time.
Globalisation	the process by which businesses or other organizations develop international influence or start operating on an international scale.
Public Service Broadcaster	Public broadcasting involves radio, television and other electronic media outlets whose primary mission is public service.
Commercial Broadcaster	Commercial broadcasting is the broadcasting of television programs and radio programming by privately owned corporate media, as opposed to state sponsorship.
Manufactured Artist	artists who don't have any input in their music, have writing camps and have a big team of people working with them to make decisions.
Authentic Artist	Artists that influence their own music and image.
Performance Video	A video that is styled to be like a performance to an audience.
Narrative Video	A video with a story.
Convergence	Technological convergence, also known as digital convergence, is the tendency for technologies that were originally unrelated to become more closely integrated and even unified as they develop and advance.
Freemium Gaming	Freemium, a portmanteau of the words "free" and "premium," is a pricing strategy by which a basic product or service is provided free of charge, but money is charged for additional features, services, or virtual or physical goods that expand the functionality of the free version of the software.
Intrinsic Narrative	Story is written for the player to play.
Extrinsic Narrative	Story can be controlled and changed by the player.
Hyperreality	an inability of consciousness to distinguish reality from a simulation of reality, especially in technologically advanced postmodern societies

Key Theories

Connell's Theory of Gender	Subordinated Femininity: women are subservient to men and have little power. Emphasised Femininity: the idea that women must conform to the needs and desires of men, through their looks and sexual appeal. Resistant Femininity: women as resisting the stereotypes and presenting themselves as powerful. Hegemonic Masculinity: perpetuates the idea that men are dominant in society/ Stereotypical, manly man. Complicit Masculinity: men who subvert the stereotypes of men, often engaging more with 'feminine' roles such as the stay at home dad. Subordinated Masculinity: LGBTQ+. Considered to lack power in society.
Laura Mulvey's Male Gaze Theory	Laura Mulvey's Male Gaze Theory: Female images in media texts are objectified and viewed through the eyes of a heterosexual man.
Judith Butler's Theory of Gender Stereotypes	Suggests that the existence of stereotypes is due to the fact that they are repeated over and over again in the media.
Propp's Character Theory	Hero, Villain, False Hero, Donor (gives the hero something), Helper, Princess, Father, Dispatcher (sends hero on their way).
Todorov's Theory of Equilibrium	Equilibrium: state of balance. Disequilibrium: state of conflict/chaos. New Equilibrium: resolution.
Binary Opposites	opposition exists in narratives to propel a story forward.
Enigma Codes	questions/mystery exist in media texts to engage the audience.
Active Audience Theories	Suggests that audiences can respond to and interpret media texts in their own ways. Uses and Gratifications Theory: suggests audiences choose to go to media texts to gain: Personal Identity, Information, entertainment, education or social interaction. Dyer's Utopian Theory: suggests audiences go to media texts to gain a sense of escapism from their normal lives.
Passive Audience Theories	Suggests that audiences accept the messages of the media without questioning them. Hypodermic Needle Model: messages are injected into the minds of audiences, without them questioning it. Cultivation Theory: The more an audience is exposed to something, the more likely they are to believe it is true.

Media Studies

Shot Angles



Codes	Technical, written and symbolic tools used to construct or suggest meaning in media forms and products.
Genre	a style or category of art, music, or literature.
Mise-en-scene	the arrangement of the scenery, props, etc. on the stage of a theatrical production or on the set of a film. The setting or surroundings of an event.
Anchorage	Where the meaning of a media text is fixed or stabilised by a caption, shot type, costume or so on (ie: <i>it anchors the meaning</i>).
Semiotics	the study of signs and symbols and their use or interpretation.
Signifier	a sign's physical form (such as a sound, printed word, or image) as distinct from its meaning.
Signified	the idea or meaning being expressed by that signifier.
Denotation	the literal meaning of a sign.
Connotation	the associated meaning of a sign.
Polysemic	a sign with multiple connotations can be described as polysemic.
Representation	the way a person or social group is presented.
Conform	following the rules or expectations.
Subvert	going against the rules or expectations.
Under-representation	a person or social group who isn't represented often or enough in media.
Misrepresentation	a person or social group is represented inaccurately through media.
Stereotypes	an assumption made about a person or social group.
Direct Mode of Address	visually, looking towards the audience, verbally, addressing them with "you."
Indirect Mode of Address	no reference made to the audience; lack of eye contact or direct speech.
Demographic	socioeconomic factors relating to an audience.
Psychographic	specific interests or attitudes of an audience.
Geographic	the location of a specific audience.

Social Mobility	the movement between social class levels.
Cultural Capital	social assets (education, intellect, style of speech, dress, etc.) The term was coined by 1970s French sociologist Pierre Bourdieu, who developed the idea as a way to explain how power in society was transferred and social classes maintained.
Mass Audience	a large audience, made up of varying demographics, psychographics and geographics.
Niche Audience	a specific audience type with specific interests and socioeconomic factors.
Diegetic Sound	Natural, ambient sound.
Non-Diegetic Sound	Edited or added sound.
Dialogue	Speech in a narrative.
Cross Cut	Transitioning between two lines of action, indicating they are happening at the same time.
Cutting on action	Transitioning from one angle of the action, to the other, to show what has happened.
Continuity editing	Editing that creates a smooth flow to the order of events.
Dissolve	A gradual scene transition, where the end of one shot is overlapped by another.
Montage	Many scenes edited together to create a summary of events.
Jump Cut	A cut that creates a lack of continuity, by leaving out parts of the action.
Smash Cut	An abrupt cut, going from loud to quiet, or quiet to loud.
Invisible Cut	Where the cut is hidden, so the audience are unable to see it.
Shot reverse shot	Cutting between over the shoulder shots, to show a conversation taking place.
Shallow Focus	Where the subject closest to the camera is in focus.
Deep Focus	Where the subject furthest away from the camera is in focus.
Focus Pull	Pulling the focus from shallow to deep, or deep to shallow.
J-Cut	Where the audio begins before the scene in which it appears.
L-Cut	When the audio from the previous scene continues into the next scene.
CGI	Computer Generated Image.
Panning, tracking and tilting	Panning – camera stays put, but pans the scene in front. Tracking – camera moves with the subject moving in the shot, or follows the subject around. Tilting – camera stays still, but tilts up and down.

Clarinet Concerto in A Major 3rd Movement Rondo

Solo instrument plays main melody

Piece with solo instrument and orchestral accompaniment

Overall key of the piece

We're just learning the final 3rd part of a full concerto which has 2 sections before ours

Form/structure of the piece with A,B,A,C,A sections

MUSIC

36 (242)

Rondo.
Allegro.
SOLO

Flauti.
Flutes

Fagotti.
Bassoons

Corni in A.
Horns

Clarinetto principale in A.
Solo Clarinet

Violino I.
Violin 1

Violino II.
Violin 2

Viola.
Viola

Violoncello.
Cello

Contrabasso.
Double Bass

Horns in A
The natural horns can only play limited notes so Mozart uses the horn that is already in the key of A and it doesn't need a key signature. To play more notes, the horn player inserts crooks.



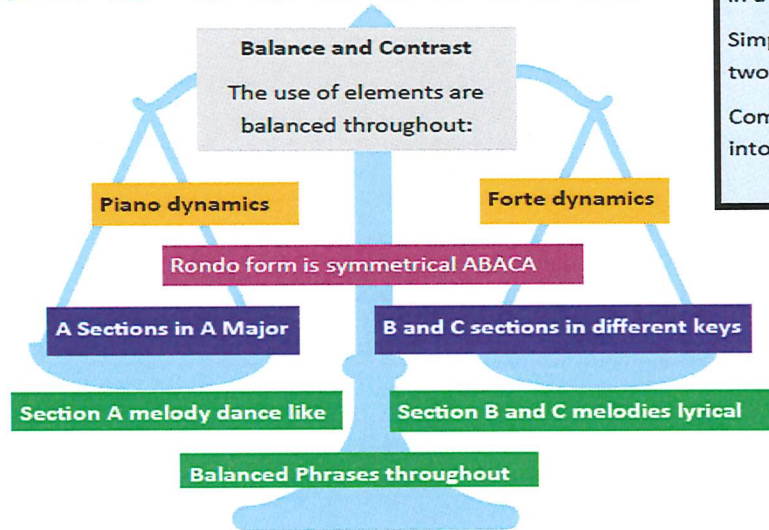
Diatonic
Overall the harmony of the piece is diatonic. This means it follows the rules of key signatures, chords and cadences

Tempo
The tempo is Allegro which means fast

Mozart Set Work



Transposing Instruments
Most instruments are in the key of C but the clarinet is a transposing instrument in the key of A. This means it has a different key signature than the other instruments.



Compound Time Signature
The piece is in 6/8 which means 6 quaver beats in a bar split into two sets of 3 quavers.

Simple time split into two quavers: $\frac{3}{4}$ |

Compound time split into three quavers: $\frac{6}{8}$ |

Dynamics
The piece mostly uses piano (quiet) and forte (loud) dynamics creating a sense of balance. There are some crescendos (gradual change to loud) and *sfp* sforzando piano is used for sudden loud to quiet

	Section A	Section B	Section A1	Section C			Section A3	
					Section A2	Section B2		Coda
Melody	Conjunct 2 bar phrases Dance-like feel	Conjunct and disjunct 4 bar phrases Lyrical feel	Conjunct 2 bar phrases Dance-like feel	Disjunct 4 bar phrases Lyrical feel	Variation of main theme heard with just part of it	Conjunct and disjunct 4 bar phrases Lyrical feel	Conjunct 2 bar phrases Dance-like feel	
All themes use chromatic notes								
Tonality	Tonic key– A Major	Starts in Tonic key A Major Lots of modulations to different major and minor keys	Tonic key– A Major	Starts in relative minor key– F# Minor Lots of circle of fifths modulations	Changing key to lead back into tonic	Starts in Tonic key A Major Lots of modulations to different major and minor keys	Tonic key– A Major	
Harmony	Section A melody and whole section ends on perfect cadence to sound finished	Section B ends on dominant after lots of key changes to help lead back into tonic next section	Starts on tonic to re-establish tonic key A Major	Dominant chords used for quick circle of fifths key changes	Ends on dominant after key changes to help lead back into tonic next section	Ends on dominant after key changes to help lead back into tonic next section	Starts on tonic to re-establish tonic key A Major	Whole piece ends with perfect cadence to sound finished
Texture	Some unison and octaves used in accompaniment		Homophonic to end section with all parts moving together			Imitation used creating contrapuntal texture		Homophonic to end section with all parts moving together
Mostly Melody and Accompaniment texture throughout to bring out the solo clarinet part								
Rhythm	Section A melody has anacrusis to drive melody forward	Section B melody does not have anacrusis to contrast and help with lyrical feel	Hemiola used created by tremolo effect making it feel like a different time signature– builds tension at end of section	Section C melody has anacrusis similar to section A	Section A melody has anacrusis to drive melody forward	Two big pauses interrupt the flow of the pulse	Section A melody has anacrusis to drive melody forward	

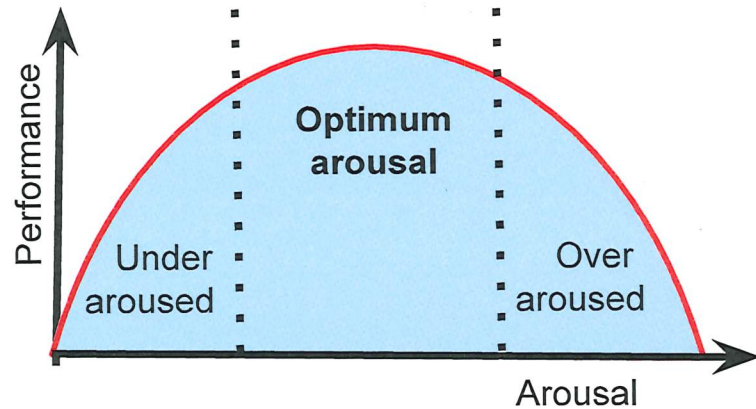
Arousal and mental preparation

A

Arousal

Arousal is a state of alertness / excitement varying from deep sleep to intense excitement.

