January – February

Year 11

KNOWLEDGEABLE AND EXPERT LEARNERS

Self Quizzing

Flash Cards

Mind Maps

Brain Dumps

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INDEPENDENT LEARNING BOOKLET

NAME: .....

TUTOR GROUP: .....

CONTENTS

You will need an A4 application booklet.

HOMEWORK:

- Your teacher will set specific tasks, with a deadline, on Class Charts
- Instructions for your homework and how to access it are in this booklet
- You must complete and hand in the work by the deadline

INDEPENDENT LEARNING EXPECTATIONS AND REWARDS:

- You should complete 1 task per day, 5 days a week.
- The tasks will be set on Class Charts to help you keep track of what you need to do.
- You must bring your ILB and application book to school every day.
- You can choose the subject/topic you want to work on.
- Your tutor will check your ILB regularly to see how you are getting on.
- You will be rewarded for going above and beyond expectations.

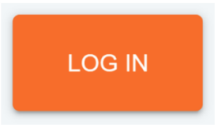
USING CLASS CHARTS

All of your homework will be set by your teachers using the Class Charts System.
You should check Class Charts every day to make sure you are up to date, and that you meet all your deadlines.
Below, shows you how to log on and track your homework.

Logging in to Class Charts

1. Enter your email address and password into the fields provided

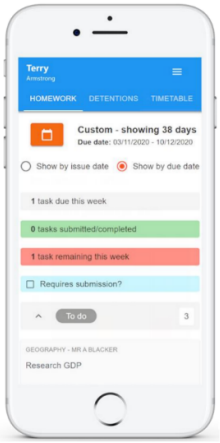
2. Click on the Log in button



3. Enter your date of birth if prompted and click on the OK button

Homework

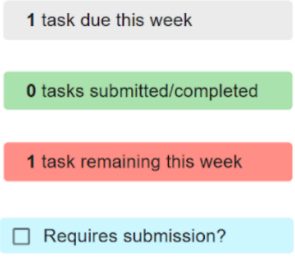
- Select the homework tab on our account.
- This will display a list of the homework tasks which you have been given.
- To change the date range for displayed homework tasks, click on the orange Date button.
- To display tasks in the order they are expected to be handed in, click on the Due date button.
- To mark a homework task as completed, view the homework task of your choice in more detail and tick the Completed checkbox.



To view a homework task in more detail, click on the expand icon in the bottom right hand corner of the homework tile. A popup will appear that contains the a description of the homework task, the estimated completion time and any links or attachments that may have been included.

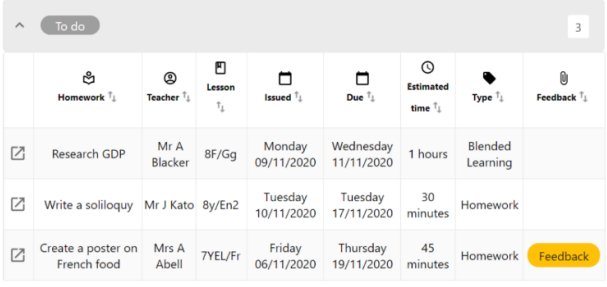
Keeping track of homework

To track your homework use the three banners above the homework status. This shows the the number of homework tasks that are due that week, how many of those tasks you have completed and how many tasks you still need to complete.



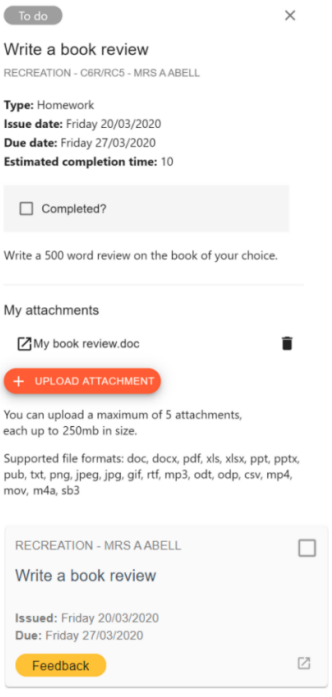
To only see homework tasks that require an attachment submission, tick the checkbox labelled Requires submission.

If you are viewing the Homework tab via a desktop or laptop, expanding a homework status category will display a table overview of each homework task for the selected date range.



Homework attachment submissions

For certain homework tasks, you may be asked by your teacher to upload your work as an attachment. When viewing a homework task in more detail, you will see the Upload attachment button if your teacher is expecting your work to be uploaded. To submit a homework attachment, click on the Upload attachment button and select the files of your choice. Successfully uploaded files will then appear above the button



If your teacher leaves feedback on one of your homework attachments, you will see a Feedback icon appear on the associated homework task.

To view the feedback, click on the expand icon in the bottom right hand corner of the homework tile. Your teacher's feedback will appear directly below your homework attachment

To do
To-Do: These are homework tasks that you need to complete. Once you have completed them, tick the checkbox

Completed
Completed: These are homework tasks that you have ticked as completed but have not been marked by your teacher

Submitted late
Late: These are homework tasks that have been handed in past the deadline.

Not submitted
Not submitted: These are homework tasks that were not handed in on time.

Submitted
Submitted: These are homework tasks that have been handed in on time.

HOW TO ACCESS SENECA

Seneca learning is a free online platform that will help you revise for all your subjects.

1. Go to https://senecalearning.com/en-GB/

2. Click 'Log In' at the top right hand corner.

3. Select 'Continue with Microsoft'.

4. Enter your school email and password.

5. Select the course(s) you want to work on

If you need any help accessing SENECA please speak to your class teacher, or Miss Holmes.

You can also scan this QR code for a video walkthrough of how to log in as a student

SCAN HERE

INDEPENDENT LEARNING LOG
MIND MAPS

Expectation this ½ term: Mind maps

1. Create 1 Mind Map a Day

- This should be done once a day , for approximately 20 minutes.
- All your Mind Maps should be evidenced in your application booklet.
- Use this log to track how what subjects you have done (see example)

Week Beginning	Monday	Tuesday	Wednesday	Thursday	Friday
EXAMPLE:	English: KG1 & 2	Science: KG2 & 4	History: KG4 & 5	PSHCE: KG 1 & 2	Drama: KG 1 & 3
5/01/2026					
ILB CHECK (10 Mind Maps) 12/01/2026					
19/01/2026					
ILB CHECK (20 Mind Maps) 26/01/2026					
02/02/2026					
09/02/2026					

MIND MAPS - INSTRUCTIONS

1.

Identify knowledge

Select a topic you wish to cover.

Decide which type of mind map you are creating

- **Retrieval**: No material
- **Concept**: Material needed

2.

Topics & Subtopics

Place the main topic in the centre of your page and identify subtopics that will branch off.

3.

Branch off

Branch of your subtopics with further detail.

E.g. Key terms, definitions, examples or descriptions.

Try not to fill the page with too much writing.

4.

Review

Is the information on your mind map accurate?

Green pen: Do you need to add anything?

Green pen: Do you need to correct anything?

5.

Revisit it

Use it to help you prioritise your revision; you can **RAG** rate it.

Use it to help you summarise the topic, or use your mind map to teach someone else a topic.

Subject: Business 9-1 | Topic: Making Financial Decisions 2.4 | Year Group: 11

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Profit

Key Idea	The **profits** made by a business consist of the money that is left over once all of the expenses incurred in running the business have been paid.
Basic Formula for Profit	Total Revenue – Total Costs
Different types of Profit	Gross Profit Net Profit
Costs	Businesses usually separate their costs into **variable costs** and **fixed costs** **Variable costs change with output** **Fixed costs stay the same no matter how many products the business sells**
Gross Profit	Gross profit is the difference between the money received from selling goods and services and the cost of making or providing them. It ignores any fixed costs, or **overheads**, so it is useful in showing how much profit each product or service generates.
Gross Profit Calculation	*Gross profit = sales revenue – cost of sales*
Net Profit	**Net profit** is the difference between the amount of money received from selling goods and services and **all** of the costs incurred in order to make them. Net profit is often considered to be the more important **profit** figure, as it includes all of the **fixed costs** and other **overheads** that a business has to pay.
Net Profit Calculation	*Net profit = gross profit – other operating expenses and interest*

Gross Profit Margins

Key Idea	**Profit** calculations alone are of limited use. While **gross profit** can be compared over time to see whether products have become more or less profitable, additional information is needed to assess whether a business has performed well.
Key Idea	In order to better assess the performance of a business, it is necessary to calculate the **profit margin**. Profit margin is the amount of profit expressed as a percentage of sales revenue. Since there are two different measures of profit, there are also two different types of profit margin: gross profit margin and **net profit margin**
Gross Profit Margin	The **gross profit margin** is the percentage of sales revenue that is left once the **cost of sales** has been paid. It tells a business how much gross profit is made for every pound of sales revenue received. For example, a gross profit margin of 75% means that every pound of sales provides 75 pence of gross profit.
Gross Profit Margin Calculation	Gross Profit/ Sales Revenue X 100
Using the gross profit margin	Comparing gross profit margins over time can be useful for businesses. In the example above, the gross profit margin decreased despite the fact that the sales revenue tripled and gross profit doubled. This indicates that the cost of sales, which includes raw materials, increased faster than the business increased the price it charged its customers. This business might respond by increasing the price that it charges its customers or by negotiating lower prices for raw materials with its suppliers.

