

BTEC Tech award in Performing Arts DRAMA – component 2 knowledge organiser

What will I be learning?	The Skills and techniques needed as to be an actor How to self-evaluate your self
How will I be learning~?	You will be developing your skills through teacher led workshops You will then use those skills in rehearsals for a play and continue to develop them. The rehearsals will be a combination of teacher led and student led. You must then demonstrate those skills in your final performance Throughout the whole unit, you will keep a log book in which you will write about the development of your skills; what you have done well, what you need to improve on, set targets and then whether you have met those targets or not.
What will my evidence look like?	A reflective log book/journal Videos recording of your workshops Videos recording of your rehearsals (milestones only) Videos recording of your final performance
Where can I find information?	The component 2 assignment brief (TEACHER TO INSERT HERE WHERE THIS CAN BE FOUND) The spec – https://qualifications.pearson.com/content/dam/pdf/btec-tec-awards/performing-arts/2017/specification-and-sample-assessments/9781446939628_BTEC_L1L2_AWD_PA_SPEC.pdf GCSE bitesize drama - https://www.bbc.co.uk/bitesize/subjects/zbckjxs

How do I achieve in this unit?			
	PASS	MERIT	DISINCTION
Workshops	Develop your acting skills appropriately	Develop your acting skills effectively	Develop your acting skills with discipline. Be organised at all times!
Rehearsals and Performance	Choose relevant skills during rehearsals for your character and play and demonstrate them within your performance	Choose appropriate skills during rehearsals for your character and play and demonstrate them within your performance	Choose considered (and thoughtful) skills during rehearsals for your character and play and demonstrate them within your performance
Log books	Describe your strengths and weaknesses (what)	Explain your strengths and weaknesses (what and why/how)	Assess your strengths and weaknesses (what, why and how plus the impact on yourself and/or the audience)

Assessment word	definition
Describe	Give a clear description that includes all the relevant features - think of it as 'painting a picture with words'
Explain	Set out in detail the meaning of something, with reasons. More difficult than describe or list, so it can help to give an example to show what you mean. Start by introducing the topic then give the 'how' or 'why'.

assess	Give careful consideration to all the factors or events that apply and identify which are the most important or relevant; Make a judgement on the importance of something - similar to evaluate
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KEYWORDS AND SKILLS

TEACHERS – PLEASE TAKE OUT OR ADD ANY SKILLS YOUR ARE NOT FOCUSING ON IN YOUR WORKSHOPS ETC. I have simply selected the most common ones.

WORKSHOP SKILLS		REHEARSAL SKILLS		PERFORMANCE SKILLS	
SKILL	Helps and hints to do well	SKILL	Helps and hints to do well	SKILL	Helps and hints to do well
<i>characterisation</i>	There are many ways an actor can change themselves to become another character; the way they walk, talk and move.	<i>learning dialogue</i>	Remembering your lines and meeting deadlines to learn lines when expected	<i>Characterisation</i>	Ensuring you have changed how you walk, talk and move and are consistent with this throughout.
<i>Facial expression</i>	The look on your face which shows emotions	<i>learning blocking and stage directions</i>	Remembering your movement as well as your exits, entrances and where you are meant to be on the stage at particular moments of your script.	<i>projection</i>	Ensuring the audience can hear you at all times
<i>Gesture</i>	Any action from the actors head, shoulders, arms, head, leg or foot to convey meaning			<i>Vocal expressions</i>	Ensuring you are using your voice correctly for the character, scene and mood/emotion; using tone, pitch, volume, pace etc
<i>Projection</i>	Directing the voice out of the body to be heard at a distance; make sure you can be heard on stage at all times	<i>cooperation</i>	Working together	<i>Physical expression</i>	Using body language, gestures, facial expressions etc to portray emotions and your character.
<i>breath control</i>	Using your diaphragm to fill your lungs with air and release gradually; to assist with projection	<i>punctuality</i>	Turning up on time (early would be even better!)	<i>Conveying the style</i>	PLEASE ADD IN THE STYLE YOU ARE FOCUSING ON HERE AND HOW TO PORTRAY IT
<i>pitch</i>	the particular level (high or low) of a voice; this is relevant to the character you will be playing	<i>commitment</i>	Being fully dedicated to the rehearsal process	<i>handling and use of props and set</i>	Using props and set appropriately, safely and confidently throughout the performance.
<i>pace</i>	The speed at which the actor speaks or moves to portray their character	<i>reliability</i>	Being ready to work at all times	<i>focus</i>	It is vital to remain focused at all times; concentrate, commit and be dedicated to your role the play and your team!
		<i>interpreting and developing a character</i>	To consider the character inside and out and have a true and full understanding of the character in	<i>Remembering lines</i>	Not only knowing your lines, but also knowing your cues

			all situations and outcomes as well as in the play		
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Vocal Skills

Articulation – the clarity or distinction of speech Projection- how well the voice carries to the audience. Pitch – level of voice e.g. high or low Pace – speed/rate of speech e.g. fast or slow Pause – choice of breaks in speech Tone – choice of the mood or emotion of delivery Inflection – change in pitch or loudness of the voice. Volume – continuum of loud to quiet

Physical Skills

Pace – speed e.g. fast to slow Direction – up/down, side to side, backwards/forwards Size – continuum of big to small Control – continuum of stable to unstable (e.g. staggered) Orientation – choice of where the body is facing Spatial behaviour (proxemics) Facial expression Gesture- hand, head or arms actions to communicate meaning Posture- How you stand

Y10 GCSE ART & DESIGN

These are the skills & the key information that you will need to know & use in your 'Culture' Project

Colour Vocabulary

Tertiary colours = Primary + Secondary

Complimentary – Colours opposite each other on the colour wheel

Harmonious – Colours from the same section on the colour wheel & blend well together

☀ Warm colours – red, orange, yellow

❄ Cool colours – blue, green, purple



Polyblock Printing

A technique where the artist carves an image into a polystyrene sheet producing a white line when rolled with ink – can be used for more than one layer. Good for repeat patterns.



Example polyblock prints

Traditional Colour scheme

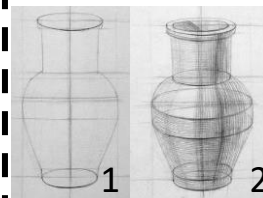


3D Construction of Pot

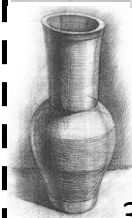
Materials:

Balloon, gumtape (3 x layers), thin card and masking tape

Consider the handles, lip, decorative elements, symmetry, asymmetry & traditional African shapes and repeat patterns



3D Vessel drawings



1 - sketch outline to get proportions
2 – use tones to get lighter/darker areas and make objects appear 3D
3 – use rubber to add highlights

Assessment objectives



AO1 Understanding

Develop ideas through investigations, demonstrating understanding of sources

AO2 Creative Making

Refine work by exploring ideas & experimenting with appropriate media, materials, techniques & processes

AO3 Recording

Record ideas, observations & insights relevant to intentions as work progresses

AO4 Presenting

Present a personal and meaningful response that realises intentions & demonstrates understanding of visual language

Blending Techniques

- Start with lightest colour and add darker colour in small amounts
- Harmonious colours blend better
- Paint should be mixed on a palette before blending
- Aim for a smooth transition from one colour through to the next



Blended Area on Miniature

Good example



Repeat pattern

Formal Elements of Art

COLOUR LINE TONE
TEXTURE SHAPE PATTERN
FORM

Key Terms

Media	The substance that artists use to make art
Repeat pattern	The same groupings over and over of figures, shapes or motifs. Repeats can be vertical or horizontal.
Decoration	The activity of making something look attractive through adornment or embellishment
Collage	From the French verb "coller" which means to glue. Using paper, fabric or other materials stuck onto another surface.
Colour scheme	The overall selection of colours in a piece of artwork (or colour palette)
3D construction	Sculptures (relief, freestanding), anything that can be held. It is not flat like paintings, drawings, photographs.

Y10 GCSE CULTURE PROJECT

Artist Research Page

TWISBOQ

Title - Artist name

Writing - Artist info

Images - Artist

images

Study - own copy of artist's work

Background -

relevant to style & creative

Opinion - own opinion of artwork

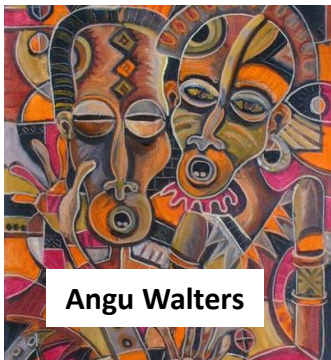
Mindmap

An example of a visual moodboard of ideas on the theme using a **collage** of collected images



Annotation = written explanations that record your thoughts and explain the thinking behind an idea or analyse a technique

Artist & Contextual links



Angu Walters



Magdalene Odundo



Portraits



African Masks



African Mudcloths

Key Words & Definitions

Culture	The ideas, customs , beliefs and social behaviours of a particular people or society
Traditional	Something that is in keeping with long-standing traditions, style or customs
Masks	Sculptures designed to represent or transform the human face for tribal reasons or rituals
Handcrafted	Made skilfully by hand rather than by a machine
Artefact	An object made by a human being typically one of cultural or historical interest
Adinkra Symbols	Asante people of Ghana in West Africa make a cloth called Adinkra. This involves handprinting patterns onto cloth.
Kente Cloth	A Ghanaian Textile made of interwoven cloth strips of silk and cotton
Natural materials	Any product that comes from plants, animals or found in the ground.
Mudcloths	"Bogolafini" is a handmade Malion cotton fabric traditionally dyed with fermented mud that dates back to the 12 th century.
Textiles	A type of cloth or woven fabric
Ceremonies	Ceremonies have cultural or religious significance and are held to celebrate a new life or well lived life.
Tribal	A group or community with similar ancestors, customs or traditions
Rituals	A ceremony or action performed in a customary way
Ceramics	Pots and other articles made from clay hardened by heat
Body adornment	Includes painting the body, tattooing, piercing, decorating, incision and scarification of the skin

		Key Term	Explanation
		Frequency and channels	Radio frequency of wireless (either 2.4 or 5ghz). Channels are sub-frequencies on the waveband like different channels on a TV.
		Encryption	Scrambling data so that only a user with the key can unscramble it.
		IP address	Each node on a network is given a unique 32 bit address (4x8bits) for example 192.168.0.1 There are 4 billion possible combinations.
		MAC address	media access control address. Unique number assigned to device at manufacture
PROTOCOLS	Ethernet		Wired data transfer protocol
	WIFI		Wireless protocol for connection to a network
	TCP/IP		Transmission Control Protocol / Internet Protocol. A set of protocols that governs the transfer of data over a network
	HTTP		Hyper Text Transfer Protocol. Standards for transmitting webpages across the internet
	HTTPS		Hyper Text Transfer Protocol Secure. Same as http but the s means SECURE .
	FTP		File Transfer Protocol. Used to directly send files from one node to another over the internet. Commonly used for uploading files to web servers.
	POP		Post Office Protocol. Used by email clients to download email from the remote email server and save it onto the users computer.
	IMAP		Internet Message Access Protocol. An alternative to POP, allowing more control such as the complete control of remote mailboxes
	SMTP		Simple Mail Transfer Protocol. An old standard for transmission of email. SMTP can only be used to push mail to client machines, whilst both POP and IMAP are used by clients to retrieve mail
		Packet Switching	Moving packets of data across the internet via fastest route

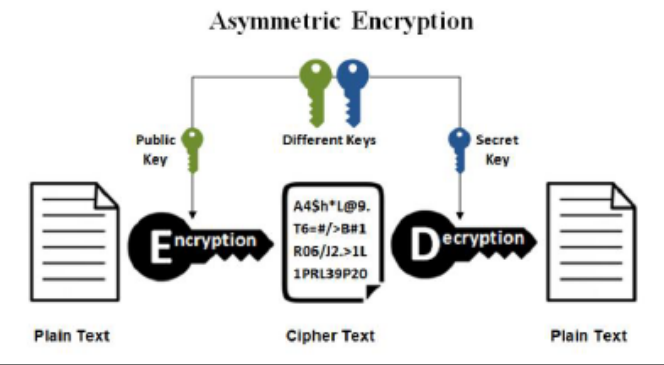
ENCRYPTION

Encryption is taking a message and changing the letters in such a way that it is not readable. The correct recipient knows how to unscramble the message and can read the text.
Modern encryption is 128bit and secure against brute force attacks

PUBLIC KEY ENCRYPTION

Public Key Encryption is a method of securely sending data over the internet. The recipient's computer uses an algorithm to produce 2 linked keys: a public key and a private key.

1. Alice (the sender) requests Bob's (the recipient) public key. This is shared.
2. Alice uses Bob's public key to *encrypt* the message she wishes to send
3. The encrypted document is sent over the internet – it is secure.
4. When Bob receives the encrypted document he combines his public key with the secret private key. This allows the message to be decrypted and turned back into plain text



KEY VOCABULARY

Protocol	The rules and standards that are agreed in order to make it possible for different devices to talk to one another
Layering	Rules organised into a distinct order in which they need to be applied

WHY LAYER?

Layering allows problems to be broken down into small chunks, and then smaller solutions created to specific parts of the problem. These small parts interact in an agreed manner, allowing the solution to be built by different teams or companies.

Layering is not unique to computing. In the car industry, a Ford engine might be used with a Jaguar gearbox in a Mazda car. By separating these 'layers', but agreeing on the interface between the layers, each company is free to develop their layer as they see fit, without affecting the other layers. It is also possible to swap one layer out, and replace it with another one – such as swapping an engine for a more powerful one.

This *interoperability* is important as it allows data (in computing) to be passed from one layer to the next.

LAYER 1: Application

This layer ensures data is produced in a form that is acceptable to the application that will use it, such as web-browsers or email clients. This is where IMAP or HTML protocols would be used.

LAYER 2: Transport

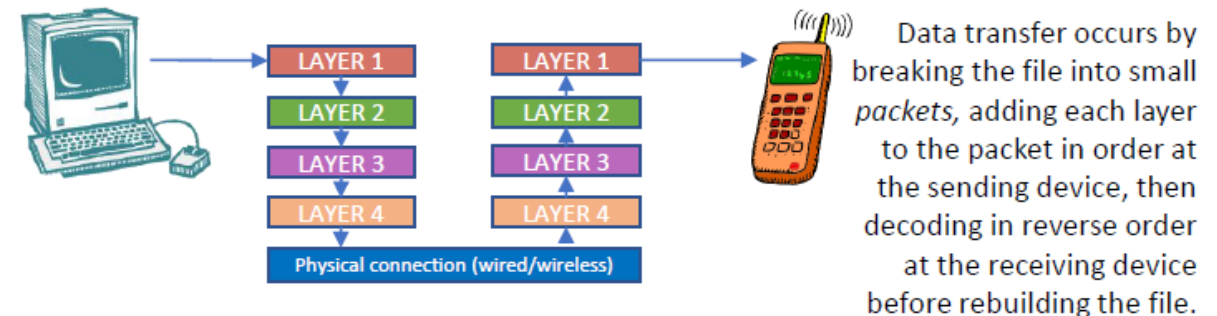
This layer establishes the connection across the network. The transmitting device agrees with the receiving device the speed or data transfer, the size and number of packets and any error checking to be used. This layer uses TCP protocols

LAYER 3: Internet

This layer is concerned with transmitting the data across different networks. It identifies the destination and establishes the path the data will take between nodes. It uses IP protocols

LAYER 4: Network

This layer deals with the physical transmitting of the data. It converts the data into binary electronic signal that can be understood by the network hardware. It uses protocols such as Ethernet or 802.11 (wireless) so the signal is hardware independent and can use any available compliant physical medium, such as UTP or fibre optic wire.



Packet switching is the process that modern networks use to send large data between devices. The data is split into small *packets* and numbered. The packets can travel by any route to the destination where the receiving machine reassembles them into the correct order.

KEY VOCABULARY

WAN	Wide Area Network
VPN	Virtual Private Network
Client	The user machines on a network
Server	The central 'controller' machine on a network, including main data storage
Internet	A worldwide network of networks
DNS	Domain Name Server
Hosting	Storing a file on a web-server for access via the internet
Cloud	A service which is stored remotely
TCP/IP	Transmission Control Protocol / Internet Protocol. These are the standards that allows network nodes to communicate with one another on the internet
WWW	World Wide Web - Pages of content
email	Electronic mail, sent through the internet
URL	Unique Resource Location

Virtual Private Networks

VPNs are small collections of devices that act as though physically connected in a LAN, but are actually widely distributed and use the internet as their network connections.

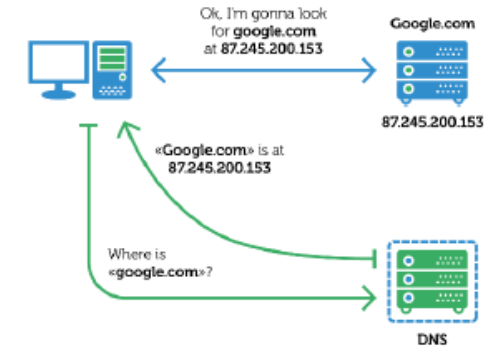
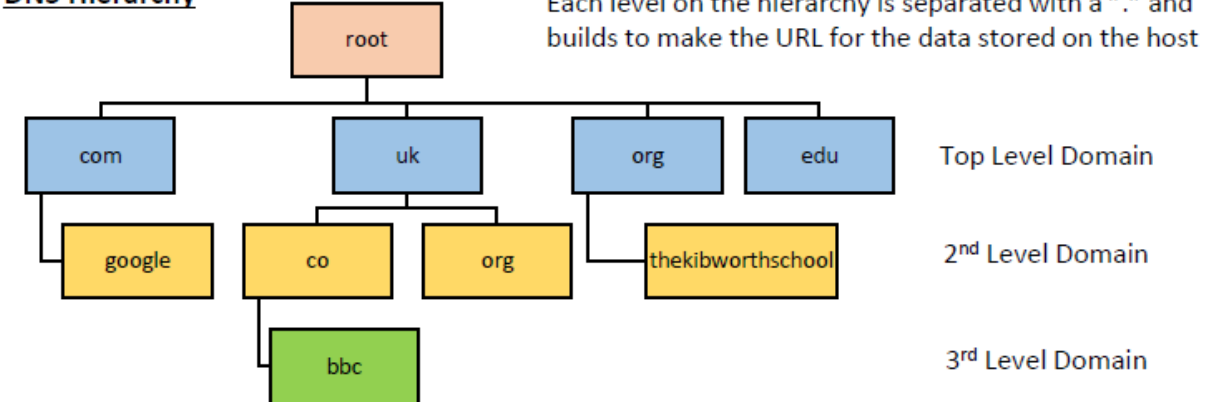
VPNs allow users to store data in a small, private area of the internet, so they can get to it at any time, using an internet connected device.

The benefits are low cost and widely available data, but users must ensure that the data is protected as, without security, their data is available to anyone connected to the internet!

How DNS works

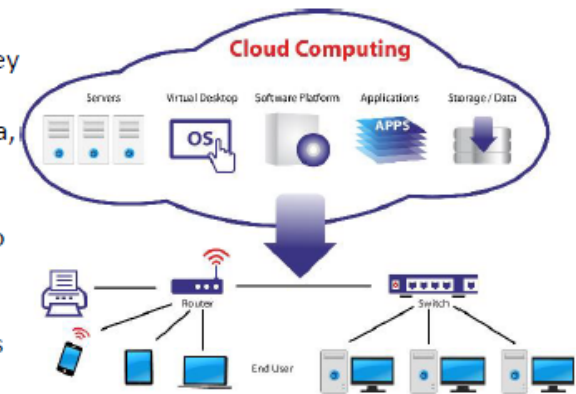
All webpage has an **IP Address** which is a unique reference to find that page. But 87.245.200.153 isn't as easy for users to remember as google.com

When the user types google.com into a web browser's address bar, the client sends a request to the DNS for the current location of google.com. The DNS returns the request, telling the browser to go to 87.245.200.153. The browser now connects to the google server, at the IP address given, and looks for the index.html file to start displaying the webpage.

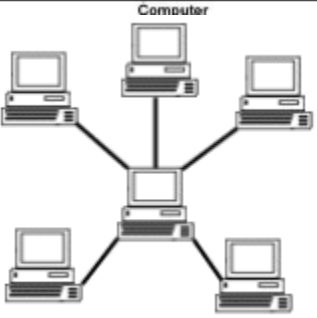
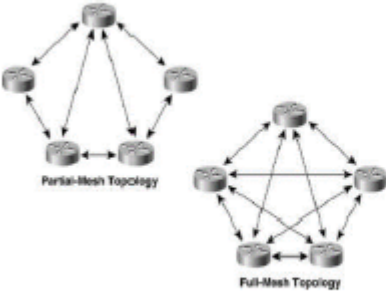
**DNS Hierarchy****The Cloud**

As our devices are all connected to the internet, they start to become client nodes in a web connected "cloud" network. It's called cloud because your data, services and applications are available everywhere without wires. It's just 'there' – like a cloud.