Inverted U Theory

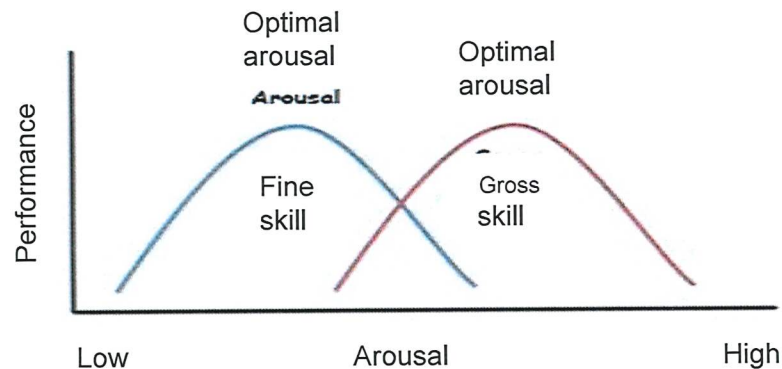


B

Optimal arousal

Optimal arousal levels vary according to the **skill** being performed in a physical activity or sport.

Higher optimal arousal levels are associated with gross skills. E.g, a rugby tackle.



B

Controlling arousal

Arousal can be controlled using stress management techniques before or during a sporting performance

Deep breathing

If a performer becomes very aroused, their breathing can become rapid and erratic. By using deep breathing techniques and taking long, deep breaths the breathing can be returned to normal and supply of oxygen to the brain increases.

Mental rehearsal/visualisation/imagery

This requires the performer to change the way they think in order to change the way they behave. These changes must be aimed at making the performer more relaxed and calm. It could include:

- remembering a previous successful action or performance,
- Imagining a positive outcome..

These techniques would need to be carried out before a sporting performance.

Positive self-talk.

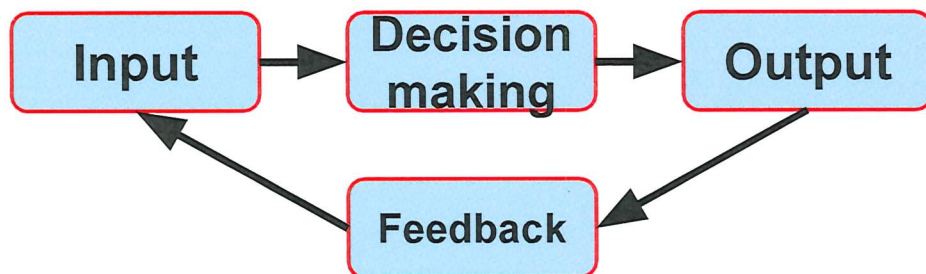
This involves a Performer mentally reflecting and "reframing" their thoughts, making sure that any negative thoughts are replaced by more positive ones. E.g. after a bad shot in tennis rally and lost the point, reframe in order to consider how you could have selected a more appropriate shot.

Information Processing model

A

The information processing model

Information processing is where you make decisions based on gathering information (stimuli) from your senses; such as what you see and hear. You prioritise important stimuli and make a decision on what action to perform



C

Sporting examples

Input: The player uses selective attention to see the ball coming towards him and the players around him

Decision making: From past experience in the long-term memory he decides what position to get into and when to move the body

Output: He moved into position and twists his foot at the ball

Feedback: He misses the ball. He feels off balance (intrinsic feedback) as his standing foot was too close to the ball.

Input: A boxer sees her opponent has her guard down

Decision-making: From past experience in the long-term memory she decides what position to get into and when and how to throw a punch. She decides to use a right hook.

Output: She moves into position throws the right hook.

Feedback: She successfully knocked out her opponent. She receives intrinsic feedback about how the punch felt and extrinsic feedback from her coach who says she kept her elbow high.



B

Input

The information received from your senses (display) by selective attention.

Selective attention: when you focus on the important information (stimuli). When performing a skill there can be a lot of information around you. You have little time to select the relevant information such as the speed and direction of the ball and ignore irrelevant such as noise from the crowd.

Decision making

The selection of an appropriate response using the information (input) and what is stored in the long-term memory

Long-term memory: The information that has been rehearsed and stored for future reference. the more you practice, the more information about a skill or technique is stored in the memory and can be recalled in the future.

Short-term memory: Only lasts for a few seconds. It is a working memory you used while completing a skill, E.g. attention to your opponent's position when passing a ball in Rugby

Output

The information you send to your muscles to carry out the response.

Feedback




A review of your response which can be intrinsic or extrinsic.

Intrinsic feedback: This is within the performer. They understand how the movement feels from feedback from the muscles. E.g. a footballer may understand why skills performed badly based on the feeling of the contact between the ball and the foot.

Extrinsic feedback: Feedback from outside of the performer. It is important as someone watching the skill can observe and explain what needs to be done to correct it. E.g. a coach could give a diver feedback about their tuck position

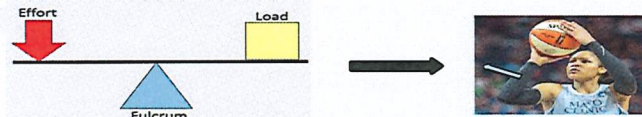
GCSE Physical Education – Movement analysis

Levers – a rigid bar that moves around a pivot point with force applied to it.

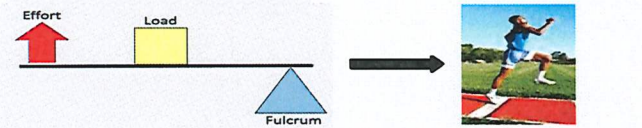
Fulcrum (F)	Effort (E)	Load (L)
A fixed pivot point 	The source of energy that will be applied 	The weight/resistance to be moved 

Classes of lever

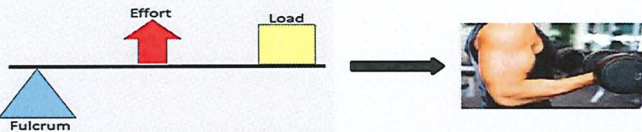
First class lever:



Second class lever:

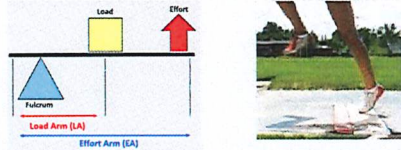


Third class lever:



Mechanical advantage

This is where a lever's **effort arm** is greater than its **load arm**.

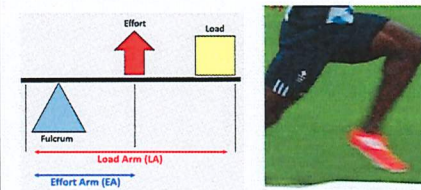


Large loads can be moved with limited effort.


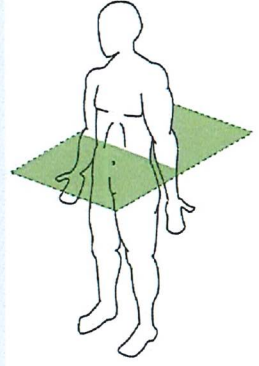
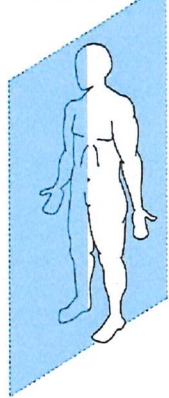
REMEMBER 1,2,3 - FLE

Mechanical disadvantage

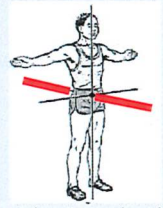

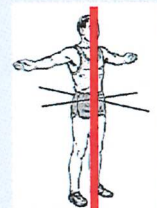

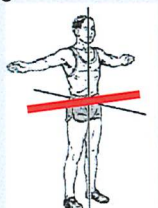

This is where a lever's **load arm** is longer than its **effort arm**.



Planes – imagery lines that divide the body into two.

Frontal plane	Transverse plane	Sagittal plane
A vertical plane but this divides the body into front and back . 	A horizontal plane that divides the body into upper and lower halves. 	A vertical plane that divides the body into right and left sides. 

Axes – imagery lines that the whole body turns around.

Frontal axis	Longitudinal axis	Transverse axis
Runs through the body horizontally from the back to front.  Example: Cartwheel 	Runs through the body vertically from the top to bottom.  Example: Full twist 	Runs through the body horizontally from the left to right.  Example: Somersault 

Skill, Target Setting, Feedback and Guidance

1. Setting Goals

A

S = Specific

- Using a specific target will mean they focus on area for improvement/weakness/relevant aim **(1)** therefore improvement is more likely leading to motivation **(1)**

M = Measurable

- By setting a measurable goal they can see progress / monitor progress **(1)** knowing their training is working/ improving will motivate them to continue with it. **(1)**

A = Accepted

- The target must be accepted / agreed by the performer and the performers coach if they have one.

R = Realistic

- Ensuring target is achievable/realistic so they know they can complete it/they have access to facilities/time **(1)** which motivates them to continue to train/work hard **(1)**

T = Time Bound

- Make time bound/time based so there is a definite point when the target must be achieved **(1)** therefore makes them motivated to work hard to achieve within time frame/keeps training interesting/ challenging as won't get bored with same target as set new target

B

Goal Setting:

Helps motivate performers and gives them a target to aspire to which helps them prepare both physically and mentally.

Performance Goals

- Personal standards to be achieved.
- The performer compares their performance against what they have already done or suggests what they are going to do. E.g. 100m runner hopes for a better start.
- They DO NOT compare themselves to other performers.

Outcome Goals

- Focus on end result. E.g. 100m runner aims to win the race.
- They usually involve comparison with other competitors.
- The performer's standards may not be seen as important, it is the final outcome that matters.

C

Use of Performance Goals

- Beginners are better concentrating on performance goals as they do not need to worry about comparing the result to others.
- Elite performers use performance goals to help motivate themselves to work on individual aspects of their performance.

Outcome Goals

- Beginners prefer to avoid outcome goals as failure demotivates them and winning may be unrealistic.
- Elite performers are sometimes driven by outcome goals as they always have the desire to win.

2) Classification of Skills

A

Basic

- Very little decision making is required
- Few decision affect the success of the movement
- Are learnt fairly quickly

Complex

- A lot of decision making is required
- Take considerable time to master
- Tend to be taught after basic skills are done correctly

B

Open

- The environment is constantly changing and people around you affect the skill.
- This type of skills is often externally paced as the changing environment controls what skill is performed and when.

