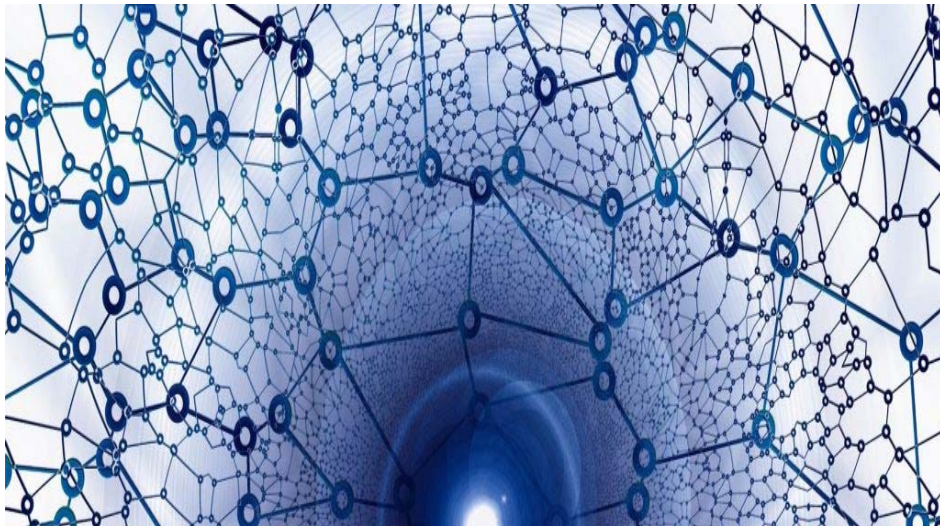


Remember to keep your 100% books from previous cycles

2018-19

# Year 10 - Cycle Two

## 100% Book



Name: \_\_\_\_\_

Tutor group: \_\_\_\_\_



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## Your 100% book and knowledge organisers

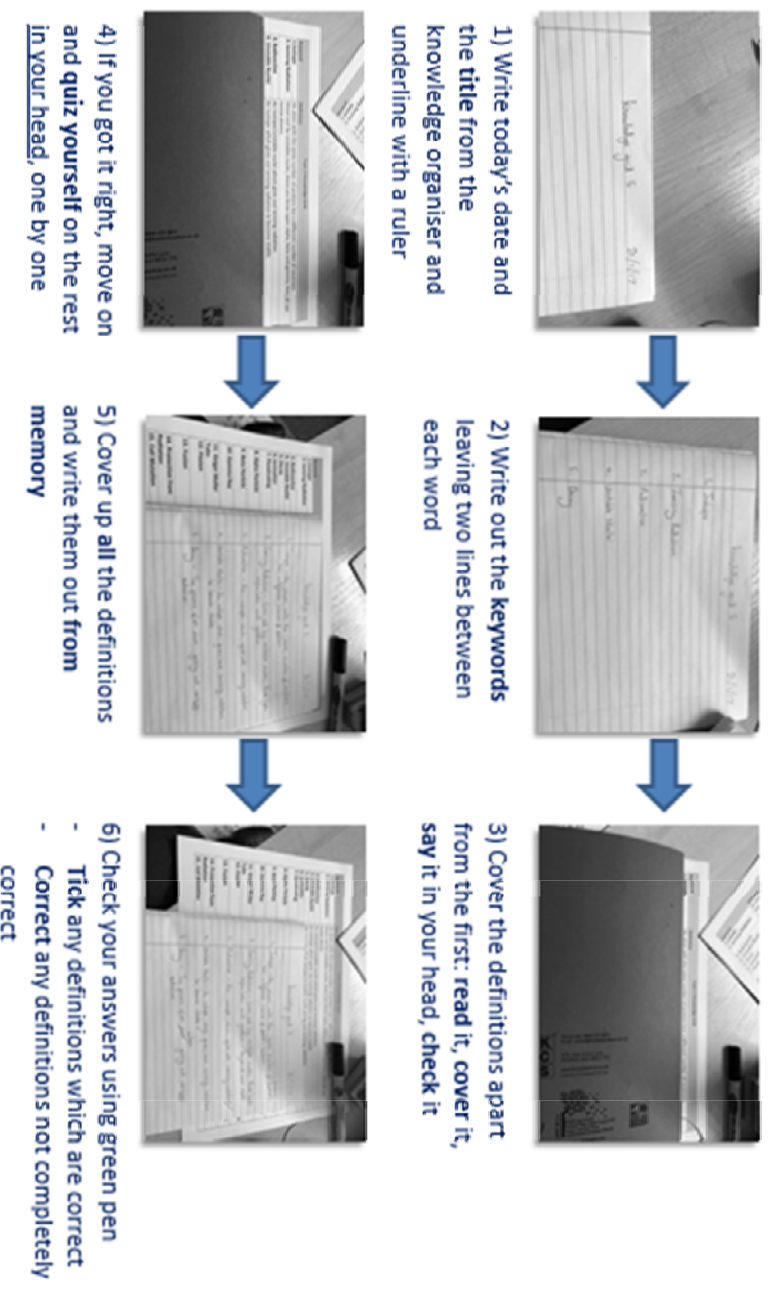
Knowledge organisers contain **critical** knowledge you must know. This will help you recap, revisit and revise what you have learnt in lessons in order to remember this knowledge for the long-term.

**Students remember 50% more when they test themselves after learning.**

You must have this 100% book for **every lesson** – it is part of your equipment.

You must keep your 100% books (even after you have finished the cycle or the year).

## How do I use my 100% book for self-quizzing?



# Correcting spelling, punctuation and grammar

Your work will be marked across all subjects to help you improve your literacy. This is the code that will be used.

Correcting your spelling, punctuation and grammar	
<b>Sp + underlined word</b>	The underlined word is spelt incorrectly.  Look, cover, write then check. Do this at least three times so you spell it correctly.
<b>A circle around part of a word or a space</b>	Your punctuation is incorrect, or something is missing (including capital letters).
<b>? + wobbly line</b>	You haven't explained your ideas clearly enough.
<b>/</b>	You need to start a new sentence here.  Remember: full stop, capital letter.
<b>//</b>	You need to start a new paragraph here.  Remember: new paragraphs for time, place, topic, person (TiPToP).
<b>^</b>	A word is missing where the arrow is pointing.

# Arabic - Year 10 Vocabulary Cycle 2 مفردات الصف العاشر

My daily sustenance	قوت يومي	Singing	لغناء	Actor / Actress	مُمثل/مُمثلة	TV, Cinema & Films	تلفزيون، سينما وافلام
Nutritious	مغذي	CD	قرص	Artist	فنان	I like watching	أنا أحب مشاهدة
Food	أكل/طعام	Album	البوم	Art	فنّ	Programmes...	برامج...
Food	غذاء	Concert	حفل موسيقي	Favourite	مُفضل	Debate	حوارية
Healthy	صحي	Jazz	موسيقى الجاز	Entertaining	مسلي	Comedy	كوميديّة
Unhealthy	غير صحي	Eastern music	موسيقى شرقية-	Exciting	مثير	Art	فنية
Breakfast	وجبة الفطور	Pop music	موسيقى البوب	Actor/ess	ممثل/ة	Culture	تنقيفة
Lunch	وجبة الغداء	Rock music	موسيقى الروك	Aiming	هادف	Children's	أطفال
Dinner	وجبة العشاء	Flamenco music	موسيقى الفلامينكو-	Useful	مفيد	Sports	رياضية
Carbs	النشويات	Folk music	موسيقى شعبية	Theatre	مسرح	Religious	دينية
Proteins	البروتينات	Classic music	موسيقى كلاسيكية	Celebration	احتفال	Documentaries	وثائقية
Fats	الدهون	Internet	الانترنت	Festival	مهرجان	Quizzes	مسابقات
Sweets	الحلويات	E-mail	بريد الكتروني	Occasion	مناسبة	News bulletins	نشرات الأخبار
Dairy products	الاجبا والألبان	Register	تسجيل	Festivals	عيد / أعياد	I went to see	ذهبت لرؤية
A cup of milk	كوب حليب	Forum	منتدى	Eid al-Fitr	عيد الفطر	Film....	فيلم.....
Water jar	ابريق ماء	Browser	متصفح	Easter	عيد الفصح	Series....	مسلسل....
A cup of coffee	فنجان قهوة	Upload	تحميل	Eid al-Adha	عيد الأضحى	Romantic	رومنسي/عاطفي
Vinegar bottle	زجاجة خلّ	Download	تنزيل	Independence Day	الاستقلال-عيد	Action	الحركة
Butchery	المجزرة	Hacking	القرصنة	Christmas	عيد الميلاد	Comedy	كوميدي
Bakery	المخبزة	Page	صفحة	New Year	رأس السنة	Drama	درامي
Vegetable market	سوق الخضّر	Website	موقع الكتروني	Music	الموسيقى	Detective	بوليسي
Refreshments shop	متجر المرطبات-	Links	الروابط	Rhythm	إيقاع	Adventure	مغامرة
Supermarket	السوبر ماركت	Login	تسجيل الدخول	Tune	لحن	Science fiction	خيال علمي
Pharmacy	الصيدلية	Password	كلمة السر	Song / Songs	أغنية / أغاني	Cowboy	رعاة البقر
				Singer	مُغني / مطرب	Horror	رعب
						War	حربي

Sentences / جُمْل		Past Tense / فعل الماضي		Present Tense / فعل المضارع	
<u>My Daily Routine</u>	<u>روتيني اليومي</u>	<u>Past Tense</u>	<u>فعل الماضي</u>	<u>Present Tense</u>	<u>فعل المضارع</u>
I come back	أعود الى / أرجع الى	I watched	أنا شأهت	I watch	أنا أشأه
I get dressed	ارتدي ملابسي	You(m) watched	أنت شأهت	You(m) watch	أنت تشأه
I go out	أخرج من البيت	You(f) watched	أنت شأهت	You(f) watch	أنت تشأهين
I go to bed	أنا أذهب الى الفراش	He watched	هو شأه	He watches	هو يشأه
I have breakfast	أنا أتناول الفطور	She watched	هي شأهت	She watches	هي تشأه
I do my home work	أقوم بواجب المدرسة	We watched	نحن شأهنا	We watch	نحن نشأه
I meet up with my friends	ألتقي مع أصدقائي	You(p) watched	أنتم شأهت	You(p) watch	أنتم تشأهون
I do the house work	أقوم بالأعمال المنزلية	They watched	هم شأهوا	They watch	هم يشأهون
I talk to my friends	أنا أأحدث مع أصدقائي	They(f) watched	هن شأهن	They(f) watch	هن يشأهن
I do the washing up	أقوم بغسل الصحون				
		<u>Clothes</u>	<u>الملابس</u>	I criticise	أنتقد
The action takes place in....	تجري الأحداث في ...	Leather	جلد	I invite	أأعو
The special effects are great	المؤثرات الخاصة هي ممتازة	Silky	أريري	I offer	أأأم
The film was about....	الفيلم كان حول...	Fabric	أماش		
A man who falls in love	رجل يقع في حب	Soft	ناعم	<u>Opinion</u>	<u>رأي</u>
The main actors	الشأصيات الرئيسية	Thick	سميك	I prefer	أأضل
A fight between good & evil	معركة بين الخير والشر	Wide	واسع	I want	أأغب
In the end....	في نهاية الفيلم...	Short sleeves	أكمام قصيرة	I love / do not like	أأب/لا أأب
The acting was....	التمثيل كان....	Long sleeves	أكمام طويلة	I like / dislike	أأعأبي/لا أأعأبي
The directing was...	الأخراج كان...	Small size	أجم صغير	In my opinion....	في رأيي....
In the beginning...	في البداية...	Large	أجم كبير		
		Embroidered	مطرز	Last week	الأسبوع الماضي
I would like to see it again	أود أن أراه مرة أخرى	What is your size?	ما هو مأسك؟	Every week	كل الأسبوع
In my opinion this....	في رأيي هذا الفيلم...			Once a month	مرة في الشهر
The main character is....	بطل الفيلم هو...				
I saw a film its title is....	رأيت فيلم عنوانه...				
Made me laugh	أعأني أضحك				



# GCSE Business Studies – Topic 1 – Business in the Real World

## 1.1. The purpose and Nature of a Business

<b>Purpose of a Business</b>	<ol style="list-style-type: none"> <li>To provide a good (tangible)</li> <li>To provide a service (intangible)</li> </ol>
<b>Business Entrepreneur</b>	An individual with a business idea that takes a risk by starting up a business
<b>Why People Start a Business</b>	<ol style="list-style-type: none"> <li>To work from home</li> <li>Be your own boss</li> <li>Pursue a hobby</li> </ol>
<b>Social Enterprise</b>	An business activity that achieves a reward for society
<b>4 Factors of Production</b>	<ol style="list-style-type: none"> <li>Land</li> <li>Labour</li> <li>Capital</li> <li>Enterprise</li> </ol>
<b>Opportunity Cost</b>	The next best alternative that is foregone
<b>Entrepreneurial Characteristics</b>	<ol style="list-style-type: none"> <li>Innovative</li> <li>Risk takers</li> <li>Hard working</li> <li>Determined</li> <li>Organised</li> </ol>
<b>Business Sectors</b>	<b>Primary</b> Extract raw materials <b>Secondary</b> Production of the product <b>Tertiary</b> Services provided and products sold
<b>Business Functions</b>	The way a business is divided: <ol style="list-style-type: none"> <li>Marketing</li> <li>Operations</li> <li>Human resources</li> <li>Finance</li> <li>Sales</li> </ol>
<b>Business Environment (Changes)</b>	<ol style="list-style-type: none"> <li><b>Technological Change</b> Changes in machinery and technology, Snapchat, Airbnb are examples of this</li> <li><b>Economic Change</b> Interest rates, inflation, GDP</li> <li><b>Legal Change</b> Laws and regulations</li> <li><b>Environmental Change</b> Ethics and consumer trends</li> </ol>

## 1.2. Legal Structures/Ownership

Structure	Limited - Unlimited	Benefits	Drawbacks
<b>Franchise</b> The legal right to use the name of an existing firm to sell the same products	Limited	<ul style="list-style-type: none"> <li>Training is given</li> <li>Business is already known</li> </ul>	<ul style="list-style-type: none"> <li>Have to pay fees</li> <li>Decisions are made by the company</li> </ul>
<b>Sole Trader</b> Business run by one person	Unlimited	<ul style="list-style-type: none"> <li>Not expensive to set up</li> <li>Profit kept by owner</li> </ul>	<ul style="list-style-type: none"> <li>Risk losing personal assets</li> <li>Hard to find finance</li> </ul>
<b>Partnership</b> Two to 20 people opening a business together	Unlimited	<ul style="list-style-type: none"> <li>Few set-up procedures</li> <li>More sources of finance</li> </ul>	<ul style="list-style-type: none"> <li>Profits are shares</li> <li>Conflicts may arise</li> </ul>
<b>Private limited company</b> Selling shares to family and friends	Limited	<ul style="list-style-type: none"> <li>Easier to get sources of finance</li> <li>Shared ideas</li> </ul>	<ul style="list-style-type: none"> <li>Conflicts may arise</li> <li>Have to share profits</li> </ul>
<b>Public Limited Company</b> Selling shares to the general public	Limited	<ul style="list-style-type: none"> <li>Personal assets are protected</li> <li>More investment</li> </ul>	<ul style="list-style-type: none"> <li>A lot of people involved in the business</li> </ul>
<b>Unlimited Liability</b>	Owners are responsible for all debts and can lose personal assets		
<b>Limited Liability</b>	Shareholders can lose their investment but not their personal assets		

## 1.3. Aims and Objectives

<b>Aim</b>	General 'long term' goal of a business
<b>Objective</b>	A specific 'short term' goal of a business
<b>Why set up objectives?</b>	<ol style="list-style-type: none"> <li>Helps with decision making</li> <li>Helps investors understand the business direction</li> <li>Gives the business and employees a direction</li> <li>Can motivate stakeholders</li> </ol>
<b>Types of Objectives</b>	<ol style="list-style-type: none"> <li>Survival</li> <li>Earning a profit</li> <li>Increase shareholder value</li> <li>Customer satisfaction</li> <li>Increase market share</li> <li>Growth</li> <li>Being ethical</li> <li>Environmental targets</li> </ol>
<b>SMART Objectives</b>	Specific Measurable Achievable Realistic Time-specific

## 1.4. Stakeholders

<b>Stakeholders</b>	Someone that has an interest in a business
<b>Types of Stakeholders</b>	<b>Employees</b> Want more pay, secure jobs <b>Customers</b> Want useful, accurate information, good service and value for money <b>Shareholders</b> High dividends and high share price <b>Local Community</b> Jobs, reduce environmental impact <b>Government</b> Legal behaviour, taxes paid, growth <b>Suppliers</b> Paid on time, kept informed about business changes
<b>Stakeholder Influence on Business</b>	<ol style="list-style-type: none"> <li><b>Negotiation</b> Employees can negotiate for better pay, suppliers demand better terms</li> <li><b>Direct Action</b> Customers boycotting the product or employees striking</li> <li><b>Refusal to Co-operate</b> Councils can refuse to support, employees can work less hard</li> <li><b>Voting</b> Owners of the business can vote on what to do next with the business</li> </ol>

## GCSE Business Studies – Topic 1 – Business in the real world

### 1.5. Business Location

<b>Importance of Location</b>	<ol style="list-style-type: none"> <li><b>Costs</b> Amount paid for rent or land</li> <li><b>Sales</b> Are there enough customers around (footfall)</li> <li><b>Image / Reputation</b> Location of a business can affect their image</li> </ol>
<b>Factors Influencing Location</b>	<ol style="list-style-type: none"> <li>The type of business (factory, shop, restaurant, warehouse)</li> <li>Distance from the market (customers)</li> <li>How many competitors in the area</li> <li>Availability of raw materials</li> <li>Availability and cost of labour (employees)</li> <li>Transport links (roads, buses, trains, airports, ports)</li> <li>Technology (good internet, phones)</li> <li>Costs</li> </ol>
<b>Advantages of Operating Overseas</b>	<ol style="list-style-type: none"> <li>Cheaper labour (workers)</li> <li>Access to resources that are not available in the UK</li> <li>Financial incentives by foreign governments</li> <li>Avoid protectionist measures by foreign governments</li> <li>The market overseas may be growing fast</li> </ol>
<b>Disadvantages of Operating Overseas</b>	<ol style="list-style-type: none"> <li>There may be different rules and regulations</li> <li>Language and culture is different</li> <li>Customers may have different tastes to the ones in the UK</li> </ol>

### 1.6. Business Planning

<b>Business Plan</b>	This is a document setting out what a business does and what it hopes to achieve in the future
<b>Risk</b>	The possibility of something going wrong or losing something
<b>Purpose of Business Planning</b>	<ol style="list-style-type: none"> <li>Helps set up a business successfully</li> <li>Helps raise finance</li> <li>Helps set objectives</li> <li>Helps co-ordinate actions</li> </ol>
<b>Problems with Business Planning</b>	<ol style="list-style-type: none"> <li><b>Uncertainty</b> It is not always easy to look ahead</li> <li><b>Lack of Experience</b> When people start up a new business it is difficult as they do not have experience</li> <li><b>Change</b> A business plan needs to always be updated and referred to and sometimes things change too quickly</li> </ol>
<b>Reducing the Risk of Business Planning</b>	<ol style="list-style-type: none"> <li>Research</li> <li>Talking to experts and consultants</li> <li>Plan for a variety of outcomes</li> <li>Regularly review and update it</li> </ol>
<b>Sections of a Business Plan</b>	<ul style="list-style-type: none"> <li>Background information</li> <li>Market analysis</li> <li>Objectives</li> <li>Pricing</li> <li>Competition</li> <li>Financial forecast</li> <li>Product information</li> </ul>
<b>Financial Section of Business Plan</b>	<p>Profit = Revenue – Costs</p> <p>Revenue = Price X No of units sold</p>
<b>Fixed Costs</b>	Costs that do not change according to output, e.g. rent
<b>Variable Costs</b>	Costs that change according to output, e.g. ingredients or materials
<b>Total Costs</b>	Total Costs = Fixed Costs + Variable Costs
<b>Revenue</b>	The income a business receives from selling goods or services

### 1.7. Expanding a Business

<b>Measuring Business Size</b>	<ol style="list-style-type: none"> <li>Value of sales (revenue)</li> <li>Value of the business (how much it owns)</li> <li>Number of employees (how many people work at the company)</li> </ol>
<b>Internal (Organic) Growth</b>	This is when a business gets bigger by selling more products
<b>Internal Growth Examples</b>	Franchise, opening new stores, e-commerce, outsourcing
<b>E-Commerce</b>	The act of buying or selling a product using an electronic system such as the internet
<b>Outsourcing</b>	When a business uses another business to make its products part of the products
<b>External (Inorganic) Growth</b>	This is when a business gets bigger by joining other businesses
<b>External Growth Examples</b>	<ol style="list-style-type: none"> <li>Merger</li> <li>Takeover</li> <li>Horizontal integration</li> <li>Vertical integration</li> <li>Diversification</li> </ol>
<b>Merger</b>	When two or more businesses join together to form a new business
<b>Takeover</b>	When one business buys control of another
<b>Horizontal Integration</b>	When one firm joins another at the same stage of the production process
<b>Vertical Integration</b>	When businesses join at different stages of the production process: <b>Forward</b> When a firm joins with its distributors <b>Backward</b> When a firm joins with its suppliers
<b>Diversification</b>	When a business takes over a business in a totally different sector
<b>Advantages of Expansion</b>	Economies of scale (when a firm gets bigger their costs decrease), more market power, more status, staff welfare
<b>Disadvantages of Expansion</b>	Decision making is slower, too many employees makes them feel isolated, less efficiency due to size, diseconomies of scale (when a firm gets bigger their costs increase)
<b>Expanding Abroad</b>	<div style="display: flex; justify-content: space-between;"> <div> <ul style="list-style-type: none"> <li>+ Target more customers</li> <li>+ Cheap labour and land</li> </ul> </div> <div> <ul style="list-style-type: none"> <li>- Different laws and regulations</li> <li>- Existing businesses may resist new business</li> <li>- Customer habits are different</li> </ul> </div> </div>