PCs like the Google Chromebook utilise the cloud to provide very cheap, very fast hardware, which just connects you to the internet. All the storage, applications and communication is done by services hosted on google's servers.



Topology

Topology means “how a network is laid out and the connections between computers”				
NAME	DIAGRAM	DESCRIPTION	ADVANTAGES	DISADVANTAGES
Star		Each node connects to a hub or switch. A central machine acts as server whilst the outer nodes are clients .	Centralised management through the server Easy to add more machines to the network If 1 machine fails, the others are unaffected	Potentially higher set up costs, especially in server and switch set ups. Central server determines the speed of the network and the number of possible nodes If the server fails then the network fails
Mesh		Every nodes is interconnected with every other, allowing for distributed transmission. Mesh topology can be FULL MESH (where every possible connection is made) or PARTIAL MESH (at least 2 computers are connected with multiple links)	Multiple devices can transmit data at once, therefore can handle large amounts of data A failure of 1 device does not affect the rest of the network Adding devices does not impact on data transmission between existing devices	Cost is higher due to increased hardware requirements Building and maintaining a mesh network is costly and time consuming The chance of redundant connections is very high, which increases the cost, and makes the network cost inefficient

NODE = Each point on the network.

VULNERABILITIES

Hacking	Attempting to bypass a system's security features to gain unauthorised access to a computer
Malware	Malware is malicious software, loaded onto a computer with the intention to cause damage or to steal information. Viruses are a type of malware
Phishing	Phishing is a common way to try to steal information like passwords. Emails are sent, requesting the user logs into a website, but the site is a fake, and the users details are logged
Social engineering	People are the weakest point of any system. If a hacker can convince a user to give over their data, this is the easiest way into a secure system
Brute force attack	Using an algorithm to try every possible combination of characters to 'guess' the users password.
Data interception	Data interception, or <i>Man in the Middle attacks</i> are hacks that use 'packet sniffer' software to look at every piece of data being transmitted in the local area to find ones that meet the hacker's criteria. Often done by creating 'fake' wireless networks to record users details
SQL injection	Using SQL statements to trick a database management system (DBMS) into providing large amounts of data to the hacker
Denial of Service Attack	Hackers flood a network with huge amounts of fake data and requests in an attempt to overload the system so that it crashes

PROTECTIONS

Penetration Testing	Employing a <i>white hat hacker</i> to try to break into a system to test how good the security is. Any problems in the security can then be fixed before they become vulnerable to real attack
Network forensics	Network procedures that capture, record and analyse all network events to discover the source of security attacks
Network Policies	Rules which govern how a network may be used – see over page
Anti-malware software	Software which analyses files, network traffic and incoming data to look for known malware such as viruses or worms. An infected file is quarantined, and either cleaned or securely deleted to prevent further infection. Needs updating very regularly to ensure that the newest malware is being checked for
Firewall	A firewall protects a system by checking all incoming and outgoing network traffic is legitimate
User level access	Limiting the access of a user by their requirements to carry out their job. An admin will have more rights than a student, for example. Often even admins do not give themselves full rights to prevent accidents, and will instead have a <i>super-user</i> account that will be used only for special high level jobs.
encryption	Encoding all data with a secure private, asymmetric key system, so that if data is stolen, it cannot be read or used.

PEOPLE ARE ALWAYS THE WEAKEST PART OF A COMPUTER SYSTEM!



TYPES OF MALWARE

Virus	A program designed to infect a computer, then copy itself. Requires human 'help' to spread; usually through infected software being installed or spread through unsecure removable media such as usb-drives
Worm	A self-replicating program, which can run itself allowing it to spread very quickly
Trojan Horse	A program which disguises itself as legitimate software, and appears to perform one task, but is actually performing another
Ransomware	Ransomware secretly encodes a users data and files, then offers to un-encode the files if a large amount of money is paid to the hacker
Rootkit	A rootkit allows a hacker to gain full, and often repeated, control of a computer, including the host operating system, which helps the hacker avoid detection

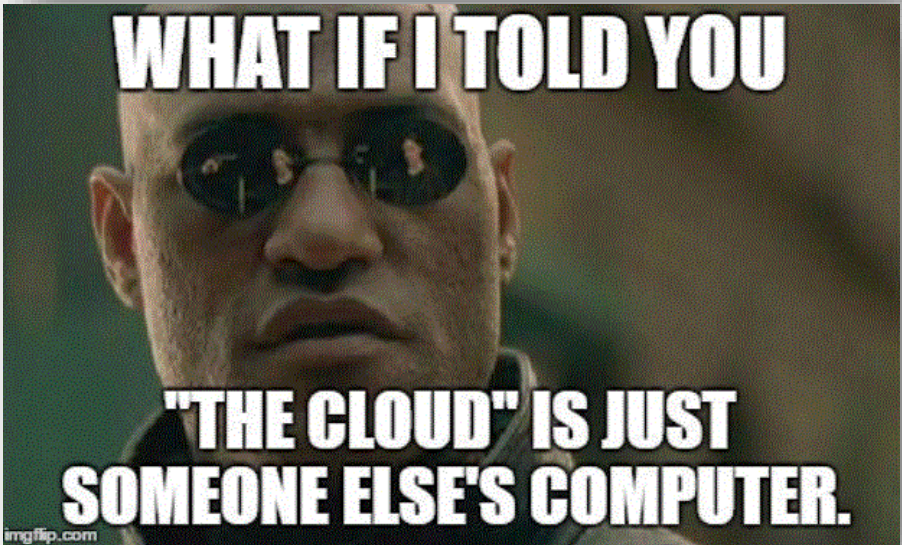
COMMON AREAS OF NETWORK POLICY	
Acceptable Use	Governs the general use of the computer system and equipment by employees. Usually limited to that which is required to carry out only the tasks that a user is employed to undertake
Passwords	Rules to ensure that passwords are strong enough to prevent guessing or brute force attack - often requiring the use of upper and lower case letters, numbers and special characters. Also usually a minimum length is required. Passwords usually have to be changed on a regular basis
Email	Governs what may and may not be sent by email
Web Access	The configuration of web browsers may limit the types and categories of website that can be accessed
Mobile Use	What devices are and are not allowed to be used
Remote Access	Govern what can be accessed from outside the system, and what can only be accessed onsite
Wireless	Govern how wireless access points (WAPs) are secured, who has access, and under what circumstances
Software	Governs who can install software, and which users are able to use that software. May have different levels of access once inside the software
Server	Rules about what services are provided by the institution and who may access data stored centrally and for what purposes
Back Up	Back up policy determines how frequently back ups are undertaken, and what type of back up (full, incremental, differential). It will also state where the back up media must be stored and for how long. Often a full weekly back up is required to be stored in a fire proof box in an offsite location
Incident Response Plan	Details what to do if something goes wrong, or if an attack is discovered.

HOW SECURE IS MY PASSWORD?

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It would take a computer about
54 MILLISECONDS
to crack your password

Even modest desktop computers can undertake billions of cycles a second these days. Therefore, without any security features, such as limited password attempts, or asking for only selected characters from a password, a home PC could *brute force crack* commonly used passwords in very, very short periods of time!



Component 1- Key Terminology

Key Terminology	Meaning/Definition
Professional Practitioner	This is usually someone in the performing arts industry that is paid for their expertise. A Practitioner in drama could be a playwright/someone that creates theatrical performances or a person that has developed a system or theatrical discourse. For dance this is usually a choreographer or a person that has developed a whole new style of dance e.g. Cunningham or Graham
Creative Intention	This is the thinking, the decisions that a theatre maker or choreographer apply so their pieces will have meaning and will communicate. Without this, and a target audience, a piece lacks purpose.
Roles and Responsibilities	This is what is expected of you as a professional within the team that is creating and performing work. Role – dancers' part in the piece Responsibilities - attend rehearsals / warm up
Influence	All artists are influenced by something. This could be from their training, their peers, when they are born, their interests and even political ideals. It is something outside that has an effect on you and your creative work. E.g. Matthew Bourne is influenced by Musicals
Purpose	This is the reason for which something is done or created or for which something exists. The purpose could be to change an audiences mind about something, to encourage a feeling, to question or just to purely entertain.
Performance Processes	This is the series of actions that are taken as you prepare for, create, rehearse and perform a piece of dance or theatre.
Theme	This is the main idea that spans an entire work. There maybe lots of other ideas, influences and inspirations within a piece but what is the whole piece about. The title of a piece is often the biggest clue.
Practitioner Skills	What skills does each job role require, for example what skills does a dancer need? what skills would a choreographer need?
Techniques and approaches used during performances	In Dance this could be the ways you warm up, the styles of dance you use to train, the way you create and rehearse pieces.

Constituent Features	Characteristics of choreography such as style, stimulus, subject matter, number/gender of dancers, action content, choreographic principles, form and structure, physical and aural settings. This is the parts that make up the whole. In Dance appreciation this is the movement material, who and where it is danced, its meaning, the formations, as well as physical setting -the set, props, lighting and aural setting the music or sounds. When looking at the work as a whole this could also mean the people involved, their creative processes, their rehearsal processes, their collaborative approaches and the final outcome.
Interrelationships	This is the way in which each of two or more things is related to the other or others. How does the set change how we view a piece? How do the dancers on stage relate to each other unison, canon, lifts, eye contact?
Stimulus	This is something that arouses activity or energy in someone or something, a spur or incentive. Something that evokes and/or inspires.
Contextual Influences	The outside factors that can be seen within a piece. E.g., the year it is set, where it is set, the political message, the style of dance or theatre used, the set, the fashions, the use of technology. Context could be: E.g. For the dance piece 'Coal' it was set in the 1980's during the miners strike.
Stylistic Qualities	These are the dynamics applied to a style. Not to be confused with stylistic features.
Genre/Style	a style or category of art, music, or literature. A genre is usually a bigger term to describe the majority and the style can be identified by its features. E.g. Musical Theatre is a Genre – but Jukebox, Concept are styles. Or Modern Dance is a genre and Graham and Cunningham are styles of that genre.
Repertoire	a stock of plays, dances, or items that a company or a performer knows or is prepared to perform. This can also be the steps, sequences that are choreographed by a professional for a particular show. It can also be a complete script.

Creative Methods	These are the methods you use when you create a performance. Some choreographers research, find music, make scrap books, listen to music, set creative tasks, film and revisit to edit and refine.
Interpretation	This is what you as an audience take away from watching a piece of dance or theatre. What did it mean to you and what clues have you got to back up your interpretation.
Collaboration	This is the action of working with someone to produce something. Working as a team where no one is directly in charge but all ideas are considered and valid.
Prerequisites	A thing that is required as a prior condition for something else to happen or exist. You need to get the planning right to be able to create a piece for it to happen on time. Look at the resources needed.
Choreographic process	How you create, select, refine, rehearse and perform (start to finish) E.G - Researching – collecting ideas - Planning - Setting tasks - Improvising - Generating movements and ideas - Selecting and refining - Developing - Structuring - Refining and synthesising - Rehearsal techniques

Physical skill		Why it is needed by a dancer	Development ideas
Posture	To hold the correct stance: Shoulders back, chin level, stomachs pulled in engaging core	☐ Reduces injury ☐ Improves the quality of actions ☐ Looks more aesthetically pleasing for audience	Increasing core strength through exercises e.g pilates, sit ups, plank position ☐ Sliding shoulder muscles and bones down the back ☐ Lengthening the spine ☐ Not tilting pelvis
Strength	Muscular power	☐ Performing lifts ☐ Higher jumps ☐ Holding positions/balances ☐ Making movements look more stable and fluid ☐ Performing more challenging movements ☐ Core strength important for posture	☐ Sit ups ☐ Press ups ☐ Plank positions ☐ Repetition of challenging jumps ☐ Weight training
Balance	Being stable whilst being still and during movement. Using core to manage weight placement	☐ You do not fall over and injure yourself ☐ You can perform lifts safely ☐ Movements are more aesthetically pleasing	Increasing our strength in particular areas (e.g a balance on one leg requires strong thigh and calf muscles) ☐ Continuous rehearsal of balancing movement ☐ Using imagery such as roots holding your feet into the floor an a balloon lengthening from the top of the head
Alignment	Correct placement of joints: Skeleton lined up from head to toe e.g. Knees bent over toes, allow back to have natural curve, not forced	☐ It reduces the risk of injury ☐ It makes the actions more aesthetically pleasing for the audience ☐ How can we improve our alignment?	☐ Yoga ☐ Exercises such as pliés and tendus in parallel, first and second position making sure the knees go over the toes ☐ Exercises such as lunges making sure the knees go over the toes ☐ Arm exercises focussing on keeping the shoulders down and extending through the fingers
Flexibility	The range of motion around a joint	Can perform more challenging movements such as splits, tilts ☐ Reduces the risk of injury ☐ Movements are more aesthetically pleasing	☐ Stretching when we are warm for example ☐ Lunges, Splits, Touching toes, Hamstring and calf stretches

Physical skill	Definition	Why it is needed by a dancer	Development ideas
Extension	fully lengthening and stretching your limbs	It is more aesthetically pleasing for the audience ☐ Perform movements accurately	☐ Imagining something is pulling on your limbs to stretch them ☐ Watch rehearsals on video to see where you need more extension
Coordination	the ability to move different body parts at the same time	☐ Can perform more challenging sequences of movement using different body parts ☐ Fluency is improved ☐ Movement can look effortless	breaking down the movements and practising each section or each body part separately and then together
Mobility	The range of movement in a joint; the ability to move fluently from action to action	Makes dance looks more aesthetically pleasing ☐ Makes performance look smooth and fluid ☐ Can perform more challenging movements such as splits, tilts ☐ Reduces the risk of injury ☐ Movements are more aesthetically pleasing Fluency is improved	Active stretches that move through a full range of motion e.g. hamstring slides, circular kicks
Isolation	An independent movement of part of the body	☐ Can perform more challenging sequences ☐ Makes dance looks more aesthetically pleasing ☐ Can execute stylistic features of a dance style ☐ Greater awareness and body control over muscle groups	☐ Practicing a dance isolation front of a full-length mirror, so you can be sure that the majority of your body is stable. ☐ Use isolations to move merely a limb or whole sections of your body e.g. if you use your neck muscles to move your head from side to side, then that is a head isolation. ☐ keep the rest of the body stationary → video to check
Stamina	The body's endurance, the ability to perform for a long time.	You can perform for a long time. Your energy levels and technical ability won't decrease as you perform.	☐ Circuit training ☐ Cardiovascular training → running, cross training ☐ Improving fitness levels

Interpretative Skill	Definition	Why it is needed by a dancer	Development ideas
Facial Expression	Used during a performance to show off the emotions in a dance; e.g. smile, frown, shocked, sad, happy etc	- To make your performance seem confident - To draw the audience in - To give an engaging performance to the audience - To portray a certain mood - To portray a certain character - To enhance the narrative	Practice the facial expression need for the dance in the mirror separately then add back into the dance
Use of Focus	Using the eyes to enhance the performance	- To enhance narrative - To communicate a connection with another dancer - To make your performance seem confident - To draw the audience in to a specific area - To enable good balance - To create a clean performance for the audience	- Use sticking notes to identify points of focus - Add verbal prompts to remind focus points - Video and check use of focus
Emphasis	Involves knowing what aspect of energy, space and time to accent at different moments	- To highlight specific actions/moments - To add interest and variety - To draw the audience in - To give an engaging performance to the audience	- Identifying specific movements that require emphasis - Adding variety/impulse to highlight these actions
Musicality	Is a sense of rhythm and musical structure in a dancers movements	- To make your performance seem confident - To draw the audience in - To complement the climax and highlights in the music - To emphasize accents within the music - To complement melodies or instruments within the music - To portray a certain mood	- Listen to the first count of 8 in the music carefully and note down when counts are accented. E.g. 1, 2, 3, 4, 5, 6, 7, + 8 - Clap out the rhythm emphasizing the accents. - Identify the actions that occur on these counts make sure they are really clear
Projection	Involves throwing energy out of the body to give a quality of life to the movement	- To make your performance seem confident - To draw the audience in - To give an engaging performance to the audience	- Take 1 count of 8 from the dance. Perform it as a whisper to the audience. - Take the same count of 8 and perform as a shout to the audience. - Consider the view you wish the audience to see. Check your facing, posture and focus to ensure you are projecting the energy into the correct place.
Dynamics Quality	How you perform a movement: fast slow, heavy, light Different types of energy; sustained, percussive, swinging, suspended, collapsed, and vibratory	- To draw the audience in - To give an engaging performance to the audience - To aid with the communication - To add interest/variety	- Create an energy graph of the professional example - Compare to your performance, identify areas for development
Characterisation	Portray features of the character through physical and expressive skills	- To aid in the communication of the narrative - To add interest and relevance to the performance	- Research the professional example - Create an apply a character profile

Interpretative Skill	Definition	Why it is needed by a dancer	Development ideas
Use of Space/Spatial Awareness	Consciousness of the surrounding space and its effective use	- To create effective formations - For a dancer's own safety and safety of other dancers - To use the performance space effectively to portray choreographic intention - To ensure the performance is spatially pleasing to the performance	Begin in the starting position / formation of the dance. Practice the transition from the starting formation to the next ensuring not to collide with other dancers
Relationship to other Dancers	Awareness of and connection to other dancers	- For the dancers to understand their relationship with each other within the narrative - To portray the connection between the dancers to the audience effectively - To enhance the choreographic intention - To enhance the narrative - To draw the audience in emotionally	- Create a chart of relationships between dancers - Highlight significant interactions between dancers and add emphasis at these points
Movement memory	The automatic recall of learned movement material, without conscious thought	To produce an effortless and faultless performance	Apply variety of rehearsal techniques especially systematic repetition, mental rehearsal, slow mark

Rehearsal Techniques

- Systematic repetition
- Breakdown of parts
- Slow mark
- Skill mastery
- Mental rehearsal
- Video evaluation
- Peer feedback
- Corrections run through

Health and safety procedures

- Warm up/cool down
- Correct kit
- Suitable space
- Correct technical execution of complex skills
- Safe grip/exit/entry for contact work
- Nutrition
- Hydration

Behaviours and attitudes when working with others

- Cooperation
- being supportive
- listening to others
- punctuality
- consistency
- commitment
- reliability
- being prepared
- being respectful of others' opinions and skills

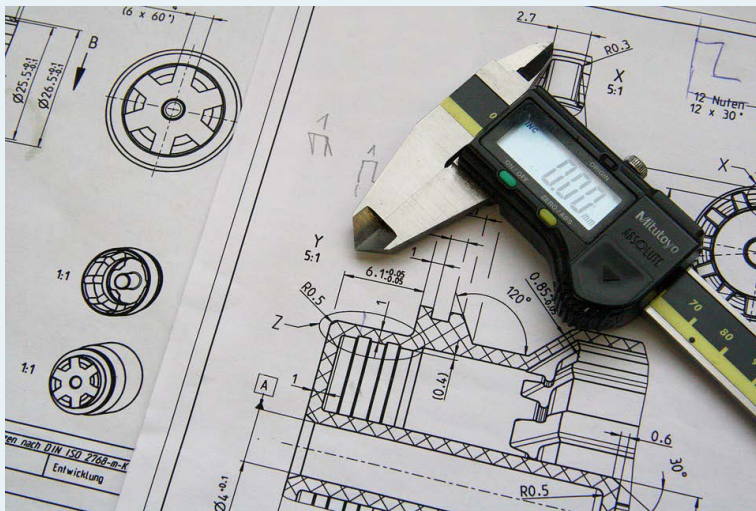


Interpreting engineering drawings

Designers and engineers use engineering drawings to convey information and details about the product to be manufactured or constructed.

Engineering drawings include details such as:

- sizes of parts or elements to be made
- details on materials
- information on finishes
- various views of the product
- tolerances
- scale
- details of complex parts.



Scale informs the engineer what scale should be used when using the drawing. A scale of 5:1 indicates that the drawings are five times smaller than the original product should be. This allows engineers to take dimensions (sizes) directly off the engineering drawings. Care must be taken when doing this to ensure the correct scale is applied.

Finishes information gives details on what the finish of the part or product would look like, for example, a knurled finish on a tightening clamp.

Detail views are sometimes used by engineers to explain the details of more complex parts in an engineering drawing.