Net Profit Margins

Key Idea	The **net profit margin** is the proportion of **sales revenue** that is left once all costs have been paid. It tells a business how much **net profit** is made for every pound of sales revenue received. For example, a net profit margin of 32% means that every pound of sales provides 32 pence of net profit.
Net Profit Margin Calculation	Net Profit / Sales Revenue X 100
Using the net profit margin	**Comparing the net profit margin with the gross profit margin** - By comparing the net profit margin with the gross profit margin for the same time period, a business can identify how significant its fixed costs, or **overheads**, are. For example, a business that has a gross profit margin of 50% and a net profit margin of 10% knows that for every pound of goods sold, 40 pence is used to pay fixed costs. This can then be used to identify whether there is any scope to reduce these fixed costs. **Comparing net profit margins over time** - By comparing net profit margins over time, a business can identify what is happening to its costs. For example, a decrease in net profit margin indicates either that sales revenue has fallen faster than costs or that costs have increased faster than sales revenue.

Average Rate of Return

Key Idea	The average rate of return is a way of comparing the profitability of different choices over the expected life of an investment. To do this, it compares the average annual profit of an investment with the initial cost of the investment. This is necessary in order to compare investments that might last for different periods of time.
Kay Idea	Businesses often have to make investment decisio ns. This might involve deciding which piece of equipment or machinery to buy, or whether to move to bigger premises. Any investment is made in the hope that in return the business will see its profits increase.
ARR calculation	Average Annual Profit / Cost of Investment X 100
Average Annual Profit calculation	Total Profit / number of years

Subject: Business 9-1 | Topic: Making Financial Decisions 2.4 | Year Group: 11

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Information from graphs and charts

Key Idea	Businesses have access to a lot of numerical information, also called **quantitative** information. Businesses often use this information to help them make business decisions. Such information might be available in internal documents, such as sales reports or financial documents, and other information might come from external sources, such as government statistics.
Quantitative Data	This is data or information that is presented by numbers like statistics
Charts	A chart is used to present information in the form of a graph, a diagram or a table. There are many different types of chart, including **pie charts**, **bar charts**, **pictograms** and **infographics**.
Graphs	A graph is a specific type of chart that illustrates a relationship between two or more **variables**. These are often plotted on two axes, vertical and horizontal. All graphs are types of chart, but not all charts are graphs.
Reading data from graphs and charts	When extracting information from charts and graphs, it is important to: • identify any trends the graph or chart shows • check the scales used on the **axes** • be aware of whether the data show units, **percentages** or **percentage change** • read the chart title and any labels used

Financial Data

Key Idea	The financial position of a business is crucial to all decisions that it makes. Using financial information, a business should be able to identify what options it can afford when making decisions. This financial data can be used to forecast how decisions might affect the business' **cash flow** and assess any impact on future **profits**.
Costs and revenues	A business should be aware of what is happening to its **total costs** and **revenues**, and how well it is able to control them. This makes it easier to forecast what might happen in the future.
Gross and net profit	Identifying what is happening to costs and revenues enables a business to calculate how this might affect both **gross profit** and **net profit**, using historical profit information.
Profit Margins	**Profit margins** can be calculated and compared either to the business' previous figures or to competitors' figures. They can help a business to understand what is causing any change in its profit levels.
Cash Flow	Businesses need access to cash in order to survive. Accurately forecasting the cash flow in and out of a business is crucial when deciding what a business can and cannot afford to do.
Break Even	Knowing the **break-even** point in the business' output is important when making decisions about which products to make. It can help a business to avoid making unprofitable products.
Average Rate of Return	Whenever investment decisions are required, a business will want to compare the expected returns from the options available. Calculating the **average rate of return** for each project enables a business to do this. This helps the business to identify the most **profitable** options.

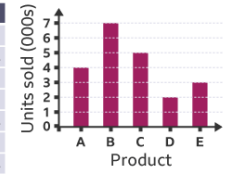
Benefits of using financial data	• Making use of financial data often requires the use of percentages and percentage change calculations over time. This enables a business to see trends and make comparisons, which can be helpful when making decisions. In addition, this data can be useful when communicating with **shareholders** or potential lenders about the performance of a business.
Limitations of using financial data	• Financial data can only be used after it has been collected, meaning that it is always out of date. While it can give insights into how a business has performed, it cannot predict the future. Business owners must take this into consideration when using company accounts to make big decisions. • When making decisions, a business owner should ensure that they are using a sufficient time period of information and a wide range of sources. • Another limitation of financial data is the fact that statistics and data can be interpreted differently using different methods, which can lead to different conclusions being drawn. • The final limitation of using financial data is that it only shows how successful a business is in financial terms. Financial success is not the only indicator of business success, although to many businesses it is the most important. Some businesses judge their success in terms of their environmental impact or according to their ethical aims.

Pie chart

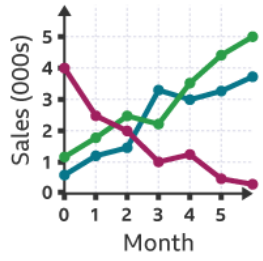
Diagram

Shoe design	A	B	C	D	E
Shoe size 1	3	1	NA	4	1
Shoe size 2	1	2	2	5	NA
Shoe size 3	6	3	1	3	2
Shoe size 4	NA	1	NA	1	1
Shoe size 5	5	NA	2	3	NA
Shoe size 6	5	2	NA	4	1
Shoe size 7	NA	NA	1	2	NA

Table



Bar chart



Line graph

Scatter diagram

Subject: Business 9-1	Topic: Making Financial Decisions 2.4	Year Group: 11

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Marketing Data

Key Idea	**Marketing** data can provide a variety of **quantitative** and **qualitative** information. This data often comes from **market research**, which can be used to obtain both **primary data** and **secondary data**. All of this information can be invaluable when making business decisions.
Key Idea	Marketing data can provide sales forecasts and promotional plans that may affect other areas of a business. For example, if a business is planning to promote a product, it will need to ensure that its production departments can cope with any anticipated increase in sales.