Closed

- Stable environment, meaning the environment does not change.
- The way the skill is performed is not affected by people around you.
- The skill will not change and is done the same way every time.
- Often self paced as performed controls when skill starts.

C

Gross

- Involves big movements using large muscle groups.
- Movements tend not to rely of accuracy and precision.

Fine

- Involves small, precise movements that use small muscle groups.
- Movements tend to involve precision and accuracy.

D

Self Paced

- The start of the movement is controlled by the performer.
- The speed, pace or rate of the movement is controlled by the performer.

Externally Paced

- The start of the movement is controlled by external factors.
- The speed, pace or rate of the movement is controlled by external factors.

3) Feedback

Intrinsic – feedback from within e.g. kinaesthetic feel (how a shot / skill feels like to the performer themselves).

Extrinsic – feedback from an external source e.g. from a coach or teacher.

Positive –. Positive feedback is essential to motivate athletes / performers.

Negative – Negative feedback must include information that helps the performer develop and improve (what they need to do to get better).

Knowledge of results (KR) – Feedback about the outcome (factual e.g. you won etc).

Knowledge of performance – Feedback about the quality of performance e.g. technique.

4) Guidance

Visual

Is when the performer can see something e.g. demonstration by coach, skill performed by another player, DVD footage.

Verbal

Is when the performer is spoken to by another person. E.g. teacher or coach. It is commonly used with visual guidance

Manual

The performer is physically moved by another person e.g. coach

Mechanical

The use of mechanical aids to assist a performer e.g. swimming floats.

Photography

AO3 Record

AO1 Develop

This includes; visual references / mind-map / mood board / contextual research / analysis // photoshoots/ gallery visit

- You must **complete contextual research and analysis** on your chosen photographer as well including other image references.
- Email contemporary photographers you are looking at and ask them contextual information
- You must **explain** how you intend to **develop your own ideas** from looking at the work of your chosen artist/ photographer/ reference
- Extensive photoshoot planning making connections between your idea and photographers techniques to develop your own ideas

This includes; Photoshoot plan / Photoshoot / Basic edits / Annotations / thumbnails

- Extensive photoshoot planning making connections between your idea and photographers techniques to develop your own ideas.
- In your photoshoots, you should show **clear connections** to your photographer but then **develop your ideas** further through trying out different composition/clothing/props/lighting.

Photoshoots must include and consider:

- Photoshoot plan / sketch of thumbnails
- 30-35 images - correctly exposed and lighting style considered
- Location/Background

- Varied composition, viewpoints, camera angle, Depth
- **Sketchbook Presentation Success Criteria**
- Connections to photographer and own ideas developed
- Contact sheet - annotated
- Basic edits of best photos x 3

- Visit galleries and complete trips, you must respond to these in your sketchbook.
- In your photoshoots, you should show **clear connections** to your photographer but then **develop your ideas** further through trying out different composition/clothing/props/lighting.
- Your ideas should link together in your sketchbook, so there is clear development / progression of an idea (**try not to jump randomly from one idea to another**).
- Your final outcome should be linked to the final experimentation in your sketchbook, to show how your ideas have developed. Alternatively, you can bring various ideas together into one last photo shoot. **Avoid using your first photo shoot as a final outcome.**

AO2 Refine

When you edit images you must ensure they...

- **Link to your chosen theme / photographer** - make sure they are **appropriate**
- Edit in three different ways, at least 1 x hand rendered and 1 digital.
- Be **imaginative** within your selection of media and techniques don't just copy or be obvious.
- **Screen shot** your editing process as you go to show your process. Use **labels** of the type of media used for hand rendering
- **Annotations** must be evaluative! If you think something could be improved make sure you apply it or evidence it in your book.

You can also show refinement through; **through photography (no edits) interpret with different styling/makeup/subject matter/composition**

Annotation checklist

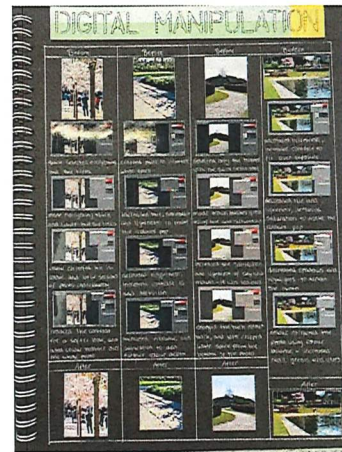
- **What** have you done?
- **How** have you done it?
- **What** inspired you?
- **What** else did you try?
- **Why** was it successful?
- **Is** there anything you would change/need to do now?

Sentence starters:

- I have explored... in response to...
- I think that... is successful because...
- I could develop this technique by...
- This technique wasn't successful because...
- I could improve this technique by...

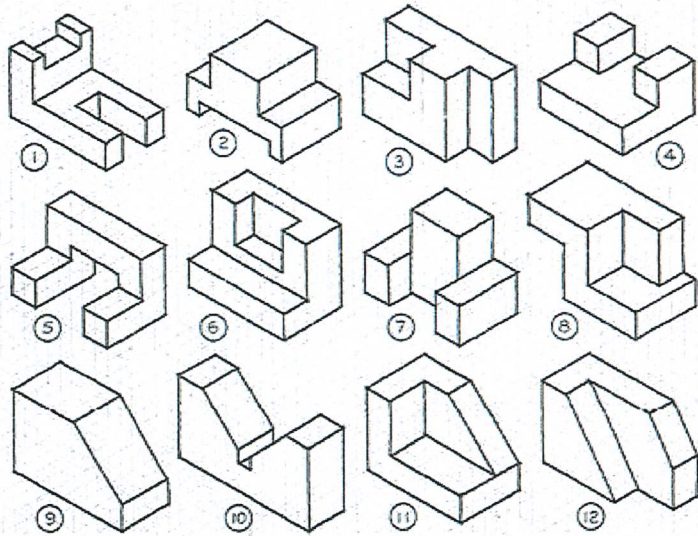
I have:

- ✓ Used appropriate colours in the background, title and writing.
- ✓ Used appropriate font for the title.
- ✓ Considered the layout of my page.
- ✓ Presentation is neat - nothingshould be stuckin wonkily.
- ✓ Used a guillotine to trim photographs.

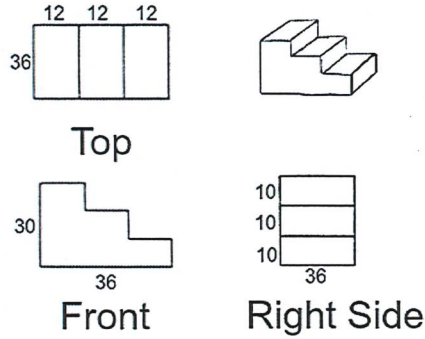


Product Design

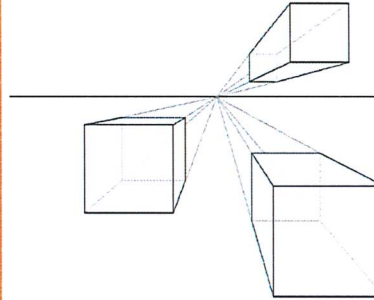
Isometric Drawing



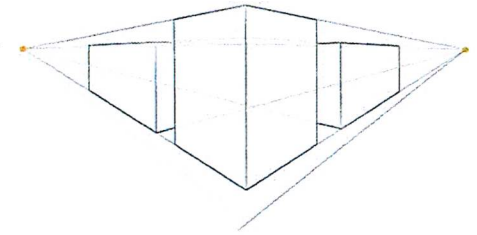
Orthographic Drawing



One Point Perspective



Two Point Perspective



Research Types:

Location Analysis
Product Analysis
Designer
Design Movements
Museum

Freehand Drawing

Light Sketch



Refine



Refine



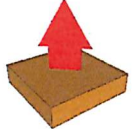
Define



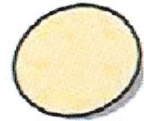
Google Sketch Up Tools



Rectangle Tool



Push/Pull Tool



Shape Tool



Eraser Tool



Pan Tool



Line Tool



Orbit Tool



Select Tool



Move Tool



Paint Bucket Tool

Key Words

Design Specification: This is a list of criteria that your design ideas should include.

Quality Control: The way in which you can ensure a product is good quality.

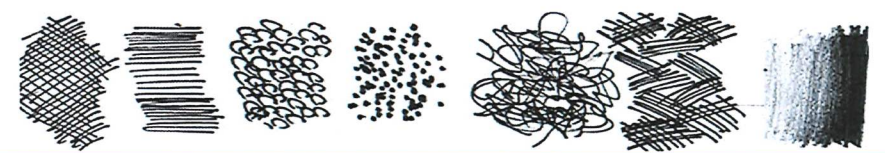
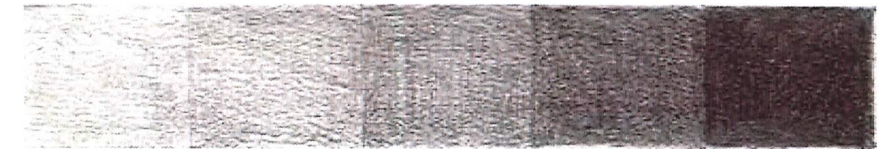
Hazard: An object or activity that could cause a risk (harm).

Risk: The harm/danger that is caused by the hazard.

Control: A way in which you can prevent the risk from happening.

Tone and Texture

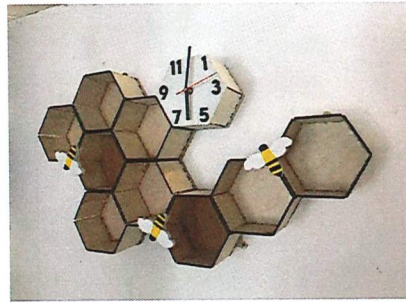
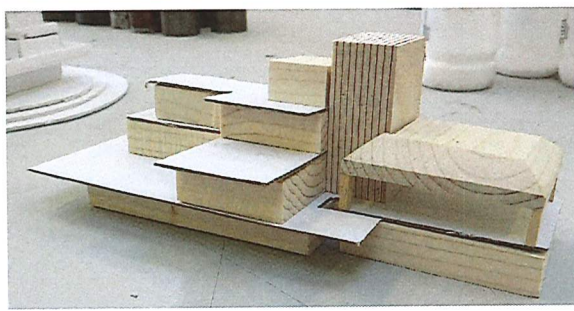
Different marks/tones can be used to render a design idea to make it look 3D.



Product Design

Final Idea Modelling:

- Remember to take pictures along the way.
- What materials could you use to model your idea?
- Did it work? Explain your answer.
- Describe the quality of your work.
- What could you do to improve and refine your idea?
- What finishes will you apply to the final product?



Annotating
All of your work must be accompanied by a brief annotation.

WHAT
 What have you done?
 What was your inspiration?

HOW
 How did you come up with your ideas?
 How did you create the piece?
 How does the piece link to your artist/designer?

WHY
 Why did you make the piece, how does it link to the project?
 Why did you make the piece that way?

WWW/EBI
 What has gone well?
 What can be improved?
 Which is the best one and why?

NEXT –
 Your next steps are...? How will you develop your ideas?