Title blocks are used to display key sections of information about the drawing, i.e. scale, who made the drawing, the date it was drawn, the drawing number.

Orthographic views are the standard views used to lay out a set of engineering drawings. They must conform to British standards (BS8888) to allow a common format of presenting information to various people such as manufacturers.

Section views show a drawing of a part that may have been cut through to allow the reader to see further details.

Isometric views are often used by engineers and designers to produce a three-dimensional representation of the product or part.

Interpreting engineering information

Engineers need to interpret the information found on engineering drawings to assist them in manufacturing.

The information should be used to identify key areas in preparation for planning such as:

Equipment that will be required to manufacture the engineered product.

Tools that will also be required during the manufacturing should be identified.

Tolerances are the minimum and maximum limit that a part can be outside of the stated dimension (size) on a drawing. For example, a part that is 20mm long with a tolerance of $\pm 0.3\text{mm}$ would be acceptable if it was 20.3mm or 19.7mm when finally tested.

Presenting engineering information

Engineers and manufacturers need to know specific information about the product before they can manufacture it.

The people who will undertake the manufacturing must also understand specific details about how processes are carried out i.e.

- which speed should be used to drill a particular size hole in a particular material
- what speed is needed to cut a slot in a piece of aluminium
- which size hole should be drilled in a material to create a given thread size
- what finished must be applied to a material when it is manufactured
- what component parts are required in production (nuts, washers etc.).



Planning manufacture

Before any manufacturing can take place, a plan is needed to determine each stage or step of the process.

The plan should include:

- the materials to be used to produce the engineered product
- what equipment will need to be used
- what tools will be needed
- the sequence (order) that manufacturing needs to take place in.

The sequences need to consider in what order parts are manufactured, as some parts require others to be made to ensure they join correctly, etc. This is also known as prioritising.

Equipment selection

Equipment should be classed as any powered machinery that will be used in the production of an engineered outcome.

Equipment choices should give justifications for their selection and should refer to engineering drawings or other provided sources.

Typical equipment may include:

- centre lathe
- drills
- miller
- laser cutter
- bandsaw
- linisher
- brazing hearth
- buffer/polisher.

Tool selection

Tools should be classed as any hand tools that will be used in the production of an engineered outcome. These should also include marking and measuring tools.

Tool choices should be justified in the planning stages to explain why they were selected.

These include:

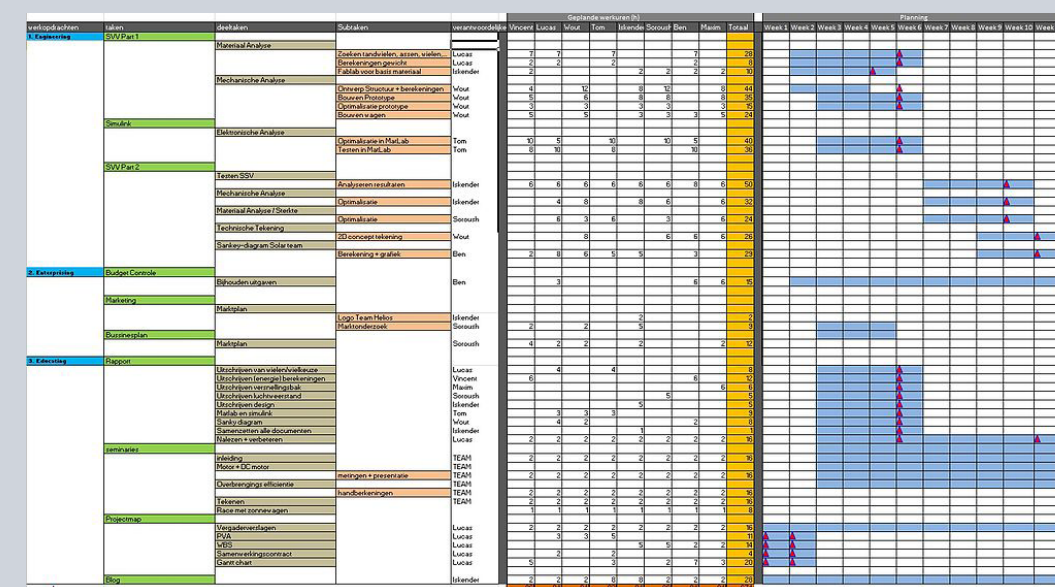
- scriber
- centre punch
- standard, internal, external and odd leg callipers
- soldering iron
- steel rule
- engineer's square
- file
- dividers
- micrometre
- vernier callipers
- rivet sets
- taps and dies
- hacksaw
- fretsaw
- pliers
- screwdriver.

Planning and sequencing

Plans for manufacture should be presented in a way which is easy to find key information at a glance. Planning information could include tables such as a GANTT chart or other lists or appropriate documents.

Manufacturers should be able to understand from the provided information, the sequence of manufacture and the time it should take to produce the part, which tools and equipment should be required for each stage and any processes such as the use of jigs or templates.

Planning and sequencing should also consider the use of CAM (where appropriate), including 3D printing and laser cutting.



Typical engineering GANTT chart

Contingency planning

Planning should also include contingencies to overcome problems that may arise during production. What happens if a machine breaks down or people become ill?

Contingency planning should include ways that problems can be overcome, giving examples of scenarios and possible contingencies.



Health and safety

Assessing potential risks is a process that is undertaken prior starting manufacture. It should identify what potential hazards and risks may be present. This should include both the working environment and the actual items of equipment to be used.

Deciding on control measures should focus on stating how the identified risks and hazards can be mitigated (made safe). This should include detailing about guards on equipment and specific any hazards around the working environment.

Personal protective equipment should also be identified for manufacturing stages and should only include appropriate choices suitable for the individual task being undertaken.

Health and safety should also form a part of the overall planning stages.

Implementing engineering processes

This involves the physical making of an engineering product using a range of processes to produce a product or part. These can include:

Marking out is a process where the required shape is marked onto the stock material.

Cutting can occur using a hand tool like a hacksaw, sheers or snips saw or fretsaw, or using machinery such as a metal bandsaw.

Milling uses a milling machine to cut slots in blocks of metals, and to face off edges.

Finishing is applied at the end stage of production. It could include a range of finishes such as polishing, knurling, enamelling, electroplating or anodizing.

Shaping can involve the removal of materials, called wasting, using saws, files or grinding equipment.

Drilling is a process used when a hole is required in a material. Drilling can be done using a hand drill, or drill press/pillar drill.

Brazing typically involves a brazing hearth to braze metals together forming a permanent joint.

Turning uses a machine called a lathe that can be used to turn a piece of metal to create differently shaped round pieces. It can also be used to create threads and to apply different knurled finishes.

Joining metals can be done permanently using welding, brazing, epoxy resin adhesives and soldering. Temporary methods include nuts and bolts, hinges, screws and rivets.

Soldering is used to heat join softer metals such as silver in jewellery (silver solder) or to attach electronic components to printed circuit boards.

Forming is a process used to change the shape of the material, for example by bending, compressing or extruding.

Evaluating the quality of engineered products

Engineers, manufacturers and designers need to constantly evaluate stages of manufacture to ensure that outcomes are produced in line with the given criteria. Typical examples are:

Inspection techniques can combine a range of methods that can be undertaken to ensure that the product or part meets the set criteria. They could include visual inspection, looking for manufacturing defects or sophisticated digital scanning techniques, which assess accuracy to a minute detail.

Evaluating against a success criteria requires the end product or part to be reviewed against information that may have been included in a brief or manufacturing specification.

Evaluating against engineering information requires checking against information obtained from engineering drawings. This could include checking sizes and finish details but also checking that the tolerances of the final parts are within the allowed parameters.

Quality inspection can include inspection of individual parts as they are manufactured or as they are assembled on the completed engineered product.





Using engineering tools

Using engineering tools

Files are used to remove material from stock form of metals and plastics. This is known as wastage.

Scribers are used to mark lines for cutting on materials such as metals and plastics.

Centre punch is a tool that is used to create a small depression in material prior to drilling. This helps locate the drill accurately on the material.

Tap and die sets are used to create threaded components. A tap is used to thread a hole and a die to thread a bar (i.e. a bolt).

Hacksaws are a framed saw used mainly to cut metal.

Rivet guns are used to place rivets in areas that are often accessible from one side. Traditional rivets use 'sets' to form the rivet on both sides of a joint.

An engineer's square is used in marking out material. It is set at 90° and is also used for parallel marking.

Callipers are used to scribe and measure on metals and plastics. Odd leg callipers can be used to scribe lines parallel to an edge, whilst straight leg callipers can be used to both mark equal distance sizes and produce arcs and circles.

Vernier callipers are used to measure a range of sizes such as length of material, depth of holes, internal openings, etc.

Micrometres are highly accurate measuring tools used to measure sizes, i.e. material width/thickness.

Reamers enlarge, smooth, or contour an existing drilled hole in a work piece for a precise fit when

installing fasteners or other parts in metalworking tasks.

Shears and snips are used to cut sheet metal. They may be straight or curved depending on the task.

Gauges are used in a variety of engineering manufacturing tasks such as centre gauges, which locate a centre on a metal bar, and thread gauges, which identify the size and pitch on a screw thread.

In addition to the examples above, tools can also include items used on items of equipment known as tooling:

Knurling tools are used to put a textured grip onto a metal bar using a lathe.

A **boring bar** is used to enlarge a drilled hole to a precise dimension. They are available for a lathe or a milling machine.

Parting tools are used on a lathe to form a narrow slot to assist in the removal of a work piece from the stock/waste material to remove.

Using engineering equipment

Commonly used items of equipment that you may find in a school workshop:

Centre lathe

- Facing off is the process of levelling off the end of the material
- Turning a taper causes a uniform change in diameter over a set length on a bar
- Applying a knurled finish
- Boring a hole
- Drilling along the centre axis line
- Cutting a thread onto a bar or into a hole.

Drilling machine

- Drilling holes using a range of drill bits
- Trimming off using a trimming tool, i.e. vacuum forming.

Miller

- End milling is used to create a profile in the work piece, including square end mills, ball end mills, finishing mills and corner rounding mills
- Slot milling involves using a cutter, which cuts slots or grooves into the material.

PCB tank

- Used to produce printed circuit boards for electronic circuits
- Uses a photographic and etching process and is used in combination with a UV light box to prepare the PCB artwork.

Vacuum forming:

- A process where a sheet of plastic is heated to a forming temperature, stretched onto a single-surface mould and forced against the mould by a vacuum.



Year 10 HT3 and HT4: ‘Macbeth’	Context	
	Jacobean era: Shakespeare wrote ‘Macbeth’ during the Jacobean era, which began when James I took over the crown in England from Elizabeth I, from 1603-25. King James I was Shakespeare’s patron (he provided Shakespeare with financial support in exchange for him writing plays) so the attitudes in the play are thought to have been heavily influenced by the King. For example, James I’s belief in witchcraft helps to explain the powerful presence of the supernatural in ‘Macbeth’. He was obsessed with magic and witchcraft and ordered several witch hunts during his reign, even producing a treatise on witchcraft called ‘Daemonologie’ (‘The Science of Demons’). The Witches’ conspiracy against the monarchy was something that would have instilled great fear amongst the audience.	Religion and the Divine Right of Kings: originating in the Middle Ages, this belief was that the King was chosen by God. It was believed that to commit regicide was to disobey the will of God and was therefore sacrilegious (a holy crime) and against the natural order. Jacobean audiences believed people who committed regicide would be punished by God, and the mental decline of both Macbeth and Lady Macbeth, having been plagued with guilt, is Shakespeare’s way of showing that regicide does not go without punishment. Jacobean society was extremely religious, believing life to be sacred and God to be the creator of everything. Thus, when Macbeth claims life is “a tale told by an idiot...signifying nothing” a Jacobean audience would have been greatly shocked. This belief that life is futile and meaningless solidifies Macbeth’s damnation by the end of the play.
	The Great Chain of Being: Jacobean society had a strict hierarchy based upon the Great Chain of Being. This was a religious hierarchy where everything on earth was awarded a ‘rank’ or status. God was at the top, followed by angels, humans, animals and plants. Jacobean audiences believed that if this hierarchy was interfered with (i.e. a human tried to ‘jump up’ the ranks to the status of angels or God) then the natural order would be thrown into chaos. Shakespeare shows this on the night of Duncan’s regicide when there is a violent storm. Macbeth’s attempt to climb the Great Chain of Being disturbs the natural world.	The Gunpowder Plot: 1605, a group of Catholic conspirators plotted to assassinate King James I, planting explosives in the House of Lords during the opening of parliament. They hid kegs full of gunpowder in the cellars beneath the chamber where the king and the rest of the political elite would assemble. Enough powder was stored to completely destroy the building and kill everyone present. One of the conspirators, Guy Fawkes, was tasked with igniting this huge bomb. The plot was uncovered just twelve hours before parliament was due to open. However, the plot made King James nervous about future attempts on his life. ‘Macbeth’ shows that those who commit regicide are greatly punished and mentally tortured – a clear deterrent to any future plotters.
	The supernatural and witchcraft: in England and Scotland, up until the 1700s, there was a very strong belief in witches and witchcraft (for example, in 1542, fifty years before Shakespeare wrote ‘Macbeth’, King Henry VIII passed the first English Witchcraft Act, which officially made the practice of witchcraft punishable by death). It was believed that ‘witches’ could be found within every community and that they could inflict diseases on people, spoil crops, bring about bad weather, and perform unspeakable and detestable acts of the devil's work. The North Berwick witch trials took place in 1590 in Scotland, when a number of people from East Lothian were accused of witchcraft. They ran for two years and implicated seventy people. This was the first major witchcraft persecution in Scotland, and it was supported by James I.	Attitudes to women: in the patriarchal society of the Jacobean era, women belonged to their fathers (or their brothers if their father died), and then to their husbands. Women could not own property of their own. They had very few rights and were viewed as subservient to men – for example, they were only provided with a very basic education and often this was centred on mastering tasks within the home. Women were not given the opportunity to work and they were not allowed on the stage. All the female parts in plays at the time were played by boys whose voices hadn’t broken yet (the apprentices) and therefore the portrayal of women is widely regarded as being very limited. To an extent, Shakespeare subverts this through Lady Macbeth, a powerful female character who commands, instructs and manipulates her husband. Many women who subverted expected gender roles or conventions at the time were accused of being witches.

Characters		Dramatic terms	Definition
Macbeth: a brave warrior in Duncan's army, later the Thane (Lord) of Glamis and Cawdor. When three witches predict that he will one day be king of Scotland, he takes his fate into his own hands, allowing his ambition and that of his wife to overcome his better judgement. Having committed murder he finds himself caught in a spiral of evil from which he can see no escape. Towards the end of the play, when he realises that he is doomed, he briefly returns to his old heroic self. His bloody reign culminates in a battle against Malcolm and the English forces. Shakespeare uses Macbeth to explore the consequences of wrongful ambition.		Tragedy	A genre of play that focuses on the downfall of the main character. Tragedies usually adhere to a set of conventions: - The play centres around a tragic hero . Usually he is male, usually with high status at the start of the play and some moral virtues. - Through a combination of the character’s fatal flaw (their hamartia) and the intervention of fate, the character is set off on a path of self-destruction from which they cannot escape. - They may have a moment of realisation (anagnorisis) in which they realise their mistake, but it is too late to turn back. - The play ends with their death, and then the natural order is restored. Audiences were meant to feel a sense of catharsis - they could experience the intense emotions of the plot without making the same mistakes as the protagonist.
Lady Macbeth: Macbeth’s wife, whose ambition helps propel her husband to seize the crown. Subsequently, her husband's tyranny and her own guilt recoil upon her, sending her into a madness from which she never recovers and leads to her suicide. She symbolises how a powerful, ambitious and ruthless character cannot escape the consequences of their own actions.	The Witches: although there is clearly more than one of them, the Witches may be seen as seem as a single character; they are often referred to as ‘The Weird Sisters’. The witches directly influence the actions of Macbeth. Their predictions drive matters forward, although they never actually suggest direct action. Rather, they plant ideas in Macbeth's mind and let his ambition do the rest. Many of their predictions are ambiguous. Macbeth did not have to act on their prophecies, but when he did, his fate was sealed. They symbolise the dangerous and destructive allure of the supernatural.		
Banquo: Macbeth’s close friend and ally who also receives predictions from the witches. While both men have ambitious thoughts, Banquo is more cautious. His prediction ultimately results in his own death. The vision of Banquo’s ghost later haunts Macbeth. He is emblematic of loyalty, rationality and reason, unlike Macbeth’s ambition and greed.	Duncan: King of Scotland. His victories against rebellious kinsmen and the Norwegians have made him a popular king. When Macbeth initially decides not to kill the king, he gives Duncan’s many admirable qualities as his reasons. When he dies at the hands of Macbeth, the Great Chain of Being or Natural Order is disrupted. He is emblematic of misplaced trust as he is betrayed by both the original Thane of Cawdor, and then the next Thane of Cawdor (i.e. Macbeth).	Tragic hero	A seemingly noble character whose flaws, imperfections and actions lead to their downfall .
		Jacobean drama	Jacobean plays tended to be explore the extremes of human nature , such as humanity’s selfishness and the nature of evil. Jacobean plays were particularly violent, cynical, pessimistic, and often dealt with the theme of society’s moral corruption . The darker, disruptive and immoral side of humanity was often portrayed on the stage.
Macduff: the Thane of Fife. He is loyal to Duncan and suspicious of Macbeth. He leaves Scotland to join Malcolm in England, supporting him in raising an army to defeat Macbeth. The witches warn Macbeth to “Beware Macduff”, and his role is vital as his killing of Macbeth allows the natural order to be restored. His nobility and loyalty serve as a foil to Macbeth’s selfishness and tyranny.	Malcolm: Duncan’s rightful heir. He leaves for England after his father’s murder and enlists the support of the English king and English lords. He is shown as being noble and deserving of the throne. Malcolm is the embodiment of good kingship. His restoration to the Scottish throne is essential for the natural order to be restored.	Hamartia	A fatal flaw which causes an otherwise noble or exceptional character to bring about their own downfall and, often, their eventual death. Examples of this could include jealousy, misplaced trust, errors of judgement, greed and lack of self-control.
		Hubris	Excessive pride which leads to a downfall. Hubris causes a character to violate a moral code, neglect a warning from an authority figure or attempt to overstep normal human limits. This has terrible consequences for them and those around them.

*What you already know		Literary techniques	Definition
		*Exclamatory	A sentence that expresses a heightened emotion . They end with an exclamation mark.
		*Foreshadowing	Where the author gives the reader hints or signs about the future . It suggests what is to come through imagery, language, and/or symbolism. It does not directly give away the outcome, but rather, suggests it.
		*Imagery	The use of vivid language to evoke a sensory experience or create a picture with words for a reader. Writers often use the different senses to describe something – such as seeing, hearing and touching – in order to help the reader experience what is being described.
		*Imperative	A sentence that is a command . They start with a verb.
		*Listing	When the writer includes several words/ phrases/ ideas, one after the other .
		*Metaphor	A type of image when one thing is compared to another thing to help the reader to understand an aspect of the original thing more clearly. The original thing (called the ‘tenor’) is compared to another thing (this is called the ‘vehicle’) to help the reader to understand it more clearly (understanding the link between the tenor and the vehicle is called the ‘ground’).
		*Motif	An object, image, symbol or idea that is repeated throughout a literary work. Motifs help to explain bigger ideas or themes.
		*Oxymoron	A phrase combining two or more contradictory terms e.g. deafening silence, blinding darkness .
		*Pathetic fallacy	A type of personification where emotions are given to a setting, a natural object or the weather .
		*Pathos	A moment that makes us feel pity or sorrow . Dramatists will use pathos to make the audience feel sorry for a character.
		*Personification	A type of image where a human quality is attached to a thing or idea.
		*Repetition	When a word/ phrase is obviously repeated throughout a sentence/ paragraph/ whole text.
		*Simile	A type of image that writers use to compare one thing with another, using ‘like’ or ‘as’ .
		*Symbol/ symbolism	A thing that represents or stands for something else – usually, this is an object that represents a much deeper idea, emotion or feeling. A symbol might occur only once to signify a particular emotion or idea. It becomes a motif if it is repeated at various points in a text. Therefore, a symbol could be described as a ‘mini-motif’!
		*Semantic field	A group of words that are very similar in meaning . Semantic fields are often used by writers to keep or reinforce a certain image/ feeling/ impression in the reader’s mind.
Themes			
Ambition: Macbeth’s ruthless seeking of power is presented as his ultimate flaw (hamartia). Shakespeare presents ambition as the pathway to deceit and evil. Shakespeare suggests that ambition can present itself in different ways: it can make a person ruthless and violent. It can override all morality. It can result in one becoming detached from oneself and from others e.g. Macbeth exchanges his soul for a fleeting moment of power and therefore, his ambition is punished.		Fate: Shakespeare explores the idea of fate – is there is a certain path that has already been set out for us that we are powerless to change? Or do the choices we make shape our lives? Is it possible to ‘cheat’ fate? Shakespeare also suggests that Macbeth becomes so consumed and obsessed with his own destiny that he fails to predict the consequences of his ruthless actions. Shakespeare suggests that the supernatural use the idea of fate to manipulate Macbeth.	
Deception (reality vs. appearance): Shakespeare presents deception (lying) as one of the products of ambition. Deceiving oneself and deceiving others is a sign of moral decline. Shakespeare also suggests that everyone is capable of deception but that those in power are particularly vulnerable.		Nature and the supernatural: Shakespeare uses the supernatural to help the audience to understand the characters’ secret ambitions. Shakespeare also uses the supernatural to encourage the characters to make irresponsible decisions. Shakespeare suggests that the supernatural are a catalyst for revealing characters’ innermost desires.	
Guilt: Shakespeare suggests that ambition ultimately leads to guilt and that this eventually results in inner torment and madness.		Violence: Shakespeare’s portrayal of violence is often contradictory: it secures Duncan’s reign at the start, but it also ends it; it also allows, secures and then ends Macbeth’s reign.	
Power: power is presented as a corrupting force in the play. Desire for power can transform the most noble of characters into tyrants. Shakespeare juxtaposes examples of good and weak kingship, through Macbeth, Duncan and Malcom.		Loyalty: Shakespeare suggests that loyalty is often vulnerable and ultimately is lost as a result of ambition. Shakespeare highlights the importance of being loyal to king and country, as well as being loyal to peers.	
Chaos and disorder: by challenging the Divine Right of Kings, the balance of The Great Chain of Being is overturned. The events that succeed Duncan’s regicide are marked by chaos and disorder, as symbolised in the mental state of characters, the state of Scotland and balance in nature.		Masculinity: Shakespeare suggests that ‘masculinity’ can encourage violent and reckless behaviour and that ideas surrounding gender can be used as tools for manipulation.	