Understanding Business Performance

Key Idea	There are a number of ways to measure business performance: • changes in costs • changes in revenue • gross profit • net profit • gross profit margin • net profit margin
Key Idea	Most of the information required to analyse the performance of a business is contained within its **accounts**. Particular care is required if this information is used to compare the performance of one business against another business. This is because different businesses might have different accounting periods

Market Data

Key Idea	Market data refers to information about the characteristics that make up a particular market. It includes both **economic** and **demographic** factors. These factors may affect the behaviour of consumers within the market and the level of demand for products and services.
Economics Factors	Economic factors relate to money and wealth. They include: 1. consumer incomes 2. exchange rates 3. interest rates 4. inflation rate 5. unemployment rates.
Demographic Factors	Demography refers to the composition of the population. Demographic data is useful for business decision-making as it can tell businesses about changes in population size, migration and population structure. 1. Age 2. Income 3. Gender 4. Ethnicity 5. Marital status 6. Education 7. Employment status

Making Business Decisions

Key Idea	Businesses make decisions using the information that they have available. It is important to ensure that any information used is: • accurate • sufficient • up to date
Accurate	Information used to make decisions needs to be accurate and complete. Inaccurate or incomplete information is likely to lead to incorrect business decisions being made. The consequences of this could be serious, potentially leading to a business failing.
Sufficient	One set of data, particularly financial data, can be meaningless unless put into context. This might mean comparing it with historical data or data from similar businesses. This is particularly true for seasonal **goods** and **services**, such as ice cream, where comparing sales in the summer months against sales in the winter months would not give a realistic growth figure for the business.
Up to date	Information needs to be kept up to date to ensure that it remains relevant. It is not just the passing of time that makes information go out of date. Any significant changes in the market can make data less useful. For example, the emergence of a new competitor would make historical market share data less useful.
Other limitations	Even when the information used to make decisions is accurate, sufficient and up to date, the way that such information is used may have limitations. For example, the **average rate of return** is often used to help a business make decisions by comparing the profitability of different investment options. However, this technique does not consider the effects of inflation on the value of cash

Subject: Computer Science	Topic: Digital Impact	Year Group: 11

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Legislation

1	Although digital technology has been hugely beneficial to mankind, it can be argued it has also had a negative impact on some sections of society and the environment. Society has reacted to many of these issues by creating legislation that governs the use of digital technology and puts in place penalties if rules or laws are broken.

Issues around Copyright

2	The Copyright Designs and Patents Act (1988) gives creators of digital media the rights to control how their work is used and distributed. Music, books, videos, games and software can all be covered by copyright law. Anything which you design or code is automatically copyrighted and may not be copied without your permission, as the digital creator.

Key Vocabulary

1	Copyright	The exclusive and assignable legal right, given to the originator for a fixed number of years, to print, publish, perform, film, or record literary, artistic, or musical material.
2	Cloud Storage	Cloud storage is a model of computer data storage in which the digital data is stored in logical pools. The physical storage spans multiple servers, and the physical environment is typically owned and managed by a hosting company.

Cloud Storage Impact

1	There is increased pressure on modern organizations not only to make profits, but also to make business decisions that are socially and environmentally responsible. Many offices have a "green policy" that aims to reduce their environmental impact in terms of energy usage, use of physical resources such as paper, and pollution and waste. For companies utilizing cloud storage and services, it's also important to consider the environmental impact of these services, and consider carefully how they compare to more traditional IT practices.

Impact on Society

1	While there have been many new employment opportunities in the software sector, digital technologies may well have contributed to the decline in traditional manufacturing jobs. Automation, the introduction of robotics, expert systems and Computer Aided Design and Manufacturing have displaced many jobs. However, the quaternary sector that supports these digital technologies has grown significantly.

Subject: Computer Science	Topic: Ethical, Legal and Environmental	Year Group: 11

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Ethical and Legal Issues

1

- Digital Divide
- Acts
  - Data Protection Act
  - Computer Misuse Act
  - Copyright Design and Patents Act
  - Cookies Law
- E-waste
- Future proofing
- Cloud Computing and Storage
- Local Vs Hosted Applications
- Privacy
- Social Media

Cultural Issues

1

The introduction of computers has changed society, sometimes for the better, sometimes for the worse.

'Cultural issues' is the term used for computer matters that have an effect on the nature and culture of society. Some of these issues include:

- the digital divide
- the changing nature of employment

Data Security

2

Personal data is precious and needs to be kept safe. Unfortunately, there are people that attempt to hack systems in order to gain access to other people's data. Social media accounts, phone mailboxes and networks that computers connect to are all prone to hacking.

Some people may also use malware to obtain data. Recent times have seen the increased use of a type of malware known as ransomware. People who write ransomware do it to extort money from unsuspecting users. Once the ransomware infects a computer it encrypts data on it, denying users access unless a ransom is paid.

Key Vocabulary

1	Ethical Issues	Are about what would be considered right and wrong by society.
2	Legal Issues	Are about what's lawfully right or wrong
3	Cultural Issues	Are how groups of people may be affected
4	Environmental Issues	Are those that cause potential damage to the work we live in.

Environmental Issues

1

Environmental issues are those where the manufacturing and use of computers has had a negative impact on the environment.

Resources are needed to in order for computers to be produced, distributed and used. Metals and plastics are used to manufacture components, while energy is expended in distributing equipment and in using it.

Subject: Computer Science	Topic: Cyber Security	Year Group: 11

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Cyber Security and Threats

1	Cyber Security is the processes, practices and technologies designed to protect networks, computers, programs and data from attack, damage or unauthorized access. Cyber Security Threats: - Social engineering techniques - Malicious code - Weak and default passwords - Misconfigured access rights - Removable media - Unpatched and or outdated software

Prevention and Detection of Threats

2	- Understand and be able to explain the following security measures: - Antivirus Software - Firewall - Biometric measures (particularly for mobile devices) - Password systems - CAPTCHA (or similar) - Using email confirmations to confirm a user's identity - Automatic software updates.

Key Vocabulary

1	Malware	Is an umbrella term used to refer to a variety of forms of hostile or intrusive software
2	Cyber Security	is protecting networks, computers, programs and data from attack, damage or unauthorized access.
3	Social Engineering	Using people as a weak point in a system
4	Virus	In computing terms it is something that maliciously affects computer software and code.

Testing Systems

1	- Penetration Testing is the process of attempting to gain access to resources without knowledge - White Box Testing is to simulate a malicious insider who has knowledge of and possibly basic credentials for the target system - Black Box Testing is to simulate an external hacking or cyber warfare attack

Social Engineering Techniques

1	- Understand and be able to explain the following security measures: - Antivirus Software - Firewall - Biometric measures (particularly for mobile devices) - Password systems - CAPTCHA (or similar) - Using email confirmations to confirm a user's identity - Automatic software updates.

Engineering Manufacture (From 2022)

Topic Area 4 Developments in Engineering Manufacture
Inventory Management; JIT MRP / Lean Manufacture / Globalisation

Year 10
Year 11

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Inventory Management - Inventory (often referred to as stock) refers to goods and/or materials held by a business for the purpose of resale or production. Inventory management simply means methods of controlling stock through the manufacturing process or release of materials/products.

Just in time (JIT) manufacturing

JIT production is a method of organising the manufacture of products so they are made to order – they arrive 'just in time' for the assembly or manufacture of a product.

Benefits include:

- Smaller manufacturing facilities due to no need to store materials/products.
- Products/components never become obsolete
- No risk of unsold stock

Disadvantages:

- Reliance on transport networks
- Reliance on reliable suppliers

Material requirements planning (MRP)

Material requirements planning (MRP) is a system for calculating the materials and components needed to manufacture a product. It consists of three primary steps:

1. Taking inventory of the materials and components in stock
2. Identifying which additional ones are needed
3. Scheduling their production or purchase

MRP is done primarily through specialised software.

Benefits include:

- Inventory is available right when it's needed and at the lowest possible cost.
- Improves the efficiency, flexibility and profitability of manufacturing operations.
- It can make factory workers more productive, improve product quality and minimise material and labour costs.
- helps manufacturers respond more quickly to increased demand for their products and avoid production delays.

Disadvantages:

- Software can be expensive
- Cost of training staff
- Still room for human error which can have huge cost implications.

Lean Manufacture - is a production method which is aimed at reducing times within the production system as well as response times from suppliers and customers. T.IM.W.O.O.D identifies where waste can occur.

Transportation	… is the process of moving something from one place to another. It does not add any value to the customer, so it should be minimised as much as possible.
Inventory	… is the waste that is associated with unprocessed inventory. This includes the waste capital tied up in excess stock, wasted transport used moving the inventory.
Movement	… any movement made that could have been used for another purpose. Anything from staff bending over to pick something up to CNC machines running inefficient programs.
Waiting	… is any form of waiting that must be done by either a member of staff or machinery to complete a task.
Over processing	…unnecessarily manufacturing a product where it may not need to be manufactured. For example the underside of a worktop.
Over production	… the production of more product/stock than is actually required or expected to be required.
Defects	… is any characteristic of a product which hinders its usability for the purpose for which it was designed and manufactured

Globalisation - is the process of interaction and integration among people, companies, and governments worldwide. Globalisation has accelerated since the 18th century due to advances in transportation and communications technology.