## GCSE Business Studies – Topic 2 – Influences on Business

### 2.1. Technology

<b>Information and Communications Technology (ICT)</b>	The computing and communicating systems that a business might use to exchange information with stakeholders
<b>Stakeholders</b>	Someone that has an interest in a business
<b>Intranet</b>	Communication network which can only be accessed by employees of an organisation, like the school emails
<b>Extranets</b>	Networks that can be accessed by other organisations such as suppliers
<b>Impact of ICT on Employees</b>	<ol style="list-style-type: none"> <li>1. Location of employees</li> <li>2. Collecting, storing and analysing information</li> </ol>
<b>Cloud Computing</b>	Storage of large amounts of data on the internet
<b>E-Commerce</b>	The act of buying and selling goods online
<b>M-Commerce</b>	The buying and selling of goods through wireless handheld devices such as smartphones
<b>Digital Communication</b>	Transmission of information electronically between computing devices <ol style="list-style-type: none"> <li>1. Email</li> <li>2. Texts</li> <li>3. Webchat</li> <li>4. Teleconferencing</li> <li>5. Apps</li> <li>6. Social media</li> </ol>

### 2.2. Ethical and Environmental Considerations

<b>Ethics</b>	A business decision that is morally right, doing the right thing
<b>Profit</b>	The positive difference between revenue and costs
<b>Ethical Marketing</b>	When a business markets in an honest, fair and responsible way
<b>Ethical Business Operations</b>	This is when the business operates ethically, such as recycling and choosing ethical suppliers
<b>Ethical Human Resources</b>	This is when employers are treating their employees right
<b>Ethical Finance</b>	When businesses make sure they use their finances in the right way
<b>Fairtrade</b>	When companies become Fairtrade they agree to pay suppliers a fair amount; this then helps the local communities
<b>Social Responsibility</b>	When businesses try to make sure all their operations benefit society
<b>Environment</b>	The natural world in which we live
<b>External Costs</b>	Costs to a business that arise when activities result in harmful effects on other people not directly involved in production, e.g. local community when companies dump their waste
<b>Non-renewable Resources</b>	Resources that are limited such as coal and oil
<b>Sources of Air and Noise Pollution</b>	<ol style="list-style-type: none"> <li>1. Agriculture</li> <li>2. Manufacturing</li> <li>3. Transport</li> <li>4. Power stations</li> </ol>

<b>Ways to be Environmentally Friendly</b>	<ol style="list-style-type: none"> <li>1. Use of renewable resources</li> <li>2. Reduce transport pollution</li> <li>3. Recycling or using recyclable materials</li> <li>4. Stop using chemicals in production</li> </ol>
<b>Sustainability</b>	Methods of production which can be continued without damaging the environment in the long-term
<b>Advantages of Being Environmentally Friendly</b>	<ol style="list-style-type: none"> <li>1. Competitive advantage</li> <li>2. Charge higher prices</li> <li>3. Attract new customers</li> </ol>
<b>Disadvantages of Being Environmentally Friendly</b>	<ol style="list-style-type: none"> <li>1. Increase costs</li> <li>2. If not behaving ethically, can attract bad publicity</li> </ol>



## GCSE Business Studies – Topic 2 – Influences on Business

### 2.3. Economic Climate of a Business

<b>The Economy</b>	Made up of millions of individual consumers, thousands of businesses and the governments
<b>Consumers</b>	Individuals who buy goods and services from businesses
<b>Economic Climate</b>	Describes key factors within an economy such as the level of goods produced and the unemployment rates
<b>Interest Rates</b>	The cost of borrowing money
<b>High Interest Rates</b>	<ol style="list-style-type: none"> <li>1. High cost of borrowing</li> <li>2. People / businesses borrow less</li> <li>3. People save more</li> <li>4. Weakening economic climate</li> </ol>
<b>Low Interest Rates</b>	<ol style="list-style-type: none"> <li>1. Low cost of borrowing</li> <li>2. People / businesses borrow more</li> <li>3. People spend more</li> <li>4. Improving economic climate</li> </ol>
<b>Employment</b>	The number of people working in an economy
<b>Unemployment</b>	The number of people that are able and willing to work that can't find a job
<b>High Unemployment</b>	<ol style="list-style-type: none"> <li>1. Less people have jobs</li> <li>2. Consumer spending falls</li> <li>3. Demand falls</li> </ol>
<b>Consumer Spending</b>	The value of goods and services bought by consumers over a period of time
<b>Income Elastic Products</b>	Products that are sensitive to changes in consumer incomes

### 2.4. Globalisation

<b>Globalisation</b>	When the world is more interconnected through communication, transport and technology
<b>Multinational Company (MNC)</b>	When a company operates in more than one country. Can also be called Transnational Companies (TNCs)
<b>International Trade</b>	Selling of goods and services across national borders
<b>Exports</b>	When goods and services produced by a business in one country are sold to another country
<b>Reducing the Risk of Business Planning</b>	<ol style="list-style-type: none"> <li>1. Research</li> <li>2. Talking to experts and consultants</li> <li>3. Plan for a variety of outcomes</li> <li>4. Regularly review and update it</li> </ol>
<b>Sections of a Business Plan</b>	<ul style="list-style-type: none"> <li>• Background information</li> <li>• Market analysis</li> <li>• Objectives</li> <li>• Pricing</li> <li>• Competition</li> <li>• Financial forecast</li> <li>• Product information</li> </ul>
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<b>Variable Costs</b>	Costs that change according to output e.g. ingredients or materials
<b>Total Costs</b>	$\text{Total Costs} = \text{Fixed Costs} + \text{Variable Costs}$
<b>Revenue</b>	The income a business receives from selling goods or services

### 2.5 Legislation

<b>Legislation</b>	A set of rules that governs the way a society operates. It is another term for "laws".
<b>National Living Wage</b>	An hourly rate of pay set by the government. All employees above a certain age must receive at least this rate of pay.
<b>Discrimination</b>	Treating one person differently from another without having good reason to do so.
<b>Part-time Employee</b>	Employees who work for a proportion of the week – for example 3 days a week, rather than 5.
<b>Trade Union</b>	A group of workers who act together to improve their pay and working conditions.
<b>Contract of Employment</b>	A legal document stating the hours, rates of pay, duties and other conditions under which a person is employed.
<b>Motivation</b>	A range of factors which influence the way a person behaves at work.
<b>Consumer Laws</b>	Laws to stop businesses from treating their customers unfairly.

### 2.6 The Competitive Environment

<b>Markets</b>	Exists where there are buyers and sellers.
<b>Competition</b>	Exists when more than one business is attempting to attract the same customers.
<b>A Monopoly</b>	Exists when a business does not face any competition in a particular market.
<b>Market Share</b>	The percentage of sales in a particular market recorded by a business.
<b>An Uncertainty</b>	Occurs when there is a lack of information about a situation. This means the outcome is hard to predict.
<b>Risk</b>	The possibility of something going wrong.
<b>A Business Plan</b>	Is a document setting out what a business does and what it hopes to achieve in the future.
<b>Diversification</b>	Occurs when a business starts selling new products in new markets.
<b>A Recession</b>	Occurs when the value of an economy's output of goods and services falls for six months or longer.
<b>Entrepreneur</b>	Someone who is willing to take the risks involved in starting a new business

## GCSE Business Studies – Topic 3 – Human Resources

### 3.1. Organisational Structures

<b>Organisational Structure</b>	The way a business arranges itself to carry out its activities
<b>Organisational Chart</b>	A plan showing the roles of, and relationships between, all the employees in a business
<b>Line Manager</b>	An employee's immediate superior or boss
<b>Authority</b>	The power to control others and to make decisions
<b>Span of Control</b>	The number of employees managed directly by another employee
<b>Levels of Hierarchy</b>	The layers of authority within a business
<b>Chain of Command</b>	The line of authority within a business along which communication passes
<b>Delaying</b>	The removal of one or more levels of hierarchy from a business's organisational structure
<b>Delegation</b>	The passing down of authority to more junior employees
<b>Communication</b>	The exchange of information between two or more people
<b>Decentralisation</b>	Allows employees working in all areas of the business to take decisions
<b>Centralisation</b>	Occurs when a small number of senior managers in a business take all the important decisions

### 3.2. Recruitment and Selection

<b>Diversification</b>	Occurs when a business starts selling new products in new markets
<b>Retention</b>	The proportion of a business's workforce who remains with the business over a period of time, usually one year
<b>Recruitment</b>	The process of finding and appointing new employees
<b>Selection</b>	Choosing the right employees from among those who have applied for the job
<b>Internal Recruitment</b>	Takes place when a job vacancy is filled from within the existing workforce
<b>External Recruitment</b>	Filling a job vacancy from any suitable person not already employed by the business
<b>Job Analysis</b>	The collection and interpretation of information about a job
<b>Job Description</b>	States information about the duties and tasks that make up a particular job
<b>Person Specification</b>	Sets out the qualifications and skills required by an employee to fill a particular job
<b>Curriculum Vitae (CV)</b>	Provides information about a person, including qualifications, employment history and interests
<b>Productivity</b>	The quantity of goods and services produced by an employee over a period of time, such as one year
<b>Quality</b>	The extent to which customers' requirements are met
<b>Customer Service</b>	That part of a business's activities that is concerned with meeting customers' needs as fully as possible
<b>Contract of Employment</b>	A legal document stating the hours of work, rates of pay, duties and other conditions under which a person is employed

<b>Full-time Employment</b>	Occurs when someone works a number of hours equal to the normal working week, normally between 35 and 40 hours
<b>Part-time Employment</b>	Takes place when an employee works for fewer than the normal number of working hours per week
<b>Job Share</b>	Exists when two or more employees agree to share the responsibilities of a single job
<b>Zero Hours Contract</b>	Allows employers to hire staff without any guaranteed hours of work

### 3.3. Motivating Employees

<b>Motivation</b>	The range of factors that influence people to behave in certain ways
<b>Job Enrichment</b>	Designing a job to give interesting and challenging tasks
<b>Fringe Benefits</b>	The 'extras' that employees pay receive in addition to their pay, for example, a company car
<b>Piecework</b>	A method of payment under which employees are paid according to the quantity of products they produce
<b>The National Living Wage</b>	An hourly rate of pay which is set by the government. All employees above a certain age must receive at least this rate of pay

### 3.4 Training

<b>Training</b>	A range of activities giving employees job-related skills and knowledge
<b>Induction Training</b>	The training given to an employee when he or she first starts a job
<b>On-the-job-Training</b>	Training given in a workplace
<b>Off-the-job Training</b>	Training that is provided outside the employee's place of work

# The Play That Goes Wrong| Drama | Year 10 | Cycle Two

## A – Key Concepts

1.	To convince the audience the play was being performed by an amateur drama society from a university
2.	To make the audience laugh and believe the mistakes were real
3.	To make the play within the play look like a murder mystery taking place in a wealthy manor house

## B – Directors, Designers and Actors

1. Director	Mark Bell
2. Set designer	Nigel Hook
3. Sound designer	Andy Johnson
4. Lighting designer	Ric Mountjoy
5. Costume designer	Roberto Surace
6. Inspector Carter / Chris Bean	Patrick Warner
7. Charles Haversham / Jonathan Harris	Jason Callender
8. Cecil Haversham / Max Bennett	Alastair Kirton
9. Florence Colley Moore / Sandra Wilkinson	Meg Mortell
10. Thomas Colley Moore / Robert Grove	Edward Judge
11. Perkins / Dennis Tyde	Edward Howells
12. Annie Twilloil (Stage Manager)	Katie Bernstein
13. Trevor Watson (Lighting and Sound Operator)	Graeme Rooney

## C – Communicating the Concepts

Set	1. The set had lighting bars and lanterns that were visible
	2. The set had cheap looking parts to it, e.g. the painted fire place
	3. The flats fell down
	4. The door was painted to look like an expensive wooden door on one side but had a gents toilet sign on the other
Sound	1. The stage crew could be heard talking over the theatre coms
	2. The repeated use of the dramatic music allowed us to realise that it was played for too long at one point
	3. The song ‘Girls on Film’ by Duran Duran played when it wasn’t supposed to
	4. The gunshot sound effect played, convincing the audience of a second death
Lighting	1. Lights were used in basic ways such as snap fades to highlight cross cutting on stage
	2. The lights would turn red when the word death or murder was said
	3. Lighting was often late
	4. The spotlight was in the wrong place at the start, meaning actors were not lit correctly
Costume	1. Characters in the stage crew wore mainly black
	2. The cocktail dress was placed onto Annie in a rush when she had to take on the role of Florence
	3. The original Florence returned and performed in comical spotty underwear
	4. Cecil wore a rowing blazer from a private school, suggesting wealth
Stage Space	1. There was a tech area for Trevor in the auditorium visible to the audience
	2. Actors came into the stalls to look for lost props
	3. The actor playing Cecil didn’t want to kiss Florence; he kept trying to move away as she moved closer
	4. Stage crew tried to remain out of sight by staying upstage

# The Play That Goes Wrong | Drama | Year 10 | Cycle Two

## D – Paragraph Planning

1. Introduction	Introduce your understanding of the play, its context and your knowledge of the key concepts
2. Example one	Give a clear and detailed example of what was done in relation to the question you are answering. Use correct terminology and explain the impact on the audience
3. Example two	Give a second clear example of what was done in relation to the question you are answering. Use correct terminology and explain the impact on the audience
4. Example three	Give a third clear example of what was done in relation to the question you are answering. Use correct terminology and explain the impact on the audience
5. Example four	Give a fourth clear example of what was done in relation to the question you are answering. Use correct terminology and explain the impact on the audience
6. Analyse what was communicated	Explain how the combination of what you have spoken about communicated ideas to the audience. Link to the question and your introduction
7. Evaluate how successful	Give a final opinion of the success or failure of the production with referral to the examples you gave

## C – Communicating the Concepts... Continued

### Acting

1. Cecil used facial expressions, such as shy smiles. He also increased the volume of his voice
2. Annie, when forced to play Florence, used small and restricted movements and gestures. These then became large and over the top to suggest her new found enjoyment of the role
3. Charles, would use a mannerism to show his repeated mistakes, including bringing his arms up to his chest in a cross, keeping his body ridged and shuffling backwards off the stage
4. Trevor, often looked fed up and bored by resting his head on his hand. His body would often be turned away from where he was supposed to be looking to imply his lack of interest in the play

## E – Success in Your Answer

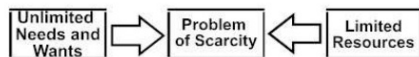
1. Use correct technical language. (Don't refer generally to the element or acting choices you are writing about)
2. Give detail in your answer, enough that someone who hasn't seen it could recreate it
3. Justify why you think what they did was successful
4. Suggest a range of examples not just one or two
5. Include clear analysis and evaluation
6. Make clear reference to the audience and how they were impacted by acting or design choices
7. Show a clear understanding of the requirements of the play
8. Develop your ideas clearly



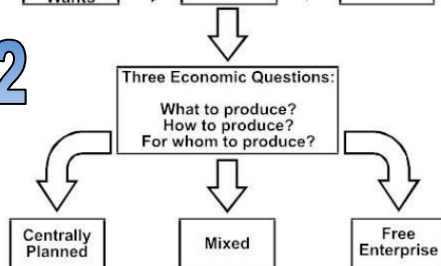
# Introduction to Economics - 1

1

The Basic Economic Problem
Our wants are infinite, but our resources are scarce
Opportunity Cost
The value of the next best alternative foregone when making a choice
Scarcity
Not having enough of something, for example not having enough resources to meet our wants



2



3

Factors of Production	
Land	Labour
The natural resources we have to make things: physical space, crops, things we dig up like coal or fish from the sea	The human input in making things, like the workers in a factory



Capital	Enterprise
Goods which are used to produce other goods, e.g. machines and tools	The ideas and the risk-taking required to pull the other factors together



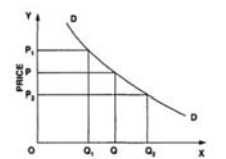
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Environmental Sustainability
Using the Earth's resources in a way which means they don't run out and that we can continue to use them in the future

5

Market
Any place (physical or virtual, like the internet) where buyers and sellers come together to exchange goods and services
Primary Sector
Where raw materials are extracted, e.g. mining, fishing, farming, the oil industry
Secondary Sector
Where raw materials are manufactured, or turned into finished goods, e.g. making cars out of metal and rubber
Tertiary Sector
The service sector, e.g. tourism, healthcare and public transport

6

Demand
The quantity of a good or service that consumers are willing and able to buy at a certain price. Being able to buy it is important, this makes it <i>effective demand</i>
Demand Curve (Diagram)
A demand curve shows you the relationship between the quantity of goods people are willing to buy and the price of the good. Demand curves are <i>downward sloping from left to right</i> . This means that when the price of a good rises, the amount that buyers want to buy will fall
Contraction in Demand
A movement along the demand curve, caused by a change in price. When prices rise, the quantity demanded will reduce, so this is a contraction
Extension in Demand
A movement along the demand curve, caused by a change in price. When prices fall, the quantity demanded will go up, so this is an extension

2.3 (A) Extension/Contraction of Demand
Shift in the Demand Curve
When the entire demand curve shifts left or right because of a change in one of the factors which influence demand <i>at any given price</i> (PASIFIC factors)

7

Supply
The quantity of a good or service that producers are willing and able to sell at a certain price
Supply Curve (diagram)
A supply curve shows you the relationship between the quantity of goods producers are willing to sell and the price of the good. Supply curves are <i>upward sloping from left to right</i> . This means that when the price of a good rises, the amount that producers will supply also rises
Extension in Supply
A movement along the supply curve, caused by a change in price. When prices rise the quantity supplied will rise, so this is an extension in supply
Contraction in Supply
A movement along the supply curve, caused by a change in price. When prices fall, the quantity supplied will fall, so this is a contraction in supply
Shift in the Supply Curve
When the entire supply curve shifts left or right because of a change in one of the factors which influence supply <i>at any given price</i> (PINTSWC factors)

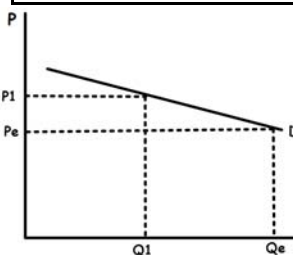
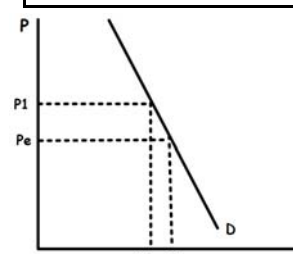
8

PASIFIC (Demand Factors)	
These are the factors which cause a demand curve to shift. The will mean that either more or less of a good is now bought <i>at any given price</i> . Change in price itself does NOT cause a shift	
P	Changes in the <u>population</u>
A	The use of <u>advertising</u>
S	The price and availability of <u>substitute</u> goods
I	Changes in <u>incomes</u>
F	Changes in <u>fashion</u> or trends
I	Changes in <u>interest rates</u>
C	The price and availability of <u>complementary</u> goods

9

PINTSWC (Supply Factors)	
These are the factors which cause a supply curve to shift. The will mean that either more or less of a good is now produced <i>at any given price</i> . Change in price itself does NOT cause a shift	
P	Changes in <u>productivity</u> (output per worker per time period)
I	Changes in <u>indirect taxes</u> on firms
N	A change in the <u>number of firms</u> in the market
T	Changes in <u>technology</u>
S	The receipt of a government <u>subsidy</u> (grant to firms)
W	Changes in <u>weather</u>
C	Changes in the <u>cost of production</u> , e.g. cost of raw materials

10

Price Elastic Demand
The percentage change in price is smaller than the percentage change in demand

Price Inelastic Demand
The percentage change in price is greater than the percentage change in demand




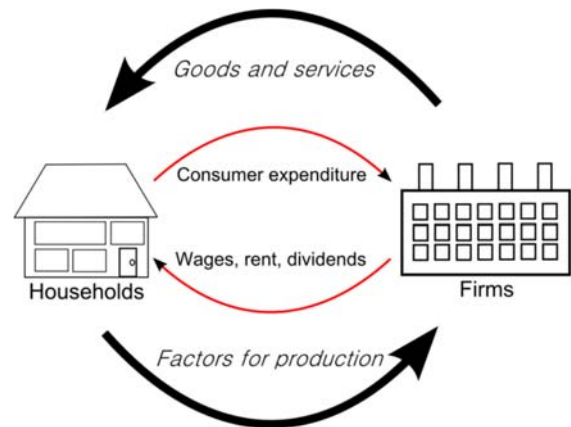
# Introduction to Economics - 2

1

Specialisation
When an individual, firm or even a country chooses to focus on producing a specific thing and becomes better at it (more efficient)
Efficiency
Being able to produce more output with the same or fewer resources
Alienation
The feeling that some workers can get if there is specialisation, when they don't see the finished product as something they have contributed to because they are only involved in a small part of its production

2

Types of Market	
Factor Market	Product Market
Market in which the services of the <u>factors of production</u> are bought and sold	Market in which <u>final goods</u> and services are offered to consumers, businesses and the public sector
For example, a builder sells his <u>labour</u> for a wage	For example, any <u>finished or manufactured product</u> like an iPad or a car



Market Interdependence
Factor markets and product markets are interdependent because households supply their labour to firms to produce goods. They use the wages they receive from this to buy goods and services from each other (see above)
Derived Demand
When something isn't demanded for itself, instead the demand for it is dependent on the demand for something else, e.g. firms don't hire builders because they like builders, they demand for builders when the demand for houses is high

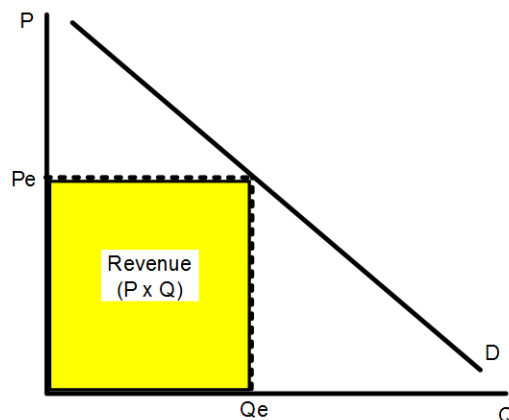
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5

The Labour Market	
Labour Market	Where workers sell their labour and employers buy labour
Wage	Payment for labour calculated per hour
Salary	Payment for labour calculated annually
Gross Pay	The amount of money earned by an employee before any deductions
Net Pay (take-home pay)	The amount of money earned by an employee after deductions
Deductions	Taxes, national insurance, pension contributions and student loan Repayments
Income Tax	A tax levied directly on your earnings
Student Loan Repayments	When a percentage of your pay is deducted to pay for your student loan
Pension	A fixed amount paid to people who have retired
National Insurance	A deduction from earnings which is used to pay for welfare payments

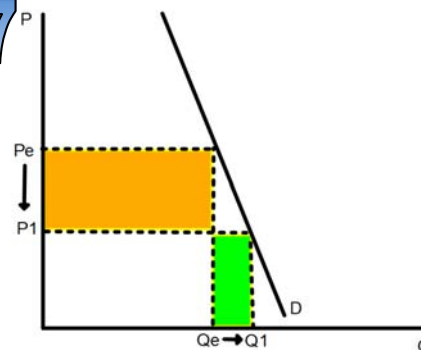
6

Revenue
Revenue is what firms earn when they sell their goods and services. It can be calculated by multiplying the quantity sold by the price it was sold at ( $P \times Q$ )



Elasticity and Pricing Strategy
Firms can use PED to help set their prices and make more revenue. If a firm sells a good like petrol with <u>inelastic demand</u> , then it can make more revenue by <u>increasing</u> its prices (see number 7)

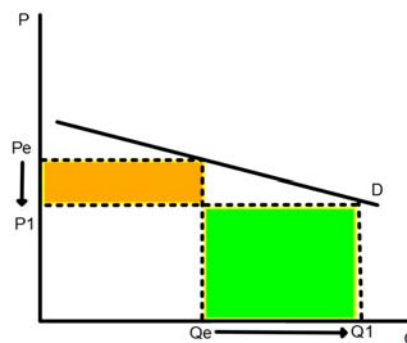
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## Price Elasticity of Demand and Revenue

Inelastic Demand—When demand is inelastic, the percentage change in demand is less than the percentage change in price.