COMPONENT 1 - Exploring Enterprises

- Investigate the factors that contribute to the success of an enterprise

What are internal factors?

Internal factors can be controlled by an enterprise.

Internal factors can impact costs positively and negatively. The factors which the enterprise need to fully understand are below.

Understanding the market

- Who are the competition?
- What do the customer want from our enterprise?
- What makes our product unique?

Satisfying customers

- What is the quality of the product?
- How is the product priced?
- Do you offer good customer service, convenience or a USP? Is the product available?

Planning / Financing

- How / When can orders be taken? Online? In person?
- Are we organised? Do we have enough stock?
- Do we have enough time to do X?
- Have we forecasted as well as possible (£)?

Marketing and promoting

- Are we getting value for money with our marketing and promotions? M&P can be an expensive cost for SMEs
- Can we make use of social media to M&P?

HR Costs

- Do we have a contingency plan? – have we planned for the unexpected (in the hope it will never happen?)
- Do we have money readily available for costs which aren't expected (in the hope we'll never need it)
- Examples: Advertising for a new role/ cover/training.

INTERNAL FACTORS SITUATIONAL ANALYSIS



How can an enterprise conduct a situational analysis?

This is simply analysing (studying) the situation an enterprise is in, looking at the market and assessing how it could be affected by trends and developments. Below is a SWOT analysis explained:

S

Strengths of an enterprise

- They might keep customers satisfied.
- They might have a good brand image & reputation.
- They might offer a good quality service.

W

Weaknesses of an enterprise

- Staff members might lack training.
- Their improvement plan might not be effective.
- They may not have the best resources.
- They may not have high market share.
- They may not have competitive edge.

O

Opportunities the enterprise might want to exploit

- These are different for each enterprise depending on what their strengths and weaknesses are.

T

Threats on an enterprise

- This is anything which might prevent success for example:
- Changes in trends/tastes
 - New competitors entering the market
 - Existing competitive changing what they do

Enterprises have to consider how each other the factors might effect them below. This is a PEST analysis.

P - Political

- Changes to laws
- New party in power
- Effect of wars, tax, environment
- Relationships with other countries and the EU

E- Economic

- Employment levels
- Exchange rates (import / exports)
- Wage levels
- Interest rates (on loans/overdrafts)
- Disposable income

S - Social

- Changes in fashion/trends
- Ethical considerations (e.g. Fair Trade)
- Environmental considerations
- Demographics (is it growing?)
- Attitudes towards work
- Level of customer education

T - Technological

- Developments in computing
- Mobile device developments
- Machines taking the place of humans
- Increase in e-commerce

COMPONENT 1 - Exploring Enterprises

EXTERNAL FACTORS



- Investigate the factors that contribute to the success of an enterprise

External factors can not be controlled by the enterprise. Once the enterprise has been made aware of changes they need act on them and over come them!

Factors that impact on COSTS

External factors which may impact an enterprise might be:

- Cost of energy (variable costs) – Gas, Electricity, Oil
- The cost of raw materials – these are items which are needed for producing a product (wood for a joiner for example)
- The cost of borrowing money – if you borrow money from a lender you will have to pay interest on the loan. If the interest rate goes up then so does your cash outflow.
- Rent on a premises – if rent goes up then this impacts your enterprise's costs.

Increase and decrease in costs is known as fluctuation. Enterprises need to be prepared for costs to fluctuate.



MARKETING (External factor)

- Marketing costs a lot of time and money and these costs can also fluctuate. In these instances enterprises might choose to use free marketing e.g. social media, blogs, vehicle advertising, email campaigns.
- They may also choose low cost marketing: radio advertising, business cards, flyers or newspaper advertising.

SELLING COSTS (External factor)

- When selling the enterprise must consider wages (they can rise and the minimum is set nationally), packaging the goods and delivering the goods (the cost of the raw materials can also rise)

GOVERNMENT REGULATIONS

- Costs can rise due to companies (such as insurance companies) needing to cover their costs.
- Costs can also rise when governments make changes such as to wages, taxation and pensions.

Factors that impact on REVENUE

Revenue is how much an enterprise earns from selling its goods and services. Changes in revenue happen when the amount of money an enterprise receives goes up or down. Enterprises cant also stop or influence the changes in revenue, but they have to respond to the changes to ensure they are still successful.

Competitors

What are competitors doing which might impact your revenue?
What new enterprises are coming into your market?
How can you attract customers or encourage repeat purchase to gain competitive edge?

Consumer behaviour

Consumer tastes have an impact on revenue - this creates a social pressure on enterprises to change their product portfolio.

Consumer Confidence

This means how much confidence consumers have in the economy.

- If the economy is growing peoples jobs will be safe and they'll spend.
- If the economy is in recession people will be uncertain about the future and will be less confident in spending.
- This impact the revenue of enterprises.

Consumer legislation

Sometimes things which enterprises sells are:

Banned – they become illegal

T&Cs change – for example how goods can be packages/promoted

COMPONENT 1 - Exploring Enterprises

MEASURING SUCCESS



- Investigate the factors that contribute to the success of an enterprise

What are some of the reasons for SME success?

- Skills relevant to the market
- Hard work and effort
- Determination
- Resilience
- Ability to develop and train staff
- Ability to motivate staff
- Providing a high level of customer service
- Meeting and exceeding customer needs
- Having experience of the market.

What are common aims of SMEs?

- Survival
- Breaking even
- Making a profit
- Meeting customer needs



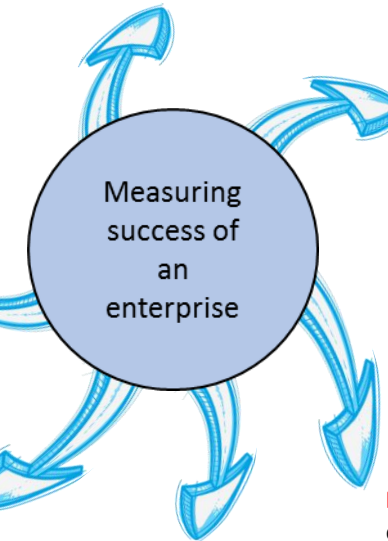
How can the success of an enterprise be measured?

Customer satisfaction: Measuring customer satisfaction is done by looking at whether the enterprise has a good reputation and whether customer tell others about the enterprise. If this is the case, then the enterprise will be deemed to be a success.

Profit: This is the revenue left after all costs have been taken away. Most enterprises make a profit. For private enterprises, profit is essential. For social enterprises, profit is called a surplus, this is reinvested into the organization. Social enterprises are, for example, charities.

There are many liquidity ratios you need to know to be able to measure this, but in essence as the profits go up the enterprise is demonstrating success.

Customer satisfaction: Measuring customer satisfaction is done by looking at whether the enterprise has a good reputation and whether customer tell others about the enterprise. If this is the case, then the enterprise will be deemed to be a success.



Market Share: This is the percentage of the market which the enterprise controls. For example if the whole market takes £100,000 per year but my enterprise takes £10,000 on its own then my enterprise has 10% market share.

Survival: This means continuing to operate for a long time after the enterprise has started. 90% of enterprises survive their first year, however, it is known that the first 5 years are the most challenging.

The longer an enterprise trades for the more successful it is likely to be. This is due to many of the skills required for success have been learnt and enhanced. Experience assists with success.

Making a living: If an entrepreneur is happy and conformable financially then they're making a success of their enterprise. Most enterprises are set up for independence.

Issues of Life and Death

2 Mark Questions

The Origin of the Universe (cosmology).

Monotheistic religions (religions with one God) like Christianity and Sikhism believe the world was created by an all-powerful (omnipotent) God. **Literalist Christians** believe this happened exactly as the Bible said (in 6 days with the 7th as a day of rest). **Non-literalist Christians** believe the creation story teaches us that God made the world. **Sikhs** believe that Waheguru created everything. They don't have a creation story, however in the Mool Mantra and throughout the Guru Granth Sahib reference is made to the believe that Waheguru is responsible for all existence. Sikhs are happy to accept scientific ideas about creation, however they will say that Waheguru used the big bang to create.

The Big Bang theory suggests that time and space began around 15 billion years ago. The Big Bang theory says the universe began from a 'singularity', an infinitely tiny point which was infinitely hot and dense and as it expanded sub atomic particles and then atoms began to appear. This led to stars and planets being formed. Scientists posited the Big Bang theory based on background radiation which they believe is left over from the initial expansion.

Stewardship. Christianity: world and everything in it should be respected and protected as part of God's creation. '*You made them rulers over the works of your hands.*' **Sikhism:** God has appointed you a custodian (a trustee to care for the world). You will be judged on your use of animals and the world. **Humanists:** look after the world for future generations. Reuse, recycle etc.

Judgement, heaven and hell (Eschatological beliefs)

Humanists- no part of us lives on. Death is the end (materialism=nothing exists apart from matter e.g. no soul).

Christianity: soul lives on in eternal life (dualism=body and soul are two separate things). Soul of the righteous (good) goes to heaven, the sinners to hell. Some believe our soul leaves the body and is united with God, other believe after death we will have a 'bodily resurrection' like Jesus and be raised as spiritual bodies.

Heaven- '*In my Father's house are many rooms. If it were not so, would I have told you that I go to prepare a place for you?*' Hell- '*they will be tormented day and night for ever and ever*' and '*there men will weep and gnash their teeth.*'

Sikhism: Believe in **samsara**, the cycle of birth, death and rebirth. Sikhs sometimes refer to death as life an experience of sleep. Having gone to sleep tired, the person wakes up refreshed the next day, ready for a new life. The body is seen as a vessel for the soul. Sikhs believe in **Karma**, each person is rewarded or punished according to his or her actions. If a person has done mainly evil deeds their soul will be reborn into a lower life form, or if the person has done mainly good deeds their soul will be reborn into a human life or achieve **Mukti**. Sikhs believe that the soul is immortal and goes through different life forms until purified to become one again with Waheguru – achieving Mukti. To achieve this involves meditating on Waheguru and purifying the soul from things like anger, attachment, greed, lust and ego. Failure to worship God and to meditate upon him results in more reincarnations. **Karma** "*What ever you plant you shall harvest*"

Funeral rites/traditions - Christianity	Funeral rites/traditions - Sikhism
Last rites are sometimes said by a priest close to death	Before the Sikh funeral the body is bathed and dressed in clean clothes. If an Amritdhari Sikh, they will have all of the 5 Ks placed on their body.
Funeral service in a church -close to God	The funeral will be held in the Gurdwara in the presence of the Guru Granth Sahib.
Candles lit - reminder Jesus is ' <i>light of the world</i> ' and there is a new life in heaven	Special Ardas prayers will be recited.
Some have Communion/Eucharist - reminder of Jesus' sacrifice	The body will be cremated as the body is seen as only clothing for the soul. Many Sikhs will take the ashes from the cremation to the Punjab to be scattered in water from where Sikhism started. Some Sikhs choose to put the ashes into a local river if they cannot go to the Punjab.
Readings from Bible -to remind them of eternal life and guidance from God.	
Cremation or Burial -depends some allow cremation now as soul is thought to be separate from body	

Abortion

UK law- legal before 24 weeks with the agreement of two doctors.

Christianity- some argue we should be compassionate and permit abortion if the mother's life is in danger. Others Christians say it is a moral evil because every life is a gift from God.

Sikh – believe that life is a gift from Waheguru and so abortions are not acceptable as they get in the way of Waheguru's creative work. They believe that life begins at fertilisation and so ending that life is a sin. Abortion may

Euthanasia

UK law- euthanasia is illegal the UK and considered either manslaughter or murder and carries a life in prison penalty. Hospices and palliative care offer pain relief and comfort as end of life care.

Christianity- life is sacred so taking life is wrong. Murder is against the 10 commandments '*do not murder.*' Hospices offer alternative where care and support can be given. Some liberal Christians might allow Euthanasia if it can be proven as the most loving thing (although most do not).

Sikh- All life has a divine spark and is sacred so no one should take action to end a life. Sikhs believe they should preform sewa and serve those who are ill and dying through hospice care.

Turning off a life support machine if there is no hope of recovery is not the same as euthanasia and is permitted by both.

Important people/theorists.

Stephan Hawking- scientific research established universe is currently expanding, contributed to the Big Bang theory. **William Paley-** Suggested the world, like a watch, must have a designer since it has such complex patterns and structures it could not have occurred by accident. **Charles Darwin-** set out the theory of evolution after seeing how finches (a type of bird) had adapted and evolved to have different beaks depending on the food available to them, those with mostly cactus fruit had much sharper pointed beaks. **Richard Dawkins-** said evolution is the best theory to explain how life came to be. He said that the world might seem designed but then we can't explain who designed the designer (God).

Afterlife 	Life after death; the belief that existence continues after physical death
Environmental sustainability 	Ensuring that the demands placed on natural resources can be met without reducing capacity to allow people and other species of animals, as well as plant life, to live well, now and in the future
Euthanasia 	From the greek, <i>eu</i> 'good' and <i>thanatos</i> 'death'. Sometimes referred to as 'mercy killing'. The act of killing or permitting the death of a person who is suffering from a serious illness
Evolution 	The process by which different living creatures are believed to have developed from earlier less complex forms during the history of the earth
Abortion 	When a pregnancy is ended so that it does not result in the birth of a child
Quality of life 	The extent to which life is meaningful and pleasurable
Sanctity of life 	The belief that life is precious, or sacred. For many religious believers, only human life hold this special status
Soul 	The spiritual aspect of a being; that which connects someone to God. The soul is often regarded as non-physical and as living on after physical death, in an afterlife

Relationships: Family, marriage, sexual relationships, issues of gender in religion and changing attitudes to all these topics including same sex relationships.

Key Concepts (2 mark questions)	
Adultery	Sexual intercourse between a married person and a person who is not their spouse (husband/wife)
	
Divorce	to legally end a marriage
	
Cohabitation	To live together as a couple without being married.
	
Commitment	a sense of dedication and obligation to someone or something
	
Contraception	methods used to prevent pregnancy (pill, condom etc)
	
Gender equality	people of all genders enjoying the same rights and opportunities in all aspects of their lives
	
Responsibilities	actions/duties you are expected to carry out. These are often as a result of a role you have.
	
Roles	position, status or function of a person in society, as well as the characteristics and social behaviour expected of them.
	

The Relationship section will have 6 extra marks for SPaG on the 15-mark question!

21st Century Family Family is the building block of society, for religions it is the place where faith is passed down. Children get taught the essentials. Prayer, worship, celebrations and how to live a good life. Christianity: ->Christians believe the family to be important because God created Adam & Eve to be a family unit. ->ideal situation would be a nuclear family: one where the father and mother are married with their natural born children. Bible quote: <i>‘Honour your father and mother.’</i> Sikhism: ->The family is the essential social unit in Sikh society. -> All the adult Gurus were married and they believed that the family was the basis for a strong, safe, secure society. - ->The family is where children are trained in the five Sikh virtues, such as compassion, truth, and love. Guru Nanak preached that the life of the householder was the highest path to spirituality. Quote from GGS: <i>“The householders assert their faith in family life”</i>

Role of men and women Christian ->Traditional/conservative: God created Adam then Eve as his companion to support each other. -> St Paul taught that wives should obey their husbands. Bible Quote: <i>‘Man is the head of the women’ ‘women submit to your husbands’</i> ->Catholics the Priest is acting in the place of Jesus, a man and so only men can be Priests. ->St Paul said women should not speak in church. Bible Quote: <i>‘learn in quiet submission’</i> ->Liberal Christians would say that Paul was writing as a man of his time, reflecting the sexist attitudes of the time. -> Most Christians would allow women to be ministers and leaders in church including the Church of England. -> Jesus treated women the same as men, he had female friends, Martha and Mary Magdalene Bible Quote: <i>‘There is no male nor female...you are all one in Christ’</i> Sikh -> Men and women are equal; all contain the divine spark. -> Guru Amar Das appointed women preachers. -> Guru Gobind Singh gave all women the same name, Kaur meaning Princess. Guru Granth Sahib Quote: <i>‘From her kings are born’</i> -> All the Gurus were men. -> Indian traditions still often have men and women in traditional roles at home.
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Sikh marriage (Anand Karaj) -> Marriage is the joining of two souls in one body. -> Part of a person’s purpose in life -> Seen as the joining of two families. -> Place where children can be born and raised. Guru Granth Sahib Quote. <i>‘they alone are called husband and wife, who have one soul in two bodies’</i> Marriage Ceremony (in a Gurdwara) 1. In the presence of the Guru Granth Sahib. 2. Grooms scarf placed in brides hand, usually by her father. Symbol of their union. 3. Guru Granth Sahib reading 4. Circle the GGS four times as each of the four parts of the Lavan, the wedding Hymn is read. 5. The lavan talks of the soul’s journey towards Mukti. 6. Ardas, set prayers are said. 7. Karah parshad shared, sweet semolina dough. Christian marriage -> God made humans to be joined together in marriage. -> In Genesis God created Adam and Eve and instructed them to fill the earth. ->For Catholics marriage is a sacrament; God is joining the couple. Bible Quote. <i>‘man will leave his mother and father and be united to his wife, and the two will become one flesh’</i> Marriage Ceremony (in a church) 1. Welcome and introduction. 2. Prayers and Hymns asking God to help the couple 3. Bible reading about love 4. Exchange of vows, the most important part the commitment. <i>‘Till death do us part’</i> 5. Rings symbol of unending love given to each other. 6. Formal pronouncement, officially married. Priest says, <i>‘what God has joined together let no man separate’</i>

Adultery Christianity ->Ten Commandments: <i>“You shall not commit adultery.”</i> ->It breaks the marriage vows (promises). ->Jesus said if you look at someone else with lust you have committed adultery in your heart. -> Jesus forgave the adulterous woman, he said <i>‘let he who is without sin cast the first stone.’</i> Sikhism -> Adultery is considered a serious sin. -> Sikh marriage is a sacred bond and adultery breaks that bond, it is giving in to lust (one of the five evil passions) -> It brings shame on the family. It is considered manmukh behaviour (self-centred) <i>‘The self-willed manmukh is lured by another man’s wife’</i>
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Divorce/Remarriage: Christianity ->Jesus taught that no-one should break up a marriage: <i>“What God has joined together let no man separate.”</i> ->You promise – ‘till death us do part’ in front of God. -> St. Paul taught <i>“A man must not divorce his wife.”</i> ->Divorce could be a last resort as it is might be the most loving thing to do. -> Remarriage generally discouraged, but sometimes allowed, usually not in a Church. Catholics (As marriage is a sacrament, a most holy ceremony involving God) ->Do not recognize divorce what God has joined no one can separate. ->may have an annulment, where the marriage is declared invalid. -> As divorce is not recognized remarriage in the RC Church not permitted. Divorce/Remarriage: Sikhism -> Marriage is the joining of two souls, divorce is not really possible. -> Family and friends will do all they can to try to support and avoid a divorce. -> Sikhs may get a legal divorce in the UK, but it may not be accepted by religious families and some in the Sikh community. -> Rehat Maryada (Sikh code of Conduct) remarriage is not permitted unless one’s spouse has died. In the West however Sikhs tend to encourage people who have had a legal divorce to remarry. Purpose of Sex/sex before marriage/cohabitation Christian ->Conservative Christians believe sex before marriage is wrong. Sex is sacred, it was created by God as a gift for a couple within marriage for the purpose of creating life. ->Liberal Christians might be ok with sex before marriage if a couple are in a faithful committed relationship as an expression of their love. Cohabitation may be acceptable. ->Casual sex (promiscuity) is seen as wrong by all Christians as it is seen as devaluing sex and the people involved. Sikh -> Sex should be with in marriage for the purpose of having children. -> Lust (Kam) is one of the five evil passions that can pull people away from God, it is manmukh (self-centred). Cohabitation generally seen as unacceptable. -> The kachera (loose underwear) is a reminder of the need for self-control and chastity (no sex before marriage) Contraception -> Catholics forbid it. Natural law says that humans should reproduce through sex, as contraception stops this it is considered wrong. -> Most Christians accept it as part of a couple’s family planning, as long as the couple have both agreed to it. ->Sikhs most will believe it is acceptable and responsible. -> Some Sikhs may see it an unnatural and preventing the purpose of sex. -> Must not be used to have excessive sex as lust in one of the five evil passions.