Requirement for transportation	Selling to as many markets as possible requires materials and products to be transported all over the world via air, sea and land. Globalisation places a huge demand on transportation, and subsequent impact on the environment.
International standards	Manufacturing to international standards is vital if you hope to sell your products or materials globally. International standards help ensure that materials and products meet a specification which helps keep customers safe.
Influence on employment opportunities	Manufacturing and selling goods globally has led to many job opportunities around the world, including developing countries.
Differences in employment conditions	Terms and conditions of employment relate to the requirements set out in an employee's contract. These outline the rights for both the employee and the business. Employment terms and conditions of businesses can include rights, responsibilities and duties.
Influence on product cost	Where in the world a product, material or service is sold, can have a huge impact on the cost. This can range from how much the raw materials cost, to how much the product can be sold for based on the economic standing of the country.
Implications for sustainability	Many manufacturers move their manufacturing facilities to be closer to a source of raw materials. Great care must be taken when doing this so that materials are used in a responsible way.
Consideration of economic, social, ethical and environmental implications	We must consider how globalisation can impact the economy of the country we operate from – it can greatly improve developing economies and severely negatively impact others when manufacturing plants move overseas.

English Language Paper 1 | Explorations in Creative Reading and Writing | Year Group: 10 & 11

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Question Summary

Q.	Skill(s) assessed	Marks, timings and question stems
1	**Retrieval and inference**	**4 marks** (10 minutes inc. reading source) "List four things…"
2	**Language**	**8 marks** (15 minutes) "How does the writer use language here to…" (2-3 PEA)
3	**Structure**	**8 marks** (15 minutes) "How has the writer structured the text to interest you as a reader?" (3 PEA)
4	**Evaluation**	**20 marks** (20 minutes) *"Statement on an aspect of the text."* To what extent do you agree? (3 PEA)
5	**Creative Writing**	**40 marks** *24 marks for content and organisation* *16 marks for technical accuracy* (45 minutes) Choice between writing based on a visual prompt or a written one. (Drop, Zoom, Zoom, Shift)

Useful Approaches to Creative Writing (Q5)

1	**Use an unreliable narrator**	Give your reader reason to doubt the accuracy of the story told e.g. write as someone old or young
2	**Choose an unexpected perspective**	Obvious isn't always best. Find interesting perspectives!
3	**Give your characters inner conflict**	A difficult decision or social situation is just as interesting as a fight!
4	**Use a cyclical structure**	Can really help contain a story and give a powerful ending
5	**Make your characters vulnerable**	Weaknesses make your characters interesting!
6	**Avoid using dialogue**	Summarise conversations rather than write every word
7	**Start at the end (and then flash back)**	Confuse your reader to start with, then clear up the confusion bit by bit
8	**Use a short timeline**	Covering a single hour is usually better than a lifetime
9	**Show, don't tell**	"Tears streamed down her cheeks" is better than "she was crying"

Key Language Terminology (Q2 and Q4)

1	**Atmosphere**	The feeling associated with a piece of writing e.g. dark or oppressive	6	**Connotation**	What a word or phrase implies or suggests
2	**Figurative language**	Any language not meant literally e.g. metaphor and simile	7	**Hyperbole**	Strong exaggeration, not meant to be taken literally
3	**Imagery**	Visually descriptive language	8	**Juxtaposition**	Placing two things together to highlight their contrast
4	**Lexis**	Word choices – words chosen with specific effects in mind	9	**Narrative Perspective**	The viewpoint from which a text is written
5	**Semantic field**	Words and phrases with related meanings	10	**Short sentences**	Used for dramatic impact, often in moments or action

Key Structural Terminology (Q3 and Q4)

1	**Ambiguity**	Intentional withholding of information to keep a reader guessing	6	**Analepsis**	Flashback – moving to an earlier point in a narrative's chronology
2	**Climax**	The peak of tension within a story – it's most thrilling point	7	**Cyclical**	A structure that returns to where it started
3	**Focus shift**	Changes of location, character or subject as a story progresses	8	**Foreshadowing**	Hints of later events used to build tension and guide readers
4	**Fragment**	An incomplete sentence, usually missing a key part	9	**Listing**	Numerous similar items are ideas one after the other
5	**Motif**	A repeated image, words, phrase or idea in a text	10	**Repetition**	A word or phrase used multiple times throughout a text

English Literature | Romeo and Juliet | Year Group: 10 & 11

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Plot Summary

1	**Prologue**	Sets up main themes of the play. Provides an overview of the action.
2	**Act 1**	Montagues and Capulets brawl. Romeo depressed about Rosaline. Paris wants to marry Capulet's young daughter Juliet. Juliet's mother and Nurse encourage Juliet to marry Paris. Romeo attends Capulet party, sees Juliet and falls in love.
3	**Act 2**	Balcony Scene – R&J decide to get married. Romeo asks Friar Lawrence to conduct ceremony. Friar Lawrence hopes marriage will end feud. Nurse visits Romeo to check his commitment. Friar Lawrence marries R&J.
4	**Act 3**	Romeo refuses to fight Tybalt. Mercutio killed by Tybalt and Tybalt by Romeo. Romeo is banished. Juliet told she is to be married to Paris. Capulet flies into a rage after Juliet refuses.
5	**Act 4**	Juliet asks Friar Lawrence for help. Friar Lawrence supplies a potion and a plan. Juliet agrees to marry Paris. Wedding plans are underway but Juliet found 'dead' by the Nurse.
6	**Act 5**	Romeo thinks Juliet is dead. He returns to Verona with a poison. Friar Lawrence discovers Romeo did not get his letter. Romeo kills Paris at Juliet's tomb, takes poison and dies. Juliet wakes and finds Romeo, stabs herself. The feud is over.

Characters

1	**Romeo Montague**	Initially a typical Petrarchan lover, his love for Juliet is incredibly romantic, impulsive and passionate.	6	**Lady Capulet**	Juliet's mother. Cold and distant for most of the play, she expects Juliet to follow in her own footsteps.
2	**Juliet Capulet**	Young and innocent, not yet 14.Her love for Romeo matures her and makes her bolder in her defiance.	7	**Nurse**	Juliet's nursemaid, they have a close relationship. She acts as confidante and messenger for Romeo and Juliet.
3	**Lord Capulet**	Juliet's father. Shows concern for Juliet's welfare, but can be aggressive and tyrannical when disobeyed.	8	**Tybalt**	Juliet's ruthless, hot-tempered and vengeful cousin. Has a deep, violent hatred of the Montagues.
4	**Mercutio**	A relative of the Prince and a high-ranking man. Mixes well with both families and is Romeo's loyal best friend.	9	**Benvolio**	Cares about his cousin Romeo and tries to keep peace between the families.
5	**Paris**	A rich and highly-regarded young man, kinsman to the Prince, who is determined to marry Juliet.	10	**Friar Lawrence**	A caring, trusted, kind man of the Church who is optimistic about the possibility of peace.

Themes

1	**Love**	Romantic, sexual, superficial and platonic forms of love are present in the play.
2	**Death**	The certainty, fear, acceptance and welcoming of death is portrayed in the play.
3	**Fate versus Free Will**	This is the idea of an inevitable destiny that cannot be escaped.
4	**Honour and loyalty**	The importance of family & friendship.
5	**Masculinity and femininity**	The play explores traditional views of masculinity and the role of women: Juliet chooses to control her own destiny.

Context

1	**Queen Elizabeth**	Reigned from 1558-1603. Her reign saw England prosper and become a major player in Europe. She chose not to marry, defying the expectations of a patriarchal society.
2	**Astrology**	In both 14th-century Italy and Elizabethan England stars linked to fate and fortune, were believed to predict and influence the course of human events.
3	**The role of women**	Society was '**patriarchal**' (led by men). Women were said to be lower than men in The Great Chain of Being. Women were expected to marry, to bear children and be subservient to men.

Key Vocabulary

1	**Foreshadowing**	R&J's deaths are hinted at throughout the play, creating suspense for the audience.
2	**Hamartia**	Both protagonists can be considered to be tragic heroes: high status, sympathetic characters whose fatal flaws (their impulsiveness) contribute to their inevitable deaths
4	**Sonnet**	A poem of 14 lines with a strict rhyme scheme, usually associated with love and romance. R&J speak in a shared sonnet when they first meet.
5	**Dramatic Irony**	Some things are revealed to the audience before the characters, increasing tension.
6	**Juxtaposition**	Opposites that are placed next to each other. Each idea is being emphasised.
7	**Motif**	Image, sound, action or other figure that has symbolic significance. Some motifs in R&J include light + dark and poison.