This diagram shows the impact of a fall in the price. Some revenue is lost through the price falling. Some revenue is gained by the quantity increasing. Overall, revenue falls.



## Price Elasticity of Demand and Revenue

Elastic demand—when demand is elastic, the percentage change in demand is greater than the percentage change in price.

This diagram shows the impact of a fall in the price. Some revenue is lost through the price falling. Some revenue is gained by the quantity increasing. Overall, revenue increases.

8

PED Factors
These factors determine whether consumers' response to price changes will be elastic or inelastic
1. Luxury vs Necessity
If something is a necessity then the percentage change in demand will be lower than the percentage change in the price
2. Percentage of Income Spent
The more of our income we spend on a good, the more sensitive our demand will be to changes in price
3. Habit Forming Goods
If we are addicted to something, then our demand will be less sensitive to price changes
4. Price and Availability of Substitutes
If there are cheap substitutes for a good we demand then we will be very sensitive to price changes

9

PES Factors
These are the factors that determine whether firms' response to price changes will be elastic or inelastic
1. Spare Capacity
The more spare capacity firms have (to produce), the more responsive their output will be to price changes
2. Production Lags
The longer it takes to produce something, the less responsive firms will be to price changes
3. Stock Levels
The more stock levels firms have, the more responsive their output will be to price changes
4. Transferability of Factors of Production
The more a firm can switch resources from one use to another the more responsive it will be



# Introduction to Economics - 3

1

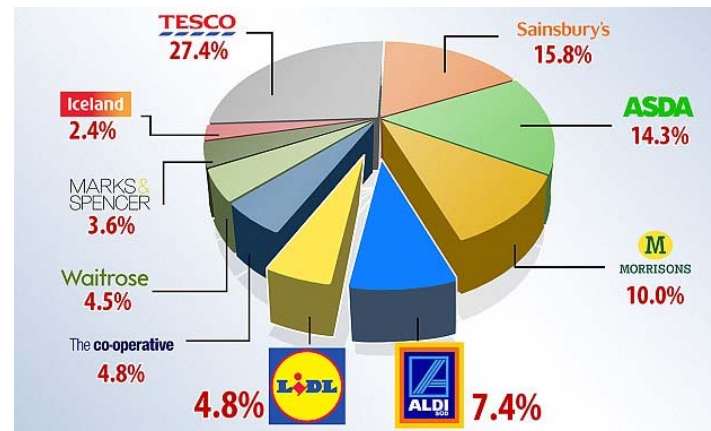
Prices	
Price Mechanism	The way in which changes in price reflect changes in supply and demand, allowing the market to correct itself
Surplus (Excess Supply)	When supply of a good is greater than the demand for it
Shortage (Excess Demand)	When the demand for a good is greater than the supply of it
Allocation of Resources	How scarce resources are distributed among producers and then allocated to consumers
Signalling	Changes in prices signal changes in the need for resources; higher prices show the need for more resources
Rationing	When resources are scarce, prices rise and only those willing to pay higher prices are allocated that resource
Equilibrium	When the quantity demanded is equal to the quantity supplied (the optimal production and distribution of resources)

2

Competition	
Competition	When different firms are trying to sell a similar product to consumers
Price Competition	When firms lower their prices in order to attract consumers
Non-price Competition	When firms use marketing, the quality of customer service or the product itself to attract consumers
Monopoly	A single producer of a good or service in a market
Legal Monopoly	A producer with at least a 25% market share
Oligopoly	Where a small number of firms control a majority share of a market
Barriers to Entry	Factors which prevent firms from joining a market, e.g. start-up costs, research costs or marketing costs

4

Financial Markets	
Debit Card	Takes money directly from your bank account; it won't work if you don't have enough
Credit Card	Enables you to buy something 'on credit' and pay for it later if you don't have the money now
Central Bank	E.g. Bank of England, acts as a bank for the other banks and the Government. Controls interest rates and prints bank notes
Medium of Exchange	Something of an agreed value which can be used to buy goods and services, e.g. money
Investment	<ul style="list-style-type: none"> <li>Purchasing capital goods which will produce other goods in the future</li> <li>Purchasing an asset to provide a future income or to sell at a profit later</li> </ul>
Commercial Bank	A profit making bank, e.g. Barclays which takes money from some customers as savings and lends to others as loans and mortgages
Building Society	A mutually financial institution, owned by its members (customers)
Mortgage	A financial agreement to borrow money in order to purchase a house
Interest Rate	The cost of borrowing money
Insurance Company	Financial institution which consumers can pay a premium to guarantee compensation for loss, theft or damage, illness or death
Liquidity	How easy it is to turn an asset into cash



5

Economies of Scale	
Economies of Scale	The cost advantages firms gain as they increase the scale of their production (as they grow)
Technical Economies	Larger firms are able to purchase specialist equipment
Economies of Increased Dimensions	Larger firms can benefit from much larger capacity storage and transport through slight increases in dimensions
Purchasing Economies	Larger firms can bulk-buy and negotiate lower prices for their raw materials
Division of Labour	Larger firms are able to divide work into separate tasks so workers can specialise
Financial Economies	Larger firms can borrow money at lower rates of interest because they are seen as less risky
Managerial Economies	Larger firms can employ specialist managers for different functions
Marketing Economies	Larger firms are able to use methods like television and newspapers with a wide reach and can spread these costs over a wider range of goods and services
R&D Economies	Larger firms are able to invest heavily in research and development to come up with innovative new products
Risk Bearing Economies	Larger firms are able to take risks with new products or ideas as they have a range of other products to rely on

6

Production	
Production	The total output of a firm or industry over a period of time
Productivity	How efficiently factors are used to produce output
Labour Productivity	Output per worker per time period
Productivity Calculation	$\frac{\text{Total output}}{\text{Total input}}$
Average Cost (AC)	The cost of producing each unit: $\frac{TC}{Q}$
Total Cost (TC)	All costs added together: $FC + VC$
Total Revenue (TR)	The total income of the firm from selling goods and services: $P \times Q$
Average Revenue (AR)	Income per unit sold: $\frac{TR}{Q}$
Profit	Money left over once all costs have been paid. When $TR > TC$

# National and International Economics - 1

1

Economic Objectives of Government	
1	Economic Growth
2	Low unemployment
3	Fair distribution of income
4	Price stability

2

Economic Growth	
Economic Growth	Growth in GDP over time
Gross Domestic Product (GDP)	The value of the output of goods and services produced in the economy in a year
GDP Per Capita	GDP divided by the total population
Real GDP	GDP adjusted for the impact of inflation
Growth Rate	A measure of the speed of economic growth (as a percentage increase)
Boom	A period of high economic activity and high levels of employment
Recession	When there are at least two quarters of negative growth

3

Economic Quarters	
Quarter	A period of three months. Used to measure economic overtime or to compare from one year to the next
Q1	January to March
Q2	April to June
Q3	July to September
Q4	October to December

4

Employment	
Labour Force	The number of people who work in a country
Employment	The use of labour in the economy to produce goods and services
Employment Rate	The percentage of those who are willing and able to work who are currently working
Unemployment	When people who are willing and able to work are not able to find a job
Unemployment Level	The number of people in the working population who are unemployed
Unemployment Rate	The percentage of those who are willing and able to work who are not able to find a job
Claimant Count	A method of measuring unemployment which simply counts the number of people claiming unemployment benefits (job-seekers allowance)

5

Types of Unemployment	
Frictional Unemployment	Unemployment caused by time lags in workers moving between jobs
Seasonal Unemployment	Unemployment caused by a fall in demand for certain types of worker at certain times of year
Structural Unemployment	Unemployment caused by a permanent change in the structure of the economy, e.g. the decline of an industry
Cyclical Unemployment	Unemployment caused by a fall in demand (recession) which goes away when the economy booms again

6

Costs of Unemployment	
1	Reduced demand in the economy causing further job losses
2	Lower living standards for the unemployed
3	Social, emotional and mental health problems
4	Workers lose their skills and become excluded workers
5	Taxpayers have to cover additional benefit payments
6	Government tax revenues fall (leading towards a deficit?)

7

Fair Distribution of Income	
Income	The payment for a service provided by factors of production, e.g. labour receives a wage
Distribution of Income	How incomes are shared out between individuals and households
Wealth	The market value of all the assets owned by a person, group or country
Wages	The payment for the provision of labour
Rent	The payment for the provision of land
Interest	The payment for the provision of capital
Profit	The payment for the provision of enterprise
State Benefits	Transfer payments made to those who require them such as job seekers or pensioners, also known as welfare payments
Gross Income	Income received before any taxes are taken or benefits given
Net Income	Income available after any taxes are taken or benefits given, also known as disposable income
Inheritance	The passing on of assets from one generation to the next

8

Price Stability	
Price stability	When the general level of prices in an economy stays constant over time
Inflation	A sustained increase in the general price level over time
Costs of Living	The price level of goods and services (bought by an average family)
Rate of Inflation	The percentage rise in the general price level over time
Consumer Price Index (CPI)	A method used to calculate inflation which calculates the change in a 'basket' of 750 common goods and services
Real Values	Nominal values which have been adjusted to account for inflation
Cost-push Inflation	When prices rise due to rising costs for firms
Demand-pull Inflation	When prices rise due to high demand in the economy

## GCSE English Knowledge Organiser: Language Paper 2 Exam: Writers' Viewpoints and Perspectives

A. Language Terminology			B. FAP			
Terminology	Definition	Example	Terminology	Definition		
1. Noun	A word used to identify people, places or things, or to name a particular one of these	London, table, family, bridge, happiness	1. Form (genre, text type)	The <b>type</b> of text Example forms: Letter, article, text for a leaflet, text for a speech, essay		
2. Adjective	A word used to describe or modify a noun	Red, shiny, unpleasant	2. Audience	The <b>target reader</b> for a text Example audiences: Teenagers, parents, a local councillor, adults		
3. Comparative adjective	A word used to compare two nouns	Bigger, happier, better	3. Purpose	The <b>Why the text has been written</b> Example purposes: To argue, to explain, to advise, to persuade		
4. Superlative adjective	A word used to compare three or more nouns	Biggest, happiest, best	C. Discourse markers			
5. Verb	A word used to describe an action, state or occurrence	To run, to be, to laugh	1. To add information	2. To sequence events	3. To show similarities	4. To emphasise
6. Imperative verb	A verb used to give a command or order	Sit down. Stop that.	too, also, and, moreover, furthermore, as well as	firstly, secondly, next, after, before, meanwhile	likewise, also, similarly, equally, in the same way	clearly, especially, particularly, essentially, above all, in particular
7. Adverb	A word that describes or gives more information about a verb and often ends ‘-ly’	Quickly, gently, ferociously				
8. Alliteration	When the same letter or sound is used at the beginning of adjacent or closely connected words	Clammy cold, pink pigs				
9. Triplets	When three words/short phrases are used in a text	A raging, fierce, howling wind	5. To illustrate	6. To contrast	7. To show cause and effect	8. To conclude
10. Hyperbole	The use of exaggerated terms for emphasis	I’m so tired I could sleep for a whole year!	for example, including, such as, according to, for instance	however, whereas, on the other hand, conversely, alternatively, otherwise	because, therefore, hence, as a result, consequently	in summary, overall, finally, to sum up, in conclusion
11. Metaphor	A figure of speech in which a word, object or idea is used in place of another to suggest a likeness	A granite sky; their home was a prison				
12. Simile	A figure of speech involving the comparison of one thing with another using ‘like’ or ‘as’	The coach swayed... like a drunken man.				
13. Emotive language	Words which create an emotional response in the reader	Could you <u>abandon</u> <u>helpless</u> puppies?	D. Academic Language			
14. Juxtaposition	Placing contrasting ideas close together in a text	Bittersweet, deafening silence, sweet sorrow	1. Alternatives for ‘shows’		2. Alternatives for ‘draws attention to’	
15. Personal pronouns	A word to show the person speaking, the person spoken to, or the person or thing spoken about	I, me , we, us , you, he/she/it, them	Communicates, conveys, creates, demonstrates, depicts, implies, establishes, explores, illustrates, indicates, introduces, represents, reveals, signifies, suggests, symbolises		Accentuates, highlights, maintains, reinforces, reiterates, repeats, strengthens, supports, underlines	
16. Rhetorical question	A question asked in order to create a dramatic effect/make a point rather than to get an answer	Will you stand up and fight?				
17. Tricolon	A rhetorical device of three parallel phrases, or words, which come in quick succession without interruption	‘...the sweat of its labourers, the genius of its scientists, the hopes of its children’	3. Alternatives for viewpoint		4. Alternatives for contrasts	
18. Repetition	Saying again something that has already been said or written		Attitude, belief, feelings, opinion, outlook, point of view, position, stance, thought(s), view		Juxtaposes, shifts, conflicts with, contradicts, subverts, goes against, opposes	
19. Anecdote	A short, interesting story about a real incident or person					
20. Fact	A thing that is known or proved to be true					
21. Opinion	The beliefs or views of a group or a person		5. Tentative language This could suggest/This might imply/This may indicate/Perhaps this reveals/It could be said that			
22. Tone	The general mood or atmosphere in a text					

	Language, Form, Structure (AO2)	Context (AO3)	Key Quotations (AO1)
<b>The Charge of the Light Brigade</b> (1854) Alfred Lord Tennyson	<ul style="list-style-type: none"> <li>• <b>Third Person</b> - sounds like official account</li> <li>• Strong <b>rhythm</b> created through regular <b>rhyme</b>: evokes the sound of horse hooves and drums</li> <li>• <b>Repetition</b> emphasises the relentless forward motion of the soldiers and how they followed orders</li> <li>• <b>Personification</b> emphasises the dangers the cavalry faced</li> </ul>	<ul style="list-style-type: none"> <li>• Based on the <b>Crimean War</b>, where a miscommunication sent the light brigade into combat</li> <li>• Tennyson was <b>Poet Laureate</b>, which could explain the <b>propagandist</b> tone</li> </ul>	<ul style="list-style-type: none"> <li>• Into the jaws of death, / Into the mouth of hell</li> <li>• Then they rode back, but not / Not the six hundred</li> <li>• Honour the light brigade, / Noble six hundred!</li> </ul>
<b>Exposure</b> (1917) Wilfred Owen	<ul style="list-style-type: none"> <li>• <b>Rhyme</b> scheme of ABBAC, together with a jarring <b>rhythm</b>, makes the poem sound uncomfortable – mirrors the physical and mental conditions of the waiting soldiers</li> <li>• <b>Alliteration, assonance, and sensory imagery</b> attack the reader</li> <li>• <b>Repetition</b> is used almost as a refrain at the end of each stanza: the question will not go away and reflects the <b>resignation</b> soldiers feel</li> </ul>	<ul style="list-style-type: none"> <li>• Based on Owen's <b>first-hand experiences</b> in the <b>trenches</b>. The winter of 1917 was bitter</li> <li>• Owen conveys the <b>reality of the horror</b> of war</li> </ul>	<ul style="list-style-type: none"> <li>• But nothing happens</li> <li>• Sudden successive flights of bullets streak the silence.</li> <li>• Merciless iced east winds that knife us</li> <li>• snow dazed / snow-dozed</li> </ul>
<b>Bayonet Charge</b> (1957) Ted Hughes	<ul style="list-style-type: none"> <li>• <b>Verbs</b> give a sense of frantic movement and lack of control, as does the <b>enjambment</b> (only four sentences in the poem)</li> <li>• <b>Accumulation</b> emphasises irrelevance of patriotism in war</li> <li>• <b>Semantic fields of war and nature</b> are <b>juxtaposed</b>, showing the impact of war on the land</li> <li>• <b>Third person</b> and <b>anonymity</b> makes the narrative universal</li> </ul>	<ul style="list-style-type: none"> <li>• The soldier is shown as more <b>weapon than man</b>, reflecting the deaths in <b>WWI</b> (Hughes' father was a veteran)</li> <li>• Hughes' poems often examine <b>man's impact on nature</b></li> </ul>	<ul style="list-style-type: none"> <li>• King, honour, dignity, etcetera</li> <li>• Threw up a yellow hare that rolled like a flame</li> <li>• Stumbling, sweating, plunged / almost stopped</li> </ul>
<b>Remains</b> (2008) Simon Armitage	<ul style="list-style-type: none"> <li>• <b>Short clauses, enjambment, colloquialisms, and economical language</b> creates an impression of natural speech; creates the sense of real-life testimony</li> <li>• <b>Half-rhymes</b> and a bouncy <b>four-beat rhythm</b> create a sense of <b>ironic jollity</b>, disrupted by shorter lines at key moments</li> <li>• <b>Enjambment</b> reflects the continuing nature of memories after war</li> </ul>	<ul style="list-style-type: none"> <li>• The poem is based on a real-life soldier's experience in Iraq and his <b>post-traumatic stress disorder</b>. The <b>first-person</b> narrative echoes the <b>interview</b> Armitage conducted</li> </ul>	<ul style="list-style-type: none"> <li>• But I blink // And he bursts again [...] / Sleep, [...] / Dream</li> <li>• tosses his guts back into his body.</li> <li>• And the drink and the drugs won't flush him out</li> </ul>
<b>Poppies</b> (2009) Jane Weir	<ul style="list-style-type: none"> <li>• <b>Ambiguity</b> in the first stanza: could be the mother sending her son to school or war. Reflects the uncertainty in his fate</li> <li>• The <b>form of first-person dramatic monologue</b> allows us to experience the inner emotions of the speaker: conflict of wanting to protect him but also let him grow up/face the dangers of the world</li> <li>• Frequent <b>symbols</b> of remembrance and peace as well as <b>metaphors</b> of material and domesticity highlight humanity and universality of this experience</li> </ul>	<ul style="list-style-type: none"> <li>• The setting of the poem is also <b>ambiguous</b>, as there are suggestions it is a modern conflict but also frequent links to the past and memory</li> <li>• Published in <i>The Guardian</i></li> </ul>	<ul style="list-style-type: none"> <li>• my stomach busy / making tucks, darts, pleats</li> <li>• Later a single dove flew from the pear tree</li> <li>• I listened, hoping to hear / Your playground voice</li> </ul>
<b>War Photographer</b> (1985) Carol Ann Duffy	<ul style="list-style-type: none"> <li>• The poem uses <b>religious imagery</b> to reverently describe the light and photographer to underline the importance of the job</li> <li>• <b>Contrasts</b> are made between the hellish warzones and peaceful homeland; intensity of war with the indifference of the readers</li> <li>• The <b>regular rhyme scheme</b> and <b>stanza length</b> are neat and precise, representing the disciplined way the photographer does his job</li> </ul>	<ul style="list-style-type: none"> <li>• Photographs, in the past, had to be carefully developed under a red light</li> <li>• This is an interesting and unusual perspective on war from a job which is dangerous</li> </ul>	<ul style="list-style-type: none"> <li>• spools of suffering set out in ordered rows</li> <li>• Home again [...] to fields which don't explode beneath the feet / of running children in a nightmare hea</li> </ul>
<b>Checking Out Me History</b> (2007) John Agard	<ul style="list-style-type: none"> <li>• <b>Non-standard English</b> is used to show the difference between the speaker's own culture, and the taught history of white culture</li> <li>• A <b>repeated quatrain</b> is used to introduce a famous white character from history before <b>contrasting</b> them with an ignored black person</li> <li>• <b>Enjambment</b> and a <b>lack of punctuation</b> represent a rejection of white history and expectations</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Curriculum</b> is predominantly established by white, middle class men. We are not taught about other cultures, or the history of those we were in conflict with.</li> </ul>	<ul style="list-style-type: none"> <li>• Dem (17 times), Dem tell me</li> <li>• Blind me to me own identity</li> <li>• But now I checking out me own history / I carving out me identity</li> <li>• What happened to de Caribs</li> </ul>