Writing about the work of other artists/designers:

Paragraph 1 - Introduction
 This should be brief. Look at their work and research key information about them to provide a contextual context.

- Nationality
- Dates - Are they contemporary or from a key historical movement
- Notable pieces of work and or style Avoid referring them by their first name, use a full name or surname.

Avoid irrelevant or uninteresting information.

Paragraph 2 - Form

1. Select one particular pieces to explore in detail.
2. Describe what you see as if explaining it to someone over the telephone.
3. Consider the formal element of line, shape, tone/value, colour, space, etc.

Paragraph 3 - Context

- What is the piece inspired by?
- How can you tell?
- How does the artist/designer link to your project?






Paragraph 4 - Opinion
 Give your thoughts and feelings about their work.
 What is effective about the artwork and would you change anything? Explain why.

Paragraph 5 - Inspiration
 What will you take away as inspiration for your own work? How might you respond?

GCSE Assessment Objectives			
AO1	AO2	AO3	AO4
Develop your ideas through investigating artists, designers and other appropriate sources. Demonstrate critical understanding of sources.	Refine your work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.	Record your ideas, observations and insights that are relevant to your project intentions as work progresses. Annotate work and include drawings within your sketchbook.	Present a personal and meaningful response that realises your project intentions and demonstrates understanding of visual language.

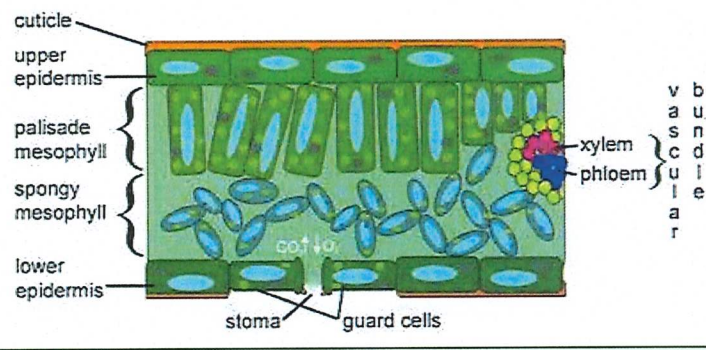
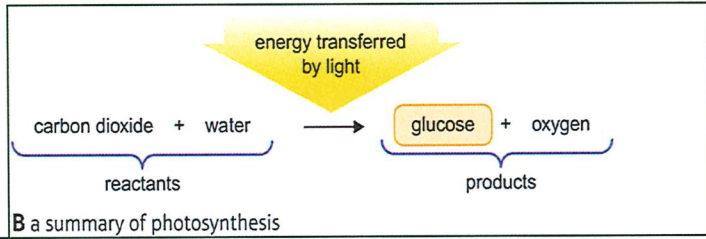
AQA Religious Studies A – Christian Beliefs

Key Words			
Ascension	Jesus returning to be with God in heaven after the crucifixion	Omnipotent	God's nature as all-powerful
Atonement	Making things better after sinning, asking for forgiveness from God	Original Sin	The built-in tendency to do wrong which comes from Eve's disobedience
Benevolent	God's nature as all-loving	Resurrection	Jesus returning from the dead after he was crucified
Crucifixion	Jesus' execution by the Romans on the cross	Salvation	Being saved from sin and given eternal life in heaven by God
Incarnation	God becoming flesh in the form of Jesus Christ	Sin	Any thought or action which goes against God's will
Just	God's nature as fair; God is fair to us so we should be fair to others	Trinity	God's nature as three-parts-in-one, the Father, Son and Holy Spirit

Key Ideas			
<p style="text-align: center; font-weight: bold;">Nature of God</p> 	<ul style="list-style-type: none"> - Christians believe in one God who is the creator and the sustainer of all that exists - God is omnipotent which means they are almighty and have unlimited power - God is benevolent which means they are all-loving and all-good - God is just which means they are a perfect and fair judge - The Problem of Suffering asks: if God is all these things why do they allow bad things to happen to good and innocent people? 		
<p style="text-align: center; font-weight: bold;">The Trinity</p> 	<ul style="list-style-type: none"> - Christians believe God is three persons in one. This idea is called the Trinity. - Each person of the Trinity is fully God but the three persons of the Trinity are not the same. - The Father is the creator of all life - The Son is Jesus Christ who is both fully human and fully God - The Holy Spirit is the unseen power of God at work in the world, especially answering prayers <i>"We believe in one God, Father, Son and Holy Spirit"</i> – The Nicene Creed 		
<p style="text-align: center; font-weight: bold;">Incarnation and Crucifixion</p> 	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Crucifixion</p> <ul style="list-style-type: none"> - Jesus travelled to Jerusalem to preach and he was sentenced to death by Pontius Pilate - Jesus was then nailed to a cross where he died. - In his last moments Jesus was able to forgive those who were killing him showing Christians how important forgiveness is - This event is remembered on Good Friday <i>"Forgive them father, they know not what they do"</i> – Luke 23:34 </td> <td style="width: 50%; vertical-align: top;"> <p>Incarnation</p> <ul style="list-style-type: none"> - Christians believe that God was incarnated (born) in human form as Jesus Christ - Mary was impregnated by the Holy Spirit and gave birth as a virgin – for Christians this is proof of Jesus' status as the son of God - Christmas is the festival that celebrates the incarnation <i>"The word became flesh"</i> – John 1:14 </td> </tr> </table>	<p>Crucifixion</p> <ul style="list-style-type: none"> - Jesus travelled to Jerusalem to preach and he was sentenced to death by Pontius Pilate - Jesus was then nailed to a cross where he died. - In his last moments Jesus was able to forgive those who were killing him showing Christians how important forgiveness is - This event is remembered on Good Friday <i>"Forgive them father, they know not what they do"</i> – Luke 23:34 	<p>Incarnation</p> <ul style="list-style-type: none"> - Christians believe that God was incarnated (born) in human form as Jesus Christ - Mary was impregnated by the Holy Spirit and gave birth as a virgin – for Christians this is proof of Jesus' status as the son of God - Christmas is the festival that celebrates the incarnation <i>"The word became flesh"</i> – John 1:14
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<p style="text-align: center; font-weight: bold;">Sin and Salvation</p> 	<ul style="list-style-type: none"> - Christians believe you are judged after you die (see Religion and Life) and how well or badly you have lived and treated others decides if you go to heaven or hell - Sin is any action or thought that goes against God's will, Christians can look in the Bible for advice on what is a sin e.g. murder (you shall not kill) and adultery (cheating, you shall not commit adultery) - God gave humans free will but they should use that freedom to make good choices and not sin - Salvation is the idea that Jesus's crucifixion saves human beings from eternal damnation - The death of Jesus made up for original sin – the idea that we were all damned by Eve's choice to disobey God – it allows us to atone for sins and reach eternal life in heaven 		

BIOLOGY PLANTS

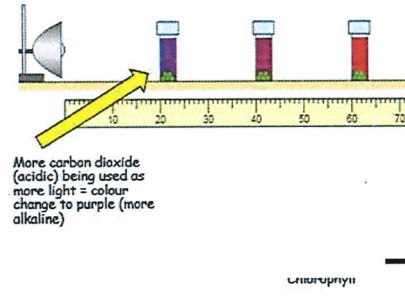
Photosynthesis



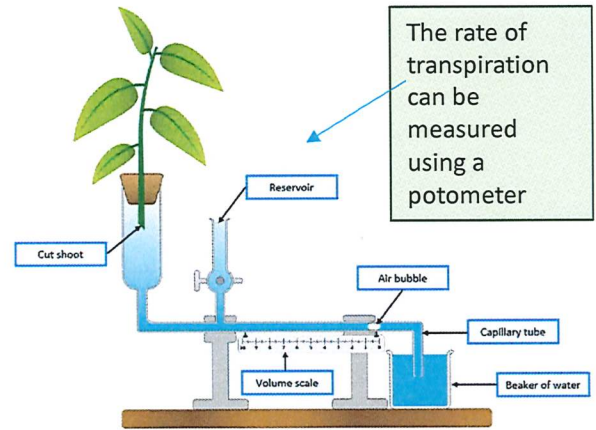
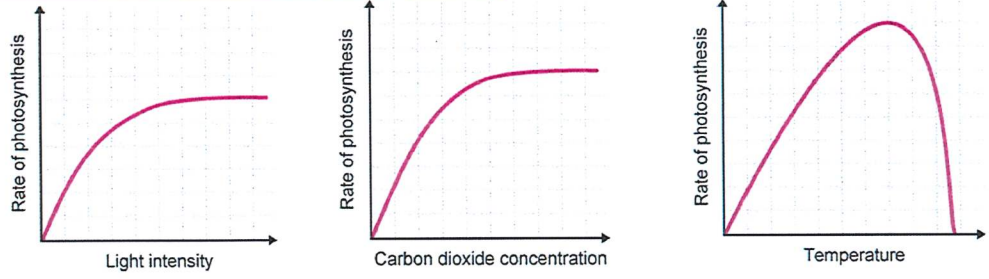
Measuring the effect of light intensity on the rate of photosynthesis core practical

Distance of bottle from lamp (cm)	Initial pH	Final pH	Change in pH
20	7.8	9.2	
40	7.8	8.8	
60	7.8	8.6	
80	7.8	8.3	
100	7.8	8.2	

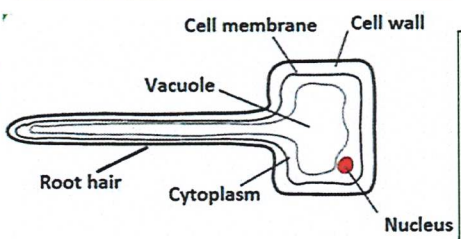
SUPPORT: The hydrogen carbonate indicator in the bottles changes colour as carbon dioxide levels change. The indicator goes purple when carbon dioxide levels are low and yellow when carbon dioxide levels are high. The closer the lamp, the more photosynthesis occurs, therefore the more carbon dioxide being used.



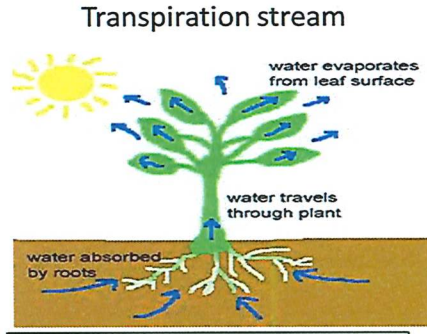
Factors affecting the rate of photosynthesis



Absorbing water and mineral ions



- Root hair cell**
- Increased surface area to absorb more water and mineral ions.
 - Many mitochondria provide energy needed for the *active transport* of mineral ions from the soil into cell
 - Water transported by osmosis through the roots to the xylem.