English Literature | A Christmas Carol | Year Group: 10 & 11

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Plot Summary

1	**Stave 1**	Scrooge is introduced; he refuses to warm the office up for Bob Cratchit; he refuses to make a charity donation; refuses to eat Christmas dinner with Fred; is irritated by Christmas as it is interrupting his business; sees Marley's ghost who warns him he will be visited by three spirits to make him change his miserly ways.
2	**Stave 2**	The Ghost of Christmas Past takes Scrooge back in time to show him: his village; him alone at school; his sister collecting him from school; a party at Fezziwig's; Belle breaking off their engagement and Belle with her husband. Unable to take any more, Scrooge begs the spirit to take him back home. When he is back home, he falls asleep almost instantly.
3	**Stave 3**	The Ghost of Christmas Present shows Scrooge how the Cratchit family celebrate Christmas; Scrooge becomes worried about Tiny Tim not surviving in the future. The spirit then takes Scrooge to see how others celebrate Christmas including Fred's Christmas party. The spirit begins to age and under its robe Scrooge sees two children: Ignorance and Want.
4	**Stave 4**	The Ghost of Christmas Yet to Come arrives and Scrooge is terrified of him. It shows Scrooge a group of businessmen discussing someone's death. He is taken to a pawn shop where the possessions of the dead man are being sold. He is next taken to the Cratchit household where the family are grieving for Tiny Tim. Scrooge is then taken to a graveyard and sees his name on a gravestone. He begs the spirit and says he will change his ways.
5	**Stave 5**	Scrooge wakes up in his own bed and is now transformed! He sends a prize Turkey to the Cratchit family and even promises to give a huge charity donation to the poor. Scrooge then goes to Fred's to attend the party and is welcomed in. He also gives Bob Cratchit a raise and becomes a second father to Tiny Tim who does not die.

Characters

1	**Scrooge**	The protagonist, a mean old loner who hates Christmas.	6	**Bob Cratchit**	Scrooge's hardworking and unpaid clerk.
2	**Marley**	Scrooge's deceased business partner who appears as a ghost to warn Scrooge to change his ways.	7	**Tiny Tim**	Bob Cratchit's ill and vulnerable son.
3	**Ghost of Christmas Past**	A shape changing spirit that represents memory and has light/a flame at the top of its head.	8	**Fred**	Scrooge's patient, jovial nephew. The son of his beloved sister, Fan.
4	**Ghost of Christmas Present**	A jolly spirit (resembles Father Christmas) that represents generosity and Christmas spirit.	9	**Fezziwig**	Scrooge's generous former employer.
5	**Ghost of Christmas Yet to Come**	A silent, sinister spirit in a black, hooded cloak who represents death.	10	**Belle**	Scrooge's former fiancée who breaks off their engagement because he valued money more than their relationship.

Themes

1	**Greed and selfishness**	Characters such as Scrooge represent the middle classes who sought to hoard rather than share their wealth.
2	**Poverty**	Scrooge despises the poor and thinks they are lazy at first. At the end, he realizes he can share his wealth with the poor.
3	**Transformation**	The spirits show Scrooge scenes that prompt his transformation. At the end of the novella, Scrooge's transformation into a kinder human being is complete.
4	**Christmas**	Scrooge learns the true meaning of Christmas is to spend time with your family and loved ones.
5	**Social responsibility**	Ignorance and Want remind Scrooge that turning a blind eye to the plight of the poor creates desperate people that turn to crime to support themselves.

Context

1	**Charles Dickens**	Born in1812 to a middle class family. His dad was imprisoned for debt leading to poverty for the family. Dickens began working difficult jobs at a young age.
2	**Poverty**	in 1834, the Poor Amendment reduced the amount of help available to the poor, forcing them to seek help from workhouses. Conditions were incredibly harsh in the Victorian era.
3	**Christmas**	Christmas was fairly a low key celebration. During Queen Victoria's reign, workers were given two days holiday for Christmas. Turkey was only eaten by the rich, goose was a cheaper option.

Key Vocabulary

1	**Simile**	Comparing two things using 'like' or 'as', e.g. "hard and sharp as a flint"
2	**Motif**	Repeated image or symbol, e.g. light being used several times in the novella
4	**Allegory**	Characters/events represent ideas about religion, morals or politics.
5	**Novella**	A short novel or long short story.
6	**Resolution**	The Point where conflict is solved, e.g. Scrooge's redemption.
7	**Redemption**	Being saved from sin, error or evil, e.g. Scrooge realising he needs to change his miserly ways and then does in stave 5.

Subject: French — Foundation Tier Knowledge Organiser — KS4

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Present Tense

1	Je suis	I am
2	J'ai	I have
3	Je fais	I do/make
4	Je vais	I go
5	J'aime	I like
6	Je déteste	I hate
7	Je joue	I play
8	Je mange	I eat
9	Je bois	I drink
10	Je lis	I read
11	J'achète	I buy
12	Je trouve	I find
13	Je travaille	I work
14	Je pense	I think
15	c'est	it's

Perfect Tense

1	Je suis allé(e)	I went
2	Je suis parti(e)	I left
3	J'ai fait	I did/made
4	J'ai aimé	I liked
5	J'ai détesté	I hated
6	J'ai joué	I played
7	J'ai mangé	I ate
8	J'ai acheté	I bought
9	J'ai trouvé	I found
10	J'ai travaillé	I worked
11	J'ai regardé	I watched
12	J'ai vu	I saw
13	J'ai bu	I drank
14	J'ai lu	I read

Near Future Tense – I am going to…

1	Je vais être	be
2	Je vais avoir	have
3	Je vais aller	go
4	Je vais faire	do
5	Je vais jouer	play
6	Je vais regarder	watch
7	Je vais manger	eat
8	Je vais acheter	buy
9	Je vais travailler	work
10	Je vais voir	see
11	Je vais boire	drink
12	Je vais devenir	become
13	Je vais voyager	travel
14	ce sera	it will be

Conditional Tense – I would like to…

1	Je voudrais être	be
2	Je voudrais avoir	have
3	Je voudrais aller	go
4	Je voudrais faire	do
5	Je voudrais jouer	play
6	Je voudrais regarder	watch
7	Je voudrais manger	eat
8	Je voudrais acheter	buy
9	Je voudrais travailler	work
10	Je voudrais voir	see
11	Je voudrais boire	drink
12	Je voudrais devenir	become
13	Je voudrais voyager	travel
14	ce serait	it would be

Il y a

1	Il y a	There is/are
2	Il y avait	There was/were
3	Il y aura	There will be
4	Il y aurait	There would be

Structures with infinitives

1	J'aime aller/faire	I like going/doing
2	Je n'aime pas aller/faire	I don't like going/doing
3	il faut aller/jouer	you have to go/play
4	on peut/doit aller	you can/must go

Imperfect Tense

1	J'étais	I was/I used to be
2	J'avais	I had/I used to have
3	C'était	It was
4	il y avait	there was/were

Subject: French

Foundation Tier Knowledge Organiser

KS4

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Sentence Starters

1	je pense que	I think that
2	je crois que	I believe that
3	à mon avis	in my opinion
4	selon moi	in my opinion
5	je dirais que	I would say that

Connectives

1	et	and
2	ou	or
3	où	where
4	parce que	because
5	car	as
6	mais	but
7	pourtant	however
8	aussi	also

Intensifiers

1	un peu	a bit
2	assez	quite
3	très	very
4	vraiment	really
5	beaucoup	much/ a lot
6	trop	too

Adjectives

1	amusant	fun
2	intéressant	interesting
3	passionnant	exciting
4	utile	useful
5	beau	beautiful
6	fantastique	fantastic
7	incroyable	incredible
8	ennuyeux/ barbant	boring
9	fatigant	tiring
10	difficile	difficult
11	cher	expensive

Signposting Time Frames

1	l'année dernière	last year
2	la semaine dernière	last week
3	hier	yesterday
4	normalement	normally
5	d'habitude	usually
6	ce soir	this evening
7	la semaine prochaine	next week
8	l'année prochaine	next year
9	dans l'avenir	in the future

Frequency

1	tous les jours	every day
2	de temps en temps	from time to time
3	une fois par semaine	once a week
4	deux fois par mois	twice a month
5	ne…jamais	never
6	toujours	always
7	souvent	often
8	quelquefois	sometimes

Exclamations!!!