	Language, Form, Structure (AO2)	Context (AO3)	Key Quotations (AO1)
<b>Ozymandias</b> (1818) Percy Bysshe Shelley	<ul style="list-style-type: none"> <li>• <b>Sonnet</b> form, written in traditional <b>iambic pentameter</b>, emphasises Ozymandias' self-love</li> <li>• As well as <b>contrast</b>, Shelley uses the <b>oxymoron</b> <i>colossal wreck</i> to accentuate the destruction of the statue</li> <li>• It is <b>ironic</b> that the sculptor's work has endured whilst Ozymandias' power has not</li> </ul>	<ul style="list-style-type: none"> <li>• Shelley was a <b>Romantic poet</b>, and the poem could be seen to sympathise with the <b>French Revolution</b> in criticising the absolute power of government</li> <li>• Looks back at <b>Ancient Egypt</b></li> </ul>	<ul style="list-style-type: none"> <li>• My name is Ozymandias, king of kings, / Look upon my works, ye mighty, and despair! / Nothing beside remains</li> <li>• frown / and wrinkled lip and sneer of cold command</li> </ul>
<b>London</b> (1794) William Blake	<ul style="list-style-type: none"> <li>• <b>Juxtaposition</b> of innocence and experience shocks the reader</li> <li>• Relentless <b>repetition</b> of negative and <b>emotive language</b> (<i>every, cry</i>) emphasises the bleak <b>mood</b> and angry <b>tone</b> of the poem</li> <li>• The <b>metaphor</b> of mind-forged manacles suggests people are trapped by their own attitudes as well as society</li> </ul>	<ul style="list-style-type: none"> <li>• Blake was a <b>Romantic poet</b>, who was exploring the effects of the <b>Industrial Revolution</b> on England, and protesting against lack of <b>individual freedom</b></li> </ul>	<ul style="list-style-type: none"> <li>• In every cry of every man, / In every infant's cry of fear</li> <li>• And blights with plagues the marriage hearse</li> <li>• black'ning church</li> </ul>
<b>Extract from The Prelude</b> (1798) - William Wordsworth	<ul style="list-style-type: none"> <li>• The <b>first-person dramatic monologue</b> allows us to explore a transformation experience in childhood and its lasting impact</li> <li>• <b>Similes</b> compare the natural to the living</li> <li>• <b>Personification</b> conveys both the beauty and danger of nature</li> <li>• <b>iambic pentameter</b>, with its close relation to the rhythm of the natural voice, suits the personal nature of this poem</li> </ul>	<ul style="list-style-type: none"> <li>• Wordsworth presents <b>Romantic ideals</b> of the power of nature – powerful, overwhelming, impressive</li> <li>• This was an <b>autobiographical poem</b> based on his childhood</li> </ul>	<ul style="list-style-type: none"> <li>• Like a living thing, / Strode after me</li> <li>• moved slowly through the mind / By day, and were a trouble to my dreams</li> </ul>
<b>My Last Duchess</b> (1842) Robert Browning	<ul style="list-style-type: none"> <li>• The <b>first-person dramatic monologue</b> allows us to explore the Duke's motivations and actions.</li> <li>• <b>Possessive pronouns</b> highlight the Duke's narcissism and pride, and his objectification of his wife</li> <li>• The frequent <b>enjambment</b> urges the poem on, like the Duke <b>relentlessly</b> pursuing his next bride</li> </ul>	<ul style="list-style-type: none"> <li>• Loosely based on the Duke of Ferrara</li> <li>• Browning had to move to Italy to marry because of his wife's <b>over-protective father</b></li> </ul>	<ul style="list-style-type: none"> <li>• This grew, I gave commands; Then all smiles stopped together.</li> <li>• My gift of a nine-hundred-years old name</li> </ul>
<b>Storm on the Island</b> (1966) Seamus Heaney	<ul style="list-style-type: none"> <li>• <b>Voice</b> of a resident on an outlying island; islanders used to storms</li> <li>• <b>Present tense</b> suggests the struggle is ongoing, and the community's <b>power</b> is suggested in their continued resistance (repetition of 'we')</li> <li>• The <b>extended metaphor</b> is of a military attack, with the <b>semantic field</b> of warfare (<i>exploding, blast, bombarded, strafes</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Stormont Ireland</b> is the name of the seat of the NI assembly, and this poem could therefore be a metaphor for the <b>troubles in Ireland</b></li> </ul>	<ul style="list-style-type: none"> <li>• We just sit tight while wind dives / and strafes invisibly</li> <li>• Strange, it is a huge nothing that we fear</li> <li>• tragic chorus</li> </ul>
<b>Tissue</b> (2006) Imtiaz Dharker	<ul style="list-style-type: none"> <li>• <b>Imagery</b> of paper explores ideas about solidity and certainty, change and impermanence, fragility and power</li> <li>• <b>Everyday language</b> is patterned with <b>alliteration</b> to convey intricate ideas and <b>modal verbs</b> reflect the elusive meanings and ambiguity; paper and its multiple purposes</li> <li>• <b>Repetition</b> imitates the layering of paper</li> </ul>	<ul style="list-style-type: none"> <li>• This complex poem looks at <b>conflict and troubles of the modern world</b>: destruction, war and politics, money and wealth, terrorism and identity</li> </ul>	<ul style="list-style-type: none"> <li>• smoothed and stroked / and thinned to be transparent</li> <li>• Paper that lets the light / Shine through</li> <li>• An architect could use all this</li> </ul>
<b>The Emigrée</b> (1993) Carol Rumens	<ul style="list-style-type: none"> <li>• <b>Repetition</b> of the unnamed <i>they</i> suggests menace and oppression</li> <li>• The poem is written as a <b>soliloquy</b>, with the poet musing to herself</li> <li>• Longer, lyrical sentences which describe the remembered city <b>contrast</b> with shorter, terser sentences for the current situation</li> <li>• <b>Repetition</b> of <i>sunlight</i> shows the importance of light and as a symbol of freedom, contrasting with metaphors of isolation</li> </ul>	<ul style="list-style-type: none"> <li>• The poet is based on modern examples of <b>emigration</b>, where people have to flee their homes because of war, corruption, tyranny, or dictatorship</li> </ul>	<ul style="list-style-type: none"> <li>• It may be at war, it may be sick with tyrants / but I am branded by an impression of sunlight</li> <li>• They accuse me of absence. They circle me. / They accuse me of being dark in their free city</li> </ul>
<b>Kamikaze</b> (2007)	<ul style="list-style-type: none"> <li>• <b>Italics</b> are used to show direct speech, adding to the impact of the mother's words</li> <li>• <b>Colour Imagery, similes</b> and <b>metaphors</b> suggest the vibrancy of life that</li> </ul>	<ul style="list-style-type: none"> <li>• Kamikaze were <b>suicide attacks</b> made by Japanese soldiers in WWII, where</li> </ul>	<ul style="list-style-type: none"> <li>• dark shoals of fish flashing silver as their bellies</li> </ul>

## English Literature: Poetry Knowledge Organiser (Anthology and Unseen Poetry)

	Subject terminology	Definition
1	Simile	A comparison made using the words 'like' or 'as'
2	Metaphor	A comparison – made directly or indirectly – without using 'like' or 'as'
3	Personification	Giving human characteristics to something which is not human
4	Onomatopoeia	Words which attempt to imitate sounds
5	Alliteration	A repetition of consonant sounds
6	Plosive	'b,' 'p,' 't' and 'd' sounds – which can be harsh, aggressive or shocking
7	Sibilance	Repeated 'S' sounds – most often caused by 's' 'ss' and 'c.' These can be harsh, smooth or sickly
8	Assonance	A repetition of vowel sounds
9	Anaphora	A repetition of words, phrases or clauses
10	Juxtaposition	Two things being placed close together for contrasting effect
11	Oxymoron	A figure of speech in which two contradictory things are placed together in a way which makes peculiar sense, e.g. 'friendly fire'
12	Semantic field	A set of words relating to the same topic. 'Foul' and 'Shot' would appear in the semantic field of sports
13	Antithesis	Placing contrasting ideas together
14	Ambiguity	A word, phrase or situation where there are two or more possible meanings and it is unclear which is the correct one
15	Cliché	An overused phrase or saying
16	Hyperbole	Exaggeration
17	Irony	A use of words to mean something very different from what they appear to mean

18	Rhyme	The repetition of syllable sounds – usually at the ends of lines, but sometimes in the middle of a line (internal rhyme)
19	Couplet	A pair of rhyming lines which follow on from one another
20	Stanza	A group of lines separated from others in a poem
21	Enjambment	The running over of a sentence from one line to the next without a piece of punctuation at the end of the line
22	Caesura	A stop or a pause in a line of poetry – usually caused by punctuation
23	Blank verse	Poetry written in non-rhyming, ten syllable lines
24	Dramatic monologue	A poem in which an imagined speaker address the reader
25	Elegy	A form of poetry which is about the death of its subject
26	End-stopped	A line of poetry ending in a piece of punctuation which results in a pause
27	Lyric	An emotional, rhyming poem, often describing emotions
28	Parody	A comic imitation of another writer's work
29	Quatrain	A four-line stanza
30	Sestet	A six-line stanza
31	Sonnet	A fourteen-line poem with a clear rhyme scheme, usually on the topic of love for a person, object or situation
32	Free verse	Non-rhyming, non-rhythmical poetry which follows the rhythms of natural speech
33	Metonymy	A related item or attribute is used to replace the word normally used, e.g. 'suit' used to replace businessman
34	Pathetic fallacy	When a character's feelings, thoughts or emotions are displayed through the environment around them, e.g. when a character is depressed and it is raining
35	Persona Narrative voice	The voice/speaker of the poem who is different from the writer
36	Protagonist	The main character in a poem
37	Volta	A turning point in the line of thought or argument in poem



# KNOWLEDGE ORGANISER FOR YEAR 10 FRENCH GCSE - CYCLE 2

1) Activities		Technology Use Continued		10) Past Tense Time Phrases		16) Subjects / Teacher Opinions	
Je cherche pour	I look for	Répondre	To reply	Hier	Yesterday	Je suis doué pour ça	I'm gifted
Des renseignements	Information	Appeler mes amis	To call my friends	La semaine dernière	Last week	Je profite de	I benefit from
Je sauvegarde	I save	Regarder les clips	To watch clips	Il y a deux semaines	Two weeks ago	Ça me fait rire	It makes me laugh
J'enregistre	I record	Parler au Skype	To speak on Skype	Depuis un mois	For a month	Je m'intéresse à	I'm interested in
Je lis les forums	I read forums	Télécharger	To download	11) Prepositions		Cela m'est égal	It doesn't bother me
2) Les Verbes Importants - Avoir		Voir des films	To see films	Devant	In front	Ça m'embête	It annoys me
J'ai	I have	Faire des achats en ligne	To purchase online	Derrière	behind	Je m'ennuie	I get bored
Tu as	You have	Se connecter	To be connected	En face de	facing	Je suis d'accord	I agree
Il a	He has	Chercher des sites	To look for sites	A côté de	next to	Le prof.....	The teacher
Elle a	She has	7) Opinions		12) Question Words		Nous motive	Motivates us
Nous avons/ on a	We have	L'avantage c'est	The advantage is	Où	Where	À apprendre	To learn
Vous avez	You lot have	Les avantages sont	The advantages are	Quand	When?	Explique bien	Explains things well
Ils ont	They have	Ce qui est bien c'est	What's good is	Est-ce que	Do you...?	Les choses	Things
3) Le Verbe Pouvoir		Mauvais	Bad	Quel est	What is?	Enseigne bien	Teaches well
Je peux	I can	Je le trouve	I find it	Comment	How?	Est sévère	Is strict
Tu peux	You can	Je dirais que	I would say that	Avec qui?	With whom?	Est sympa	Is nice
Il peut	He can	Quant à moi	According to me	13) SCHOOL - Facilities		17) Daily Routines	
Elle peut	She can	Je pense que	I think that	Le labo	The laboratory	Je me lève	I get up
Nous pouvons/ on peut	We can	Je crois que	I believe that	Le car de ramassage	School bus	Je me couche	I go to bed
Je ne peux pas	I can't	Selon moi	According to me	Une piste	Track	Je me lave	I wash
On ne peut pas	We can't	8) Adjectives		De l'athlisme	The athletics	Je me réveille	I wake up
4) Le Verbe Vouloir		Utile	Useful	La salle	The room	Je quitte la maison	I leave the house
Je veux	I want	Pratique	Practical	Les vestiaires	Lockers	Je prends	I have
Tu veux	You want	Lent	Slow	14) School Subjects		Le déjeuner	Lunch
Il veut	He wants	Compliqué	Complicated	Le commerce	Business	Je fais mes devoirs	I do my homework
Elle veut	She wants	Économique	Good value	Le dessin	Art	18) School Rules	
Nous voulons / on veut	We want	Rapide	Fast	Le Français	French	Mâcher	To chew
Vous voulez	You all want	Bonne / mauvaise	Good / bad	L'espagnol	Spanish	Du chewing gum	Gum
Ils veulent	They want	Qualité	Quality	La chimie	Chemistry	Être à l'heure	To be on time
Je ne veux pas	I don't want	Un gaspillage	A waste	La biologie	Biology	Être en retard	To be late
On ne veut pas	We don't want	Une perte	A waste	La géographie	Geography	Être agressif	To be aggressive
5) La Technologie		De temps	Of time	L'informatique	ICT	Être poli	To be polite
Un portable	A laptop / phone	Divertissant	Fun	15) Quantifiers / Comparative		Dire des gros mots	To say rude words
Un téléphone portable	A mobile phone	Entrainant	Entertaining	Plus que	More than	Faire l'imbécile	To be silly
Un appareil	A camera / device	9) Past Activities - With Avoir		Moins que	Less than	19) Future Plans - Future Simple	
Une clé USB	A USB key	Dépendé	Spent	Le plus	The most	Je ferai	I will do
6) Technology Use		Posté	Posted (online)	Le moins	The least	Un diplôme	A degree
Je l'utilise pour	I use it in order to	Regardé	Watched	Assez	Quite	Mon bac	My A levels
Je l'utilise afin de	I use it in order to	Téléchargé	Downloaded	Trop	Too	Je serai prof	I will be a teacher
Il faut	One must	Parlé	Spoke	Un peu	A little	J'irai à l'université	I will go to uni
On doit	We must	Vu	Saw	Beaucoup	A lot	J'aurai	I will have
Lire mes messages	Read messages	Fait	Did	Le moindre	The least	Je travaillerai	I will work
Envoyer des textos	Send texts	Lu	Read			Je ferai un stage	I will do work experience

# Weather Hazards & Climate Change

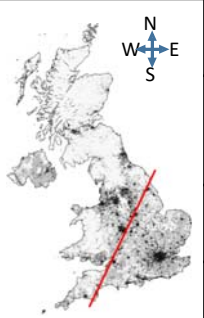
A. CIRCULATION CELLS			EDEXCEL A GCSE GEOGRAPHY (9-1)				C. MEASURING CLIMATE CHANGE				
Hadley Cell	Air rising	Near Equator hot & moist = tropical	B. CAUSES OF CLIMATE CHANGE		Ice Cores	Shows pollen & air bubbles over time					
	Low pressure		Solar Energy	Varies – sometimes more energy							
Ferrel Cell	Air sinking	30°N and S of Eq Hot & dry = desert	Volcanos	Ash blocks sunlight – lowers temp	Historical	For example, paintings, books, diaries					
	High pressure		Milankovitch	Tilt, wobble and axis of Earth							
Polar Cell	Air rising	Weakest cell	CO <sub>2</sub>	Transport, energy, industry	Pollen	Climate was suitable for that plant					
	Low pressure		CH <sub>4</sub>	Rice paddies, livestock farming	Tree Rings	Wide ring = good growing conditions					
D. EFFECTS OF CLIMATE CHANGE					E. UK CLIMATE						
Environment	Melting glaciers = rising sea levels = soil loses fertility				Past	Medieval Warm Period (950-1100), Little Ice Age (1600-1685)					
	Melting sea ice = Gulf Stream changes = colder W Europe				Temperate	Colder in north and at higher altitudes in the south					
People	Crop yield = less food, less money, poor health = sickness				Wind	From south-west over Atlantic Ocean = more wet air in SW UK					
	Warmer areas means mosquitoes carry malaria further				Rainfall	More rainfall in west but falls over Pennines and dry over east					
F. TROPICAL STORMS					I. DROUGHT						
Conditions for Tropical Storms (x4)			Risks of Tropical Storms (x4)		Meteorological Causes	An area receives less than average precipitation					
Water 27°C		Light wind sheer	High winds	Intense rainfall	Hydrological Causes	Water supplies are used up, e.g. groundwater					
Coriolis Effect		Thunderstorms	Landslides	Storm Surges	Human Causes	Deforestation, dam-building, agriculture					
G. SANDY (USA)			H. HAIYAN (PHILIPPINES)		J. CALIFORNIA (USA)		K. ETHIOPIA (EASTERN AFRICA)				
Impacts	Soc	150 killed, no electricity	Impacts	Soc	6000 died. Travel disrupt.	Impacts	Ppl	Loss of food and income Gvt money for drought	Impacts	Ppl	Loss of crops = income Poor diet = sicknesses
	Eco	\$65bn. Tourism stopped		Eco	\$2bn. Charity donated \$		Env	River low = no salmon Wildfires = wildlife killed		Env	Extinct = Grevy Zebra Fires = 200,000ht/yr
	Env	Raw sewage, leaked water		Env	Chemical leaks, oil spill		Ind	Efficient irrigation		Ind	Live Aid = raised money
Responses	Ind	Donating to charity concert	Responses	Ind	Donations to charities	Responses	Org	Uni of Cali-research help	Responses	Org	Oxfam – helping water
	Org	Red Cross – shelter, food		Org	WHO helped gvt		Gvt	Law for 25% water cut		Gvt	USA - \$128m for food
	Gvt	Gvt office to help rebuild		Gvt	Focus on Tacloban City						

# Changing Cities

## EDEXCEL A GCSE GEOGRAPHY (9-1)

A. KEYWORDS	
Urbanisation	Process moving to urban areas
Suburbanisation	Process moving to suburbs
Regeneration	Giving an area a new purpose
Decentralisation	Companies moving out of city
QOL	Quality of life
Natural Increase	High birth rate, low death rate

B. PATTERNS OF URBANISATION	
Developed	Urbanisation in 19 <sup>th</sup> Century during industrial period.
Developing & Emerging	Rapidly urbanising now. -> Rural-urban migration (rural job decline and attraction of U) -> Natural increase

C. FACTORS AFFECTING UK PATTERNS		
	North /West	Pennines mountains & wet weather = rural
	South /East	Flatter area, dry and sunnier = more urban areas
	Politics	Gvt funding affects city growth
	History	Industrial Revolution - rapid growth

D. BIRMINGHAM CONTEXT			
Site	Plateau, dry, faces south	Population	1.1 million
Situation	Central with good roads	Structure	<b>CBD</b> – Bullring shopping <b>Inner City</b> - Sparkbrook <b>Suburbs</b> - Edgbaston
Connect	Airport, rail, M5, M6		

G. MEXICO CITY CONTEXT			
Site	Island on Lake Texcoco	Population	1950 = 2m. 2010=19m
Situation	Flat, mountains nearby	Structure	Inner city = slums
Connect	A link from N/S America		Rural-urban fringe = slums





E. BIRMINGHAM CHANGES			
Retail (shopping)		Immigration	
Decline	Bullring to help bring £	National	Old out (retire), young in
Centres	Out of town, more space	Interna	In the past to fill employment
Internet	24hr, “armchair” shopping	Impacts	Young, global, services stress
Economy		Structure	
1	Deindustrialisation	18th/19th C	Urbanisation
2	Factories move - decentralisation	1920s/30s	Suburbanisation
3	Workers needed retraining	1970-1990	Counter-urbanisation
4	Visual and environ pollution	1990+	Re-urbanisation

H. MEXICO CITY AFFECTED BY FAST GROWTH			
Inequality		Immigration	
Wages	1/3 earn below \$4 daily	National	Searching for better QOL
Education	Poorest average 2yrs	Interna	Wealthy Europeans = offices
Services	No running water / pool	Impacts	Stress resources. Conflict. Air

F. MAKING BIRMINGHAM MORE SUSTAINABLE	
Transport	Birmingham City Council – Hybrid Buses save 378t of CO <sub>2</sub>
Employ/Education	Youth Promise = provide employment, training teachers
Houses & Health	Housing Trust=1500+ new houses, more energy efficient

I. EFFECTS OF RAPID URBANISATION	
Housing	Many migrants, houses aren't built fast enough = slums/squatters
Employment	Some in informal economy, e.g. collecting rubbish, or underemployed
Pollution	Pollutants trapped by mountains, ↑air pollution = respiratory diseases
Services	Services can't deal with numbers, e.g. 13,000 tonnes of rubbish daily

J. GOVERNMENT POLICIES TO IMPROVE MEXICO CITY'S QOL	
Social	\$8000 wooden pallet homes (easy to move) to help housing
Economic	2011 - Barter Market – exchanging waste for food vouchers
Environmental	In 2005 – Metrobus – reduced 35,000 tonnes of CO <sub>2</sub> a year