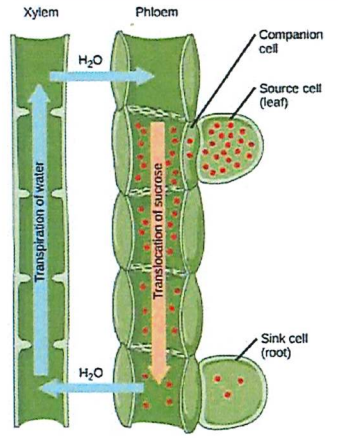
- Factors that affect transpiration:**
- Temperature
 - Wind
 - Humidity
 - Light

Transpiration

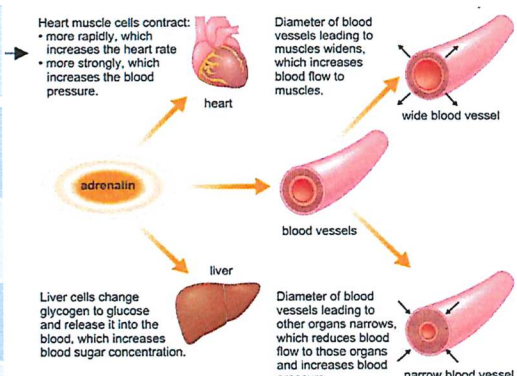
Water travels from the roots through the xylem in one direction and evaporates from the leaves through the stomata. Xylem tissue is made up of dead cells reinforced with lignin.

Translocation

Sugar travels from the leaves through the phloem up and down the plant. Phloem tissue is made up of living sieve cells and companion cells that use active transport to move sucrose.



Control of metabolic rate	
Adrenaline	Thyroxine
Produced by the adrenal glands	Produced by the thyroid gland
Target organs: Heart and lungs	Target organs: Heart, liver, lungs
Increase heart and breathing rate, causing vasodilation in order to supply more oxygen and glucose to the working muscles	Increase the heart, breathing rate and respiration rate



Hormones	Gland	Role	Interactions with other hormones
FSH	Pituitary Gland	Helps to develop egg cell inside follicle	Stimulates the production of oestrogen
oestrogen	Ovaries	Causes initial thickening of uterus lining	Stimulates the production of LH Inhibits the production of FSH
LH	Pituitary Gland	Helps to release egg cell from follicle (ovulation)	Stimulates the production of progesterone
progesterone	Corpus Luteum	Maintains the thickening of uterus lining	Inhibits the production of LH and FSH

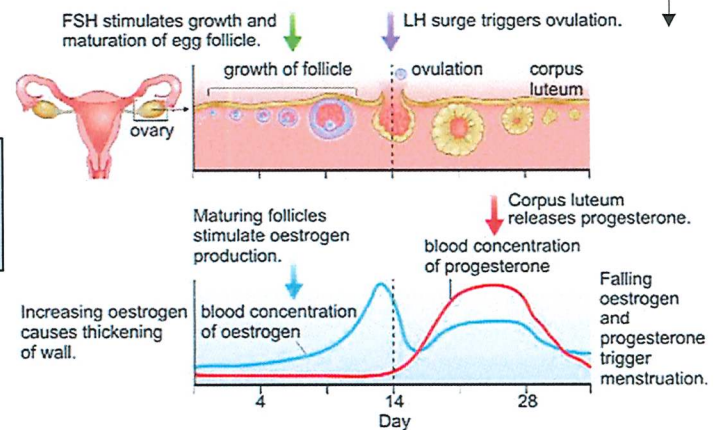
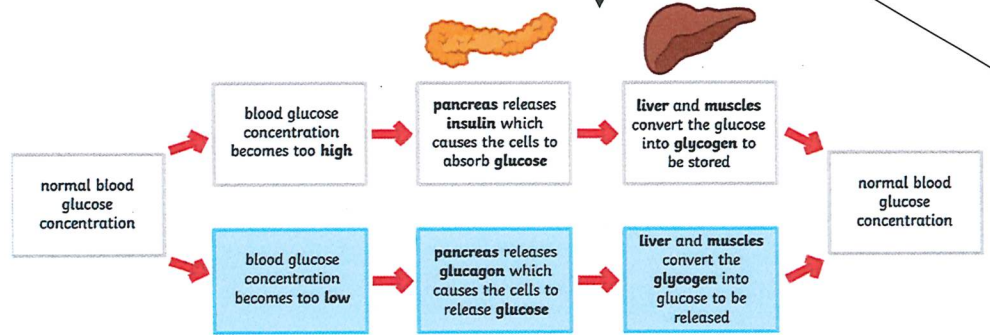
B7 HOMEOSTASIS (BIOLOGY)

Homeostasis **Hormones**

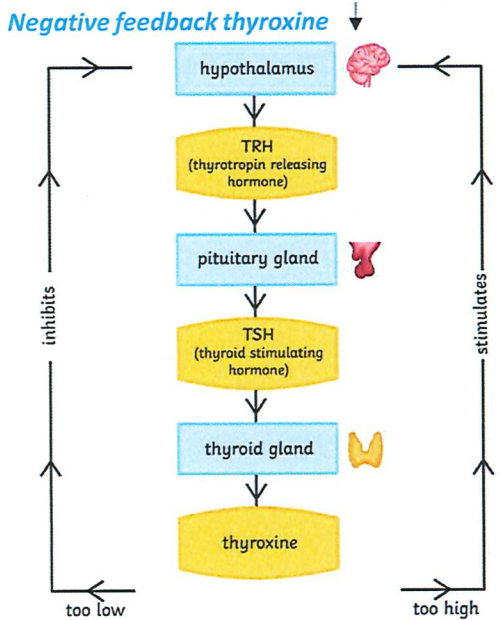
Regulation of a constant internal environment. The conditions are maintained to ensure optimum conditions for metabolism and changes in response to both internal and external fluctuations

Chemical messengers produced by glands and transported in blood to target organs to activate a response

Control of blood glucose



Diabetes type 1	Diabetes type 2
Pancreas produces little or no insulin	Pancreas produces little insulin or person become resistant to insulin
Treatment: Insulin injection and limited intake of sugars	Treatment: Healthy diet and regular exercise



Bond breaking takes in energy -
endothermic

Bond making releases energy -
exothermic

YEAR 10 CHEMISTRY HEAT CHEMICAL CHANGES IN CHEMICAL REACTIONS

Keywords

Exothermic	Transfers chemical energy to the surroundings - usually as heat.
Endothermic	A reaction that takes in energy from the surroundings and transfers it to a chemical store.
Activation Energy - E_a	The energy needed to start a reaction.
Bond energy	1. The energy needed to break the bond between two atoms - measured in KJ/mol 2. The energy released when a bond is formed between two atoms - measured in KJ/mol

Exothermic reactions

Transfers chemical energy to the surroundings - usually as heat.
The temperature will increase.



Combustion

Respiration

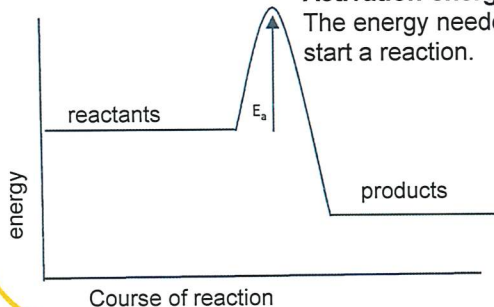
Activation energy, E_a

The energy needed to start a reaction.

Uses for exothermic reactions

Self heating cans

Handwarmer



Bond Energy

Add up the amount of energy required to break all of the bonds in the reactants.

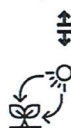
Add up the energy released when the products are formed.

Total energy required - total energy released

-ve = exothermic reaction
+ve = endothermic reaction

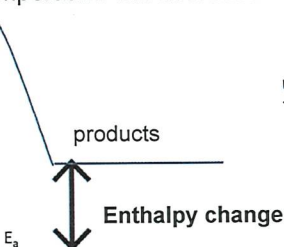
Endothermic reactions

A reaction that takes in energy from the surroundings and transfers it to a chemical store. The temperature will decrease.



Thermal decomposition

Photosynthesis



Uses for endothermic reactions

Cool packs, for sports injury

The **overall heat energy change** for a reaction is:

- **Exothermic** if more heat is released in forming bonds in the products than is required to break bonds in the reactants.
- **Endothermic** if less heat is released in forming the bonds in the products than is required in breaking bonds in the reactants.

Bond Energy

The overall energy change in a reaction

Step 1: Draw the structural formula of the reactants and products.

Step 2: Look up the energy associated with each bond.

Step 3: Add up the amount of energy required to break all of the bonds in the reactants.

Step 4: Add up the energy released when the products are formed.

Step 5: Subtract the energy released from the energy required.

-ve = exothermic reaction
+ve = endothermic reaction

YEAR 10 CHEMISTRY GROUPS IN THE PERIODIC TABLE

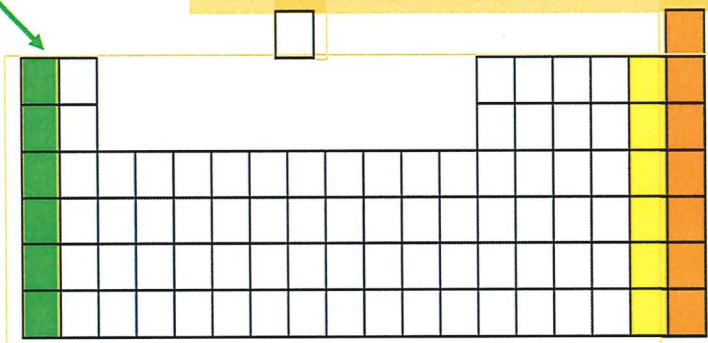
Group 1 - Alkali metals

Li
Na
K
Rb
Cs

More reactive down group

Because:
More electron shells

Outer shell electron easier to remove



Group 0- Noble gases

He
Ne
Ar
Kr
Xe

Unreactive

Full outer shell

Alkali metals have characteristic properties because of the single electron in their outer shell.

- Alkali metal + water → alkali metal hydroxide + hydrogen
- Alkali metal + chlorine → Alkali metal chloride
- Alkali metal + oxygen → Alkali metal oxide

As with other groups, there are trends in the physical properties of the noble gases

The noble gases have very **low melting** and **boiling points**. They show an **increase** in boiling point as we move **down** the group due to an increase in the **relative atomic mass** (the atoms get larger as you move down the group).

TRENDS IN GROUP 1

Trends are patterns of behaviour in **physical** or **chemical** properties. Following these trends seen in lithium, sodium and potassium, we can say that:

Rubidium, caesium and francium will react even more vigorously with air and water than the first three alkali metals

Of the alkali metals, lithium is the **least** reactive (as it is at the top of group 1) and francium would be the **most** reactive (as it's at the bottom of group 1)

Using the information given in the trends we would predict that **rubidium**:
 would be a **soft grey solid**
 would appear **shiny when freshly cut**
 would be **more dense** than potassium ($> 0.86 \text{ g cm}^{-3}$)
 would have a **lower melting point** than potassium ($< 63.5 \text{ }^\circ\text{C}$)

Group 7 - Halogens

Less reactive down group

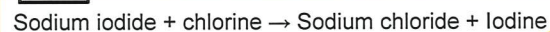
Because:
More electron shells

Harder to gain electron

F
Cl
Br
I
At

Displacement

More reactive halogen displaces less reactive

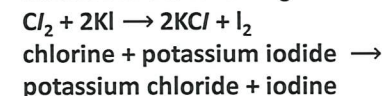


Halogen Displacement & Redox

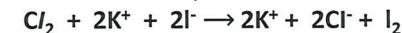
Recall that oxidation and reduction take **place together** at the **same time** in the **same reaction**

Oxidation is **loss** of electrons and reduction is the **gain** of electrons. Halogen displacement reactions are **redox reactions**

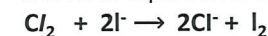
This can be seen if we analyse in more detail the displacement of iodine by chlorine in the following reaction:



The full ionic equation is:



The K^+ ions are **spectator ions** as they appear on both sides of the equation unchanged so can be eliminated. The net ionic equation is thus:



If we now analyse each half equation, we can see that each chlorine atom has been **reduced** as an electron is **gained** on changing from the chlorine molecule to chloride ions:



Each iodide ion has been **oxidised** as an electron is **lost** on changing from iodide ions to the iodine molecule:

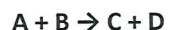


This shows that halogen displacement reactions are **redox processes**.