Same sex relationships Conservative Christians would say they are sinful. They would say that sex is meant to be creative but same sex couples cannot create through sex. Bible Quote: <i>‘You should not lie with a man as with a woman it is an abomination’</i> Liberal Christians would suggest the Jesus never mentioned same sex issues but did talk about love and compassion. Many would support gay marriage. Sikhs- no mention in GGS. There is mention of marriage between a man and women. Mixed views among Sikhs but officially no support for gay marriage.
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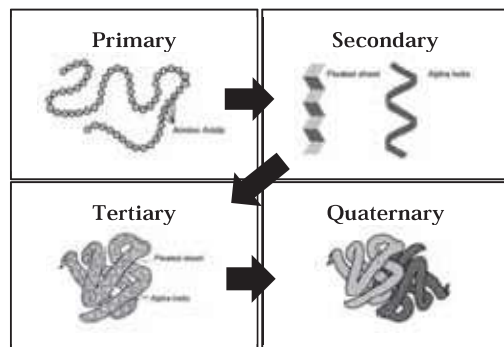
Functional and Chemical Properties of Food 1

The chemical structure of food ingredients plays a vital role in how they can be used in cooking. Applying heat to proteins, carbohydrates and fats usually damages their structure, which helps to obtain the desired effect.

Proteins

Macromolecules built of thousands of amino acids bonded together into long chains
Amino acids → peptides → polypeptides (proteins)

The structure of proteins:



Functional and chemical properties:

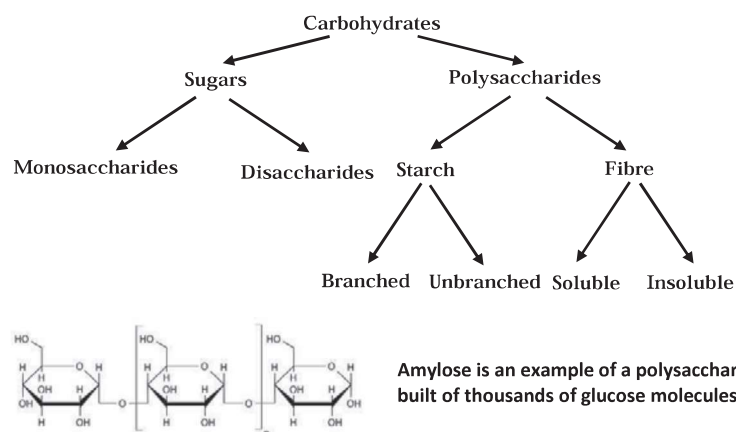
- Denaturation** – damage to the protein's structure caused by:
 - Heat** – during cooking, proteins vibrate quickly and as a result hydrogen bonds in them rupture
 - Acid** – because hydrogen atoms from the acid bind with nitrogen from the protein, preventing it from forming hydrogen bonds within protein molecule and so it cannot form a 3D structure
 - or mechanical action (physical)** – during whisking, protein uncoils and exposes hydrophobic areas, which stick together and form a foam
- Coagulation** – aggregation of protein particles into larger lumps, causing it to set. Examples of protein coagulation include cheese becoming rubbery when overheated and egg whites becoming solid when cooked.
 

During cooking, the protein in eggs coagulates and denatures, and causes the eggs to set.
- Syneresis** – leakage of water from overcooked (and over-coagulated) proteins. Usually associated with eggs.
- Gluten formation** – complex, net-like protein built of glutenin and gliadin, simple proteins present in wheat, rye, barley and oats; the two proteins cross-link with each other, creating a net (as in a sweater) which can hold air bubbles during proving and baking of bread and bakery products

glutenin + gliadin + water → gluten net → soft, springy texture
- Foam formation** – air bubbles trapped in a liquid (e.g. egg white). Whisking makes proteins unravel and denature.

Carbohydrates

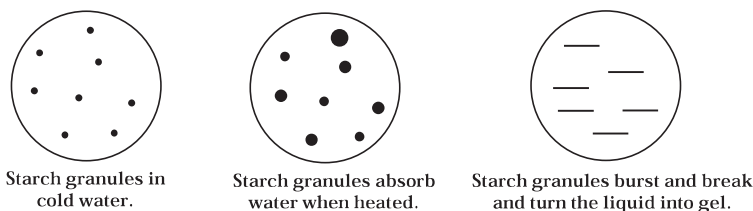
Macromolecules which include mono-, di- and polysaccharides (built of thousands of monosaccharides) bonded together



Functional and chemical properties:

- Gelatinisation** – happens when starch granules absorb water, and swell and break during heating, so that mixtures thicken and form a gel when cooled; used to prepare sauces and puddings

starch + water + heat → gelatinisation



- Dextrinisation** – happens when starch chains break down into shorter chains of dextrins; during the process molecules of water evaporate and carbon is left to give brown colour; occurs during baking and toasting bread and other baked goods
- starch + heat → dextrinisation
- Caramelisation*** – happens when sugar is heated in very high temperatures, causing it to liquidise and form a thick, brown syrup; during the process water evaporates and carbon is left to create a brown or black colour; occurs during roasting of vegetables, making caramel and fudge, etc.

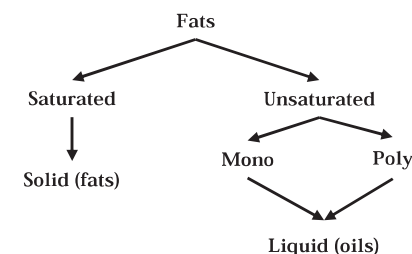
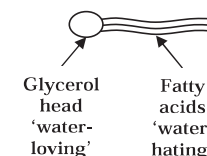
sugar + heat → caramelisation

*Caramelisation is not required by the specification; however, it is an important reaction that occurs in food during cooking, causing changes in appearance, texture, taste and aroma.

Fats and Oils

Macromolecules built of a glycerol head and fatty acid tail

Fat particles are **immiscible** – they are repelled by water molecules and separate from it, forming little droplets of oil in the mixture, and eventually creating a coat on top of it.



Functional and chemical properties:

- Shortening** – when fat particles surround starch so that it cannot access water and, therefore, prevent gluten formation; technique used to obtain crunchy, crumbly pastry such as for biscuits
- Aeration** – trapping air bubbles in a fat mixture, e.g. cream or butter, to improve its texture
- Plasticity** – ability of fat to be easily spreadable and melt in various temperatures, dependent on the length of the fatty acids chains in the fat particle



Plasticity is increased when butter melts.

- Melting point** – temperature at which fat turns into oil
- Emulsion** – stable mixture of oil and water

Water-in-oil emulsion → butter
Oil-in-water emulsion → milk

To create a stable emulsion, **emulsifiers** need to be used, e.g. lecithin from egg yolk is used to make mayonnaise. Emulsifiers bind together molecules which normally wouldn't bind and prevent them from separating.

KNOWLEDGE ORGANISER BREADMAKING



Key processes in making bread

Fermentation-In a warm environment yeast feeds on sugar contained in dough producing co2 gas and alcohol. Co2 is trapped as tiny pockets of air within the dough and this causes it to rise. Alcohol evaporates on cooking



Kneading -process where dough is worked. Kneading distributes the yeast and develops the gluten making dough elastic and smooth. It allows bread to rise properly and more easily



Shaping-gives bread a quality finish



Proving- This is where the dough is left to enable the fermentation to occur

FUNCTION OF INGREDIENTS

INGREDIENT	FUNCTION
Strong plain flour	Bulk and structure. Strong plain flour contains two protein glutenin and gliadin which when mixed with liquid form gluten . Gluten helps form and elastic stretchy dough. Flour also adds flavour and colour due to dextrinisation (effect of dry heat on starch.) Flour is converted to dextrin (simple sugar.) The dextrin is then caramelised and gives the crust colour and flavour
Yeast	Produces carbon dioxide gas which makes bread rise. Yeast needs food, warmth, moisture and time in order to multiply. Yeast also adds flavour and taste.
Liquid	Binds ingredients together and helps development of gluten. It needs to be about 37c to enable yeast to multiply. If too hot it will kill yeast
Salt	Adds flavour and strengthens gluten. Too much will stop yeast working
Fat/oil	Weaken gluten and restrict action of yeast giving dough a closer texture. Do add flavour and prevent bread staling as quickly. Bread needs longer to prove if lot of fat/oil is used
Sugar	Flavour and colour. Also acts as extra food for yeast so speeds up proving

FAULT	CAUSE OF FAULT	HOW TO AVOID/REMEDY THE FAULT
Bread has not risen well and is coarse in texture	Yeast was killed, yeast out of date, lack of proving, too much proving	Water must be 37c max. Check use by dates on dried yeast. Dough should be left until double in size
Bread has a dense texture	Wrong flour used, too much salt added, yeast killed, dough too dry, dough left proving too long	Check using strong plain flour. Add salt on opposite side of bowl to yeast before mixing and check amount. Check temperature of water, if too hot yeast is killed. Add enough water to make soft, slightly sticky dough, do not use too much flour when kneading
Dough collapses whilst cooking	Dough left proving for too long	Leave dough until double in size only before baking
Bread has uneven texture and large holes	Insufficient kneading	Dough must be elastic and spring back when pressed

Food Technology: Meat Knowledge Organiser

MEAT
Meat is the flesh of an animal. It contain HBV protein, fat, iron and B vitamins

Types
Beef – comes from a cow
Veal – comes from a young male cow (calf)
Good quality beef should be firm, fine grained, moist but not slimy and a rich burgundy colour
Lamb –comes from sheep under a year old
Mutton –comes from older sheep

Pork
All meat from pigs is a type of pork
Ham –cured and salted pork
Gammon – whole leg of pork, cured and cut into easy to cook slices
Bacon – cured and sold as smoked or unsmoked depending on production
Venison – meat from deer

OFFAL
This is the edible internal organs of an animal e.g. heart, liver, kidney, brain, tongue

POULTRY
This is the collective word for domestic fowl(birds) reared for their meat and eggs eg chicken, turkey, pheasant, goose, duck, quail

Structure of meat
Lean meat is made up of muscle and fat. Muscles consist of long fibres. The longer and thicker the fibre the tougher the meat.

(a) **Muscle fibres** are made of the proteins *myosin* and *actin*. Muscle cells are long thin fibres which are formed into bundles.

(b) **Connective tissue** is made up of the proteins *collagen* and *elastin*. Connective tissue surrounds each bundle of muscle fibres and also holds groups of muscle fibre together. Collagen surrounds muscle and is the main constituent of tendons. Elastin forms ligaments.

(c) **Fat** is found under the skin and around organs e.g. suet around kidneys. Patches between muscle fibres are called 'marbling'.

<u>Changes in meat during cooking</u> 1 There is a change in colour from red to brown. This is due to changes in the pigment MYOGLOBIN. 2 An appetising smell is produced as volatile and aromatic substances are released by cooking. 3 The texture becomes firmer as the protein in the muscle fibres <u>coagulate</u>) (sets) above 50°c 4 Meat juices are squeezed out as the collagen contracts at 60°c. This loss of juices makes the meat shrink. 5 The fat melts and helps to keep the meat moist. 6 Cooking can make meat more tender and palatable. At temperatures of 80-100°c the collagen is softened and converted into gelatine (when liquid is present). Gelatine is soluble. Conversion of collagen → gelatine make meat more tender. 7 Over cooking by moist heat causes the meat fibres to separate completely and the meat is stringy. 8 Dry methods of cooking are for expensive cuts of meat with little connective tissue.	
<u>Tenderness of Meat</u> Meat that is easy to tenderise usually has: • Small, fine fibres • Little connective tissue or gristle • Fine marbling with fat between the bundles of fibre	<u>FACTS</u> •Cheaper cuts of meat are just as nutritious and useful as more expensive cuts if correctly cooked. •Cheaper cuts of meat have larger, longer fibres and more connective tissue. •Cheaper cuts of meat need LONG, SLOW, MOIST methods of cooking e.g. stewing, casseroles, pot roasting.
Tender cuts of meat are usually more expensive	Tender more expensive cuts of meat can be—fried, grilled, roasted

FOOD TECHNOLOGY

Type of pastry	Examples of products	Picture
Shortcrust	Cornish pasties, fruit pies, jam tarts, Bakewell tarts	
Rich shortcrust	Fruit flans, fruit tartlets, French apple tart	
Flaky/Puff/Rough puff	Vol au vents, fruit turnovers, cream horns, Eccles cakes, palmiers, vanilla slices	
Filo	Apple strudel, spring rolls	
Hot water crust	Pork pie	
Choux	Profiteroles, eclairs, gougere	
Suet	Steak and kidney pudding, jam roly poly, dumplings	

(B) INGREDIENTS USED IN PASTRY AND THEIR FUNCTIONS

1. **FLOUR**
 - Bulking agent/adds structure as used in large quantities, provides proteins which form GLUTEN.
 - Gluten creates a stretchy net and helps to keep the dough together
 - Develops colour and flavour of pastry through dextrinization during cooking
2. **FAT (butter/margarine/lard)**
 - Shortens the pastry as fat coats the starch particles and prevents them from forming too long gluten strands
 - Ensures a crumbly texture as the gluten strands are kept short and just enough to keep dough together
 - Improves the colour and flavour of the pastry
3. **WATER**
 - Binding agent as it enables glutenin and gliadin to form gluten
 - Helps to form the dough and develops some pliability
 - Prevents pastry becoming too dry during cooking
 - It expands during cooking allowing pastry to obtain a more airy and open texture
4. **SALT**
 - Flavour
5. **EGG**
 - Used in some pastries to enrich
 - Adds colour and flavour
 - Helps aerate choux pastry

Faults in pastry	Causes
Tough and hard pastry	• Conditions not cool enough • Lack of air introduced • Heavy handling of pastry which pressed out air • Incorrect proportion of water used (usually too much) • Too much flour used during rolling out • Turning pastry over during rolling • Wrong type of fat used • Too cool an oven • Inadequate rubbing in of fat
Pastry is too crumbly and short	• Too much fat used • Fat is rubbed in too much • Too little water used
Crisp outside and underdone inside	• Too hot an oven • Too short a cooking time
Pastry shrinks after cooking	• Pastry was stretched during rolling • Pastry not allowed to relax in a cool place before cooking
Blistered pastry	• Uneven rubbing in of fat • Water added too slowly and unevenly • Cooking too high up in the oven
Soggy pastry	• In a pie steam is not allowed to escape during cooking • Presence of sugar on top of fruit in a pie • Under cooking • Using a pot/ceramic dish for cooking pastry in • Not baking a flan 'blind' (baking blind is where pastry is cooked WITHOUT a filling)

What happens when pastry is cooked?

The fat melts and is absorbed by the starch in the flour.

The formed gluten stretches a little (more gluten is formed in choux, flaky/puff/rough puff making these pastries rise up more)

The dry heat causes dextrinization creating a golden colour and sweeter flavour

During baking water evaporates causing further browning and a crisper texture



(A) General rules for pastry making

1. Keep everything as cool as possible. (apart from hot water crust and choux).

Cold air has more capacity to expand than warm.

2. Introduce as much air as possible in sieving, mixing etc. to make pastry light.

3. Handle lightly and roll lightly to avoid pressing out air.

4. Do NOT turn pastry over as this allows too much flour to be pressed in, altering the proportions of fat to flour and making the pastry tough and hard.

5. Use as little flour as possible when rolling out to prevent making pastry hard.

6. Try not to stretch the pastry during rolling or it will shrink during cooking.

7. Pastry may be improved by leaving it to relax in a COOL PLACE before cooking. This makes it easier to roll as the fat is not oily. It also allows the gluten to relax which prevents shrinking.

8. Cook pastry in a hot oven so that it will rise and the gluten in the flour will absorb water, stretch and expand. The high heat will then set the pastry in the risen shape. The hot oven will allow the starch grains to burst and absorb the fat.

If the oven is too cool the fat will melt and run out while the flour remains uncooked. The resulting pastry will be moist, heavy and greasy.

(B) MAKING DIFFERENT TYPES OF PASTRY

(i) Shortcrust pastry

Recipe example= 200g plain flour, 50g butter, 50g lard/white vegetable fat 8 tsp cold water

Sieve flour into bowl, rub in fats (usually butter/margarine and lard) until breadcrumbs. Bind with cold water to form a soft, pliable dough (approx. 1 tsp for each 25g flour). Roll out on a lightly floured surface, shape and bake

(ii) Choux pastry

Recipe example= 75g plain flour, 50g butter (NOT low fat spread), 150ml water, 2 eggs

Sieve flour onto paper towel, crack eggs into a small bowl and whisk with a fork, put water and butter into a pan and heat until butter melts, then bring to a rapid boil, remove from heat and quickly stir in flour until mixture leaves side of the pan clean, allow to cool, beat in egg a little at a time to form a smooth, stretchy paste, spoon or pipe shapes and bake at 200c until risen, golden and hollow

(iii) Flaky pastry

Recipe example =200g strong plain flour, 150g butter, 100ml cold water, 1 tsp lemon juice

1. Sieve flour into a bowl and rub in 37g of butter until there are breadcrumbs.
2. Add water and lemon juice to make a dough.
3. Roll out the dough to form a rectangle of approx. 15x35cm.
4. Dot 1/3 of the remaining butter over 2/3 of the rectangle.
5. Fold the 1/3 without any fat on it over the middle third of the pastry.
6. Bring the other third on top.
7. Seal the edges with a rolling pin and turn the dough through 90 degrees. Cover and chill for 10 minutes.
8. Repeat stages 4-8 with 1/2 of the rest of the fat. Cover and chill for 10 minutes.
9. Repeat stage 4-8 with the remaining fat. Cover and chill for 10 minutes.
10. Roll and fold the pastry one more time without any fat.
11. Cover and chill for at least 30 minutes before using.



SAUCEMAKING

(A) Function of sauces – Sauces are used to add colour, flavour, moisture and nutritive value to food.

(B) STARCH BASED SAUCES – can be made by the **blended method**, **roux method** or **all-in-one method**. **BASIC RECIPE PROPORTIONS FOR ROUX SAUCES** (proportions of fat and flour are always equal) (a) **Pouring**=15g margarine/butter 15g flour 250ml liquid (b) **Coating**=25g margarine/butter 25g flour 250ml liquid (c) **Panada**= 50g margarine/butter 50g flour 250ml liquid **THE ROUX METHOD** (i) Melt fat ,remove from heat and stir in flour (ii)GRADUALLY add liquid stirring well after each addition (iii) When all liquid is added, return pan to the heat and SLOWLY bring the contents to the boil stirring all the time until the sauce thickens

THE ALL-IN-ONE METHOD – this is a quick and easy method. The ingredients and proportions are the same as for the roux method (i) Put flour, liquid and fat in a pan (ii) put the pan on the heat and gradually bring the contents to the boil, whisking all the time until the sauce thickens

BLENDED SAUCES -are used for pouring (custards and gravy) or can be used to set in moulds. They **DO NOT** contain any fat. **Arrowroot** sauces are used to glaze sweet foods eg flans as they become **transparent** when boiled. **PROPORTIONS OF INGREDIENTS – CORNFLOUR BLENDED SAUCE** 275ml liquid (milk/fruit juice/stock) 15g cornflour 25g sugar (for sweet sauce.)