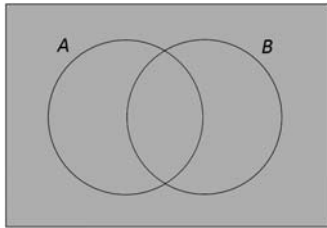
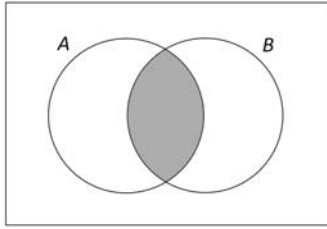
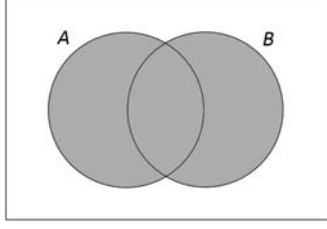
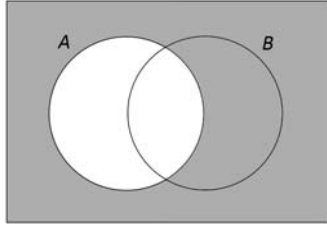
Health and Social Care Knowledge Organiser: Component 1 Human Lifespan Development			
Learning Aim A: Understand human growth and development across life stages and the factors that affect it			
How do people grow and develop throughout their lives? How can factors such as lifestyle choices and relationships affect this? Understanding these processes is essential knowledge and understanding for health and social care practitioners.			
A1 Growth and Development Across Life Stages		A2 Factors Affecting Growth and Development	
<b>Lifestages</b> <ol style="list-style-type: none"> <li>1. Infancy (0 – 2 years)</li> <li>2. Early childhood (3 – 8 years)</li> <li>3. Adolescence (9 – 18 years)</li> <li>4. Early adulthood (19 – 45 years)</li> <li>5. Middle adulthood (46 – 65 years)</li> <li>6. Later adulthood (65+ years)</li> </ol> 	<b>Holistic Development</b> <ol style="list-style-type: none"> <li>1. <b>Physical development</b> – Physical growth and physiological change</li> <li>2. <b>Intellectual development</b> – Developing thinking and language skill and common activities that promote learning and development</li> <li>3. <b>Emotional development</b> – Developing feelings about self and other</li> <li>4. <b>Social development</b> – Forming relationships</li> </ol>	<b>1. Physical Factors</b> <ol style="list-style-type: none"> <li>a) Genetic inheritance</li> <li>b) Diet and lifestyle choices</li> <li>c) Experience of illness and disease</li> <li>d) Appearance</li> </ol>	<b>2. Economic Factors</b> <ol style="list-style-type: none"> <li>a) Income / wealth</li> <li>b) Material possessions</li> </ol>
		<b>3. Social, Cultural and Emotional Factors</b> <ol style="list-style-type: none"> <li>a) Educational experiences</li> <li>b) Culture, e.g. community involvement, religion, gender</li> <li>c) Influence of role models</li> <li>d) Influence of social isolation</li> <li>e) Personal relationship with friends and family</li> </ol>	
Learning Aim B: Investigate How Individuals Deal with Life Events			
B1 Different Types of Life Events		B2 Coping with Change Caused by Life Events	
<b>1. Physical Events</b> <ol style="list-style-type: none"> <li>a) Accident / injury</li> <li>b) Ill health</li> </ol>	<b>3. Life Circumstances</b> <ol style="list-style-type: none"> <li>a) Moving house, school or job</li> <li>b) Exclusion from education</li> <li>c) Redundancy</li> <li>d) Imprisonment</li> <li>e) Retirement</li> </ol> 	<b>1. How Individuals Adapt to These Changes</b>	
<b>2. Relationship Changes</b> <ol style="list-style-type: none"> <li>a) Entering a relationship</li> <li>b) Marriage</li> <li>c) Divorce</li> <li>d) Parenthood</li> <li>e) Bereavement</li> </ol> 			<b>2. Sources of Support</b> <ol style="list-style-type: none"> <li>a) Family, friends partners</li> <li>b) Professional carers and services</li> <li>c) Community groups, voluntary and faith based organisations</li> </ol>
		<b>3. Types of Support</b> <ol style="list-style-type: none"> <li>a) Emotional</li> <li>b) Information, advice</li> <li>c) Practical help, e.g. financial assistance, childcare, transport</li> </ol>	

A: Algebraic Notation	
$ab$	$a \times b$
$3y$	$3 \times y$
$a^2$	$a \times a$
$a^3$	$a \times a \times a$
$a^2b$	$a \times a \times b$
$\frac{a}{b}$	$a \div b$
$t + t + t + t$	$4t$
$t^2 + t^2 + t^2$	$3t^2$

B: Probability	
Probability	$\frac{\text{Number of successful outcomes}}{\text{Total number of possible outcomes}}$
$P(A)$	Probability of event A
$P(\text{not } A)$	$1 - P(A)$
Predicted number of outcomes	Probability $\times$ number of trials
$P(A \text{ and } B)$	$P(A) \times P(B)$
$P(A \text{ or } B)$	$P(A) + P(B)$
Experimental probability	$\frac{\text{Frequency of event}}{\text{Total frequency}}$

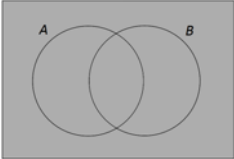
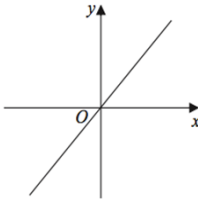
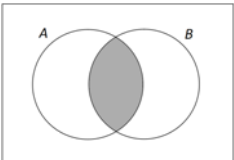
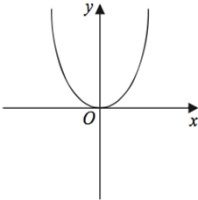
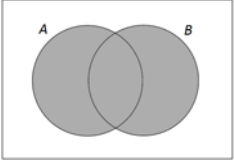
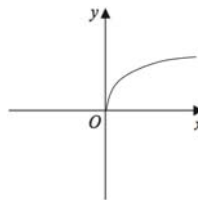
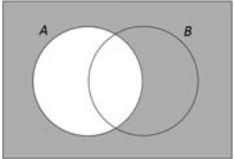
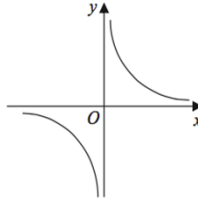
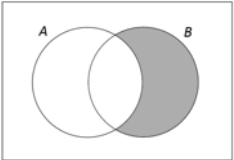
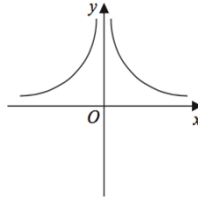
## Year 10 Foundation Maths Knowledge Organiser

### C: Venn Diagrams

$\xi$	Universal set	
$A \cap B$	A intersect B A and B	
$A \cup B$	A union B A or B	
$A'$	Complement of A Not A	

D: Sequences	
Square numbers	1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225...
Cube numbers	1, 8, 27, 64, 125, 216...
Triangular numbers	1, 3, 6, 10, 15, 21, 28, 36, 45, 55...
Fibonacci sequence	0, 1, 1, 2, 3, 5, 8, 13, 21, 34...

E: Percentages	
Change a decimal to a percentage	$\times 100$
Change a percentage to a decimal	$\div 100$
Multiplier for <b>increase</b> of 15%	1. Add 15% to 100% 2. Divide by 100 (= 1.15)
Multiplier for <b>decrease</b> of 15%	1. Subtract 15% from 100% 2. Divide by 100 (= 0.85)
Percentage change	$\frac{\text{Actual change}}{\text{Original amount}} \times 100$
Compound growth and decay	Starting amount $\times$ multiplier <sup><i>n</i></sup> where <i>n</i> is the number of years

A: Sequences		C: Venn Diagrams			Year 10 Higher Maths Knowledge Organiser		F: Proportion		
Square numbers	1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225...	$\xi$	Universal set		D: Sampling		$y = kx$	$y$ is directly proportional to $x$	
Cube numbers	1, 8, 27, 64, 125, 216...				Random sample	Each item has the same chance of being selected			
Triangular numbers	1, 3, 6, 10, 15, 21, 28, 36, 45, 55...	$A \cap B$	$A$ intersect $B$ $A$ and $B$		Stratified sample	The number of people taken from each group is proportional to the group size	$y = kx^2$	$y$ is directly proportional to the square of $x$	
Fibonacci sequence	0, 1, 1, 2, 3, 5, 8, 13, 21, 34...				Qualitative data	Data that can be counted or measured, e.g. height or weight			
B: Probability		$A \cup B$	$A$ union $B$ $A$ or $B$		Quantitative data	Data that must be described in words, e.g. hair colour	$y = k\sqrt{x}$	$y$ is directly proportional to the square root of $x$	
$P(A)$	Probability of $A$				Discrete variable	Data that can only take certain values, e.g. number of people			
$P(A \text{ and } B)$	$P(A) \times P(B)$	$A'$	Complement of $A$ Not $A$		Continuous variable	Data that can take any value within a range, e.g. height of students	$y = \frac{k}{x}$	$y$ is inversely proportional to $x$	
$P(A \text{ or } B)$	$P(A) + P(B)$				E: Standard Form				
$P(\text{not } A) =$ (for mutually exclusive events)	$1 - P(A)$	$A' \cap B$	$B$ but not $A$		Standard form	$a \times 10^n$			
Relative frequency	$\frac{\text{Frequency}}{\text{Total number of trials}}$				$a$	A number between 1 and 10	$y = \frac{k}{x^2}$	$y$ is inversely proportional to the square of $x$	



## Topic 1: Elizabethan Government

1. Elizabeth's Popularity	<ul style="list-style-type: none"> <li>November 1558 – Elizabeth I became the Queen at 25 years old</li> <li>January 1559 – Elizabeth's <b>coronation</b> took place at Westminster Abbey</li> <li>Elizabeth used portraits to project her royal authority</li> <li>Portraits were hung in the homes of nobles to show their loyalty to the Queen</li> <li>Elizabeth travelled the country on royal progresses staying in the homes of nobles</li> <li>Royal progresses allowed Elizabeth to keep a close eye on the nobility</li> </ul>
2. The Royal Court	<ul style="list-style-type: none"> <li>Royal Court = the monarch and the people they are surrounded by</li> <li>The Royal Court was the centre of political power and travelled with the Queen on royal progresses</li> <li>Ladies in waiting were an important group as they had unlimited access to the Queen</li> </ul>
3. Factional rivalry	<ul style="list-style-type: none"> <li>Factions = rival groups competing for power</li> <li>Factions developed as members of the court competed for the Queen's attention</li> <li>Elizabeth used patronage to ensure loyalty and to stop one group becoming more powerful than the other</li> <li>Patronage = When the monarch provides a reward, e.g. land in recognition of support</li> <li>The most significant factional rivalry was between <b>Robert Dudley</b> and <b>William Cecil</b></li> </ul>
4. Privy Council	<ul style="list-style-type: none"> <li>Privy Council = selected by the Queen to provide her with advice and govern the country</li> <li>Elizabeth did not have to accept the advice of the Privy Council</li> <li>William Cecil (Lord Burghley) – Elizabeth's chief minister and served as Secretary of State</li> <li>Robert Dudley (Earl of Leicester) – Elizabeth's favourite</li> <li>Sir Francis Walsingham – responsible for Elizabeth's secret service</li> </ul>
5. Local Government	<ul style="list-style-type: none"> <li>Elizabeth relied on a body of trusted officials to maintain law and order</li> <li>Counties – the large areas of England, e.g. Kent and Essex</li> <li>Lord Lieutenant – a noble in each county that ensured laws were upheld, supervised the JPs and reported to the Queen</li> <li>Justices of the Peace (JPs) – appointed to maintain law and order at a local level and oversee court cases</li> <li>The sheriff – collected taxes, appointed juries and delivered prisoners to court</li> <li>Parish constable – carried out basic policing duties at a local level, e.g. patrolling the streets</li> </ul>
6. Parliament	<ul style="list-style-type: none"> <li>Parliament only met at the request of the Queen and was closed when not in used</li> <li>Elizabeth called just ten in her forty four year long reign</li> <li>For twenty-six years, parliament did not call because Elizabeth had not summoned it</li> <li>Parliament was made up of two bodies:               <ol style="list-style-type: none"> <li>The House of Commons – elected men from across England</li> <li>The House of Lords – non-elected men with high status, e.g. nobles and bishops</li> </ol> </li> </ul>
7. Clashes with Parliament	<ul style="list-style-type: none"> <li>Extraordinary revenue – when parliament raise taxes to provide the Queen with additional money, e.g. during times of war</li> <li>Elizabeth did not allow parliament to discuss certain topics, e.g. marriage or the succession</li> </ul>
8. Success of Elizabethan Government	<ul style="list-style-type: none"> <li>Elizabethan government was at its strongest in the 1570s and 1580s</li> <li>Elizabeth was highly effective playing the factions against each other, ensuring that she remained in control</li> <li>Local government was effective at maintaining law and order during Elizabeth I's reign</li> </ul>

## Topic 2: Lifestyles of the Rich and Poor

9. Elizabethan Society	<ul style="list-style-type: none"> <li>There was a very clear difference in the standard of living between the rich and poor</li> <li>The Great Chain of Being = that everyone had a place in society decided by God</li> <li>Approximately 20% of the population lived on the verge of starvation</li> </ul>
10. Social Hierarchy	<ul style="list-style-type: none"> <li>Nobles = incredibly wealthy and great land owning families</li> <li>Gentry = wealthy and lesser land owning families</li> <li>Lower classes = very low paid workers, e.g. farmers</li> <li>The poor = those living close to the poverty line / unemployed</li> </ul>
11. Homes - the Rich	<ul style="list-style-type: none"> <li>Homes included large glass windows, chimneys and were made of brick</li> <li>Long galleries were used for recreation, socialising and displaying portraits</li> <li>Many built large new homes to show their wealth, e.g. William Cecil's Burghley House</li> </ul>
12. Fashion - the Rich	<ul style="list-style-type: none"> <li>Clothes were made of the finest materials, e.g. silk and velvet</li> <li>Fine jewels were sewn into clothes to display wealth</li> </ul>
13. Education - the Rich	<ul style="list-style-type: none"> <li>Sons of nobles were taught by the most educated tutors at their homes</li> <li>Theology, classics and languages, e.g. French and Latin, were taught</li> </ul>
14. Homes - Lower Classes	<ul style="list-style-type: none"> <li>Small homes, such as cottages, with little more than one room</li> <li>Homes often had an earth floor and were made of timber (wood)</li> <li>The lower classes often shared their homes with their livestock (animals)</li> </ul>
15. Fashion - Lower Classes	<ul style="list-style-type: none"> <li>Poverty meant the poor couldn't afford many items of clothing</li> <li>Clothing was practical for work, not fashionable</li> </ul>
16. Education - Lower Classes	<ul style="list-style-type: none"> <li>The lower classes had little to no education – the majority were illiterate</li> <li>Some would receive basic education from their parish church (local church)</li> </ul>
17. The Poor	<ul style="list-style-type: none"> <li>Impotent poor – those genuinely unable to work and in need of support, e.g. the old</li> <li>Able-bodied poor – those capable of work but unable / unwilling to find employment</li> <li>Vagrants – unemployed people that travelled looking for charity and work</li> </ul>
18. Causes of Poverty	<ul style="list-style-type: none"> <li>Rising population – 2 million in 1558 to 4 million in 1603</li> <li>Rising inflation – wages fell but prices rose</li> <li>Rural depopulation – more competition in urban areas, e.g. towns, for work</li> </ul>
19. Early Poor Laws	<ul style="list-style-type: none"> <li>Vagrancy Act (1572) – severe punishments for vagrants</li> <li>Act for Relief of the Poor (1576) – Houses of Correction to be built in each county</li> </ul>
20. 1601 Poor Law	<ul style="list-style-type: none"> <li>1601 Poor Law acted as the foundation for poor relief</li> <li>Contributions to local poor rates were made compulsory across the nation</li> <li>Beggars were whipped and sent back to their place of birth</li> <li>Alms-houses were set-up to provide relief for the impotent poor</li> </ul>
21. Effectiveness of the Poor Laws	<ul style="list-style-type: none"> <li>The poor laws did not end poverty but did introduce a system to manage poor relief</li> <li>The laws did provide relief to many people in need</li> <li>For the first time the government was taking action to tackle poverty</li> <li>Poverty did continue to rise throughout the Elizabethan era</li> </ul>

## Topic 3: Elizabethan Entertainment

22. <b>Entertainment</b>	<ul style="list-style-type: none"> <li>Life in the Elizabethan era was hard and mortality rates were high</li> <li>Sundays and religious festivals were the only times people had away from work</li> <li>Entertainment was popular as it provided an escape from normal life</li> </ul>
23. <b>Cruel sports</b>	<ul style="list-style-type: none"> <li>Bear baiting, cockfighting and bull baiting were very popular cruel sports</li> <li>Cruel sports were popular with all members of society, especially as people would bet on the outcome</li> <li>The Bear Pit in Southwark, London could accommodate 1,000 people</li> </ul>
24. <b>Entertainment for the Rich</b>	<ul style="list-style-type: none"> <li>The rich had the wealth and leisure time to engage in a range of pastimes</li> <li>Archery, hawking and dancing were all popular forms of entertainments</li> <li>Hunting was especially popular with the nobility</li> </ul>
25. <b>The Development of Theatre</b>	<ul style="list-style-type: none"> <li>No theatres were built in London in 1559 – by 1603 there were many</li> <li>The first purpose-built theatre opened in London in 1576</li> <li>The Globe, home to Shakespeare's productions, opened in 1599</li> <li>Theatres became very popular with all members of society and attracted large numbers</li> </ul>
26. <b>Opposition to the Theatre</b>	<ul style="list-style-type: none"> <li>There were concerns that theatres could cause civil disobedience (rebellions)</li> <li>1572 – the law stated the theatre companies had to have a licence to perform a play</li> <li>Theatres had to be built outside of London's city walls</li> <li>Theatres were places of crime, e.g. pickpockets and beggars were common</li> <li>Puritans believed theatres tempted people to live sinful lives</li> </ul>

## Topic 4: The Religious Settlement

27. <b>Religious problems</b>	<ul style="list-style-type: none"> <li>When Elizabeth I took the throne in 1559 England was a country divided by religion</li> <li>Elizabeth was a moderate Protestant that wanted to heal religious divisions</li> <li>Catholics saw Elizabeth as an illegitimate Queen and had loyalty to the Pope</li> <li>Protestants wanted to undo Catholic reforms that took place before Elizabeth was Queen</li> </ul>
28. <b>The 'Middle Way'</b>	<ul style="list-style-type: none"> <li>Elizabeth adopted a 'middle way' – a way to ensure obedience and loyalty from all</li> <li>Protestantism was made the official religion of England</li> <li>A new protestant Prayer Book and the Bible in English were printed</li> <li>The structure of the church was kept the same, with bishops and archbishops</li> <li>Catholics would be fined for not attending church, rather than persecuted</li> </ul>
29. <b>1559 legislation</b>	<ul style="list-style-type: none"> <li>Act of Supremacy – Elizabeth was made 'Supreme Governor of the Church of England'</li> <li>The clergy (churchmen) had to swear the Oath of Supremacy</li> <li>Act of Uniformity – all churches were to hold the same services</li> <li>Everyone had to attend church on Sunday or pay a fine</li> <li>Royal injunctions were sent out to ensure the clergy were following the acts</li> </ul>
30. <b>Reactions to the Settlement</b>	<ul style="list-style-type: none"> <li>250 priests out of 9,000 refused to swear the Oath of Supremacy</li> <li>Bishops that were strict Catholics resigned</li> <li>Philip II of Spain and the Pope hoped the changes were temporary and did not act against the settlement</li> </ul>
31. <b>Success</b>	<ul style="list-style-type: none"> <li>In the first ten years of Elizabeth's reign her 'middle way' was accepted by the majority</li> <li>Religious upheaval and persecution was brought to an end</li> <li>Opposition from extreme groups remained, e.g. Puritans and Recusants</li> </ul>

## Topic 5: The Religious Settlement

32. <b>Early Tolerance</b>	<ul style="list-style-type: none"> <li>For the first ten years of Elizabeth's reign, tolerance was shown towards Catholics</li> <li>Fear of rebellion from powerful Catholic nobles was one reason for tolerance</li> <li>The constant threat of foreign invasion was another reason for tolerance towards Catholics</li> </ul>
33. <b>Mary, Queen of Scots</b>	<ul style="list-style-type: none"> <li>1568 - arrived in England after a forced abdication from Scotland</li> <li>Mary was a devout Catholic with a claim to the throne of England</li> <li>Some Catholics saw Mary as the legitimate Queen of England</li> </ul>
34. <b>Rebellion of the Northern Earls</b>	<ul style="list-style-type: none"> <li>1569 – a force of 4,600 men began a rebellion against Elizabeth in Durham (north England)</li> <li>Led by the Earls of Northumberland and Westmoreland</li> <li>The aim was to depose Elizabeth and replace as Queen with Mary, Queen of Scots</li> <li>The rebellion failed – both the earls were executed and over 400 rebels were hanged</li> <li>The Council of the North was established led by the Earl of Huntington, a Puritan</li> </ul>
35. <b>Papal Bull</b>	<ul style="list-style-type: none"> <li>1570 – Pope Pius V issued a Papal Bull which excommunicated Elizabeth</li> <li>Elizabeth was referred to as a heretic and 'servant of wickedness'</li> <li>Catholics were freed from any loyalty to Elizabeth and encouraged to remove her</li> <li>1571 – The Treason Act made refuting Elizabeth's authority a crime punishable by death</li> </ul>
36. <b>Ridolfi Plot</b>	<ul style="list-style-type: none"> <li>1571 – plot organised by Ridolfi, a merchant from Florence (Italy)</li> <li>It planned for a Spanish army to land in England and overthrow Elizabeth and replace her with Mary as Queen</li> <li>Ridolfi and De Spes (the Spanish ambassador) were expelled from the country</li> </ul>
37. <b>Throckmorton Plot</b>	<ul style="list-style-type: none"> <li>1583 – Francis Throckmorton (an English Catholic) plotted to depose Elizabeth</li> <li>It planned for French and Spanish forces to land in England backed by money from the Pope</li> <li>Throckmorton was discovered, tortured and executed</li> <li>Mary was moved to a more secure location, Tutbury Castle and was not allowed visitors</li> </ul>
38. <b>Babington Plot</b>	<ul style="list-style-type: none"> <li>1586 – Anthony Babington planned to free Mary from captivity and assassinate Elizabeth</li> <li>Letters using a cipher code were sent between Mary and Babington</li> <li>Walsingham and his network of spies uncovered the letters which proved Mary's guilt</li> <li>Babington and six other plotters were executed</li> </ul>
39. <b>Trial of Mary</b>	<ul style="list-style-type: none"> <li>October 1586 – Mary was put on trial for conspiracy against the Queen</li> <li>Mary was found guilty of 'imagining and encompassing her Majesty's death'</li> <li>Elizabeth initially refused to sign the death warrant but eventually did so in 1587</li> <li>8<sup>th</sup> February 1587 – Mary was executed at Fotheringhay Castle</li> </ul>
40. <b>Recusants</b>	<ul style="list-style-type: none"> <li>Recusants = Catholics that refused to accept the religious settlement</li> <li>Seminary priests = Catholic priests trained in Europe to re-establish Catholicism in England</li> <li>Jesuits = European Catholics that swear an oath of loyalty to the Pope</li> <li>1568 – A Catholic training college was set up in Douai</li> <li>438 seminary priests were sent to England</li> </ul>
41. <b>Dealing with Recusancy</b>	<ul style="list-style-type: none"> <li>1581 – increased fine of £20 for recusants</li> <li>1581 – attempts to convert people to Catholicism made a treasonable crime</li> <li>1585 – all Jesuit and seminary priests ordered to leave the country or face death</li> <li>98 priests sentenced to death</li> </ul>