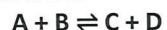
YEAR 10 TRIPLE DYNAMIC EQUILIBRIA

Reversible Reactions

You should know that in a chemical reaction, **reactants** react to make **products**:



However, in some chemical reactions the products can react together to reform the original reactants. This is called a **reversible reaction**, and we use a different arrow to represent it:



The top half of the arrow represents the **forward reaction**, where A and B makes C and D. The bottom half of the arrow represents the **reverse reaction** (sometimes called a **backwards reaction**), when C and D recombine to make A and B.

One of these reactions (forward or reverse) will release energy to the surroundings (**exothermic**), and the other will take in energy (**endothermic**).

The Haber Process

nitrogen + hydrogen \rightleftharpoons ammonia
 $N_2 + 3H_2 \rightleftharpoons 2NH_3$

The Haber Process is used to produce ammonia, which can be used to manufacture nitrogen-based **fertilisers**. This process is a reversible reaction between nitrogen (extracted from the air) and hydrogen (obtained from natural gas). This reaction can reach a **dynamic equilibrium**.

The conditions for the Haber Process are:
temperature of 450 °C
pressure of 200 atmospheres (atm)
iron **catalyst**

Dynamic equilibrium

Equilibrium is reached when the forward and reverse reactions, of a reversible reaction, occur at the *same rate* (the reaction must be in a **closed system**).

When the forward and reverse rates balance, and are equal, it can appear as if the reaction isn't doing anything - and is finished. What actually is happening is that the reactants are being converted into products at the same **rate** the products are converted back into reactants.

The concentrations of the reactants vs products are not necessarily equal, and there is usually more of one than the other:

if the concentration of the reactants is higher than products, we say the **equilibrium** lies to the left

if the concentration of the products is higher than the reactants, we say the **equilibrium** lies to the right

Dynamic equilibrium is when the forward and reverse reactions are still occurring (dynamic), but the substances remain in balance (equilibrium).

If a system is at **equilibrium** and a change is made to any of the conditions (temperature, concentration, pressure), then that system will respond to counteract the change. This is called **Le Chatelier's Principle**.

Changing concentration

if you add more reactant, the equilibrium will shift to the right to reduce the concentration of reactant (and make more product)
if you remove some of the product, the equilibrium will shift to the right to increase the concentration of the product

Changing temperature

if the temperature is increased then the equilibrium position will shift to reduce the temperature (so will favour the endothermic reaction)

if the temperature is decreased then the equilibrium position will shift to increase the temperature (so will favour the exothermic reaction)

Changing pressure

if you increase the pressure then the equilibrium will shift to reduce it (by favouring which ever side of the reaction has the fewest molecules of gas)

The periodic table of the elements

1		2												3	4	5	6	7	0		
														<div style="border: 1px solid black; padding: 2px; text-align: center;"> 1 H hydrogen 1 </div>							<div style="border: 1px solid black; padding: 2px; text-align: center;"> 4 He helium 2 </div>
		<div style="border: 1px solid black; padding: 5px;"> Key relative atomic mass atomic symbol name atomic (proton) number </div>										<div style="border: 1px solid black; padding: 2px; text-align: center;"> 11 B boron 5 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 12 C carbon 6 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 14 N nitrogen 7 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 16 O oxygen 8 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 19 F fluorine 9 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 20 Ne neon 10 </div>				
<div style="border: 1px solid black; padding: 2px; text-align: center;"> 7 Li lithium 3 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 9 Be beryllium 4 </div>											<div style="border: 1px solid black; padding: 2px; text-align: center;"> 27 Al aluminium 13 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 28 Si silicon 14 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 31 P phosphorus 15 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 32 S sulfur 16 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 35.5 Cl chlorine 17 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 40 Ar argon 18 </div>				
<div style="border: 1px solid black; padding: 2px; text-align: center;"> 23 Na sodium 11 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 24 Mg magnesium 12 </div>											<div style="border: 1px solid black; padding: 2px; text-align: center;"> 65 Zn zinc 30 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 70 Ga gallium 31 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 73 Ge germanium 32 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 75 As arsenic 33 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 79 Se selenium 34 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 80 Br bromine 35 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 84 Kr krypton 36 </div>			
<div style="border: 1px solid black; padding: 2px; text-align: center;"> 39 K potassium 19 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 40 Ca calcium 20 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 45 Sc scandium 21 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 48 Ti titanium 22 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 51 V vanadium 23 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 52 Cr chromium 24 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 55 Mn manganese 25 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 56 Fe iron 26 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 59 Co cobalt 27 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 59 Ni nickel 28 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 63.5 Cu copper 29 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 65 Zn zinc 30 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 70 Ga gallium 31 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 73 Ge germanium 32 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 75 As arsenic 33 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 79 Se selenium 34 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 80 Br bromine 35 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 84 Kr krypton 36 </div>				
<div style="border: 1px solid black; padding: 2px; text-align: center;"> 85 Rb rubidium 37 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 88 Sr strontium 38 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 89 Y yttrium 39 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 91 Zr zirconium 40 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 93 Nb niobium 41 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 96 Mo molybdenum 42 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> [98] Tc technetium 43 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 101 Ru ruthenium 44 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 103 Rh rhodium 45 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 108 Pd palladium 46 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 108 Ag silver 47 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 112 Cd cadmium 48 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 115 In indium 49 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 119 Sn tin 50 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 122 Sb antimony 51 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 128 Te tellurium 52 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 127 I iodine 53 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 131 Xe xenon 54 </div>				
<div style="border: 1px solid black; padding: 2px; text-align: center;"> 133 Cs caesium 55 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 137 Ba barium 56 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 139 La* lanthanum 57 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 178 Hf hafnium 72 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 181 Ta tantalum 73 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 184 W tungsten 74 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 186 Re rhenium 75 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 190 Os osmium 76 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 192 Ir iridium 77 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 195 Pt platinum 78 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 197 Au gold 79 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 201 Hg mercury 80 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 204 Tl thallium 81 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 207 Pb lead 82 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> 209 Bi bismuth 83 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> [209] Po polonium 84 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> [210] At astatine 85 </div>	<div style="border: 1px solid black; padding: 2px; text-align: center;"> [222] Rn radon 86 </div>				

* The elements with atomic numbers from 58 to 71 are omitted from this part of the periodic table.

The relative atomic masses of copper and chlorine have not been rounded to the nearest whole number.

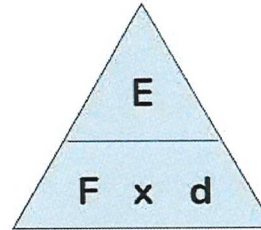
Energy - Forces doing work

Energy **cannot** be created nor destroyed, it is **always conserved**.

Energy can be transformed from one form into another.

Energy can be **transformed** by a **force**, for example applying the brakes in a car transforms **kinetic energy into heat**.

Most energy transformations are **not** 100% efficient. This means that some energy is transformed into a type that we don't want. We call this **wasted energy**.



Energy is usually wasted as **heat**. Most energy transformations create some heat.

The heat spreads evenly around the surroundings and becomes very **difficult** to capture for use. This energy can no longer be used, so we say it has been **lost**.

Example



In this example, a force of 10 N causes the box to move a horizontal distance of 2 m, so:

$$E = F \times d$$

$$E = 10 \times 2$$

$$E = 20J$$

Energy is measured in **Joules**. When a force transforms one type of energy into another we say that **work is done**.

Work done is another way of saying **amount of energy transformed**. Work done is therefore also measured in Joules.

Work done (J) = force (N) x distance moved in the direction of the force (m)

This can be written as:

$$E = F \times d$$

Where:

- work done (E) is measured in joules (J)
- force (F) is measured in newtons (N)
- distance (d) is in the same direction as the force and is measured in metres (m)

Power tells us how quickly energy is transformed by a device. A 100W lightbulb transforms 100J of electrical energy **per second** into heat and light. A 3kW hairdryer transforms 3000J of electrical energy per second, mostly into heat.



Calculating power

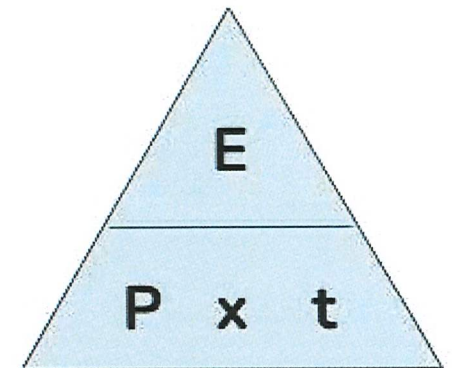
The equation used to calculate power is:

$$\text{power} = \frac{\text{work done}}{\text{time}}$$

$$\text{power} = \frac{W}{t}$$

This is when:

- power (P) is measured in watts (W)
- work done (W) is measured in joules (J)
- time (t) is measured in seconds (s)



Energy can also be transformed in **electrical circuits**.

Examples include kettles transforming **electrical energy into heat**, motors transforming electrical energy into **kinetic energy** and bulbs transforming electrical energy into **light**.

When work is done on an object, energy is transferred. The **rate** at which this energy is transferred is called **power**. So the more powerful a device is, the more energy it will transfer each second.

Forces and their effects



Forces are **vectors**, because they have both a **magnitude** and a **direction**.



There are 2 categories of forces. **Contact forces** (including the **normal contact force**, thrust, upthrust, and **friction**, drag and air resistance) and **non-contact forces** caused by fields (**electrostatic**, **gravitational** (weight), and **magnetic**)

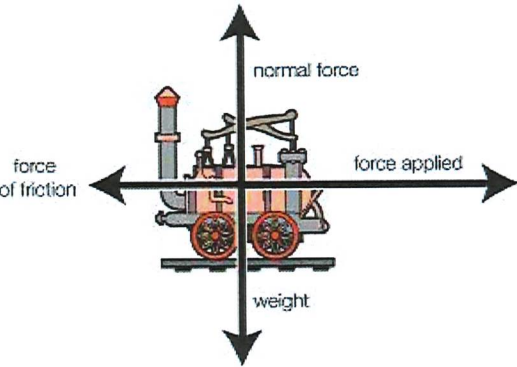
A **resultant force** can be calculated by **adding** all the forces in the **same direction**, and **subtracting** all the forces in the **opposite direction**.



The tug of war has a resultant force of **100N left**.

We use **free body force diagrams** to show the forces acting on an object. The train has 4 forces acting on it.

Friction is acting to the left, so the train must be travelling to the right because friction acts against the direction of travel.