1	Quel dommage!	What a shame!
2	Quel plaisir!	What a pleasure!

Perfect Phrases For Any Essay

1	Hier je suis allé au cinema/au stade/au restaurant/au parc/au café/à la piscine et c'était…	Yesterday I went to the cinema/stadium/restaurant/park/café/swimming pool and it was…
2	J'ai mangé une pizza/des frites/un hamburger/du jambon/du poisson/une glace et c'était…	I ate a pizza/fries/a hamburger/some ham/fish/an ice-cream and it was…
3	J'ai joué au foot/au tennis/au rugby/au golf et c'était…	I played football/tennis/rugby/golf and it was…
4	J'ai bu un coca/un jus d'orange et c'était…	I drank a coke/an orange juice and it was…

Fancy Phrases

1	je l'ai trouvé génial	I found it great
2	je me suis bien amusé(e)	I really enjoyed myself
3	j'ai tellement hâte	I'm really looking forward to it

Subject: French

Foundation Tier Knowledge Organiser

KS4

BECKFOOT SCHOOL
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Present Tense - I

1	Je suis	I am
2	J'ai	I have
3	Je fais	I do/make
4	Je vais	I go
5	Je bois	I drink
6	Je lis	I read
7	Je vois	I see
8	J'achète	I buy
9	Je trouve	I find
10	Je travaille	I work
11	Je pense	I think
12	Je crois	I believe
13	Je dois	I have to
14	Je peux	I can
15	Je veux	I want to

Perfect Tense (past)- I

1	Je suis allé(e)	I went
2	Je suis parti(e)	I left
3	J'ai fait	I did/made
4	J'ai aimé	I liked
5	J'ai détesté	I hated
6	J'ai joué	I played
7	J'ai mangé	I ate
8	J'ai acheté	I bought
9	J'ai trouvé	I found
10	J'ai travaillé	I worked
11	J'ai regardé	I watched
12	J'ai vu	I saw
13	J'ai bu	I drank
14	J'ai lu	I read

Imperfect Tense - I used to

1	J'étais	… be
2	J'allais	… go
3	J'avais	… have
4	Je faisais	… do
5	Je jouais	… play
6	Je regardais	… watch
7	J'écoutais	… listen
8	Je mangeais	… eat
9	Je buvais	… drink
10	J'achetais	… buy
11	J'aimais	… like
12	Je lisais	… read
13	Je travaillais	… work
14	Je détestais	… hate

Future Tense – I will

1	Je serai	…be
2	J'aurai	…have
3	J'irai	…go
4	Je ferai	…do
5	Je jouerai	…play
6	Je regarderai	…watch
7	Je mangerai	…eat
8	J'achèterai	…buy
9	Je travaillerai	…. work
10	Je verrai	….see
11	Je boirai	….drink
12	Je lirai	…read
13	Je partagerai	… share
14	J'écouterai	… listen

Conditional – I would

1	Je serais	…be
2	J'aurais	…have
3	J'irais	…go
4	Je ferais	…do
5	Je jouerais	…play
6	Je regarderais	…watch
7	Je mangerais	…eat
8	J'acheterais	…buy
9	Je travaillerais	…work
10	Je verrais	…see
11	Je boirais	…drink
12	Je lirais	…read
13	Je partagerais	…share
14	J'écouterais	…listen

Present Tense – We/they

1	On va	We go
2	On joue	We play
3	On peut	We/you can
4	On fait	We do
5	Ils sont	They are

Past Tense – We/they

1	On a vu	We saw
2	On a fait	We did
3	On a joué	We played
4	On est allés	We went
5	On est partis	We left

Imperfect – We /they

1	On était	We used to be
2	On avait	We used to have
3	On allait	We used to go
4	Ils étaient	They were
5	Ils avaient	They had

Future – We /they

1	On sera	We will be
2	On aura	We will have
3	On ira	We will go
4	Ils seront	They will be
5	Ils auront	They will have

Conditional – We/they

1	On serait	We would be
2	On aurait	We would have
3	On irait	We would go
4	Ils seraient	They would be

Subject: French

Foundation Tier Knowledge Organiser

KS4

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Sentence Starters

1	**je pense que**	I think that
2	**je crois que**	I believe that
3	**à mon avis/selon moi**	in my opinion
5	**je dirais que**	I would say that
6	**il me semble que**	it seems to me that
7	**d'un point de vue personnel**	from a personal point of view
8	**bien que je sache que**	although I know that
9	**à cause du fait que**	due to the fact that
10	**Je considérais que**	I would consider that
11	**il faut que je dise que**	I have to say that

Frequency

1	**tous les jours**	every day
2	**de temps en temps**	from time to time
3	**une fois par semaine**	once a week
4	**deux fois par mois**	twice a month
5	**ne…jamais**	never
6	**toujours**	always
7	**souvent**	often
8	**quelquefois/ parfois**	sometimes

Connectives

1	**mais**	but
2	**pourtant**	however
3	**en revanche**	however
4	**néanmoins**	nevertheless
5	**certes**	admittedly
6	**aussi**	also
7	**donc**	therefore
8	**d'ailleurs**	besides

Exclamations!!

1	**Quel dommage!**	What a shame!
2	**Quel plaisir!**	What a pleasure!

Signposting Time Frames

1	**l'année dernière**	last year
2	**la semaine dernière**	last week
3	**hier**	yesterday
4	**normalement**	normally
5	**d'habitude**	usually
6	**ce soir**	this evening
7	**la semaine prochaine**	next week
8	**l'année prochaine**	next year
9	**dans l'avenir**	in the future

Intensifiers

1	**un peu**	a bit
2	**assez**	quite
3	**très**	very
4	**vraiment**	really
5	**beaucoup de**	Lots of
6	**trop**	too
7	**tellement**	so
8	**extrêmement**	extremely

Pronouns

1	**Mon/ma/mes**	My
2	**Son/sa/ses**	His/her
3	**Notre/nos**	Our
4	**Leur/leurs**	Their
5	**Lui/Elle/eux**	Him/her/them

Avoir/Etre/Faire

1	**C'est**	It is
2	**Ce sera**	It will be
3	**Cétait**	It was
4	**Ce serait**	It would be
5	**Il y a**	There is
6	**Il y aura**	There will be
7	**Il y avait**	There was
8	**Il y aurait**	There would be
9	**Il fait beau**	It's nice
10	**Il fera froid**	It will be cold
11	**Il faisait chaud**	It was hot
12	**Il ferait orageux**	It would be stormy

Fancy Phrases

1	**après avoir mangé**	after having eaten
2	**je l'ai trouvé génial**	I found it great
3	**je me suis bien amusé(e)**	I really enjoyed myself
4	**ça m'a vraiment plu**	I really enjoyed it
5	**ça en valait la peine**	It was worth it
6	**je n'aurais jamais pensé**	I would never have thought
7	**j'ai tellement hâte**	I'm really looking forward to it
8	**le jeu en vaudra la chandelle**	it will be worth it

Subject: Geography | Topic: changing economic world | Year Group: 11

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A. There are global variations in economic development and quality of life.

1	**Economic** and social measures of development 	**Gross Domestic Product per capita-** This is the total value of goods and services produced in a country per person, per year. **Gross National Income per capita-** An average of gross national income per person, per year in US dollars. **Infant mortality-** The number of children who die before reaching 1 per 1000 babies born. **Literacy rate-** The percentage of population over the age of 15 who can read and write. **Life expectancy-** The average lifespan of someone born in that country.
2	The Demographic transition model	**The demographic transition model (DTM) shows population change over time. It studies how birth rate and death rate affect the total population of a country.**

STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
High DR High BR Steady	BR Low Declining DR Very High	Rapidly falling DR Low BR High	Low DR Low BR Zero	Slowly Falling DR Low BR Negative

3	Causes of uneven development.	Physical- location, climate, natural disasters, landlocked Economic- trade, political, corruption Historical- colonialism, political, war
4	Consequences of uneven development: disparities in wealth and health, international migration.	**Levels of development are different in different countries.** People in more developed countries have higher incomes than less developed countries. Better healthcare means that people in more developed countries live longer than those in less developed countries. If nearby countries have higher levels of development or are secure, people will move to seek better opportunities and standard of living.