## Topic 6: The Spanish Armada


42. <b>Philip II of Spain</b>	<ul style="list-style-type: none"> <li>Philip II of Spain – King of Spain, which was the most powerful nation in the world</li> <li>Philip was a devout Catholic and saw it as his mission from God to remove Protestantism</li> <li>Spanish Inquisition = Spain's plan to find heresy and destroy it</li> <li>The execution of the Catholic Mary Queen of Scots push Philip to launch an armada</li> </ul>
43. <b>Rebellion in the Netherlands</b>	<ul style="list-style-type: none"> <li>The Netherlands were a possession of Catholic Spain</li> <li>1566 – Dutch Protestants rebelled against Spanish rule</li> <li>Duke of Alba sent with 10,000 Spanish troops to ruthlessly put down the rebellion</li> <li>1,000 Protestants rebels were burnt to death</li> </ul>
44. <b>Elizabeth and Dutch Protestants</b>	<ul style="list-style-type: none"> <li>1575 – a second rebellion in the Netherlands caused the country to split</li> <li>The south made peace with Spain, the north rejected Spanish rule</li> <li>1584 – William of Orange (leader of the Dutch Protestants) was assassinated</li> <li>1585 – Treaty of Nonsuch – Elizabeth promised to protect the Dutch Protestants</li> <li>Earl of Leicester was sent to the Netherlands with 5,000 troops</li> </ul>
45. <b>English Privateers</b>	<ul style="list-style-type: none"> <li>Privateers = a ship and crew paid by the government for a specific purpose</li> <li>1570s &amp; 1580s – Elizabeth secretly encouraged English privateers to attack Spanish ships</li> <li>Sir Francis Drake – England's most well known privateers sailed on '<i>The Golden Hind</i>'</li> <li>Between 1577 and 1580 Drake took Spanish treasures back to England worth £140,000</li> </ul>
45. <b>Philip's Plan</b>	<ul style="list-style-type: none"> <li>Armada – a collection of war ships</li> <li>1586 – Philip ordered the construction of an armada</li> <li>The armada would set sail from Lisbon and anchor off the coast of Calais</li> <li>The Duke of Parma would then join from the Netherlands with 17,000 troops</li> <li>Spanish forces would then invade England and depose Elizabeth</li> </ul>
47. <b>Attack on Cadiz</b>	<ul style="list-style-type: none"> <li>April 1587 – Drake attacked a Spanish fleet gathered in Cadiz harbour</li> <li>Important timber supplies used for the construction of barrels were also destroyed</li> <li>Drake's attack 'signed the King of Spain's beard' and delayed the Armada for a year</li> </ul>
48. <b>Weaknesses in Philip's Plan</b>	<ul style="list-style-type: none"> <li>Philip ignored advice to delay the launch of the armada</li> <li>The Duke of Medina Sidonia was chosen to lead the armada – he was inexperienced and easily seasick</li> <li>After it set sail the armada was hit by a storm and had to seek refuge to repair the ships</li> </ul>
49. <b>Threat posed</b>	<ul style="list-style-type: none"> <li>England's land forces were weak and did not know where the Spanish might have landed</li> <li>English soldiers were inexperienced and poorly equipped</li> <li>Spanish fleet consisted of 130 galleons (large war ships) compared to England's 54 ships</li> </ul>
50. <b>The course of the Armada</b>	<ul style="list-style-type: none"> <li>29<sup>th</sup> July 1588 – the Armada was sighted off the coast of Cornwall</li> <li>The Armada sailed in a crescent formation making it hard for English ships to attack</li> <li>6<sup>th</sup> August 1588 – the Armada anchored off the coast of Calais</li> <li>The Duke of Parma's forces were delayed and not ready to meet the Armada</li> </ul>
51. <b>The course of the Armada</b>	<ul style="list-style-type: none"> <li>The English used fireships to force the anchored Armada to break their formation</li> <li>The Spanish ships were forced to cut their anchor chains in a hasty escape</li> <li>8<sup>th</sup> August 1588 – Battle of Gravelines was a key turning point with 1,000 Spanish killed</li> <li>Strong winds pushed the Spanish north around the coast of Scotland</li> <li>Many ships were shipwrecked because of winds – 25 off the coast of Ireland</li> <li>Of the 130 original ships, only 67 made it back to Spain</li> </ul>

## Topic 7: The Puritan Threats

52. <b>Puritans in England</b>	<ul style="list-style-type: none"> <li>Puritans = radical / extremist Protestants</li> <li>Wanted to rid the church of all Catholic associations and follow a 'pure' worship</li> <li>Forced to leave England due to persecution when it was a Catholic nation</li> <li>Returned to England when Elizabeth became Queen and wanted more Puritan reforms</li> </ul>
53. <b>Puritan Beliefs</b>	<ul style="list-style-type: none"> <li>Opposed religious practices not mentioned in the Bible</li> <li>Strongly disagreed with decorations and candles inside churches</li> <li>Did not believe that bishops should be included in the church hierarchy</li> <li>Opposed gambling, swearing, drunkenness and the theatre</li> </ul>
54. <b>Types of Puritans</b>	<ul style="list-style-type: none"> <li>Moderate – accepted the Religious Settlement, but hoped for more Protestant reforms</li> <li>Presbyterians – wanted to abolish bishops and create committees of elders elected by the congregation of each church</li> <li>Separatists – wanted to break away from the national church and allow each church to be independent</li> </ul>
55. <b>Vestment Controversy</b>	<ul style="list-style-type: none"> <li>Archbishop of Canterbury – the most senior member of the clergy (churchmen)</li> <li>Vestments = robes worn by priests during church services</li> <li>1566 – Matthew Parker (Archbishop of Canterbury) published his Book of Advertisements</li> <li>Parker gave rules for conducting church services and wearing vestments</li> <li>37 priests refused to wear vestments - a challenge to Elizabeth's authority</li> <li>All priests who refused were dismissed from their posts</li> </ul>
56. <b>Thomas Cartwright</b>	<ul style="list-style-type: none"> <li>Thomas Cartwright – Professor of Divinity at Cambridge University</li> <li>1570 – Cartwright began lecturing on a Presbyterian system of church</li> <li>His proposals were rejected and he was forced to live in exile in Geneva</li> </ul>
57. <b>John Stubbs</b>	<ul style="list-style-type: none"> <li>1579 – Stubbs published his pamphlet criticising Elizabeth for entering into marriage talks with the Duke of Anjou</li> <li>Stubbs was arrested and imprisoned for 18 months</li> <li>Elizabeth had his right hand cut off so he could never write again</li> </ul>
58. <b>Marpelate Tracts</b>	<ul style="list-style-type: none"> <li>1588-89 – anonymous pamphlets were published</li> <li>The pamphlets criticised the church and its bishops</li> <li>The pamphlets used obscene language which lost the Puritans' support</li> </ul>
59. <b>Challenges from Parliament</b>	<ul style="list-style-type: none"> <li>1571 - Walter Strickland proposed a new Book of Prayers and the banning of Vestments</li> <li>1576 – Peter Wentworth was imprisoned after complaining that MPs did not have freedom of speech</li> <li>1587 – Anthony Cope called for the abolition of bishops and the Book of Prayers; he was imprisoned as a result</li> </ul>
60. <b>Prophecyings</b>	<ul style="list-style-type: none"> <li>Prophecyings – public meetings where people discuss the Bible and practice preaching</li> <li>1576 – Elizabeth ordered Archbishop Grindal to ban prophecyings</li> <li>1583 – Archbishop Whitgift demanded uniformity and ordered prophecyings to stop</li> <li>300 members of the clergy refused and were dismissed</li> <li>1593 – Act against Seditious Sectaries – allowed for separatists to be executed and those who attended unauthorised meetings to be arrested</li> </ul>



## MEDIA BTEC KNOWLEDGE ORGANISER 3; PRODUCTION TECHNIQUES — EDITING AND SOUND

			SOUND TECHNIQUES		
MISE EN SCENE	How a film is sequenced and put together in post-production	CONTINUITY EDITING		SYNCHRONOUS SOUND	Sound matched to movements
TRANSITIONS		CONTINUITY EDITING	Editing style to make a film as realistic as possible	ASYNCHRONOUS SOUND	Sound not matched to
STRAIGHT CUT	An instant change from one framing to another	EYELINE MATCH	Cutting from characters to what they see	AMBIENT SOUND	Natural sounds from the setting
FADE IN	A dark screen that gradually brightens to a shot	180 DEGREE RULE	All shots of a single scene should be from the same 180° plane	DIALOGUE	Speech
FADE OUT	A shot that gradually darkens to a dark screen	MATCH ON ACTION	Cutting from one shot to another with matching action	VOICEOVER	Narrative from an off-screen character
WIPE	A line that passes over the screen, changing one shot to	SHOT REVERSE SHOT	Showing a conversation from two characters POV one after another	DIRECT ADDRESS	When a dialogue is directed to the camera / audience
DISSOLVE	One shot gradually disappears whilst the next appears	MONTAGE EDITING		SOUND BRIDGE	Sound that continues from one shot to another
MATCH CUT	Creates a cut between two similar visuals	MONTAGE EDITING	A series of short shots, edited together to condense space, time and information	MOTIF	A sound that is associated with a character / place
CUT AWAY	A cut that draws attention to something particular	THE KULESHOV EFFECT	Deriving more meaning from the interaction between shots than just the shots themselves	HYPER REAL/ PLEONASTIC	Exaggerated sounds
CROSSCUTTING	Alternating between two narratives	VISUAL EFFECTS		MUSIC	
JUMP CUT	Two shots of the same subject taken from only slightly different	SUPERIMPOSTION	The exposure of more than one image on a film strip	ASSOCIATIVE	Music that evokes emotional or physical response
PACE		CGI (COMPUTER GENERATED IMAGERY)	Using computer graphics to add to or change images in a film	PARALLEL	Music that complements the on screen scene
FAST PACE	Frequent cuts between shots	POST-PRODUCTION	Work done on a film after the recording has taken place	CONTRAPUNTAL	Music that does not fit with or
SLOW PACE	Infrequent cuts between shots			DIAGETIC	Sound from on screen action
				NON-DIAGETIC	Added sound, e.g. soundtrack

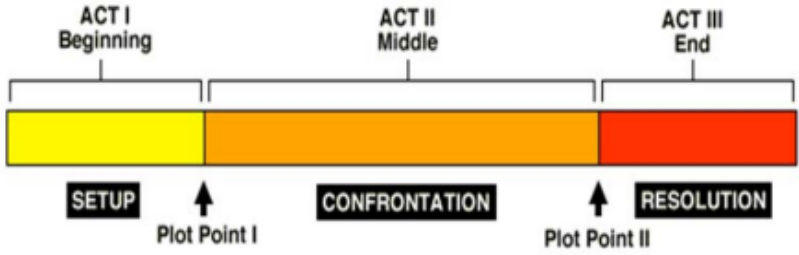


## MEDIA BTEC KNOWLEDGE ORGANISER 3; PRODUCTION TECHNIQUES — EDITING AND SOUND

CINEMATOGRAPHY	Photography and camera-work in film making.	LIGHTING		MISE EN SCENE	What we see on the screen
		HARD LIGHT (LOW KEY)	Creates sharp shadows	ELEMENTS OF MISE EN SCENE	
ANGLES		SOFT LIGHT (HIGH KEY)	Creates less contrast between light and dark		
HIGH ANGLE	Shot from above to make something seem smaller	FRONTAL LIGHTING	Eliminates shadow	SETTING	Where the film’s action takes place
		SIDE LIGHTING	Shadow from the side	PROPS	Any movable objects in a scene
LOW ANGLE	Shot from below to make	BACK LIGHTING	Silhouettes objects and people by lighting them from behind	HAIR/MAKE UP	The way a character is presented physically
		UNDER LIGHTING	Shadow from below	COSTUME	The clothes worn by characters
EYE LEVEL	Shot from neutral angle	TOP LIGHTING	Shadow from above	PROXEMICS	Positioning of people/ objects on the screen
CANTED ANGLE/	Off centre/unbalanced	THREE POINT LIGHTING	Key light, fill light and back light used to illuminate the subject to create depth	DESCRIBING MISE EN SCENE	
SHOTS		MOVEMENTS			
ESTABLISHING SHOT	Usually a distant framing that introduces a key idea/person/ place	PAN	Horizontal movement	NATURALISTIC	Realistic and relatable
		PRACTICAL EXTENSION	Camera stays at a consistent distance from the subject		
CLOSE-UP	A shot that shows an object/ person in a way that fills the screen	CRANE	Moving the camera aerially via crane	EXPRESSIVE	Theatrical and unrealistic; stylised
		TILT	Vertical movement		
LONG SHOT	A shot in which the scale of the object shown is small.	TRACKING	Movement through space to follow a subject	SIMPLISTIC	Simple and ordinary; few objects/ characters on screen
		DOLLY	Support with wheels from tracking shots		
MEDIUM SHOT	A shot between a long shot and a close up	ZOOM/REVERSE ZOOM	A rapid movement to or from close up	CLUTTERED	Very busy, with many characters and objects on screen
		HANDHELD	Camera movement as if held by a character/spectator		
AERIAL SHOT	A moving shot from above looking down	STEADICAM	A device for smoother hand held footage		
		FRAMING			
POINT OF VIEW	A shot from the position of a character’s eyes	RULE OF THIRDS	Framing using a nine box grid		
		FRAMING	How things are visible		
TWO-SHOT	A shot with two figures in the frame	CENTRALLY FRAMED	Object/Character is in the middle of the frame		
		TIGHTLY FRAMED	The object/character shown fills the screen		



# MEDIA BTEC LEVEL 1/2 KNOWLEDGE ORGANISER 2; GENRE, NARRATIVE, REPRESENTATION AND AUDIENCE INTERPRETATION

AUDIENCE INTERPRETATION					NARRATIVE, STORY OR PLOT?				
TODOROV		NARRATIVE THEORY	NARRATIVE DEVICES		STORY	A series of events			
Five stages to every story			CAUSE AND EFFECT	Showing the reasons for action before the action	PLOT	The order of events in a film, including how long each event is focused on for			
1	EQUILIBRIUM	Normal/Usual life	ELLIPSIS	Missing/Skipping information or time					
2	DISRUPTION	A problem happens	WITHHOLDING AND RELEASING		NARRATIVE		The combination of story and plot		
3	RECOGNITION	The problem is recognised							
4	REPAIR	An attempt to solve the problem	ENGIMA CODES	Questions left unanswered	NARRATIVE STRUCTURES				
5	NEW EQUILIBRIUM	Return to normal, or new way of life after events	BINARY OPPOSITES	Contrasts that impact on response					
KEY TERMS									
Target Audience		Who a product is aimed at							
Secondary Audience		Any smaller groups that may also be attracted to a product							
Genre		The category or style of a media product							
Hybrid Genre		A combination of more than one genre							
Sub-genre		A small and precise part of a genre							
Iconography		The way a genre, style or certain range of products looks							
 <p style="text-align: center;"><b>3 Act Structure</b></p>									
					THREE ACT STRUCTURE				
					ACT 1		Introduction of setting, protagonist, antagonist and problem		
					PLOT POINT 1		The inciting incident: Turns the story in a new direction		
					ACT 2		At least half of the story, in which the protagonist tries to resolve the problem		
					PLOT POINT 2		The climactic turning point: A solution is offered to the problem		
					ACT 3		The conflict is resolved and narrative closure is provided		



## MEDIA GCSE KNOWLEDGE ORGANISER 3; ADVERTISING AND MARKETING - GALAXY TV, NHS TV & OMO PRINT AD CSPs

CONVENTIONS OF ADVERTISING		REPRESENT		MISE EN SCENE	What we see on the screen
MUSIC	An inspiring soundtrack used to engage with the audience	YEAR	2016	ELEMENTS OF MISE EN SCENE	
		ORGANISATION	NHS	SETTING	Where the film’s action takes place
STRAPLINE	The slogan of the advert; the line that is repeated across a campaign.	PURPOSE	To increase the number of BAME blood donors	PROPS	Any movable objects in a scene
		FORM	Hybrid of music video and social action advert		
CELEBRITY	The use of a star to endorse the product	STRAPLINE	Do something amazing, give blood	HAIR/MAKE UP	The way a character is presented physically
LOGO	The symbol used to represent the organisation or product	MOON RIVER		COSTUME	The clothes worn by characters
		YEAR	2014		
ICONOGRAPHY	The look and symbols of the advert, including typography	ORGANISATION	Galaxy	PROXEMICS	Positioning of people/objects on the screen
		PURPOSE	To increase sales of Galaxy chocolate		
MODE OF ADDRESS	The way that the advert speaks to the audience	FORM	Pastiche.	CINEMATOGRAPHY—SHOTS	
		STRAPLINE	Why have cotton when you can have silk?	CLOSE-UP	A shot that shows an object / person in a way that fills the screen
PRODUCT	Shots the show the use and purpose of the product	WOMEN’S OWN		LONG SHOT	A shot in which the scale of the object shown is small
USP	Unique selling point—what makes the product different	YEAR	1955		
		ORGANISATION	OMO	MEDIUM SHOT	A shot between a long shot and a close up
		PURPOSE	To increase sales of OMO washing powder		
PERSUASIVE LANGUAGE	Language used to convince the audience of the message	FORM	Print (Magazine)	AERIAL SHOT	A moving shot from above
		STRAPLINE	OMO adds brightness to whiteness	POINT OF VIEW	A shot from the position of a character’s eyes

## MEDIA GCSE KNOWLEDGE ORGANISER 4; FILM INDUSTRY - DOCTOR STRANGE & I, DANIEL BLAKE CSPs

KEY TERMS			BRITISH FILM CLASSIFICATION BODY	British Board of Film Classification (BBFC)
BLOCKBUSTER		A film made with a high budget and recognisable stars		
			<i>Dr Strange (2016)</i>	
STAR POWER		The appeal that a famous actor brings to a film	DIRECTOR	Scott Derrickson
			PRODUCTION COMPANIES	Marvel Studios
DIRECTOR POWER		The appeal that a famous director brings to a film	BUDGET	\$165–236.6 million
GLOBALISATION		The presence and influence of (film) companies internationally	BOX OFFICE TAKINGS	\$677.7 million
VERTICAL INTEGRATION		When conglomerates own companies at more than one stage of the production cycle	CERTIFICATE (REASONS)	12A, moderate fantasy violence, injury detail
			COUNTRIES DISTRIBUTED TO	52
HORIZONTAL INTEGRATION		When conglomerates own more than one company at the same stage of the production cycle	MARKETING TIE INS	Yakult, Google Maps, Lamborghini, Merchandising (toys, etc.)
			<i>I, Daniel Blake (2016)</i>	
INDEPENDENT CINEMA		Films made outside of the big Hollywood studios	DIRECTOR	Ken Loach
			PRODUCTION COMPANIES	Sixteen Films, Wild Bunch, Why Not Productions (BFI, BBC Films)
1	PRE-PRODUCTION	Planning for production work	BUDGET	Under £5 million
2	PRODUCTION	The actual making of the product	BOX OFFICE TAKINGS	\$15.8 million
3	POST-PRODUCTION	Any editing and reworking needed	CERTIFICATE (REASONS)	15, very strong language
4	DISTRIBUTION	Getting the product in to the world	COUNTRIES DISTRIBUTED TO	23
5	EXHIBITION	Showing the product to the audience	MARKETING TIE INS	T-shirts