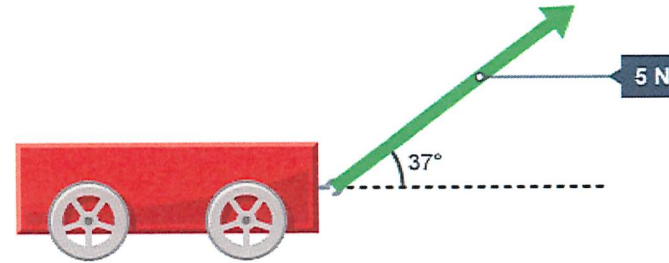
Forces can transform energy (see topic 8). Friction usually transforms kinetic energy into thermal energy (heat). This is often unwanted, for example friction in the axles of the trains wheels causing it to slow down.

We can **reduce friction** by using **lubrication**. Oil is often used as a lubricant.



Two forces can be added together to find a resultant force. A single force can be resolved (broken down) into two **component forces** at right angles to each other.

In the diagram of a toy trailer below, when a child pulls on the handle, some of the 5 newton (N) force pulls the trailer upwards away from the ground and some of the force pulls it to the right.



Vector diagrams

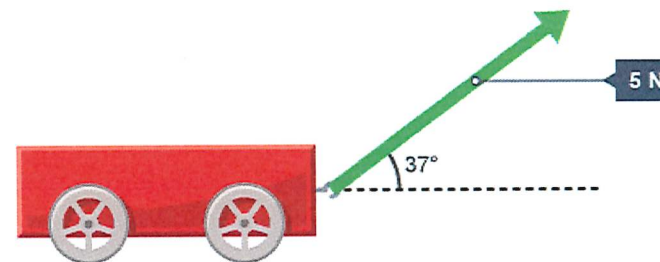
Vector diagrams can be used to resolve the pulling force into a horizontal component acting to the right, and a vertical component acting upwards.

Vector diagrams

Draw a right-angled triangle to scale, in which each side represents a force. Try to choose a simple scale, for example 1 cm = 1 N. For the toy trailer example above, draw:

- a line representing the 5 N force at 37°
- a horizontal line ending directly below the end of the first line
- a vertical line between the ends of the two lines
- arrow heads to show the direction in which each force acts

Measure the lengths of the horizontal and vertical lines. Use the scale for the first line to convert these lengths to the corresponding forces.



Electricity and circuits



We used the rope to help you understand circuits

When the rope moves the people holding it get hot hands. They are like bulbs / motors / etc. They provide **resistance** which slows the whole rope down. They **transform energy**.

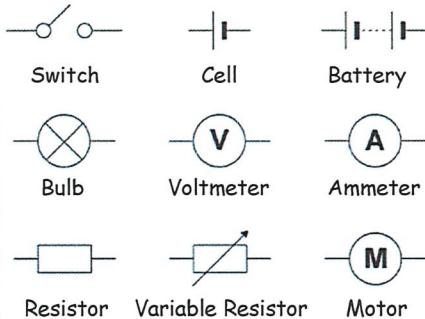
The person pulling the rope is like the **battery**. They **transform energy** from their muscles.

The speed of the rope is the **current**. The greater the current the hotter the hands get / the brighter a bulb gets.

The **voltage** is the amount of energy needed to move the rope a fixed distance (e.g. 1 metre). It is also the amount of energy transformed by a hand / bulb as an amount of rope / current passes through.

We use standard symbols for representing circuits. You need to know these symbols.

There are 4 other symbols you also need to know which are described below.

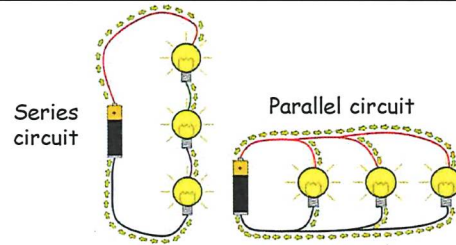


Components in a circuit can be arranged in **series** or in **parallel**.

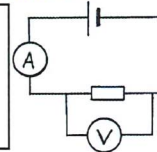
Components in series come one after the other, The current has to pass through **all** of them - there are no branches.

Components in parallel are parallel to each other. The current splits - part goes through one branch and the rest goes through the other branch.

Circuits often have a mixture of both series and parallel

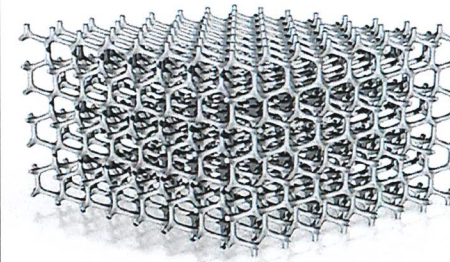


Ammeters measure **current** (in **amps**) and must be connected in **series**.



Voltmeters measure **voltage** (in **volts**) and must be connected in **parallel**.

Voltage is also sometimes called **potential difference**.



Metal wires and components have a **lattice structure** that free electrons pass through.

The electrons bump into the ions of the lattice, heating it up. These **collisions** with the lattice cause **resistance**

Some materials have a lower resistance than others. Thicker wires also have lower resistance than thin wires

The conducting material in a heater has **resistance**. This transforms **electrical energy** into **heat** as the current passes through.

A **motor** uses magnets to transform **electrical energy** into **kinetic energy** (movement). The current creates an electromagnet which **opposes** the fixed magnets.



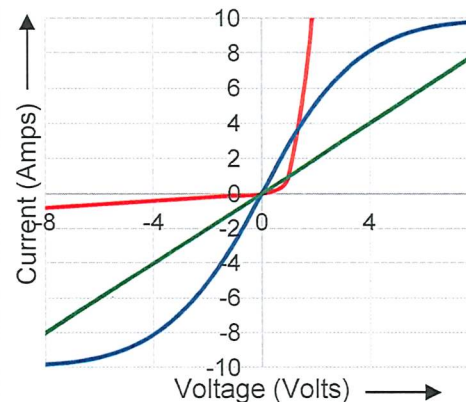
Batteries produce **Direct Current (D.C.)** which travels in **1 direction**. Mains electricity from sockets is **Alternating Current (A.C.)** which goes backwards and forwards **50 times per second**.

Mains voltage in the U.K. is 230V.

Diodes are used to turn A.C. into D.C.



Component	Symbol	What it does
diode		Only lets current flow through in 1 direction (to the right, in the arrow direction).
thermistor		A resistor that depends on temperature. The higher the temperature the lower the resistance.
LDR (Light Dependent Resistor)		A resistor that changes with light. The brighter the light the lower the resistance.
LED (Light Emitting Diode)		Produces light, but uses less energy than a normal lightbulb.

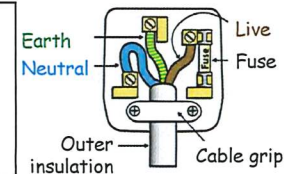


— Diode — Bulb — Resistor

The resistance of a **bulb** changes with voltage. As the bulb gets hotter its resistance increases. This produces a curved line (blue) A **fixed resistor** does not change its resistance and so a graph of current against voltage for it is a straight line (green line) A **diode** only resists in 1 direction (red line)

Switches and fuses are connected to the **live** (brown) wire in UK circuits because this means all of the circuit **after** the fuse or switch should be safe if the fuse/switch is off.

In the UK our circuits have an earth wire for safety. This allows current to escape to the earth if there is a fault. This high flow of current to earth will then trip circuit breakers / fuses which make the circuit safe.



Mi Vida en el Insti *My life at school*
School



¿Cómo es tu insti? ¿Qué instalaciones tienes/no tiene?

What is your school like? What facilities does it (not) have?

En mi opinión, mi insti es mexto, bastane grande y moderno. En mi insti hay unos laboratorios modernos y una biblioteca pequeña, pero no hay gimnasio que es horrible.

¿Qué asignaturas te gustan y no te gustan? ¿Por qué?

What subjects do you like or not? Why?

Por lo general me chifla el inglés porque es útil para el futuro y es mejor que las ciencias que son aburridísimas. En la escuela primaria, prefería estudiar las matemáticas pero ahora creo que es demasiado complicado.

¿Qué opinas del uniforme escolar?

What do you think about school uniform?

Pienso que mi uniforme es cómodo y es más elegante que el uniforme de mi hermano pero hay otros que piensan que el uniforme limita la individualidad de los jóvenes.

¿Qué piensas de las otras normas de tu insti?

What do you think about the other school rules?

Creo que el uniforme escolar es importante, pero pienso que es injusto que no puedo llevar joyas o masticar chicle – ¡no tiene nada que ver con los estudios!

¿Qué actividades extraescolares haces?

What extracurricular activities do you do?

Soy miembro del club de fútbol. Jugamos tres veces a la semana y es fatigante, pero me encanta jugar en equipo. En el pasado, cantaba en el coro y dimos un concierto al Disneyland – ¡era increíble!

¿Qué planes tienes para este trimestre?

What plans do you have for this term?

Este trimestre, voy a trabajar duro porque voy a mejorar mis notas en matemáticas. También me gusta participar en el club de teatro porque será divertido.

¿Qué es lo bueno / malo de tu insti?

What is the good/bad thing about your school?

Lo que me gustan más son los profesores. Son muy simpáticas y me ayudan mucho. Particularmente, me encanta mi profe de geografía porque es inteligente y siempre nos apoya.

Compara tu escuela primaria con tu instituto

Compare your primary school with your secondary school

Mi escuela primaria era menos grande, pero había cinco clases al día. Había un salón de actos que era la cafetería también - ¡qué raro! Sin embargo en mi insti, hay tres clases al día y muchas instalaciones.

¿Hay diferencias entre los institutos españoles y tu instituto?

Are there differences between Spanish and English schools?

Desde mi punto de vista, hay muchas diferencias entre los instis aquí y los de España. En España, la hora de almuerzo es más larga. ¡No es justo! También muchos instis españoles no tienen uniforme escolar.

¿Puedes describir un intercambio o un viaje escolar que hiciste en el pasado?

Can you describe an exchange or school trip that you have been on?

El año pasado, fui a España y visitamos un parque temático. ¡Fue muy entretenido! También visitamos monumentos en Barcelona y mi preferido fue la Sagrada Familia porque es muy colorida y fascinante.