ARROWROOT BLENDED SAUCE 150ml liquid(usually fruit juice or water) 2-2.5g arrowroot flavouring and sugar if required **BLENDED METHOD** (i) Mix a little of the measure out starch with a little of the measured out liquid and blend together (ii) Heat the remaining liquid until it is almost at boiling point (iii)Pour this warmed liquid over the starch paste, stirring all the time (iv)Return the mixture to the heat and keep stirring all the time until it boils and thickens (arrowroot sauce will also become transparent) (v) Cook the mixture for a further 2 minutes to make sure all starch gelatinises

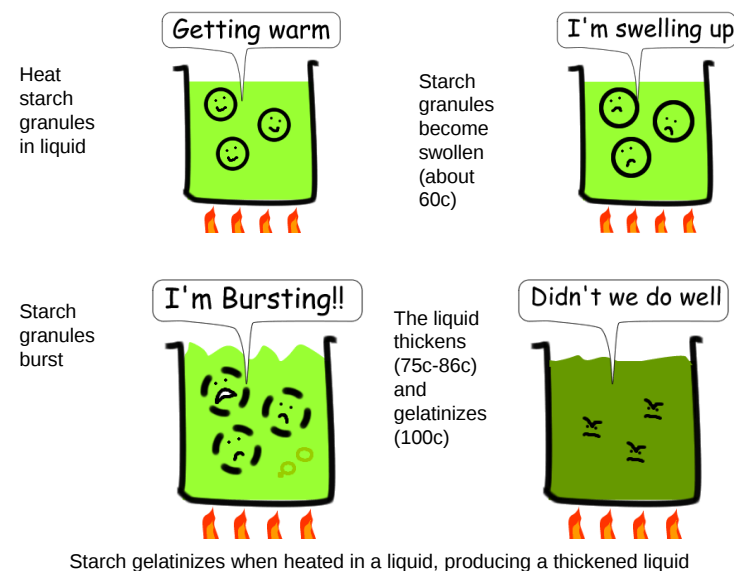
(D) REASONS WHY A STARCH BASED SAUCE MAY NOT WORK

>Too much or too little flour/cornflour/arrowroot >Too much or too little liquid >Adding liquid too quickly in a roux sauce > Heating sauce too quickly or using too high a heat >Not stirring/whisking whilst heating > Stirring irregularly >Not allowing the sauce to cook for long enough >Not allowing sauce to boil (incomplete gelatinisation) >inadequate seasoning

(C) How are sauces thickened?

- **Starch** present in either wheat flour eg. White sauce, or cornflour eg. Custard or arrowroot eg. Glaze for desserts
- **Puree** of **either fruit** a (coulis) eg. Raspberry sauce or **vegetables** eg. Napoletana
- **Emulsion** of oil and water eg. Mayonnaise
- **Coagulating** properties of eggs eg. Egg custard
- Reduction of a liquid

GELATINISATION/GELATINIZATION (two ways to spell it!)



MODIFICATIONS

Use reduced fat milk, add herbs, add sugar, add cheese, add chocolate

(A) BASIC INGREDIENTS in STARCH BASED SAUCE

.flour/cornflour/arrow root > Fat eg butter/margarine >Liquid eg. Milk/stock/juice

(D) COMMON FAULTS IN SAUCES

Lumps, poor/incorrect consistency, tastes of raw starch/poor flavour

1. WHAT IS DEVELOPMENT?

- Development** is the progress of a country in terms of economic growth, the use of technology and human welfare.
- The **development gap** is the difference in standards of living and wellbeing between the world's richest and poorest countries.

2. MEASURING DEVELOPMENT

Indicators of development

Development is measured using a range of objectively-measured **indicators** (statistics) which cover economic and social aspects of a country. Economic and social aspects are linked (i.e. wealthy countries can afford to invest in healthcare).

Economic indicators measure money and jobs.

Gross National Income (GNI) measures the total value of goods and services which a country produces, normally within a year. It is often divided by the population to give **GNI per person** (or per capita).

Social indicators measure the population and standard of living (the level of wealth, goods and necessities available to people).

Birth rate The number of births per 1000 adults.

Death rate The number of deaths per 1000 adults.

Infant mortality rate The number of children who die before their 1st birthday, per 1000 births.

Life expectancy The average age which a person can expect to live to.

People per doctor The number of people per qualified doctor.

Literacy rate The percentage of adults who can read and write.

Access to safe water The percentage of people who can easily access clean water.

Evaluation of development indicators

- Indicators can show the quality of education (literacy rate), health care (people per doctor) and infrastructure (access to safe water).
- Some indicators show how wealth and public services combine to influence the size and change of population (birth rate, life expectancy, etc).
- Single indicators (social and economic) only consider one aspect of a country. This masks some countries which may have lower GNI but invest heavily in healthcare (e.g. Cuba).
- GNI per capita suggests that wealth is spread equally and this is normally not the case. Rich countries can have a few rich people and many poor people.
- As well as wealth not being spread equally, some governments may not invest in health, education or infrastructure. So a country with good economic indicators may have poor social indicators.
- Whilst standard of living can be objectively measured, quality of life is subjective (opinion).

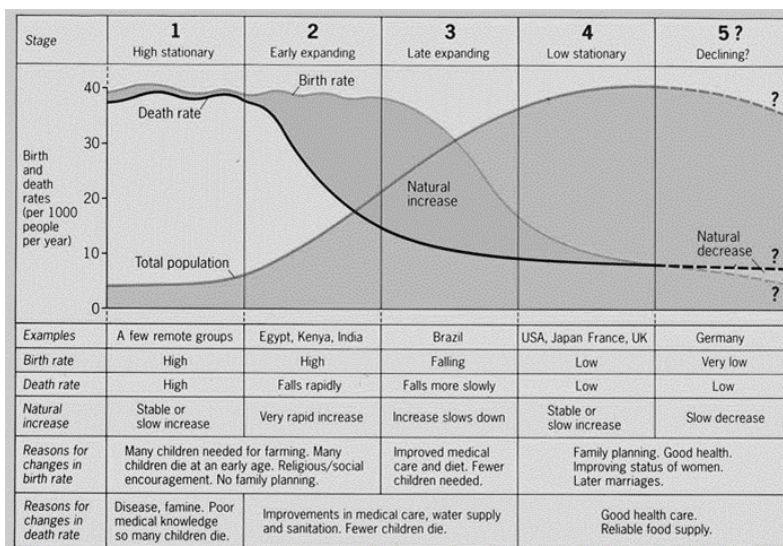
To avoid the limited scope of single indicators of development which only consider one aspect, there are also **composite indicators** such as the **Human Development Index (HDI)**.

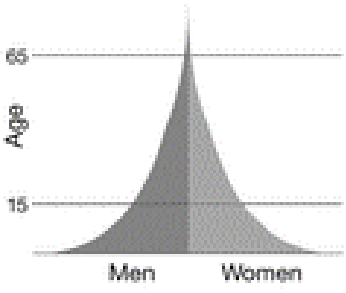
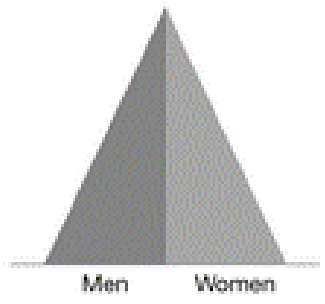
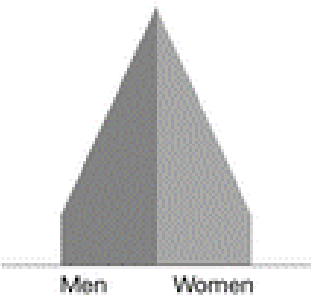
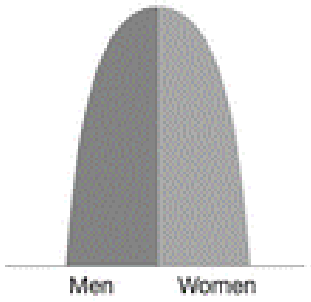
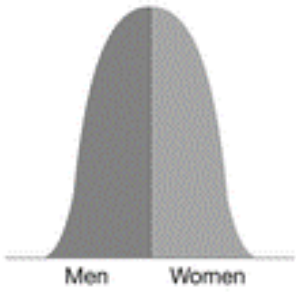
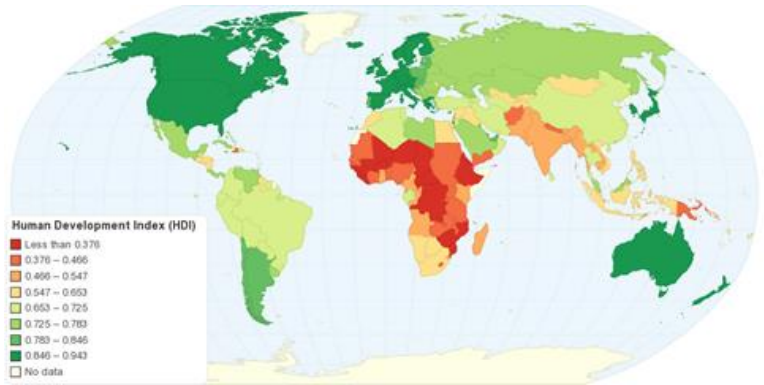
HDI includes life expectancy, number of years of education and GNI per head.

3. THE DEMOGRAPHIC TRANSITION MODEL

The **Demographic Transition Model** shows how a country's population typically changes as it develops. The model is split into five stages.

- In Stage One, countries have a high death rate due to disease, famine and war. People have a high number of children to allow for high infant mortality. The overall population is low and stable.
- As a country becomes wealthier and the standard of living improves, the death rate falls leading to a rapidly increasing population in Stage 2. This normally happens alongside industrialisation and urbanisation.
- Then as people need fewer children for financial reasons, the birth rate falls and population increase slows down in Stage 3 before low birth and death rates see a stable population in Stage 4.
- Increasing life expectancy leads to an **ageing population** (higher percentage of older people). This may see death rate overtake birth rate and the overall population to decrease in Stage 5.



4. POPULATION PYRAMIDS		
Population pyramids are graphs that show the population structure. Population structure shows the breakdown of a population by age and gender. The shape will change to show birth rate, death rate, life expectancy and IMR.	Stage 1 	Stage 2 
Stage 3 	Stage 4 	Stage 5 
5. PATTERN OF UNEVEN DEVELOPMENT		
		Development across the world is uneven. Countries are categorised into the following: • Low Income Country (LIC) – Countries with less than \$1045 GNI per capita. • Newly Emerging Economy (NEE) – Countries with between \$1046 and \$12,735 GNI per capita. • High Income Country (HIC) – Countries with more than \$12,736 GNI per capita.
6. CAUSES OF UNEVEN DEVELOPMENT		
Physical causes <i>Location:</i> some countries can find trade more difficult due to their location. Landlocked countries (a country without a coast) depend on neighbours to export/import. <i>Climate:</i> food production depends on a good climate. Climate change will affect this. Tropical regions also suffer more diseases. <i>Extreme events:</i> extreme weather is becoming more frequent. Tropical areas are worst hit. Tectonic hazards such as earthquakes have greater impact on LICs.	Historical causes Past events such as war or colonialism affect development. Many LICs were historically colonies (part of an empire) of HICs, such as the British Empire. Whilst empires introduced transport networks to help trade (i.e. railways) and some public services (i.e. schools), most of the profits from the raw material exports from colonies went back to the HICs. Many former colonies have gone through civil wars and unrest since gaining independence.	Economic LICs, because of their low income, don't have money to invest in infrastructure and public services which are needed to develop. • Poor health services and low access to safe water will increase disease and reduce the working population. • Poor education will mean that businesses do not have the skilled workers needed. Many children do not have free, local schools to attend. • Trade is dominated by HICs. Many LICs depend on exporting raw materials which have lower prices and rely on importing expensive manufactured goods, leaving them in debt.

7. CONSEQUENCES OF UNEVEN DEVELOPMENT

Disparities in wealth

Wealth inequality between countries and within countries is increasing.
In 2018, eight people own the same wealth as the poorest 3.6 billion people in the world.

Disparities in health

Life expectancy is often lower in LICs than HICs. Access to healthcare is normally better in HICs. HICs are better at preventing disease by providing clean water, better housing and public services.

Migration

Uneven development can lead to migration: from LICs to HICs and also within countries to regions with more opportunities. **Economic migrants** move for jobs or better wages. This tends to be younger people.

Refugees are forced to flee their home country due to war, political unrest or natural disasters.

Push factors force people away from a place and **pull factors** attract them to a place.

Internal migration is movement within a country whilst **international migration** means moving countries.

8. STRATEGIES TO REDUCE THE DEVELOPMENT GAP

Investment

- Money from HIC governments, international organisations (i.e. the United Nations) or TNCs can improve **infrastructure** (roads, energy network, Internet access) which improves trade or employment opportunities such as factories or hotels.
- **Top-down investment** supports large projects with large amounts of money. The effects should 'trickle down' through the economy to benefit people.
- **Bottom-up investment** gives smaller amounts to individuals and small businesses. People can then earn more which they spend in the local economy, spreading wealth that way.

Industrial Development

- The building of factories increases employment and wages. The wealth this generates can be invested in public services and improved housing.
- Industrial development has a significant **multiplier effect**, where investment in one activity leads to growth in other areas. For example, opening a factory creates employment not only at the factory but also at the companies supplying the factory and at nearby shops and services which the worker uses. The government also increases its tax income.
- Industrial development can be highly effective but could lead to environmental problems.

Aid

- **Aid** is when a country or non-governmental organisation (NGO) such as Oxfam donates resources to help another country to develop.
- Aid can include grants (donated money), loans, emergency supplies, food or the skills of specialist people (i.e. doctors).
- Some aid can be short-term, such as disaster relief, and some can be long-term, to try and improve people's lives.
- Some aid is **tied** which means countries must meet a certain conditions, such as to purchase products from the donor country.
- The UK spends 0.7% of its Gross Domestic Product (a similar measure to GNI) on overseas aid. In 2013, Pakistan was the top recipient of UK aid receiving £338 million.

Intermediate technology

- **Intermediate technology** is sustainable technology that is appropriate to the needs, skills and wealth of local people. It is suitable for the local environment and doesn't put people out of work.
- Intermediate technology involves small-scale projects which can help with farming, water supply, transport or people's health. For example, water pumps to extract water from wells for drinking or farming.
- Chambamontera is a village in Peru. It was given a micro-hydroelectric power generator which allowed them to produce electricity from the mountain streams around the village. Locals were hired to run the generator and the electricity has improved standards of living.

Trade Fairtrade

Countries can place a **tariff** (a tax) on imports which makes them more expensive than home-produced products. They can also put a **quota** (limit) on how many goods can be imported. This reduces the ability for LICs to sell their goods cheaply into HICs. **Trading blocs** are groups of countries which reduce or remove tariffs or quotas on all trade between members, e.g. the EU. Joining a bloc can be good for trade. **Fairtrade** gives farmers in LICs a fair price and invests in community development projects, raising standards of living.

Loans and Debt Relief

- Countries can lend money from other countries, organisations and banks. Loans must be repaid with interest.
- Many LICs have built up debt leading to a debt crisis where they cannot afford the repayment.
- Some HICs have reduced or cancelled debts of LICs in what is called **debt relief**.
- By 2015, 36 out of 39 highly indebted poor countries had had their debt fully removed by the International Monetary Fund (an international government bank).
- Despite this, African countries still owe \$300 billion.

Microfinance

- Micro-finance is providing small loans to poor individuals or families to set up or develop their businesses and earn an independent income.
- Microfinance has been particularly successful at allowing women to borrow money and start their own business.
- Grameen Bank in Bangladesh was set up in Bangladesh in 1976 and has lent over \$11 billion to 7 million people. It lends money to women to buy a 'village phone' which the women rent to people to research market prices for their goods.

9. TOURISM EXAMPLE: GOA

- Tourism is the main industry in the Indian state of Goa.
- Goa has 125km of coastline on the Arabian Sea where most tourism is focused.
- Goa has over one million tourists every year, 20% from overseas.
- People are attracted to Goa for beach holidays, water sports, wildlife and the cultural history from Goa's time as a Portuguese colony.
- Tourism has grown rapidly since Goa became a package holiday destination for European travel agents in 1986.
- **Positive impacts** – tourism has created jobs, the multiplier effect means that many small businesses have benefited.
- **Negative impacts** – deforestation to make space; massive reduction in water available; land prices too expensive for local people; sand dunes and swamps destroyed; **leakage** where profits from tourism go to companies in HICs and many managerial jobs are held by foreigners.

10. INDIA: CONTEXT AND IMPORTANCE



India is located in South Asia. It is located in the north and centre of Indian Ocean, giving it excellent transport links.

It is bordered by six countries: Bangladesh, Myanmar, Bhutan, Nepal, Pakistan and China.

India is the second most populous country in the world with 1.3 billion people. 34% of the population live in urban areas (compared to 83% in the UK).

Political

- The country is a member of the United Nations (UN), the World Trade Organisation (WTO) and the Commonwealth.
- Most of India was part of the British Empire.
- India is the world's largest democracy.

Social

- 16 million Indians live in the largest diaspora (spread of people from their country of origin) of any country.
- Life expectancy (2015) was 69.8 for women and 66.9 for men.

Economic

- India is a newly-emerging economy.
- India is the 5th largest economy in the world, ahead of France (6th) and the UK (7th).
- In 2016, India has \$261 billion of exports.

Culture

- India is mainly Hindu, but also has the third largest Muslim population in the world.
- The Bollywood film industry has the most cinema admissions of any country.

Environment

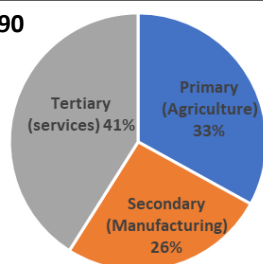
- The country has two monsoon seasons – north-east and south-west – lasting from June to October.
- In 2014, India ranked 155th out of 178 countries for environmental quality.

Other

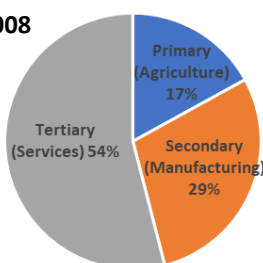
- India has the second largest active military in the world.
- India's HDI score has increased from 0.427 in 1990 to 0.640 in 2017.

11. INDUSTRIAL STRUCTURE

1990



2008



- Up until the 1980s, India was an LIC and the primary sector was the largest section of the economy. Many people were subsistence farmers.
- Manufacturing has expanded. This has created millions of jobs. The government has helped this with its 'Make In India' initiative.
- The increase in manufacturing and services, and decrease in agriculture has led to rural-urban migration.
- Services are now the biggest contributor to GDP. India now has a skilled workforce and poverty has reduced.
- India is unusual in expanding its service sector faster than its manufacturing sector. This is largely through TNCs opening call centres and offices in India to take advantage of the high number of English-speaking workers.

12. TRADE

India's top trading partner is China.

Between 2006 and 2012, trade trebled from \$252 billion to \$794 billion

Imports

India imports raw materials and products from many countries. India imports crude oil and machinery for industry. It also imports gold, silver and electronic goods for its growing middle class.

Exports

The UK is the 8th largest importer of Indian goods. India's main exports are petroleum products (made from crude oil), transport equipment and clothing.

13. TRANSNATIONAL CORPORATIONS

A **transnational corporation (TNC)** is a company that operates in more than one country. Usually its HQ is in a HIC (or a NEE) and its **branch** offices and factories are in NEEs and LICs. TNCs do this to take advantage of cheaper costs of production and lower wages. They can also access more consumers by working in multiple countries.

Since 1991 India's government has opened the country to investment by TNCs. Investment has increased from \$233 million in 1992 to \$44 billion in 2015.

The country where TNCs have branches are called host countries.

Advantages of TNCs

- Create jobs for local people.
- Investment has a multiplier effect.
- Invest in infrastructure.
- Offer new skills and training which can be transferred into local businesses.
- Pay taxes.
- Local businesses make money supplying TNCs.

Disadvantages of TNCs

- Working conditions and wages can be poor.
- **Leakage** of profits back to the TNC's home country.
- Management jobs can go to foreign staff.
- TNCs take advantage of weaker environmental laws and use many natural resources, such as fresh water.