## Islam - Beliefs and Teachings

Section 1: Nature of God (Allah)			Section 2: Prophethood			Section 3: Angels			Section 5: Afterlife		
1	Tawhid	The oneness of God.	1	Risalah	The line of communication between God and His creation.	1	Malaikah	Heavenly immortal beings, God’s first creation.	1	Signs of the end of the world	<ul style="list-style-type: none"><li>The most important one will be the appearance of a man called Mahdi- the saviour from end of time events.</li><li>Other signs include: abundance of earthquakes, common killing, rejection of Islam, increase in dishonesty, nakedness and fornication.</li></ul>
2	Immanent	God is always close by.	2	Adam	The first prophet, known as father of the human race.	2	Nature of angels	Invisible and exist everywhere in the universe.			
3	Transcendent	God is beyond all things, not limited by laws of nature.	3	Ibrahim	Known as hanif. He had inner knowledge that there was only one God.	3	Jibiril	The angel of revelation to the prophets.			
4	Omniscient	God is all knowing.	4	Musa	Freed the Israelites from slavery in Egypt.	4	Mika’il	The gatekeeper of heaven.			
5	Beneficent	God is all loving.	5	Dawud	Israel’s greatest king who made Jerusalem holy for Muslims.	5	Azrail	Takes the soul at death.			
6	Merciful	God is always fair and forgives those who repent.	6	Isa	Was given the injil (Gospel).	6	Raqib and Atid	The ‘noble recorders’.			
7	Judge	On the last day God will judge the behaviours of Muslims.	7	Muhammad	Muhammad (pbuh) is seen as the perfect role model for Muslims because of the moral and prayerful way he lived his life.	7	Munkar and Nakir	The angels that will question the dead in their graves to test their faith.			
8	Creator	God is the beginning and the cause of all that exists.	8	The Revelation on the Night of Power (Laylatul Qadr)	Muhammad was spoken to by the angel Jibril and received the first revelation of the Qur’an.	8	Israfil	Responsible for blowing the trumpet on judgement day.			
			9	Muhammad’s message	<ul style="list-style-type: none"><li>There is one true God.</li><li>We need to show thanks to God through worship.</li><li>There will be a judgement day where God will judge our lives.</li></ul>	Section 4: Keywords			2	Day of judgement: test	<ul style="list-style-type: none"><li>Barzakh- where all souls are in waiting until the final trumpet blows for the Day of Judgement.</li><li>Heaven- a state of joy, happiness and peace- where the righteous will live.</li><li>Hell- a state of torment and suffering for those who failed to pass God’s test.</li></ul>
						Tawhid	Monotheism				
						Shirk	Polytheism				
						Revelation	God’s words in the Qur’an				
						Surah-	a chapter of the Qur’an				
						Akhirah	Afterlife				
						Barzakh	The waiting pace before judgement				

Key beliefs	Key quotes
<b>Nature of Allah Monotheism</b>	<ol style="list-style-type: none"> <li>1. "There is no God but Allah."</li> <li>2. "Say: He is Allah, the <b>One and Only</b>; Allah, the Eternal, Absolute; He begetteth not, nor is He begotten; And there is none like unto Him."</li> </ol>
<b>Prophethood</b>	<ol style="list-style-type: none"> <li>1. "And to every nation we have sent a messenger."</li> <li>2. '<b>Ibrahim</b> was neither a Jew nor a Christian, but he was a hanif, a Muslim [submitting to God ].</li> <li>3. 'We gave <b>Moses</b> the Book and followed him up with a succession of prophets."</li> <li>4. "We gave <b>Isa</b> signs (miracles) and strengthened him with the holy spirit."</li> <li>5. "There is no God but Allah and <b>Muhammad</b> is His last and final messenger."</li> </ol>
<b>Prophet Muhammad (pbuh)</b>	<ol style="list-style-type: none"> <li>1. "There is no God but Allah and <b>Muhammad</b> is His last and final messenger."</li> <li>2. 'Not once did I receive a revelation without thinking that my soul had been torn away.' Hadith</li> <li>3. The prophet was known as "Al-Amin" the trustworthy, for his honest and humble character.</li> </ol>

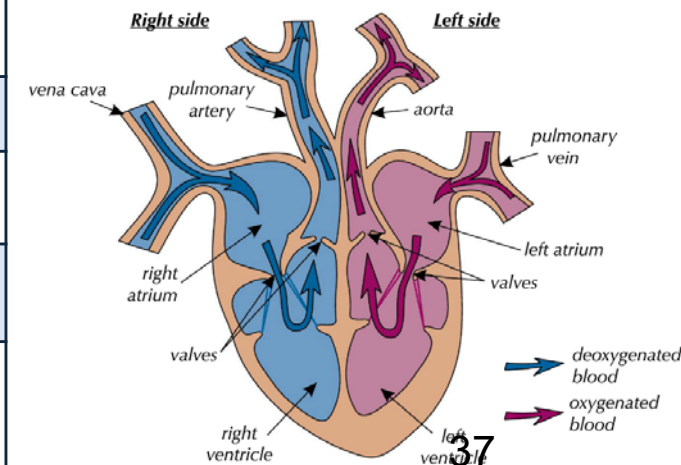
Key beliefs	Key quotes
<b>Angels</b>	<ol style="list-style-type: none"> <li>1. "Whoever is an enemy to Jibril– it is [none but] he who has brought the Qur'an down upon your heart."</li> <li>2. The prophet (pbuh) said that "Israfil is awaiting the order of blowing while He grasps the trumpet".</li> <li>3. "The Angel of Death, put in charge of you, will take your souls: then you shall be brought back to your Lord."</li> <li>4. "Noble recorders"</li> <li>5. They (Munkar &amp; Nakir) will ask "Who is your Lord? Who is your prophet? What is your Book?"</li> </ol>
<b>Qur'an</b>	<ol style="list-style-type: none"> <li>1. 'We have sent down to you the Book as clarification for all things and as guidance and mercy and good tidings for the Muslims.'</li> <li>2. "We have revealed it to you on the Night of Power."</li> </ol>
<b>Life after death</b>	<ol style="list-style-type: none"> <li>1. 'Every soul shall have a taste of death.'</li> </ol>

# Biology Topic 2: Organisation (Paper 1)





1	<b>Cell</b>	Building block of life
2	<b>Tissue</b>	A group of similar cells that work together to complete a function
3	<b>Organ</b>	A group of different tissues that work together to complete a function
4	<b>Organ System</b>	A group of organs working together to complete a function
5	<b>Iodine</b>	Turns blue/black when added to starch
6	<b>Benedict's Reagent</b>	Turns brick red when heated with reducing sugars, e.g. glucose
7	<b>Biuret Reagent</b>	Turns lilac when added to protein
8	<b>Sudan III Test</b>	Forms a bright red layer when mixed with lipids
9	<b>Enzyme</b>	A protein molecule that acts as a biological catalyst
10	<b>Substrate</b>	A molecule that is broken down by an enzyme
11	<b>Active Site</b>	The part of an enzyme that the substrate fits into
12	<b>Amylase</b>	Enzyme that breaks down starch into sugars; produced in the salivary glands and the pancreas
13	<b>Protease</b>	Enzyme that breaks down proteins into amino acids; produced in the stomach and the pancreas
14	<b>Lipase</b>	Enzyme that breaks down lipids into glycerol and fatty acids; produced in the pancreas
15	<b>Bile</b>	A liquid that neutralises stomach acid & emulsifies fats; produced in the liver and stored in the gall bladder
16	<b>Denatured</b>	When the active site of an enzyme changes shape, so the substrate can no longer fit
15	<b>Factors Affecting Enzyme Activity</b>	<ul style="list-style-type: none"> <li>High temperatures cause enzymes to denature</li> <li>Very high or very low pH cause enzymes to denature</li> <li>Substrate concentration</li> <li>Enzyme concentration</li> </ul>
16	<b>Red Blood Cell</b>	Carry oxygen to body cells. Biconcave disc shape gives them a large surface area. Contain haemoglobin, which binds to oxygen

17	<b>White Blood Cell</b>	Part of the immune system, which defends us against infection by microbes; some engulf microbes, others produce antibodies
18	<b>Platelets</b>	Small fragments of cells, responsible for blood clotting
19	<b>Plasma</b>	Liquid that carries cells, nutrients, hormones, water and urea
20	<b>Arteries</b>	Blood vessels that take blood away from the heart; they have thick muscular walls and elastic fibres to cope with high pressure
21	<b>Veins</b>	Blood vessels that take blood back to the heart; they have valves to prevent the backflow of blood and a large lumen
22	<b>Capillaries</b>	Blood vessels that carry blood to every cell; they are one cell thick to provide a short diffusion distance
23	<b>Coronary Heart Disease</b>	When the coronary arteries, which supply the heart with blood, are blocked by fatty deposits. This restricts the supply of oxygen to the heart and can cause a heart attack
24	<b>Stent</b>	A surgical device inserted into an artery to keep it open, as a treatment for heart disease
25	<b>Statins</b>	A drug that reduces the amount of cholesterol in the blood, reducing the risk of heart disease. Some side effects, e.g. headaches / memory loss
26	<b>Communicable Disease</b>	Can be spread between people, e.g. measles and malaria
27	<b>Non-communicable Disease</b>	Cannot be spread between people, e.g. asthma and cancer
28	<b>Cancer</b>	Uncontrolled cell division leading to the build-up of a tumour
29	<b>Malignant Tumour</b>	When tumour cells break off and spread to other parts of the body through the bloodstream, which can be fatal. Tumours that do not spread are called benign

30	<b>Epidermal Tissue</b>	Covers the surface of a leaf
31	<b>Palisade Tissue</b>	Where most photosynthesis takes place in the leaf, as the cells have many chloroplasts
32	<b>Xylem</b>	Tubes that carry water and mineral ions from the roots to the leaves. Made of dead cells and strengthened with lignin
33	<b>Phloem</b>	Tubes that carry sugars from the leaves to other parts of the plant (known as translocation). Made of long cells with pores in each end
34	<b>Stomata</b>	Pores in the lower epidermis that allow gases to diffuse in and out of the leaf
35	<b>Guard Cell</b>	Responsible for opening and closing the stomata. Stomata close at night to prevent water loss
36	<b>Transpiration</b>	Loss of water from a plant. Water moves up the xylem and then evaporates from the stomata
37	<b>Factors Affecting Transpiration</b>	<ul style="list-style-type: none"> <li>Light intensity</li> <li>Temperature</li> <li>Air flow</li> <li>Humidity</li> </ul>

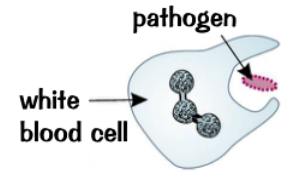


# Biology Topic 3: Diseases & Infections (Paper 1)

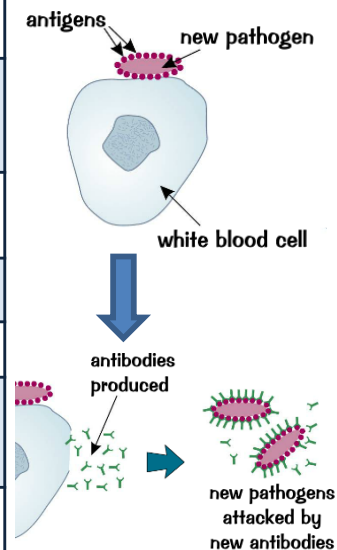
1	<b>Pathogen</b>	Micro-organism that causes disease
2	<b>Bacteria</b>	Make toxins that damage cells 
3	<b>Salmonella</b>	Caught by eating food that contains bacteria. Bacteria make toxins that cause fever, stomach cramps & vomiting
4	<b>Gonorrhoea</b>	Bacteria that spread through unprotected sex; causes genital discharge. Some strains of the bacteria are now resistant to antibiotics
5	<b>Viruses</b>	Replicate inside your cells – the damage this causes makes you ill 
6	<b>Measles</b>	Virus spread in the droplets released when a person coughs or sneezes. Causes fever & red rash and sometimes serious complications
7	<b>HIV</b>	Virus spread through unprotected sex & drug use. Attacks the immune system, leading to AIDS. Treated with antiretroviral drugs
8	<b>Tobacco Mosaic Virus</b>	A viral disease of plants that discolours leaves, preventing photosynthesis
9	<b>Fungi</b>	Form thread-like arms called hyphae, which penetrate defences. Spread by making spore 
10	<b>Rose Black Spot</b>	Fungus that spreads through wind or water, causing leaf spots that prevent photosynthesis
11	<b>Protists</b>	Single-celled eukaryotes, often carried by another animal that spreads the disease (called a vector)
12	<b>Malaria</b>	Caused by a protist, which is spread by mosquitoes. Causes potentially fatal fever 
13	<b>Infected Water</b>	A way that disease can be spread, e.g. cholera
14	<b>Airborne</b>	A way that disease can be spread, e.g. by breathing in droplets produced when a person infected with influenza coughs / sneezes
15	<b>Direct contact</b>	A way that disease can be spread, e.g. touching a floor infected with athlete's foot fungus or having unprotected sex with someone with gonorrhoea

16	<b>Preventing transmission of disease</b>	<ul style="list-style-type: none"> <li>Good hygiene, e.g. washing hands with antibacterial handwash</li> <li>Isolating people with the disease</li> <li>Destroying vectors</li> </ul>
17	<b>Physical defences</b>	<ul style="list-style-type: none"> <li>Skin acts as a barrier</li> <li>Saliva &amp; tears contain antibacterial enzymes</li> <li>Mucus traps microbes, which are swept out by cilia</li> <li>Stomach acid kills pathogens</li> </ul>
18	<b>Painkillers</b>	Drugs that relieve symptoms, but don't cure the disease, e.g. aspirin
19	<b>Antibiotics</b>	<ul style="list-style-type: none"> <li>Medicines that kill <u>bacteria</u>, but <u>NOT viruses</u></li> <li>Some bacteria have mutated to become resistant to antibiotics, e.g. MRSA</li> </ul>
20	<b>Phagocytosis</b>	When white blood cells destroy pathogens by engulfing them
21	<b>Antibodies</b>	Produced by white blood cells to destroy pathogens
22	<b>Antitoxins</b>	Produced by white blood cells to neutralise toxins
23	<b>Immune</b>	If you're infected by the same pathogen again, the body quickly produces antibodies to kill the pathogen before it makes you ill
24	<b>Vaccines</b>	Contain <u>dead / weakened pathogens</u> . The body recognises their antigens and you become immune – but the weakened pathogens don't make you ill
25	<b>Preclinical Trials</b>	Drugs are tested on human cells and animals in the lab to check if they are poisonous.
26	<b>Clinical Trials</b>	<ul style="list-style-type: none"> <li><u>Phase 1</u>: Test low doses on healthy volunteers to check for side effects</li> <li><u>Phase 2</u>: Test on patients, comparing the effect of a placebo versus the drug</li> </ul>
27	<b>Double Blind Trial</b>	The effect of a new drug is compared with a placebo (fake drug) to see if the drug works; neither the doctor nor the patient know who has been given the placebo
28	<b>Peer Review</b>	When the results of scientific studies are checked by other scientists to ensure they are of high quality

## Phagocytosis:



## Production of antibodies:

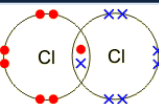
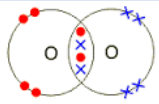


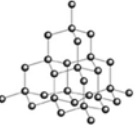
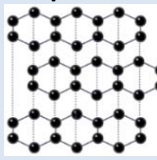
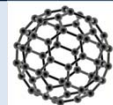
## Physical defences:



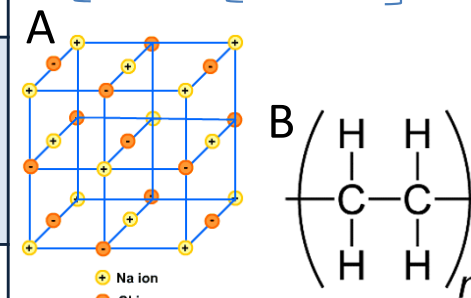
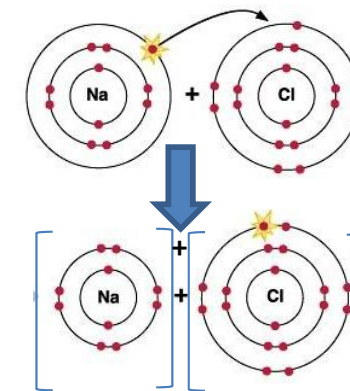


# Chemistry Topic 2: Structure & Bonding (Paper 1)

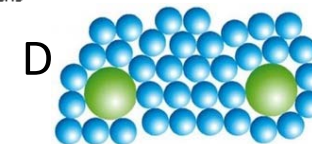
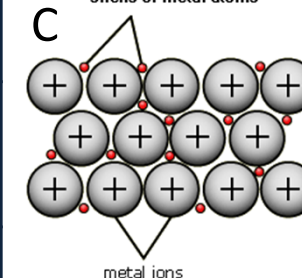
1	<b>Metal</b>	An element which loses electrons to form positive ions
2	<b>Non Metal</b>	An element which gains electrons to form negative ions
3	<b>Positive Ion</b>	An atom that has lost electrons to gain a positive charge
4	<b>Negative Ion</b>	An atom that has gained electrons to gain a negative charge
5	<b>Electrostatic</b>	The force between a positive and negative charge
6	<b>Ionic Bond</b>	A bond formed by the electrostatic attraction between positive and negative ions
7	<b>Ionic Lattice</b>	Hundreds of positive and negative ions arranged in rows, with strong electrostatic forces holding them together
8	<b>High Melting Points</b>	A property of ionic compounds. This is because a lot of energy is needed to break the strong electrostatic attraction between the ions
9	<b>Conduct Electricity</b>	Ionic compounds conduct electricity when melted or dissolved in water, because the ions can move to carry a current
10	<b>Aqueous</b>	When a substance is dissolved in water
11	<b>Covalent Bond</b>	When two atoms share a pair of electrons
12	<b>Chlorine Molecule</b>	
13	<b>Oxygen Molecule</b>	
14	<b>Low Melting Points</b>	A property of covalent compounds. This is because little energy is needed to break the weak intermolecular forces between the molecules

17	<b>Non-conducting</b>	A property of covalent compounds. There are no delocalized electrons to carry a current
18	<b>Polymer</b>	Many small units (monomers) joined together with covalent bonds to form a large molecule
19	<b>Diamond</b> 	<ul style="list-style-type: none"> <li>Each carbon atoms covalently bonded to four others</li> <li>Very high melting point, due to strong covalent bonds.</li> <li>Does not conduct electricity</li> </ul>
21	<b>Graphite</b> 	<ul style="list-style-type: none"> <li>Each carbon atom covalently bonded to three others</li> <li>Weak bonds between the layers, allowing them to slide over each other</li> <li>Contains delocalised electrons, which allow it to carry an electrical current</li> </ul>
22	<b>Graphene</b>	A single layer of graphite – a layer of inter-locking hexagonal rings of carbon atoms one atom thick
23	<b>Fullerene</b>	Hexagonal rings of six carbon atoms with hollow shapes, e.g. buckminsterfullerene forms a sphere 
24	<b>Nanotubes</b>	Thin cylinders, with high strength and electrical and thermal conductivity. Could also be used for drug delivery into the body, as well as lubricants and catalysts
25	<b>Metallic Bonding</b>	Consists of rows of positive metal ions, surrounded by a 'sea' of delocalised electrons
26	<b>Properties of Metals</b>	<ul style="list-style-type: none"> <li>Conduct electricity because delocalised electrons carry a current</li> <li>High melting and boiling point (see previous explanation)</li> <li>Malleable because layers of ions slide over each other</li> </ul>
27	<b>Alloy</b>	<ul style="list-style-type: none"> <li>A mixture of two metals with another element, e.g. steel is an alloy of iron and carbon</li> <li>Harder than pure metals as different sized atoms stop the layers sliding over each other</li> </ul>

Ionic bonding:



**free electrons** from outer shells of metal atoms



D - Alloy:

C - Metallic bonding:

A - Ionic lattice:

B - Polymer:

# Chemistry Topic 3: Quantitative Chemistry (Paper 1)

1	<b>Conservation of Mass</b>	<ul style="list-style-type: none"> <li>Atoms can never be created or destroyed</li> <li>In a reaction, the total mass of reactants always equals the total mass of products</li> </ul>
2	<b>Decreases in Mass</b>	<ul style="list-style-type: none"> <li>Mass may seem to decrease in a reaction if a gas is released, e.g. when magnesium reacts with acid to make hydrogen</li> </ul>
3	<b>Increases in Mass</b>	<ul style="list-style-type: none"> <li>Mass may seem to increase in a reaction if one of the reactants is a gas, e.g. when magnesium reacts with oxygen to make magnesium oxide</li> </ul>
4	<b>Relative Formula Mass</b>	<ul style="list-style-type: none"> <li>The sum of the atomic masses of each atom in the formula</li> <li>For example <math>\text{CO}_2</math>:  <math>\text{C} = 1 \times 12</math>, <math>\text{O}_2 = 2 \times 16</math>  <math>12 + (2 \times 16) = 44</math> </li> </ul>
5	<b>Percentage by Mass</b>	<ul style="list-style-type: none"> <li>You can calculate the percentage mass of an element in a compound, using the formula:</li> </ul> <div> <math display="block">\text{Percentage mass of an element in a compound} = \frac{A, \times \text{number of atoms of that element}}{M, \text{ of the compound}} \times 100</math> </div>
6	<b>Concentration</b>	<ul style="list-style-type: none"> <li>The mass of a substance in a given volume of solution</li> <li>Measured in <math>\text{g/dm}^3</math></li> </ul>
7	<b><math>1\text{dm}^3</math></b>	<ul style="list-style-type: none"> <li>= 1 litre</li> <li>= <math>1000\text{ cm}^3</math></li> </ul>
8	<b>Calculating Concentration</b>	<div> <math display="block">\text{concentration} = \frac{\text{mass of solute}}{\text{volume of solvent}}</math> <p>in <math>\text{g/dm}^3</math>      in g      in <math>\text{dm}^3</math></p> </div>
9	<b>Solute</b>	<ul style="list-style-type: none"> <li>Solid that dissolves</li> </ul>
10	<b>Solvent</b>	<ul style="list-style-type: none"> <li>Liquid that a solute can dissolve in</li> </ul>
11	<b>Solution</b>	<ul style="list-style-type: none"> <li>When a solute is dissolved in a solvent</li> </ul>

## Higher Tier Only

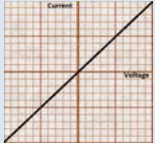
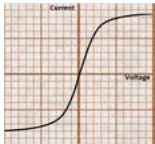
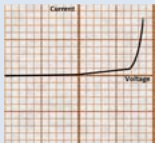
17	<b>Mole</b>	The amount of a substance that contains $6.02 \times 10^{23}$ particles
18	<b>Mole Equation</b>	<div> <math display="block">\text{Number of moles} = \frac{\text{mass in g (of an element or compound)}}{M_r \text{ (of the element or compound)}}</math> </div>