Question you will ask:

Fancy Phrases:

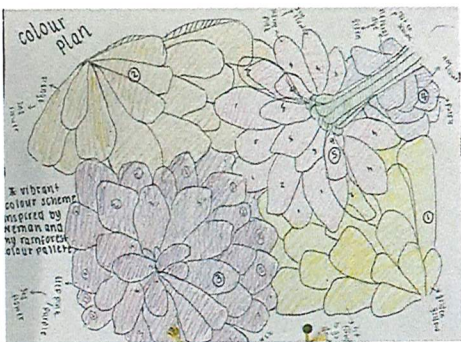
PRESENTE			FUTURO SIMPLE			PRETERITO			
hablar <i>to speak</i>	comer <i>to eat</i>	vivir <i>to live</i>	nadar <i>to swim</i>	beber <i>to drink</i>	abrir <i>to open</i>	preguntar <i>to ask</i>	comer <i>to eat</i>	escribir <i>to write</i>	
habl-o	com-o	viv-o	nadar-é	beber-é	abrir-é	pregunt-é	com-í	escrib-í	
habl-as	com-es	viv-es	nadar-ás	beber-ás	abrir-ás	pregunt-aste	com-iste	escrib-iste	
habl-a	com-e	viv-e	nadar-á	beber-á	abrir-á	pregunt-ó	com-ió	escrib-ió	
habl-amos	com-emos	viv-imos	nadar-emos	beber-emos	abrir-emos	pregunt-amos	com-imos	escrib-imos	
habl-áis	com-éis	viv-ís	nadar-éis	beber-éis	abrir-éis	pregunt-ásteis	com-ísteis	escrib-ísteis	
habl-an	com-en	viv-en	nadar-án	beber-án	abrir-án	pregunt-aron	com-ieron	escrib-ieron	
<i>The present tense is used to describe what you're doing at the present moment in time, e.g. "I am eating breakfast" or what you do routinely, e.g. "I eat breakfast every day".</i>			<i>The future tense is used to say what you will do in the future.</i>			<i>The preterite is sometimes known as the simple past. It's used to talk about events in the past, e.g. I asked, I ate, I wrote.</i>			
PRESENTE CONTINUO			CONDICIONAL			IMPERFECTO			
hablar <i>to speak</i>	comer <i>to eat</i>	vivir <i>to live</i>	nadar <i>to swim</i>	beber <i>to drink</i>	abrir <i>to open</i>	trabajar <i>to work</i>	comer <i>to eat</i>	escribir <i>to write</i>	
estoy hablando	estoy comiendo	estoy viviendo	nadar-ía	beber-ía	abrir-ía	trabaj-aba	com-ía	escrib-ía	
estás hablando	estás comiendo	estás viviendo	nadar-ías	beber-ías	abrir-ías	trabaj-abas	com-ías	escrib-ías	
está hablando	está comiendo	está viviendo	nadar-ía	beber-ía	abrir-ía	trabaj-aba	com-ía	escrib-ía	
estamos hablando	estamos comiendo	estamos viviendo	nadar-íamos	beber-íamos	abrir-íamos	trabaj-ábamos	com-íamos	escrib-íamos	
estáis hablando	estáis comiendo	estáis viviendo	nadar-íais	beber-íais	abrir-íais	trabaj-ábais	com-íais	escrib-íais	
están hablando	están comiendo	están viviendo	nadar-ían	beber-ían	abrir-ían	trabaj-aban	com-ían	escrib-ían	
<i>The present continuous tense is used to indicate what is happening at the time of speaking, or when one action is happening at the same time as another. Estar+past participle</i>			<i>The conditional is recognised in English by the use of the word "would" or sometimes "should", e.g. "I would swim"</i>			<i>The imperfect tense is used for things that 'used to happen' or 'were happening' e.g. I worked, I used to work, I was working</i>			
PARTIPIO PRESENTE		PARTIPIO PASADO		FUTURO INMEDIATO (I am going to +Verb)			PRESENTE PERFECTO		
-AR	-ando hablando	-AR	-ado hablado	voy	a	trabajar <i>I am going to work</i>	hablar <i>to speak</i>	comer <i>to eat</i>	vivir <i>to live</i>
-ER	-iendo comiendo	-ER	-ido comido	vas	a	estudiar	he hablado	he comido	he vivido
-IR	-iendo viviendo	-IR	-ido vivido	va	a	beber	has hablado	has comido	has vivido
<i>The present participle or gerund is recognised in English by the ending -ing .e.g. talking, eating, living. To find the past participle of a verb in English, just imagine that the words 'I have' are in front of it. E.g. 'to eat' put 'I have' in front of it you would say 'I have eaten' so 'eaten'.</i>				<i>The immediate future tense can be used to express what is going to happen in the future. E.g. I am going to work, I am going to study, I am going to drink, I am going to eat....</i>			<i>The present perfect in English always contains 'has' or 'have' in it. E.g. I have spoken, I have eaten, I have lived.</i>		
There is/are= hay There was/were= había				Most verbs in Spanish have six forms which correspond to their respective pronouns and which will be listed in the following order:			PASADO PERFECTO		
In Spanish the infinitive form of a verb always ends with the letter r and falls into three categories:				1) yo (I)			hablar <i>to speak</i>		
1) those which end with -ar (ar verbs) e.g. <i>hablar</i> = to speak				2) tú (you-familiar a person you know well, a familiar relationship)			comer <i>to eat</i>		
2) those which end with -er (er verbs) e.g. <i>comer</i> = to eat				3) él/ella/usted (he/she/you-formal a person you don't know, a formal relationship)			vivir <i>to live</i>		
3) those which end with -ir (ir verbs) e.g. <i>vivir</i> = to live				4) nosotros/nosotras (we)			había hablado		
For regular verbs in the present, preterite and imperfect tenses, you must first remove the -ar, -er or -ir endings from the infinitive form of the verb, and then add the correspondent endings.				5) vosotros/vosotras (you-plural-familiar [only used in Spain])			habías hablado		
				6) ellos/ellas/ustedes (they/you-plural-formal [Spain]/you-plural [L. America])			había hablado		
				It's essential that you get the correct ending for the person you're talking about in Spanish because pronouns don't tend to be used in Spanish.			habíamos hablado		
							habíaís hablado		
							habían hablado		
							había comido		
							habías comido		
							había comido		
							habíamos comido		
							habíaís comido		
							habían comido		
							había vivido		
							habías vivido		
							había vivido		
							habíamos vivido		
							habíaís vivido		
							habían vivido		
							había spoken/lived/eaten		
							habías spoken/lived/eaten		
							había spoken/lived/eaten		
							habíamos spoken/lived/eaten		
							habíaís spoken/lived/eaten		
							habían spoken/lived/eaten		

TEXTILES

Planning a sample:

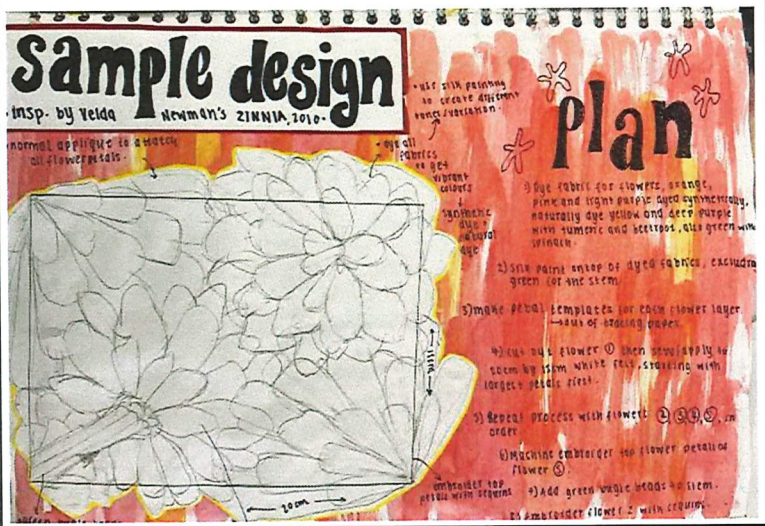
I have done the following:

- ✓ Drawn (to scale) what my sample will look like.
- ✓ Added labels to show different techniques.
- ✓ Included colour where appropriate.
- ✓ Annotated with a statement of intent to show how my idea links to artist research and techniques explored.



Statement of intent:

- In this sample I am going to...
- I am going to explore...
- The techniques are inspired by...
- I plan to use... and... because...
- I won't be using... because...



As Textile Artists we should be **discriminative** and **discerning** in our work.

Definitions:

Discrimination:

- Making fine distinctions; discerning
- Able to recognise small differences between things

Discerning:

- Having or showing good judgment

GCSE Assessment Objectives			
AO1	AO2	AO3	AO4
Develop your ideas through investigating artists, designers and other appropriate sources. Demonstrate critical understanding of sources.	Refine your work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.	Record your ideas, observations and insights that are relevant to your project intentions as work progresses. Annotate work and include drawings within your sketchbook.	Present a personal and meaningful response that realises your project intentions and demonstrates understanding of visual language.

AO2 and AO3 success criteria

- ✓ Project shows strong development and refinement of ideas.
- ✓ Project shows a wide range of media experiments and different techniques. Minimum of 8.
- ✓ Techniques respond to/are inspired by artist research.
- ✓ Sketchbook work shows clear inspiration from artists/research.
- ✓ Annotations are clear - stating the **successes and weaknesses of techniques**.
- ✓ Annotations are discriminative/critical against work.
- ✓ You always develop from critiques - make changes, use a technique differently, adapt your skills.

- Minimum project checklist by the end of the summer term:**
- Mind map
 - Artist research with copy and response x 3
 - Drawings
 - Refined mind map
 - Quick experiments page x 2
 - Idea development experiments x 4 (minimum 3 techniques)
 - Idea refinement samples x 2

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial statements. This includes not only sales and purchases but also expenses, income, and transfers. The document provides a detailed explanation of how to categorize these transactions and how to use a double-entry system to ensure that the debits equal the credits.

The second part of the document focuses on the preparation of the financial statements. It outlines the steps involved in calculating the net income, determining the ending balances for the assets and liabilities, and preparing the balance sheet and income statement. The document also discusses the importance of reconciling the bank statements and the cash account to ensure that the records are accurate and up-to-date.

The final part of the document provides a summary of the key points discussed and offers some practical advice for managing the books. It stresses the importance of regular record-keeping and the need to seek professional help if necessary. The document concludes by reminding the reader that accurate bookkeeping is essential for the success of any business.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial statements. This includes not only sales and purchases but also expenses, income, and transfers between accounts.

The second part of the document provides a detailed explanation of the accounting cycle. It outlines the ten steps involved in the process, from identifying the accounting entity to preparing financial statements. Each step is described in detail, including the necessary documents and procedures to follow.

The third part of the document discusses the various methods used to record transactions. It compares the double-entry system with the single-entry system, highlighting the advantages and disadvantages of each. It also explains how to use T-accounts to organize and summarize the data.

The fourth part of the document covers the process of adjusting the accounts. It explains why adjustments are necessary and how they are made. It discusses the different types of adjustments, such as accruals, deferrals, and depreciation, and provides examples of how to record them.

The fifth part of the document discusses the preparation of financial statements. It explains how to calculate the net income and how to prepare the income statement, balance sheet, and statement of owner's equity. It also discusses the importance of comparing the results of the current period with those of the previous period.

The sixth part of the document discusses the closing process. It explains how to close the temporary accounts and how to transfer the net income to the permanent accounts. It also discusses the importance of reconciling the books and how to correct any errors.

The seventh part of the document discusses the use of accounting software. It explains how to set up the system and how to use it to record transactions and generate financial statements. It also discusses the benefits of using software and the potential risks.

The eighth part of the document discusses the importance of internal controls. It explains how to design and implement controls to prevent errors and fraud. It also discusses the role of the auditor and how to respond to an audit.

The ninth part of the document discusses the ethical aspects of accounting. It explains the importance of honesty and integrity in the profession and how to handle difficult situations. It also discusses the role of the accountant in society and the impact of their actions.

The tenth part of the document discusses the future of accounting. It explains how technology is changing the profession and how accountants can stay current. It also discusses the importance of continuing education and the role of the accounting profession in the future.



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