Example of a TNC: COCA COLA

- Coca-Cola has invested in India since 1993 and will have spent \$7 billion by 2020.
- Sells products in 2.6 million outlets. Employs 25,000 directly and 150,000 indirectly through 57 factories and their supply chain.
- Coca-Cola bought four local rivals in 1993 and now dominate the market.
- Works with 56,000 farmers to source fruit locally.
- Aware of its water usage, Coca-Cola replenishes 138% of the water it uses. It does this by investing in water storage and dams.
- Invests in communities through its own charity – Anandana.

14. POLITICAL RELATIONSHIPS AND AID

India has historically tried to avoid close alliances with any single country. That said, India does have a strong political and economic relationship with the UK since gaining independence from the British Empire in 1947. As one of the world's major newly-emerging economies, it has also formed close relationships with Brazil, Russia and China, making up the BRIC club of countries.

Aid

India has received aid from many HICs, including the USA and Canada. India was one of the largest receivers of aid from the UK, with over £200m given by the UK government each year.

UK aid has invested in education, sanitation and health and for small business support. UK aid to India stopped in 2015, noting that the Indian government spends £600m a year on space exploration. It wants to do more **multilateral** (two-way) trade rather than **unilateral** (one-way) aid donations in future to help India develop further.

15. TRADE**Environmental impacts**

- Increasing industrialisation and urbanisation has seen increased water and air pollution.
- The National Green Tribunal is an environmental court set up in 2010. The tribunal is helping clean up cities by ensuring individuals and companies are made to pay compensation for pollution.
- Increasing waste has led to significant waste disposal problems and a large increase in **landfill** (rubbish dumps).
- Some cities have very high recycling rates, driven by the informal economy around selling recyclable materials. This includes **E-waste** (old computers and electronic equipment).
- Cities like Mumbai have introduced new public transport networks, banned diesel cars and checks on factories.

Human impacts

- Manufacturing and service sectors have created jobs and increased wages. This has seen India's middle class grow.
- Life expectancy has increased from 38 to 68 in thirty years.
- An older population has reduced young dependents and increased the proportion of working age people.
- Rapidly growing urban populations have led to the growth of squatter settlements.
- Many people still live in inadequate housing, both in urban and rural areas.
- Corruption and the size of the country means that some investment has not improved life in rural areas.
- India has reduced poverty from 55% to 34% between 2005-2016.
- India still has 5.5% people living in extreme poverty.

KEY TERM	DEFINITION
Limitation	A limiting rule or circumstance; a restriction.
Consequences	A result or effect, typically one that is unwelcome or unpleasant.
Inequality	Lack of equality or fairness.
Traditional	Existing in or as part of a tradition; long-established.
Disparity	Differences or inequalities.

HISTORY KNOWLEDGE ORGANISER – CRIME AND PUNISHMENT UNIT THREE – INDUSTRIAL ENGLAND, 1700 – 1900.

(a) New crime: Smuggling Smuggling became an important crime in the 1700s because the government introduced import duties on goods from abroad. Goods that had import duties placed on them included perfumes, spirits and wine. Smuggling was organised by criminal gangs. The most famous was the Hawkhurst gang, which was based in Kent and led by Thomas Kingsmill. Smuggling was not seen as a big problem by many people. It was viewed as a 'social crime' and people were reluctant to report smugglers to the authorities. Smuggling began to decline after the government reduced import duties on foreign goods in 1780. - Watchtowers were also built along the coast and a 'coast guard' was introduced in 1820 to combat smuggling.	(b) New crime: Highway robbery Highway robbery became a major problem after 1700. This was caused partly by Britain's growing wealth. As Britain became wealthier, more goods and money were moved by road. - Improvements to the roads through the turnpikes meant that more people chose to travel by road. This created more opportunities to steal. - In 1772 the government introduced the death penalty for anyone who was found armed and in disguise on the roads. - The newspapers made highwaymen like 'Black Harry' and Dick Turpin into celebrities. - The Bow Street Runners were established in 1748. From 1763 they began to patrol the roads into London looking for highwaymen. The last reported highway robbery was in 1831.	(c) New crime: Poaching - Poaching had existed since Norman times – the Forest Laws after 1066 were designed to stop poaching. However, poaching became a major problem after 1700. - As more people moved to the towns after 1700 they found it difficult to get the high quality meat and fish that they had been able to catch in the countryside. - Poaching was seen as a 'social crime' as it was carried out by poorer people on the property of wealthy landowners. - Poaching gangs organised raids during which hundreds of animals would be caught. These included fish, pheasants and rabbits. - The 1723 Waltham Black Act made poaching a capital offence – meaning that anyone caught poaching could be executed.	(d) Case Study: Tolpuddle Martyrs - In 1834 George Loveless and 5 others were arrested for demanding a pay rise from their local landowner. They were paid just 6 shillings per week. The average for farm workers was 10 shillings. - They were found guilty of taking a 'secret oath' but what the landowner really disliked was that they had formed a Trade Union. - In 1834 they were sentenced to seven years' transportation to Australia. This punishment was seen as deeply unfair. - Protests were organised and a petition for their release was signed by 250,000 people. In 1836 the government pardoned the men. The 'Tolpuddle martyrs' finally returned to England in 1838.
(e) Punishments: The end of transportation and public executions - By 1810 the 'Bloody Code' meant that 222 crimes carried the death penalty in England. - The Bloody Code was ended in 1868. This was because juries finding people innocent because they did not want them to be executed for minor crimes. Also, public executions becoming a difficult to control – they were attended by up to 200,000 people. - Public executions were ended in 1868 but executions were still carried out away from public view until 1965. - Transportation to Australia was ended in 1867. This was due to transportation costing the government over £500,000 per year. Gold was discovered in Australia in 1851. This made it a desirable place to move to. Settlers in Australia complaining that prisoners were being 'dumped' in their country.	(f) What led to prison reform? - Conditions in prisons in the 1700s were extremely poor – cells were crowded, diseases like dysentery spread easily and hardened criminals were mixed with first-time offenders. - Prison wardens were paid by the prisoners. This meant that rich inmates could pay for private cells with good food and regular visitors. - John Howard published a book in 1777 which criticised the system of prisoners paying the wardens. It also demanded improvements in the conditions in prison. - Elizabeth Fry visited Newgate prison in 1813 and was shocked at the treatment of female prisoners. She demanded that women be given separate cells and that prisoners be taught skills to allow them to be successful after they were released. - In 1823 Robert Peel introduced the Gaols Act. This improved conditions in prisons and made sure that wardens were paid by the government, not by prisoners.	(g) Changes to prisons in the nineteenth century - Pentonville prison was opened in 1842 as a model prison for the 'Separate System'. Conditions were better than in previous prisons as they had piped water, heating and a toilet. - Under the 'Separate System' prisoners were kept apart and had to spend 23 hours a day in their cells. Prisoners could exercise but had to wear a mask so that they could not see the other inmates. - To help rehabilitate prisoners they were given religious teachings and allowed to weave on a loom in their cell. - From 1865 prisons were made even tougher through the 'Silent System'. Prisoners had to be silent at all times or they would be whipped. Under the 'Silent System' prisoners had to sleep on a wooden board instead of a bed. - Punishments under the 'Silent System' included having to turn a crank 10,000 times and being forced to walk on a treadmill for hours at a time.	(h) Why was a professional police force introduced in 1829? - The Bow Street Runners had been established in 1748 by the Fielding brothers and gained funding from the government from 1785. The Bow Street Runners were successful in reducing crime and showed that professional law enforcers were more effective than relying on ordinary people. - By 1800 London's population was more than 1 million. The old methods like the Hue and Cry and nightwatchmen were not suitable for large cities. - The government could afford a professional police force as they had begun to tax peoples' wages in 1803. - Robert Peel was an influential politician who convinced both the government and the wider population that a professional police force was needed. In 1829 he introduced a police force in London called the 'Metropolitan Police'. In 1856 every area of England was given its own professional police force.

KEY TERMS	
Highway robbery	A robbery that takes place whilst someone is travelling on the roads. The crime is committed by a 'highwayman'.
Import Duties	Taxes on goods imported from other countries
Martyr	A person who is killed or suffers because of their beliefs or actions .
Oath	A serious promise about future behaviour and loyalty.
Pardoned	To be forgiven of a crime and have the punishment reversed.
Poaching	Illegally hunting on private land.
Reform	To make changes to improve something.
Smuggling	Bringing items into a country illegally.
Trade Union	An organisation which helps workers to get better rights and higher pay. This is done through negotiations, or sometimes strikes.
Turnpikes	Roads which were allowed to charge a fee to people who used them. The money raised was used to improve the quality of the road.
Settlers	A person who moves with a group of others to live in a new country or area. Settlers are also referred to as colonists.
Urbanisation	The growth of towns and cities.
Warden	A prison guard.

HISTORY KNOWLEDGE ORGANISER – CRIME AND PUNISHMENT UNIT FOUR c.1900 TO THE PRESENT DAY.

(a) Decriminalisation Homosexuality - In 1967 homosexuality was decriminalised. Following the 1967 Sexual Offences Act, being gay was no longer a crime in Britain. - Ideas in society had changed by the late 1960s and there was greater public acceptance of homosexuality. - The Equalities Act of 2006 made discrimination on the basis of sexual orientation a crime. Abortion - In 1967 abortion was legalised in Britain through the Abortion Act (1967). - A major cause of this change was that stories about the dangers of illegal abortions were reported in the media.	(b) Criminalisation Racial discrimination - The Race Relations Act (1968) made it a crime to refuse a job, housing or public service to anyone based on their race or country of origin. - This change was brought about by protests by minority groups such as the boycott of buses in Bristol during 1963 caused by the Bristol Omnibus Company refusing to employ black and Asian workers. Domestic violence - The Domestic Violence Act (1976) made violent acts against a partner in a private home a crime. - Feminist campaigns during the 1960s and 1970s influenced public attitudes and helped to show that domestic violence was unacceptable.	(c) Continuities in crimes, 1000-today - Murder has remained largely unchanged between 1000 and the present day. In most cases the murderer knew the victim and the act was carried out on the spur of the moment. This has been the case for murders throughout our 1000 year study. - Thefts such as burglary and pickpocketing have been carried out throughout the 1000 year period. - Terrorist attacks have happened in Britain for hundreds of years. Bombing such as the Fenian attacks during the 1880s and attempted bombings such as the Gunpowder Plot (1605) have similarities to more modern terrorist attacks, such as the 1993 Warrington bombings and the 2005 London bombings.	(d) Changes in crimes, 1900–today - Racial discrimination (1968) and domestic violence (1976) were new crimes introduced during the twentieth century. - The growing use of cars from the 1920s led to a number of new crimes including speeding. In 1976 drink driving became a crime. - The widespread use of computers and other internet-enabled devices since the 1990s has created new opportunities for fraud such as hacking, ransomware and phishing scams. - Drug smuggling became an important crime during the second half of the twentieth century. Before the 1960s drugs had not been smuggled into Britain on a large scale. This ‘modern crime’ does however have many similarities with eighteenth century smuggling.
(e) Conscientious objectors - In 1916, during WWI, the government introduced conscription. - Around 16,000 men refused to fight as they were conscientious objectors. They had to prove that they had a genuine religious or political reason at a tribunal. - Very few people were found to have a ‘genuine reason’ as the tribunals were led by ex-soldiers. These men were then offered alternative work to support the war effort. - If conscientious objectors refused this work they were sent to prison and faced harsh sentences. Around 6,000 conscientious objectors were imprisoned during WWI. 73 conscientious objectors died in prison due to poor conditions. - Even conscientious objectors who chose to work for the war effort were sometimes attacked in the street and were frequently stigmatised in the media.	(f) Reasons for the abolition of the penalty in 1965 - From around 1900 there was a greater focus on the rehabilitation of criminals through prison, rather than using execution. - The 1948 Universal Declaration of Human Rights which was introduced after WWII said that ‘cruel inhumane punishments’ should never be used. Many believed that the death penalty went against the Universal Declaration of Human Rights. - Controversial executions such as Timothy Evans (1950), Derek Bentley (1953) and Ruth Ellis (1956) turned public opinion against the death penalty. - The media increased public awareness of miscarriages of justice such as the execution of Timothy Evans (1950). - Roy Jenkins, a prominent politician in the 1960s, also influenced the government to end the death penalty.	(g) Changes to prisons, 1900 – today - In 1902 the use of the ‘crank’ and treadmill were banned as punishments in prisons. In the same year ‘borstals’ were introduced as separate prisons for young offenders. - In 1922 prisoners were allowed to talk to each other and the use of solitary confinement was ended. Teachers were also employed to educate the inmates showing a clear move towards rehabilitating criminals. - In 1933 the use of ‘open prisons’ began which allowed some low-risk inmates to work outside of prison during the day and return in the evening. - From 1967 prisoners could apply for an early release from prison called ‘parole’. This was based on good behaviour whilst in prison. - Today prison remains the main form of punishment for serious offenders. Non-custodial methods such as restorative justice are also used to try to reform offenders’ behaviour.	(h) Changes to policing, 1900 – today - Since 1901, the police have used fingerprints and analysis of blood samples to identify suspects. Since 1988, DNA samples have been used to catch and convict criminals. - Since the 1930s, cars and motorbikes have improved police response speed. Police helicopters are now used to track suspects and support officers on the ground. - Crime has become more varied and complex. Therefore there is greater police specialisation including the drugs-squads, counter-terrorist units and cyber-crime units. - There has been a return to community involvement in law enforcement through working with ‘neighbourhood watch’ groups. - New crime prevention methods including CCTV, speed cameras and breathalysers are routinely used by the police.

KEY TERMS

Abolition	When something is ended
Borstal	A prison for young offenders.
Conscientious objector	A person who refuses to fight in a war due to their beliefs.
Conscription	When the government forces people to join the army.
Criminalise	When something is made illegal.
Decriminalise	When an action is no longer a crime in the eyes of the law.
Domestic Violence	Violent or aggressive behaviour in the home, typically between a married couple.
Joint enterprise	When an individual is jointly convicted of the crime of another. This is used if the court decides they knew that the other person involved was likely to commit that crime.
Miscarriage of justice	When a court gets a decision wrong or the wrong person is punished.
Non-custodial	A punishment which does not involve being sent to prison.
Open prison	A prison in which inmates can leave during the day to go out to work but have to return in the evening.
Parole	The release of a prisoner before the end of their sentence based on good behaviour.
Probation	When an offender is not sent to prison or released from prison but is closely monitored.
Restorative justice	When a criminal meets the victims so that he/she can understand the impact that the crime had on the victims’ lives.
Tribunal	A special court set up to deal with disagreements.

(a) Problems in Whitechapel

- Whitechapel is an area in the east end of London. At this time the main problems were:
- Overcrowding – there were just 4,000 houses for around 30,000 people. The best housing was on the Peabody estate but the people who lived there had to follow strict rules.
- Work – **sweatshops** paid low wages to workers who undertook 20 hour shifts. Dock work was insecure as the men would not be given contracts.
- Many people lived in **lodging houses** (or 'doss houses') where a room could be rented by the day for 4d.
- For the most **impoverished** people in Whitechapel the workhouse was the only option. Inmates in the workhouse would be given food and shelter but were made to do hard labour.

(b) Victorian beliefs about the causes of crime

- There was a belief that some people were 'born criminals' – meaning that it was just in their nature to lie, steal, fight and rob. Such people were called the 'residuum'.
- Overcrowding was believed to spread criminal behaviour. In Whitechapel's **rookeries**, **lodging houses** and pubs it was said that the residuum influenced 'decent people' and made them into criminals.
- Alcohol was viewed as an important cause of crime as it made people more likely to commit violent acts and because drunk people could easily become the victims of crime.
- There was a belief that immigrants in Whitechapel were responsible for organising gangs and thefts.

(c) Prejudice against immigrant groups in Whitechapel

- Irish immigrants were stereotyped as violent drunks by the media.
- A small groups of Irish **Fenians** (who wanted Ireland to be independent of British control) organised bombings such as 'Dynamite Sunday' in 1885. The actions of this small group increased suspicions amongst the people of Whitechapel of all Irish immigrants.
- As Jewish businesses often employed only Jewish workers there was anger that recent Jewish immigrants were sometimes able to find work quickly when many 'native' workers were unable to.
- Jewish immigrants were accused of holding extreme political views such as **socialism** and **anarchism**.

(d) Policing in Whitechapel

- The Metropolitan (London) Police Force was divided into 20 divisions. Whitechapel was policed by H-Division.
- H-Division had around 575 officers. These officers would walk a 'beat' approximately 40 times during a 9 hour shift.
- H-Division officers were supported by the Criminal Investigation Division (C.I.D) who provided intelligence through detective work and undercover operations.
- The main problems faced by H-Division included high levels of alcoholism, gangs (including **Bessarabian** gangs) who ran protection rackets, a negative attitude towards the police from some Whitechapel residents (particularly immigrants) and a shortage of detective in the C.I.D.

(e) Attitudes towards the police in Whitechapel

- Many people in Whitechapel had a negative attitude towards the police because:
- 1829 – When the police force was created there were rumours that it was a way of the government spying on and trying to control the people.
- 1877 – Some detectives were found guilty of accepting bribes in the 'Trial of the Detectives'. This was hugely embarrassing for the Police Commissioner at the time, Edmund Henderson. To improve the quality of the detective force Henderson introduced the C.I.D in 1878.
- 1883 – 1885 – The C.I.D failed to prevent a series of **Fenian** bomb attacks.
- 1886 – Edmund Henderson resigned after his officers failed to control a protest in Trafalgar Square. He was replaced as Commissioner by Charles Warren.

(f) The police investigation into the 'Jack the Ripper' murders

- The five women murdered by 'Jack the Ripper' in 1888 were Mary Nichols (31st Aug), Annie Chapman (8th Sept), Elizabeth Stride (30th Sept), Catherine Eddowes (30th Sept), Mary Kelly (9th Nov).
- Detailed observations of the crime scenes were undertaken in most cases (although Mary Ann Nichol's body was moved before a detective inspector could investigate it).
- A huge number of interviews were conducted with potential suspects and witnesses. In total 2,000 people were spoken to in connection with the killings.
- Autopsies** revealed that the killer was probably left handed and had a knowledge of anatomy.
- New methods such as criminal profiling, photographing crime scenes and using blood hounds were tried.

(g) Problems within the police during the Ripper investigation

- 50 extra police officers and some soldiers were brought in to support H-Division. There was however criticism that no extra detectives were brought in.
- Commissioner Charles Warren fell out with the Home Secretary, Henry Matthews, several times during the investigation. This made decision making difficult and made H-Division look disorganised.
- A key piece of evidence was found outside of Whitechapel when a section of an apron belonging to Catherine Eddowes was found outside of Whitechapel. Next to the apron was a piece of anti-Jewish graffiti. The City of London police wanted to photograph the evidence but Charles Warren ordered that it be washed off the wall.

(h) How the media and public hindered the investigation

- The newspapers wrongly accused several people of being the Ripper, most famously the Daily Star claimed that the Ripper was a Jewish immigrant called John Pizer. False accusations such as these wasted a lot of police time.
- The newspapers did not share key evidence with the police quickly enough, including letters like the 'Dear Boss' letter which was almost certainly written by the killer.
- The media constantly criticised the police which made people lose faith in the investigation.
- The Whitechapel **Vigilance Committee** attempted to catch the Ripper, but this harmed the investigation as they bullied and bribed people in Whitechapel to speak to them, rather than to the police.
- Over 300 **hoax** letters were sent to the police by the public.

KEY TERMS

Anarchist	A political idea which opposes any kind of government.
Autopsy	The investigation of a dead body.
Bessarabian	The name given to an area of Eastern Europe in the nineteenth century. It was used as a term for all East European immigrants
Fenian	A group who wanted Ireland to be free from British control.
Gin palace	A well-decorated pub selling cheap, strong gin.
Hoax	False information to fool somebody.
Lodging House	A building converted into many small bedrooms. People could pay a fee of 4p to rent a room for 24 hours. Also called a 'doss-house'.
Satire	Writing or art which humorously makes fun of famous people, current events or institutions.
Socialist	A political idea which aims to spread wealth more evenly across society.
Rookery	An area of tightly packed buildings in a poor area.
Sweatshop	A factory which employs workers for long hours and low pay. Workers sometimes live inside the factory.
Vigilance Committee	A group of Whitechapel residents who set up their own vigilante force to catch 'Jack the Ripper'.
Workhouse	A building which offered food and shelter to people who had nowhere else to go. Conditions were deliberately awful to make sure it was only used as a last resort.