Knowledge Organiser Physics Topic 2 – Electricity

Charge, Current, Resistance, Potential Difference

1	Charge (Coulombs)	Electrons are transferred when objects become charged
2	Current (Amps)	<ul style="list-style-type: none"><li>The rate of flow of electric charge</li><li>Measured using an ammeter connected in series</li></ul>
3	Resistance (Ohms)	<ul style="list-style-type: none"><li><math>= \frac{\text{Potential Difference (Volts)}}{\text{Current (Amps)}}</math></li><li>Electrons have to push their way through vibrating atoms in the metal</li></ul>
4	Potential Difference (Volts)	<ul style="list-style-type: none"><li>Energy transferred per coulomb of charge</li><li><math>= \frac{\text{Energy Transferred (J)}}{\text{Charge (Coulombs)}}</math></li><li>Measured using a voltmeter connected in parallel</li></ul>

Component Characteristics

1	Ohms Law		Current through a resistor at a constant temperature is directly proportional to the potential difference across a resistor. A conductor which obeys this rule is described as an ohmic conductor
2	Filament Lamp		Current is not directly proportional to potential difference. The resistance increases as the temperature of the filament lamp increases
3	Diode		Only allows current to pass through it in one direction, this stops a circuit being damaged if the battery is connected the wrong way
4	LDR	The resistance of a light dependent resistor decreases if light intensity increases	
6	Thermistor	The resistance of a thermistor decreases if temperature increases	

Series and Parallel Circuits

1	Series Circuit Rules	<ul style="list-style-type: none"><li>Potential difference is shared between the components</li><li>Current is the same everywhere</li><li>Total Resistance = <math>R_1 + R_2 + \dots</math></li></ul>
2	Parallel Circuit Rules	<ul style="list-style-type: none"><li>For components in parallel, the potential difference across each component is the same</li><li>Total current is the sum of the currents through separate branches</li><li>The total resistance of two components in parallel is less than the resistance of the resistor with the least resistance</li></ul>






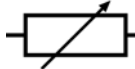


Energy in Circuits

1	Power	Power (Watts) = Current (Amps) x Potential Difference (V) $= \frac{\text{Potential Difference (Volts)}}{\text{Current (Amps)}}$
2	Resistance Heating	When current passes through a resistor, the power supplied to the resistor heats it
3	Fuses	A fuse contains a thin wire which will break if too much current passes through it
4	Energy Transfer	<ul style="list-style-type: none"><li>= Charge (Coulombs) x Potential Difference (Volts)</li><li>= Power (Watts) x time (seconds)</li><li>= Potential Difference (V) x Current (A) x time (s)</li></ul>
5	Efficiency	$= \frac{\text{Output Power (W)}}{\text{Input Power (W)}} \times 100$

National Grid

1	Direct Current	Current goes in one direction only
2	Alternating Current	Repeatedly reverses its direction. Its frequency is the number of cycles per second
3	Mains Circuit	Has a live wire and a neutral wire, an alternating potential difference occurs between the two wires
4	National Grid	A nationwide network of cables and transformers transferring electricity from power stations to homes
5	Step Up Transformer	Used at a power station to increase voltage and decrease current so less power is lost heating cables
6	Step Down Transformer	Used at homes to decrease voltage so it is safe to use

Circuit Symbols

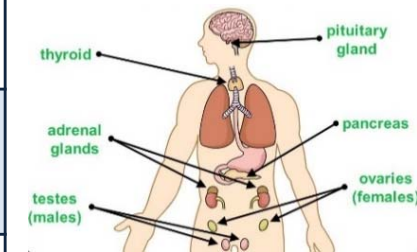
 Filament Lamp	 Cell	 Switch	 Ammeter
 Resistor	 Variable Resistor	 Light Emitting Diode	 Voltmeter

# Biology Topic 5: Homeostasis (Paper 2)

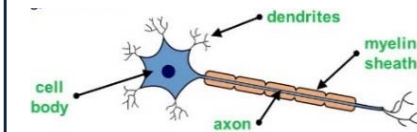
1	<b>Homeostasis</b>	<ul style="list-style-type: none"> <li>Maintaining a constant internal environment</li> <li>Body temperature, blood glucose and blood water content are all regulated</li> </ul>
2	<b>Stimulus</b>	<ul style="list-style-type: none"> <li>A change in the environment</li> </ul>
3	<b>Effector</b>	<ul style="list-style-type: none"> <li>An organ that carries out a response (a muscle or a gland)</li> </ul>
4	<b>Hormone</b>	<ul style="list-style-type: none"> <li>A chemical messenger that travels in the bloodstream and causes a response over a wide area</li> </ul>
5	<b>Gland</b>	<ul style="list-style-type: none"> <li>An organ that releases hormones into the bloodstream, e.g. pituitary gland / pancreas</li> </ul>
6	<b>Insulin</b>	<ul style="list-style-type: none"> <li>Released by the pancreas when blood glucose levels are too HIGH</li> <li>Causes glucose to be converted to glycogen</li> </ul>
7	<b>Glucagon</b>	<ul style="list-style-type: none"> <li>Released by the pancreas when blood glucose levels are too LOW</li> <li>Causes glycogen to be converted to glucose</li> </ul>
8	<b>Type 1 Diabetes</b>	<ul style="list-style-type: none"> <li>A condition where the pancreas does not release insulin</li> <li>Controlled by insulin injections, dietary restrictions and exercise</li> </ul>
9	<b>Type 2 Diabetes</b>	<ul style="list-style-type: none"> <li>A condition where body cells no longer respond to insulin</li> <li>Linked to obesity and genetics</li> <li>Controlled through dietary restrictions and exercise</li> </ul>
10	<b>Adrenaline</b>	<ul style="list-style-type: none"> <li>A hormone produced by the adrenal glands in times of fear or stress</li> <li>It increases the heart rate and boosts the delivery of oxygen and glucose to the brain and muscles, preparing the body for 'flight or fight'</li> </ul>
11	<b>Thyroxine</b>	<ul style="list-style-type: none"> <li>A hormone released from the thyroid gland to control basal metabolic rate</li> </ul>

12	<b>FSH</b>	<ul style="list-style-type: none"> <li>A hormone released by the pituitary gland to control the menstrual cycle</li> <li>Causes eggs to mature in the ovary</li> <li>Stimulates the ovary to produce oestrogen</li> </ul>
13	<b>Oestrogen</b>	<ul style="list-style-type: none"> <li>A hormone released by the ovary to control the menstrual cycle</li> <li>Causes the uterus lining to thicken</li> <li>Stops the pituitary gland releasing FSH</li> </ul>
14	<b>LH</b>	<ul style="list-style-type: none"> <li>A hormone released by the pituitary gland to control the menstrual cycle</li> <li>Causes the ovary to release an egg into the oviduct</li> </ul>
15	<b>Progesterone</b>	<ul style="list-style-type: none"> <li>A hormone released by an empty egg follicle to control the menstrual cycle</li> <li>Maintains the lining of the uterus</li> <li>Inhibits the release of FSH and LH</li> </ul>
16	<b>IVF</b>	<ul style="list-style-type: none"> <li>In vitro fertilisation</li> <li>Women are treated with FSH and LH, then eggs are collected</li> <li>Eggs are fertilised in the lab using a sample of sperm</li> <li>Embryos are surgically implanted into the mother</li> </ul>
17	<b>Neurone</b>	<ul style="list-style-type: none"> <li>A nerve cell; carries electrical messages</li> <li>Adaptations are dendrites (for connection to other nerve cells) and myelin sheath (insulates the nerve and speeds up electrical impulses)</li> </ul>
18	<b>Synapse</b>	<ul style="list-style-type: none"> <li>A gap between two neurones</li> <li>Messages are carried across by chemicals called neurotransmitters</li> </ul>
19	<b>Sensory Neurone</b>	<ul style="list-style-type: none"> <li>A neurone that carries a message from a receptor to the central nervous system</li> </ul>
20	<b>Relay Neurone</b>	<ul style="list-style-type: none"> <li>Part of a reflex arc, so only involved in involuntary actions, e.g. blink reflex, knee jerk reflex</li> <li>Connects a sensory neurone to a motor neurone, bypassing the brain</li> </ul>
21	<b>Motor Neurone</b>	<ul style="list-style-type: none"> <li>Connects the central nervous system to effectors</li> </ul>

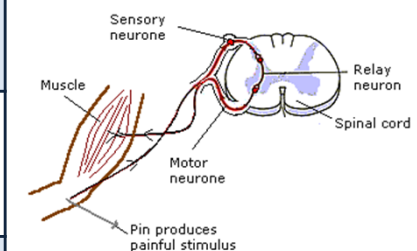
## Glands



## Neurone



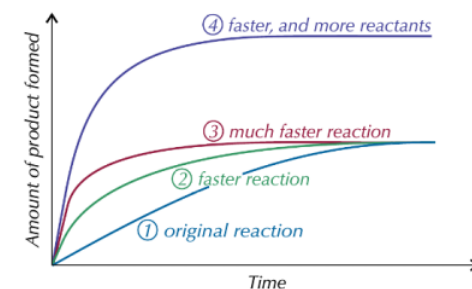
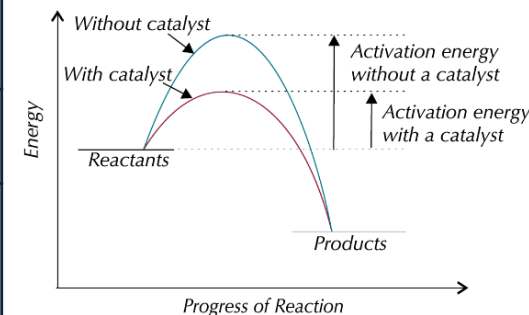
## Reflex arc



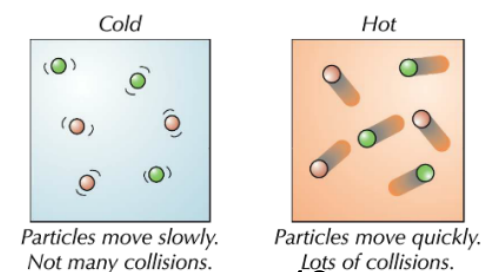
# Chemistry Topics 6 Rates of Reaction Paper 2)

1	<b>Rate of Reaction</b>	How quickly reactants are turned into products
2	<b>Collision Theory</b>	The rate of reaction depends on: <ul style="list-style-type: none"> <li>Frequency of collisions between reacting particles</li> <li>Energy transferred during each collision</li> </ul>
3	<b>Activation Energy</b>	The minimum energy that particles must have to successfully collide
4	<b>Rate of Reaction Equation</b>	$\frac{\text{Quantity of reactant used}}{\text{Time taken}}$ OR $\frac{\text{Quantity of product formed}}{\text{Time taken}}$
5	<b>Factors Which Affect the Rate of Reaction</b>	<ul style="list-style-type: none"> <li>Temperature</li> <li>Concentration of reactants (or pressure if it is a gas)</li> <li>Surface area</li> <li>Presence of a catalyst</li> </ul>
6	<b>Catalyst</b>	Speeds up the rate of reaction by lowering the activation energy without being used up or changed
7	<b>Effect of Increasing Temperature</b>	<ul style="list-style-type: none"> <li>The particles will move faster so will collide more frequently</li> <li>The particles will collide with more energy (more successful collisions)</li> </ul>
8	<b>Effects of Increasing Concentration</b>	<ul style="list-style-type: none"> <li>There are more particles in a fixed volume so they will collide more frequently</li> </ul>
9	<b>Effect of Increasing Gas Pressure</b>	<ul style="list-style-type: none"> <li>The particles are in a smaller space and therefore closer together so will collide more frequently</li> </ul>
10	<b>Effect of Increasing Surface Area</b>	<ul style="list-style-type: none"> <li>More particles are exposed and able to collide in a set period of time</li> </ul>

11	<b>Reversible Reactions</b>	The products can react to produce the original reactants. The reaction is exothermic in one direction and endothermic in the other direction
12	<b>Closed System</b>	When nothing can escape or get in
13	<b>Equilibrium</b>	When the rate of forward reaction and backward reaction are equal in a reversible reaction. The amount of products and reactants will remain constant
<b>HIGHER TIER ONLY</b>		
14	<b>Le Chatelier's Principle</b>	If you change the conditions of a reversible reaction at equilibrium, the system will try to counteract the change
15	<b>Decreasing Temperature in a Reversible Reaction</b>	<ul style="list-style-type: none"> <li>The rate of the exothermic reaction will increase so the amount of product for the exothermic reaction increases</li> <li>The rate of the endothermic reaction will decrease so the amount of product for the endothermic reaction decreases</li> </ul>
16	<b>Increasing Temperature in a Reversible Reaction</b>	<ul style="list-style-type: none"> <li>The rate of the exothermic reaction will decrease so the amount of product for the exothermic reaction decreases</li> <li>The rate of the endothermic reaction will increase so the amount of product for the endothermic reaction increases</li> </ul>
17	<b>Increasing the concentration of Reactant in a Reversible Reaction</b>	The rate of the forward reaction will increase so more product will be made to reach equilibrium again
18	<b>Increasing the Concentration of Product in a Reversible Reaction</b>	The rate of the backward reaction will increase so more reactant will be made to reach equilibrium again



Rate of reaction =  
change in y/change in x





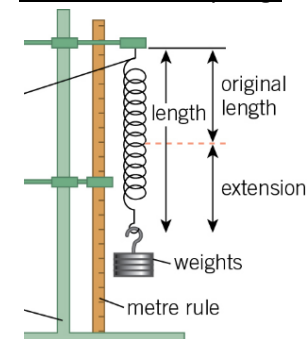
# Physics Topic 5: Forces

(Paper 2)

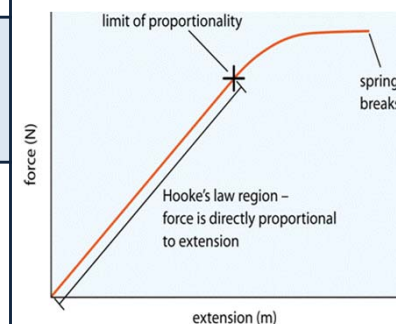
1	<b>Vector quantity</b>	Quantity with size and direction – e.g. velocity, force, displacement, acceleration.
2	<b>Scalar quantity</b>	Quantity with size only – e.g. speed, distance, mass.
3	<b>Contact force</b>	When 2 objects have to be touching for a force to act – e.g. friction, air resistance.
4	<b>Non-contact force</b>	When 2 objects do not have to be touching for a force to act – e.g. magnetic force, gravitational force.
5	<b>Newtons (N)</b>	The unit of force
6	<b>Mass</b>	The amount of matter in an object, measured in kilograms (kg)
7	<b>Weight</b>	<input type="checkbox"/> The force acting on an object due to gravity. <input type="checkbox"/> <b>Weight = Mass x Gravitational Field Strength</b>
8	<b>Resultant force</b>	The overall force acting on an object
9	<b>Work done</b>	<input type="checkbox"/> The energy transferred when a force moves an object. Measured in Joules (J) or Newton metres (Nm). <input type="checkbox"/> <b>Work done = Force x Distance</b>
10	<b>Resolving forces</b>	A force acting at an angle can be split into a horizontal force and a vertical force
11	<b>Elastic deformation</b>	When an object can return to its original shape and length after the force on it is removed.
12	<b>Direct proportion</b>	<input type="checkbox"/> As one quantity increases, the other increases by the same percentage – e.g. extension of a spring is directly proportional to the force on it. <input type="checkbox"/> <b>Force = Extension x Spring Constant</b>
13	<b>Limit of proportionality</b>	When the force applied to a spring is so great that it becomes <u>inelastically</u> deformed. Extension of the spring will no longer be proportional to force.
14	<b>Displacement</b>	This measures the distance and direction that an object has travelled in a straight line from its starting point to its finishing point.

15	<b>Typical speeds</b>	<input type="checkbox"/> Walking = 1.5 m/s      Car = 25 m/s <input type="checkbox"/> Running = 3 m/s      Train = 30 m/s <input type="checkbox"/> Cycling = 6 m/s      Plane = 250 m/s
16	<b>Acceleration</b>	<input type="checkbox"/> The change in an object's velocity within a certain time. Measured in m/s <sup>2</sup> . <input type="checkbox"/> <b>Acceleration = <math>\frac{\text{Change in velocity}}{\text{Time taken}}</math></b>
17	<b>Drag</b>	<input type="checkbox"/> The frictional forces experienced when an object passes through a fluid (e.g. air resistance). <input type="checkbox"/> Drag increases as speed increases.
18	<b>Terminal velocity</b>	<input type="checkbox"/> When the drag forces on a falling object (e.g. parachute jumper) equal its weight. <input type="checkbox"/> The object stops accelerating and reaches its maximum speed.
19	<b>Newton's first law</b>	<input type="checkbox"/> A resultant force is needed to change the motion of an object <input type="checkbox"/> E.g. if an object is moving at 5 m/s and the resultant force is 0N, it will carry on moving at 5 m/s. <input type="checkbox"/> The object's tendency to keep moving at this constant speed is called <u>inertia</u> .
20	<b>Newton's second law</b>	<input type="checkbox"/> The acceleration of an object is proportional to the resultant force on it and inversely proportional to its mass. <input type="checkbox"/> <b>Resultant force = Mass x Acceleration</b>
21	<b>Newton's third law</b>	When 2 objects interact, the forces they exert on each other are equal and opposite.
22	<b>Light gates</b>	A pair of sensors that can calculate an object's speed and acceleration.
23	<b>Stopping distance</b>	Stopping distance = Thinking distance + Braking distance
24	<b>Thinking distance</b>	Affected by: <input type="checkbox"/> Speed <input type="checkbox"/> Reaction time (e.g. tiredness, drugs, alcohol).
25	<b>Braking distance</b>	Affected by: <input type="checkbox"/> Speed <input type="checkbox"/> Tyre & brake quality <input type="checkbox"/> Weather (e.g. ice)

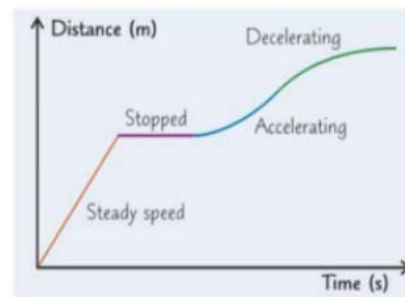
## Investigating the extension of a spring:



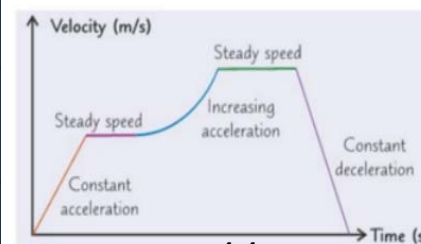
## Hooke's Law:



## Distance time graph:



## Velocity time graph:





# Y10 Spanish – Cycle 2 Where I live and Technology

1) Ser is used for			
	Ser	To be	
D	Date	Soy	I am
O	Occupation	Eres	You are
C	Characteristic	Es	He /she / it is
T	Time	Somos	We are
O	Origin	Sois	You all are
R	Relation	Son	They are
2) Estar is used for			
	Estar	To be	
P	Position	Estoy	I am
L	Location	Estás	You are
A	Action	Está	He /she / it is
C	Condition	Estamos	We are
E	Emotion	Estáis	You all are
		Están	They are

3) La Navidad		Christmas
La Nochebuena		Christmas Eve
El Año Nuevo		New Year’s Day
La Nochevieja		New Year’s Eve
El árbol de Navidad		The Christmas tree
Los regalos		The presents
Los juguetes		The toys
Abrir		To open
Dar		To give
Recibir		To receive

4) ¿Dónde vives?	Where do you live?
Vivo en un piso	I live in a flat
Vivo en una casa adosada	I live in a semi-detached house
Está en	It is located in
El campo	The countryside
La ciudad	The city
El pueblo	The town
Hay...	There is / there are
El salón	The living room
El comedor	The dining room
El dormitorio	The bedroom
El cuarto de baño	The bathroom
La cocina	The kitchen
La mesa	The table
La cama	The bed
La silla	The chair
El armario	The wardrobe

5) Las preposiciones	Prepositions
Al lado de	Next to
Detrás de	Behind
Entre	In between
Delante de	In front of
A la derecha de	On the right of
A la izquierda de	On the left of
Encima de	On top of
Cerca de	Close to
Lejos de	Far from

6) ¿Cómo es tu ciudad?	What’s your city like?
Mi ciudad ofrece	My city offers
Un gran almacén	A department store
El ayuntamiento	The town hall
El puerto	The port
Una mezquita	A mosque
Una fábrica	A factory
Una iglesia	A church
Las empresas	Businesses
donde se puede	where you can
Conseguir información	To get information
Coger el metro	To get the underground
Hay mucho que hacer	There is a lot to do
No hay nada que hacer	There is nothing to do
7) ¿Es mejor la ciudad o el campo?	Is the city or countryside better?
La pobreza	Poverty
El paro	Unemployment
Hay de todo	There is everything
La contaminación	Pollution
El alquiler	The rent
8) Conectores	Connectives
Además / también	Also
Por un lado... por otro lado	On the one hand... on the other hand
Así que / Por lo tanto	Therefore
Sin duda	Without a doubt

9) Cuando era pequeño	When I was little
Vivía en	I used to live in
Había	There was
Era	It was
Iba	I used to go
10) La tecnología	Technology
La red	The net
Las redes sociales	Social networks
El ordenador	The computer
Lo / las uso	I use it
Para...	In order to...
Compartir fotos	To share photos
Conocer a gente nueva	To get to know new people
Subir y ver vídeos	To upload and watch videos
Colgar fotos	To upload photos
Buscar música	To look for music
11) Las redes sociales	Social networks
Lo bueno/malo es que...	The good thing is that
Se puede	You can
Mantenerse en contacto	To keep in contact
Aprender cosas nuevas	To learn new things
Es gratis	It’s free
Hay el riesgo de ciberacoso	There is the risk of cyberbullying
Una falta de privacidad	A lack of privacy
Los jóvenes están enganchados	Young people are hooked