B. Various strategies exist for reducing the global development gap.

1	strategies used to reduce the development gap	investment, industrial development and tourism, aid, using intermediate technology, Fairtrade, debt relief, microfinance loans.  
2	Tourism in JAMAICA 	-In 2015, **2.12 million** visited. -Tourism **contributes 27% of GDP** and will increase to **38% by 2025**. -**130,000 jobs** rely on tourism. -**Global recession** 2008 caused a **decline in tourism**. Now tourism is beginning to recover. -Jobs from tourism have meant more money has been spent in shops and other businesses. -Government has invested in infrastructure to support tourism. -New sewage treatment plants have reduced pollution.

C. Some LICs and NEEs are experiencing rapid economic development which leads to significant social, environmental and cultural change: NIGERIA

1	Nigeria in the wider world	Nigeria is a NEE in West Africa. Nigeria is just north of the Equator and experiences a range of environments. Nigeria is the most populous and economically powerful country in Africa. Economic growth has been base on oil exports
2	TNC'S in Nigeria- SHELL	TNCs such as Shell have played an important role in its economy. + Investment has increased employment and income. - Profits move to HICs. - Many oil spills have damaged fragile environments.
3	International relationships with Nigeria	Nigeria plays a leading role with the **African Union** and **UN**. **Growing links** with **China** with huge **investment in infrastructure**. Main import includes petrol from the EU, cars from Brazil and phones from China.

D. Key idea Specification content major changes in the economy of the UK have affected, and will continue to affect, employment patterns and regional growth.

1	De-industrialisation	De-industrialisation and the **decline** of the UK's industrial base. **Globalisation** has meant many industries have moved overseas, where labour costs are lower. **Government investing** in supporting vital businesses.
2	North- south divide	- Wages are lower in the North. - Health is better in the South. - Education is worse in the North. + The government is aiming to support a Northern Powerhouse project to resolve regional differences. + More devolving of powers to disadvantaged regions.
3	The UK's place In the wider world-changing industry	The influence of science parks: A major **quaternary industry** on the outskirts. Good transport access to the **A14** and **M11**. A good **location for sourcing highly educated workers** from **Cambridge University**. Staff benefit from **attractive working conditions**. Attracts **clusters** of related **high-tech businesses**.

Subject: Geography	Topic: Changing economic world	Year Group: 11

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1. Death rate	The number of deaths in a year per 1000 of the total population.
2. Gross national income	A measurement of economic activity that is calculated by dividing the gross (total) national income by the size of the population. GNI takes into account not just the value of goods and services, but also the income earned from investments overseas.
3. Infant mortality	The average number of deaths of infants under 1 year of age, per 1000 live births, per year.
4. Literacy rate	The percentage of people who have basic reading and writing skills.
5. Demographic transition model	A model showing how populations should change over time in terms of their birth rates, death rates and total population size.
6. Trade	The buying and selling of goods and services between countries.
7. Intermediate technology	The simple, easily learned and maintained technology used in a range of economic activities serving local needs in LICs.
8. Birth rate	The number of births in a year per 1000 of the total population.
9. Human development index	A method of measuring development in which GDP per capita, life expectancy and adult literacy are combined to give an overview. This combined measure of development uses economic and social indicators to produce an index figure that allows comparison between countries.
10. Life expectancy	The average number of years a person might be expected to live.
11. Development gap	The difference in standards of living and wellbeing between the world's richest and poorest countries (between HICs and LICs).
12. Fairtrade	When producers in LICs are given a better price for the goods they produce. Often this is from farm products like cocoa, coffee or cotton. The better price improves income and reduces exploitation.
13. Globalisation	The process which has created a more connected world, with increases in the movements of goods (trade) and people (migration and tourism) worldwide.
14. International aid	Money, goods and services given by the government of one country or a multilateral institution such as the World Bank or International Monetary Fund to help the quality of life and economy of another country.
15. Microfinance loans	Very small loans which are given to people in the LICs to help them start a small business.
16. Commonwealth	The Commonwealth is a voluntary association of 53 independent and equal sovereign states, which were mostly territories of the former British Empire. It is home to 2.2 billion citizens. Member states have no legal obligation to one another. Instead, they are united by language, history, culture, and their shared values of democracy, human rights, and the rule of law.
17. European union	An international organisation of 28 European countries, including the UK, formed to reduce trade barriers and increase cooperation among its members. Seventeen of these countries also share the same type of money: the euro. A person who is a citizen of a European Union country can live and work in any of the other 27 member countries without needing a work permit or visa.
18. north-south divide	Economic and cultural differences between Southern England (the South-East, Greater London, the South-West and parts of the East) and Northern England (the North-East, West and Yorkshire and the Humber). There are clear differences in health conditions, house prices, earnings, and political influence.
19. Science and business parks	Business Parks are purpose built areas of offices and warehouses, often at the edge of a city and on a main road. Science parks are often located near university sites, and high-tech industries are established. Scientific research and commercial development may be carried out in co-operation with the university.
20. Secondary industries	industry that converts the raw materials provided by primary industry into commodities and products for the consumer; manufacturing industry.

Subject: Geography	Topic: Resource Management	Year Group: 11

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A. Food, water and energy are fundamental to human development.

1	Food	Food provides calories and energy for people to be healthy and able to work. This is essential for economic and human development.
2	Water	Used for survival, washing, food production, industry. Clean, safe water enables development and allows people to break free from the cycle of poverty.
3	Energy	Traditionally we get energy from oil, coal and wood. Many different sources are generated by changing technology. Used for electricity production, heating, transport and for water supply (e.g. wells).Supports industrialisation and development.

B. The changing demand and provision of resources in the UK create opportunities and challenges.

1	HIC's surplus	HIC's have a greater consumption of Food, water and energy. They don't always have a ready supply within their country but are able to purchase this using their wealth.
2	LIC's deficiet	LIC's have a lower consumption of Food, Water and Energy as they are unable to compete with the wealth. In some LIC's food is exported to HIC's as they can afford to pay higher prices.
3	Energy mix	Due to the high consumption of fossil fuels HIC's have a greater carbon footprint. However as fossil fuels decrease the energy mix of these countries will change as they are forced to use alternative sources.
4	Carbon foot print	As a result of higher consumption of food, water and energy HIC's have a higher carbon footprint.

C. Demand for food resources is rising globally but supply can be insecure, which may lead to conflict.

1	Food inequality	The global supply of food is uneven. Countries like China and India have high agricultural outputs. The USA, Brazil and UK also achieve high outputs due to intensive farming methods and high capital investment. Countries in sub –Saharan Africa produce less food because they have unreliable rainfall, drought, low investment and lack of education and training.
2	Food insecurity	Many LIC's suffer from food insecurity which can lead to problems such as, famine, undernutrition, soil erosion and social unrest.
3	Famine	Famine is a widespread food shortage of food often causing malnutrition, starvation and death. Famine in Somalia 2010-2012 258,000 people died. 18% of child population died due to lack of food. Risng food prices can make this matter even worse.
4	Undernourished	This is the lack of a balanced diet. It is a major public health problem in sub-Saharan Africa. Diets in these regions are frequently lacking in protein, carbohydrates, vitamins and minerals.
5	Soil erosion	This involves the removal of fertile top soil layers by wind and water as a result of overgrazing, deforestation and over cultivation.
6	Social unrest	The 21st century has seen lots of social unrest- especially in North Africa and the Middle East. 'Food riot' correspond with high prices in food.

D. Different strategies can be used to increase food supply.

1	Thanet Earth	There are 7 greenhouses, each the size of 10 football pitches which are used to grow salad, pepper, tomatoes and cucumbers throughout the year. It uses hydrophonics (when plants are grown in nutrient solutions)It aims to be sustainable- each greenhouse has its own power station to provide heat and lighting and collects rainwater from the roofs to provide water.
2	Jamaplur	Rice-fish culture is where small local fish are introduced to the paddy fields. The small fish are safely hidden from predators (birds)among the rice plants. The fish provide a natural fertilizer with their droppings, eat insects and pests and help to circulate oxygen in the water around the rice plants.