MATHS 10A 10D 10F			SPARX Code(s)	KO Pages	Vocabulary
Year Group Movie - A BEAUTIFUL MIND					
SPRING 1					
Wk 1	Trigono- metry	Sketch Graphs of Trigonometric Functions	U450	27	proportion
		Use Trig Graphs to find Values	U450	27	currency
		END OF UNIT FEEDBACK			change
Wk 2	New Stats 2	Sampling / Stratified Sampling			profit
		Capture Recapture			loss
		Geometric Mean and Weighted Mean			ratio
Standard Deviation: Of Discrete Data				like terms	
Estimate of Standard Deviation for Grouped Data				dimension	
Wk 3		Use Standard Deviation - Making Estimates			heptagon
		Index Numbers, Chain Based Index Numbers			kilo-
		RPI, CPI and GDP			
Wk 4		Rates of Change			
		Population Pyramids			
Wk 5	Proportion	Recognise and Interpret Graphs Showing Direct and Indirect Proportion	U238	32	
		Set up and use equations to solve direct proportion problems	U640	32	
		Set up and use equations to solve inverse proportion problems	U138	32	
END OF UNIT FEEDBACK					
Wk 6	Volume and Surface Area	Surface Area of a Prism and Cylinder	U464 U259	42	
		Volume of a Prism and Cylinder	U174 U915	43	
		Convert Between Metric Units of Volume/Capacity	U388	43	
Volume and Surface Area of Pyramids		U871 U484	42, 43		
Wk 7		Volume and Surface Area of Cones	U523 U116	42, 43	
		Frustums	U334 U350	43	
		Volume and Surface Area of Spheres and Hemispheres	U893 U426	43	
		Harder Volume & Surface Area Problems	U771	43	
FEBRUARY HALF TERM					

MATHS 10E 10C 10T			SPARX Code(s)	KO Pages	Vocabulary
Year Group Movie - A BEAUTIFUL MIND					
SPRING 1					
Wk 1	Equations & Inequalities	Solve Simple Equations	U755	15	unitary
		Solve More Difficult Equations with negatives and brackets	U325	15	similar
		Solve Equations with Unknowns on Both Sides	U870	15	express
		Form and Solve Equations	U599	17	measure
Wk 2		Rearrange equations that involve 2 steps such as $ax + b = c$	U556		compare
		Rearrange two equivalent fractions where the variable is the denominator	U556		quotient
Wk 3		Introduction to Inequalities (Represent on a Number Line)	U509	19	tangent
		Solve Linear Inequalities	U759	19	plane
		Writing Error Intervals (including truncation)	U145		density
		Solve simple simultaneous equations	U760 U757		tera-
Wk 4		END OF UNIT FEEDBACK			
Wk 5	New Stats	Index Numbers, Chain Based Index Numbers			
		RPI, CPI and GDP			
		Rates of Change			
		CF Curves	U642		
		Boxplots	U879 U837 U507		
Wk 6		Outlier / Skewness			
	END OF UNIT FEEDBACK				
Wk 7	Sequences and nth Term	Recognise and continue Simple Sequences (including Fibonacci)	U213	22	
		Using and Finding the Nth Term of Linear Sequences	U498	22	
		Recognise Sequences in Diagrams and draw the next term	U978	22	
		Using the Nth Term of Quadratic Sequences	U206		
		Geometric Progressions	U681		
FEBRUARY HALF TERM					

Free Time Activities: GCSE Foundation Tier Spanish Knowledge Organiser

Key Ideas

- los pasatiempos (normalmente, en el pasado, en el futuro)
- los aspectos positivos del ejercicio
- los deportes individuales o los deportes de equipo
- a favor o en contra de los deportes extremos
- las ventajas y los inconvenientes de ver la televisión o de ir al cine
- la música
- lo que como, la comida extranjera y comer en un restaurante



Key Vocabulary

Los sustantivos

el aire libre	outdoors
el alpinismo	mountain climbing
el baile	dancing
el baloncesto	basketball
la bici/bicicleta	bike, bicycle
la carne/el pescado/ la fruta/as verduras	meat/fish/fruit/vegetables
la equitación	horse riding
el estadio	stadium
el fútbol	football
el monopatín	skateboard
la natación	swimming
el partido	match

Los adjetivos

aburrido/a	boring
cansado/a	tiring
delicioso/a	delicious
interesante	interesting
peligroso/a	dangerous

Los verbos

andar	to walk
-------	---------

bailar	to dance
beber	to drink
cantar	to sing
comer	to eat
correr	to run
jugar	to play
montar (a caballo, en bici)	to ride (a horse/bike)
nadar	to swim
patinar	to skate
tocar	to play (an instrument)

Key Verbs

Infinitivo	Presente	Pasado (Pretérito)	Futuro
hacer - to do	yo hago ; él/ella hace ; nosotros/as hacemos	yo hice ; él/ella hizo ; nosotros/as hicimos	yo haré ; él/ella hará ; nosotros/as haremos
ser - to be	yo soy ; él/ella es ; nosotros/as somos	yo era ; él/ella era ; nosotros/as éramos	yo seré ; él/ella será ; nosotros/as seremos
estar - to be	yo estoy ; él/ella está ; nosotros/as estamos	yo estuve ; él/ella estuvo ; nosotros/as estuvimos	yo estaré ; él/ella estará ; nosotros/as estaremos
comer - to eat	yo como ; él/ella come ; nosotros/as comemos	yo comí ; él/ella comió ; nosotros/as comimos	yo comeré ; él/ella comerá ; nosotros/as comeremos
beber - to drink	yo bebo ; él/ella bebe ; nosotros/as bebemos	yo bebí ; él/ella bebió ; nosotros/as bebimos	yo beberé ; él/ella beberá ; nosotros/as beberemos
ir - to go	yo voy ; él/ella va ; nosotros/as vamos	yo fui ; él/ella fue ; nosotros/as fuimos	yo iré ; él/ella irá ; nosotros/as iremos



Key Phrases

Estoy interesado/a en...	I'm interested in...
Me apasiona...	I'm passionate about...
He jugado a fútbol los sábados por la mañana desde hace cinco años.	I've been playing football on Saturday mornings for five years.
Cuando era pequeño, hacía judo.	When I was young, I used to do judo.
Soy un/ una fan de la cantante Beyoncé.	I'm a fan of the singer Beyoncé.
Detesto las telenovelas.	I hate soap operas.
Como mucha comida basura, es un problema.	I eat a lot of fast food, it's a problem.
Juego al fútbol para estar en forma.	I play football in order to stay in shape.
En mi opinión, los deportes extremos son peligrosos.	In my opinion extreme sports are dangerous.



Tricky Pronunciation: Practise these with your teacher!

la equitación	horse riding
el patinaje	skating
delicioso/a	delicious



Tricky spellings

aburrido/a	boring	Check: double r (rr).
el fútbol	football	Check: the accent.
la natación	swimming	Check: the accent.
la película	film	Check: the accent.

Key Questions

- Háblame de tus aficiones.**
Talk to me about your hobbies.
- ¿Te gusta hacer ejercicio?**
Do you enjoy exercising?
- ¿Qué prefieres: el fútbol o la natación?**
What do you prefer, football or swimming?
- ¿Qué piensas sobre los deportes extremos?**
What do you think of extreme sports?
- ¿Prefieres ir al cine o ver la televisión?**
Do you prefer going to the cinema or watching TV?
- ¿Qué género de música prefieres?**
What genre of music do you like?
- ¿Qué te gusta comer?**
What do you like to eat?

Useful Grammatical Structures

- Use **modifiers** to modify an adjective. Examples include: bastante (quite); un poco (a bit).
- Use **intensifiers** to intensify an adjective. Examples include: realmente (really); muy (very); particularmente (particularly); totalmente (totally); completamente (completely).
- Use **connectives and conjunctions** to make longer sentences. Examples include: porque (because); ya que (as/because); pero (but); sin embargo (however); cuando (when); although (aunque).



Free Time Activities: GCSE Higher Tier Spanish Knowledge Organiser

Key Ideas

- Los pasatiempos (normalmente, en el pasado, en el futuro).
- Los beneficios del ejercicio.
- Los deportes individuales o los deportes de equipo.
- A favor o en contra de los deportes extremos.
- Las ventajas y los inconvenientes de ver la televisión o de ir al cine.
- La música y cómo la escuchas.
- Lo que como, la comida extranjera y comer en un restaurante.



Key Vocabulary

Los sustantivos

la alimentación	food, nourishment
el cantante/la cantante/ el actor/la actriz	the singer (m/f)/the actor/the actress
la carrera	race
los deportes de equipo/ individuales/de riesgo/ tradicionales	team/individual/ extreme/traditional sports
los deportes de invierno/ de verano	winter sports/summer sports
La música pop/rock/ alternativa	pop/rock music/indie pop
los pasatiempo	hobbies
la película de miedo/ romántica/de guerra/de policías	horror/romantic/war/ thriller (film)
el pirguismo	canoeing

el premio	prize
la propina	tip
la selección	team, side
el socio	member
la telenovela/el concurso/los dibujos animados	soap opera/ gameshow/cartoon animados

Los adjetivos

aburrido/a	boring
cansado/a	tiring
delicioso/a	delicious
emocionante	exciting
escalofriante	scary

interesante	interesting
peligroso/a	dangerous

Los verbos

apetecer	to fancy/to feel like
beber	to drink
costar	to cost
descargar	to download
escoger/elegir	to choose
estar interesado en	to be interested in
jugar	to play
leer	to read
unirse a/participar en	to join

Key Verbs

Infinitivo	Presente	Pasado	Futuro	Condicional	Imperfecto
hacer – to do	yo hago ; él/ella hace ; nosotros/as hacemos	yo hice; él/ella hizo ; nosotros/as hicimos	yo haré ; él/ella hará ; nosotros/as haremos	yo haría ; él/ella haría ; nosotros/as haríamos	yo hacía; él/ella hacía ; nosotros/as hacíamos
ser – to be	yo soy ; él/ella es ; nosotros/as somos	yo era; él/ella era ; nosotros/as éramos	yo seré ; él/ella será ; nosotros/as seremos	yo sería ; él/ella sería ; nosotros/as seríamos	yo era ; él/ella era ; nosotros/as éramos
estar- to be	yo estoy ; él/ella está ; nosotros/as estamos	yo estuve; él/ella estuvo ; nosotros/as estuvimos	yo estaré ; él/ella estará ; nosotros/as estaremos	yo estaría ; él/ella estaría ; nosotros/as estaríamos	yo estaba; él/ella estaba; nosotros/as estábamos
tener- to have	yo tengo ; él/ella tiene ; nosotros/as tenemos	yo tuve; él/ella tuvo ; nosotros/as tuvimos	yo tendré ; él/ella tendrá ; nosotros/as tendremos	yo tendría ; él/ella tendría ; nosotros/as tendríamos	yo tenía; él/ella tenía ; nosotros/as teníamos
ir- to go	yo voy ; él/ella va ; nosotros/as vamos	yo fui; él/ella fue ; nosotros/as fuimos	yo iré ; él/ella irá ; nosotros/as iremos	yo iría ; él/ella iría ; nosotros/as iríamos	yo iba; él/ella iba ; nosotros/as íbamos
leer- to read	yo leo ; él/ella lee ; nosotros/as leemos	yo leí ; él/ella leyó; nosotros/as leímos	yo leeré ; él/ella leerá ; nosotros/as leeremos	yo leería ; él/ella leería; nosotros/as leeríamos	yo leía ; él/ella leía ; nosotros/as leíamos
comer- to eat	yo como ; él/ella come; nosotros/as comemos	yo comí; él/ella comió ; nosotros/as comimos	yo comeré ; él/ella comerá ; nosotros/as comeremos	yo comería ; él/ella comería; nosotros/as comeríamos	yo comía ; él/ella comía; nosotros/as comíamos

Key Phrases

Estoy interesado/a en...	I'm interested in...
Me apasiona...	I'm passionate about...
He jugado a fútbol los sábados por la mañana desde hace cinco años.	I've been playing football on Saturday mornings for five years.
Me apunté al club de tenis hace dos años.	I joined the tennis club two years ago.
Cuando era pequeño/a, hacía judo.	When I was young, I used to play judo.
Soy un/una fan de la cantante Beyoncé.	I'm a fan of the singer Beyoncé.
Escucho su música cuando hago mis deberes.	I listen to music whilst doing my homework.
Mis padres ven telenovelas cada noche pero las encuentro aburridas.	My parents watch soaps every night but I find them boring.
Las películas de miedo me asustan. Nunca las veo.	Horror films scare me. I never watch them.
Las entradas para el cine son demasiado caras así que prefiero descargar películas.	Cinema tickets are too expensive so I prefer to download films.
Tengo muchos hábitos alimenticios malos porque soy adicto/a a la comida basura.	I've lots of bad eating habits because I'm addicted to fast food.
Aunque no soy deportista, me gusta nadar/la natación.	Although I'm not sporty, I love swimming.
Hacer ejercicio regularmente es importante para mantenerse en forma.	Doing regular exercise is important for keeping in shape.
En mi opinión, los deportes de riesgo son más peligrosos que los tradicionales.	In my opinion, extreme sports are more dangerous than traditional sports.

Tricky Pronunciation: Practise these with your teacher!

el piragüismo	canoeing
escalofriante	scary
escoger/elegir	to choose

Tricky spellings

la música	music	Check: the accent.
la película	film	Check: the accent.

Useful Grammatical Structures

- Use **modifiers** to modify an adjective. Examples include: bastante (quite); un poco (a bit).
- Use **intensifiers** to intensify an adjective. Examples include: realmente (really); muy (very); particularmente (particularly); totalmente (totally); completamente (completely).
- Use **connectives and conjunctions** to make longer sentences. Examples include: porque (because); ya que (as/because); pero (but); sin embargo (however); cuando (when), although (aunque).

More Advanced Grammatical Structures

- Use **direct object pronouns** to avoid repetition of a noun. In Spanish, these go in front of the verb, e.g. mis padres lo ven (my parents watch it)
- Use the **imperfect tense** to describe something you regularly used to do in the past, e.g. iba a jugar al baloncesto los sábados (I used to go to the play basketball on Saturdays). Use the preterite tense to talk about actions that were completed in the past, e.g. la semana pasada, mi madre y yo fuimos a la piscina (last week, my mum and I went to the swimming pool).
- Use **clauses with Si** to make your sentences more interesting, e.g. si tengo tiempo, iré al cine con mis amigos (if I have time I will go to the cinema with my friends).
- Use **synonyms**, e.g. emocionante = impresionante (exciting).

Key Questions

- Háblame de tus aficiones**
Talk to me about your hobbies
- ¿Cuáles son los beneficios del ejercicio?**
What are the benefits of exercise?
- ¿Prefieres los deportes individuales o de equipo?**
Do you prefer individual or team sports?
- ¿Qué piensas de los deportes de riesgo?**
What do you think of extreme sports?
- ¿Prefieres ir al cine o ver la televisión?**
Do you prefer going to the cinema or watching TV?
- ¿Cómo escuchas música? ¿Qué género de música prefieres?**
How do you listen to music? Which genres do you like?
- Describe tus hábitos alimenticios.**
Describe your eating habits.



GCSE TEXTILES AO1

Develop ideas through investigation, demonstration and critical understanding of sources.

What is a Source?

A source can be anything you are inspired by, examples are listed below that can be included in your sketchbook.

A Theme Mind Map:

Mind map all the things you can think of relating to your topic, this can include images.

Mood Board: Collect images linked to your theme and add to a mood board, annotate.

Artist/Designer Analysis: Look at an existing Artist/Designer and complete an Analysis of their work.

Take your own photographs: You can use your own photos as a source of inspiration. Annotate them explaining how they link to your theme.

How to Analyse a Designer/Artist:

- Introduce their work, key facts only.
- Are there any social, environmental, moral, issues surrounding their work?
- Consider what key features appear regularly in your designers work, why might that be?
- What colours do they use a lot of? What effect does this give?
- Who do you think their designs are aimed at ? Why?
- Explain what you like/ dislike about the designs and why.
- What techniques has the designer used? Why? Could different techniques be used to create different effects?
- How will this designer inspire your work?
- How does the designer fit the theme?
- What techniques will you sample and why?

Below are some examples of what you need to do when you have analysed a source :

Complete a Textile Sample using your source as inspiration.

Do some initial sketches.

Compare 2 different sources.

Key words:

Aesthetics

Style

Process

Trend

Connotation

Textile Technique

Colour

Line

Tone

Form

Texture

Shape

Decoration

Repetition

Scale

Structure

Pattern

Composition

Annotation

illustration

Key

points:

There is a difference between analysing and stating. Analysing will always get you more marks.

Denotation:

Literally stating what something is.

Connotation:

Explaining the meaning of something, what it connotes.

GCSE TEXTILES AO2

Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, processes and techniques.

- **How do I meet the assessment objectives?**
- **Refine work:** Quality over quantity. Go back to old samples and develop them. Compare samples, what works? What does not work?
- **Explore ideas:** This can be as a sketch or textile sample. Try to create the idea in your head and remember if it does not work, don't worry it is a sample.
- **Experimenting with appropriate media, materials and techniques:** Practice creating samples using a wide range of techniques and the correct materials. Don't be afraid to experiment and combine different techniques, think outside the box.

How to evaluate a sample:

What have you done?
What techniques have you used?
What inspired you?
How does it relate to your theme?
How have you created it?
What do you like or dislike?
Was it successful, if not, why?
How could you improve it?
What else could you try?
Is there anything you would change? Why?
How will you develop your work now?

Never throw away a sample! Samples are for experimentation, if you are unhappy with the outcome evaluate them so that we can improve!

Once you have completed a sample:

Make a colour copy for the samples you are pleased with.
Cut the sample in half, further further develop half the sample using different techniques.
Sketch an idea to show how you would use this sample for your final piece.
Evaluate your samples to help you refine your ideas and techniques.

Techniques to try:

Batik
Batik Sgraffito
Machine stitching
Embroidery
Pleating
Silk painting
Screen Printing
Applique
Beading
Couching
Felting
Weaving
Pattern construction
Patchwork
Quilting
Ruffles
Embellishment
CAD
Fabric Dyeing
Fashion illustration

GCSE Textiles A03

Record ideas, observations and insights relevant to intentions as work progress.

Developing Ideas:

Once you have recorded your ideas develop them by:

Varying aspects of your Design ideas for example shape, size features etc.
Use observational sketches to develop repeat patterns.
Take photographs and then annotate them.
Throughout your annotation underline any key points you have made or keywords used.

How to annotate a design:

What textile techniques have you used in your designs and why?

How does the sample link to the samples you have made?

Is your design inspired by any of your sources?

How and why?

What materials have you used and why?

How does this design link to your theme?

What developments would you make to your designs and why?

Media you can use to record ideas:

Pencil

Pen

Collage

Chalk

Pencil crayons

Watercolour

Acrylic paint

Photographs

Charcoal

ink

How can I record my ideas?

- Recording ideas is really important to show the examiner your thought process and design development.
Ways to record your ideas :
- Design Ideas:** Draw out your design ideas, they should be clearly inspired by your samples and sources.
Annotate these to explain parts of your designs.
- Observational drawing:** Sketching objects that relate to your theme and help to inspire design ideas.
- Take Photographs:** Take photographs of sources for inspiration or take photos when you are making samples as evidence.
- Annotation:** Annotate to explain your thought, this can be in the form of bullet points.

Key Points to remember:

All designs should clearly relate to AO1 and AO2.

All designs should show how your sources have inspired them, include this in your annotation.

All designs should have at least three different textile techniques that you have sampled.

Annotation can be written or typed, bullet points, key words or paragraphs.

GCSE Textiles A04

Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.

- **How can I meet the assessment objective?**
- **Give a personal and meaningful response:** Your response to a source should be personal to you. What your feelings and reactions are. It must be meaningful by relating to your source inspiration. Everything must link.
- **Demonstrate understanding of visual language:** Combine different textures, colours and techniques in an aesthetically pleasing way.
- **Aesthetics:** The way things look.

Ways of showing a personal response:

Create your own ideas.

Develop your own ideas.

Create samples inspired by a source.

Create a developed sample inspired by a combination of sources.

Produce a final Piece in fashion or interiors.

Creating a final piece: AO4 is shown throughout your sketchbook but a final piece secures marks.

Develop your design ideas.

Select the design you would like the most to make.

Sketch out your final design, planning the techniques you will use.

Plan your making process step by step.

Reflection on entire project:

What was your original theme and how you were inspired?

How did you begin your research?

How do your samples reflect your own ideas?

What would you do differently?

If you were to develop the theme further what would you do and why?

Key points:

A personal response is:

Any response where it is your own work.

Not just your final piece but all work in your sketchbook.

Inspired by Artists but do not copy them as this is not personal ie not your own work.

Recording the step by step process of creating any developed sample and final piece, you can do this with photographs, sketches and annotation.