Subject: Geography	Topic: Resource Management	Year Group: 11

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1) Agribusiness	Application of business skills to agriculture.
2)Carbon footprint	A measurement of all the greenhouse gases we individually produce, through burning fossil fuels for electricity, transport etc, expressed as tonnes (or kg) of carbon-dioxide equivalent.
3)Energy mix	The range of energy sources of a region or country, both renewable and non-renewable.
4)Food miles	The distance covered supplying food to consumers.
5)Fossil fuel	A natural fuel such as coal or gas, formed in the geological past from the remains of living organisms.
6)Local food sourcing	A method of food production and distribution that is local, rather than national and/or international. Food is grown (or raised) and harvested close to consumers' homes, then distributed over much shorter distances.
7)Organic produce	Food which is produced using environmentally and animal friendly farming methods on organic farms. Artificial fertilisers are banned and farmers develop fertile soil by rotating crops and using compost, manure and clover. It must be free of synthetic additives like pesticides and dyes.
8)Resource Management	The control and monitoring of resources so that they do not become depleted or exhausted.
9)The new green revolution	A combination of modern technology, traditional knowledge and an emphasis on farming, social and agro-ecological systems as well as yields, especially in poorer countries. At the same time, it emphasizes alternative approaches and improved farm management and information systems in order to minimise environmental damage from external inputs and benefit poor farmers and marginal areas bypassed by the original green revolution.
10)Undernutrition	This occurs when people do not eat enough nutrients to cover their needs for energy and growth, or to maintain a healthy immune system.
11)Urban farming	The growing of fruits, herbs, and vegetables and raising animals in towns and cities, a process that is accompanied by many other activities such as processing and distributing food, collecting and reusing food waste.

12) Aeroponics	Growing plants in an air or mist environment without the use of soil.
13) Biotechnology	The manipulation (through genetic engineering) of living organisms to produce useful commercial products (such as pest resistant crops and new bacterial strains).
14)Famine	A widespread, serious, shortage of food. In the worst cases it can lead to starvation and even death.
15) Food insecurity	Being without reliable access to a sufficient quantity of affordable, nutritious food. More than 800 million people live every day with hunger or food insecurity.
16)Food security	When people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life.
17) Hydroponics	A method of growing plants using mineral nutrient solutions, in water, without soil.
18) Irrigation	Applying water to land in order to supply crops and other plants with necessary water.
19) Permaculture	A system of agricultural and social design principles based upon or directly using patterns and features observed in natural ecosystems.
20)Sustainable development	Development that meets the needs of the present without limiting the ability of future generations to meet their own needs.
21) Sustainable food supply	Food that is produced in ways that avoid damaging natural resources, provide social benefits such as good quality food and safe and healthy products, and contribute to local economies.

Subject: German — Foundation Tier Knowledge Organiser — KS4

BECKFOOT SCHOOL enjoylearnsucceed

Present Tense

1	Ich bin	I am
2	Ich habe	I have
3	Ich mache	I do/make
4	Ich gehe	I go
5	Ich fahre	I travel
6	Ich mag	I like
7	Ich hasse	I hate
8	Ich spiele	I play
9	Ich esse	I eat
10	Ich trinke	I drink
11	Ich lese	I read
12	Ich sehe	I see
13	Ich kaufe	I buy
14	Ich finde	I find
15	Ich arbeite	I work
16	Ich denke	I think
17	Ich muss	I have to
18	Ich kann	I can
19	Ich will	I want to
20	Es ist	it's

Perfect Tense

1	Ich bin gegangen	I went
2	Ich bin gefahren	I travelled
3	Ich bin geflogen	I flew
4	Ich bin geblieben	I stayed
5	Ich habe gemacht	I did/made
6	Ich habe gespielt	I played
7	Ich habe gegessen	I ate
8	Ich habe getrunken	I drank
9	Ich habe gekauft	I bought
10	Ich habe gearbeitet	I worked
11	Ich habe gesehen	I watched
12	Ich habe gelesen	I read
13	Ich habe gefunden	I found
14	Ich habe besucht	I visited

Using Geben

1	Es gibt	There is/are
2	Es gab	There was/were
3	Es wird…geben	There will be
4	Es würde…geben	There would be

Simple Past

1	Ich war	I was
2	Es war	It was
3	Sie waren	They were
4	Ich hatte	I had
5	Es gab	There was/were

Conditional Fancy

1	Ich wäre	I would be
2	Es wäre	It would be
3	Sie wären	They would be
4	Ich hätte	I would have
5	Es gäbe	There would be

Future/Conditional Tense

Ich werde/möchte… = I will/would like to

1	…sein	be
2	…werden	become
3	…gehen	go
4	…fahren	travel
5	…spielen	play
6	…essen	eat
7	…trinken	drink
8	…sehen	see
9	…arbeiten	work
10	…lesen	read
11	…machen	make/do
12	…besuchen	visit

Structures With Infinitives

1	Ich muss…machen	I have to do
2	Ich darf…machen	I am allowed to do
3	Ich kann…machen	I can do
4	Ich soll…machen	I should do
5	Ich will…machen	I want to do
6	Man muss/kann/soll…machen	You must/can/should do

Subject: German — Foundation Tier Knowledge Organiser — KS4

BECKFOOT SCHOOL enjoylearnsucceed

Sentence Starters

1	Meiner Meinung nach	In my opinion
2	Meines Erachtens	In my opinion
3	Im Großen und Ganzen	All in all
4	Ich denke, dass…	I think that
5	Ich würde sagen, dass	I would say that
6	Ich muss sagen, dass	I have to say that

Connectives

1	und	and
2	aber	but
3	denn	because
4	oder	or
5	jedoch	however
6	außerdem	furthermore
7	weil/da	because
8	dass	that

Intensifiers

1	ein bisschen	a bit
2	ziemlich	quite
3	sehr	very
4	wirklich	really
5	echt	genuinely
6	zu	too
7	so	so
8	ganz	totally

Adjectives

1	lustig	funny
2	interessant	interesting
3	spannend	exciting
4	nützlich	useful
5	schön	beautiful
6	toll	great
7	unglaublich	incredible
8	langweilig	boring
9	anstrengend	tiring
10	schwierig	difficult
11	teuer	expensive
12	billig	cheap

Signposting Time Frames

1	letztes Jahr	last year
2	letzte Woche	last week
3	gestern	yesterday
4	normalerweise	normally
5	gewöhnlich	usually
6	heute Abend	this evening
7	nächste Woche	next week
8	nächstes Jahr	next year
9	in der Zukunft	in the future
10	am Wochenende	at the weekend

Frequency

1	jeden Tag	every day
2	ab und zu	from time to time
3	einmal pro Woche	once a week
4	zweimal pro Monat	twice a month
5	nie	never
6	immer	always
7	oft	often
8	manchmal	sometimes

Exclamations!!!

1	Wie Schade!	What a shame!
2	Wahnsinn!	Wow!

Fancy Phrases

1	Es hat eine Menge Spaß gemacht	It was loads of fun
2	Es hat sich wirklich gelohnt	It was really worth it
3	Das hat mir gefallen	I liked it
4	Ich freue mich schon darauf	I am already looking forward to it
5	Ich werde mich amüsieren	I will enjoy myself

Perfect Past Examples

1	Letztes Wochenende bin ich ins Kino/Café/Restaurant/Stadion/Museum gegangen und es hat eine Menge Spaß gemacht.	Last weekend I went to the cinema/café/restaurant/stadium/ museum and it was loads of fun.
2	Ich habe Hähnchen, Pommes und Salat gegessen und ich habe Cola getrunken. Das Essen war sehr lecker und es hat sich wirklich gelohnt. Wahnsinn!	I ate chicken, chips and salad and I drank cola. The food was very tasty and it was really worth it. Wow!

Fantastic Future Examples

1	Nächstes Jahr werde ich mit meinen Freunden nach Berlin fahren und ich freue mich schon darauf.	Next year I will travel with my friends to Berlin. I am already looking forward to it.
2	Ich möchte ins Café gehen und ich möchte Pizza essen. Ich werde mich amüsieren, weil ich Pizza liebe.	I would like to go to café and I would like to eat pizza. I will enjoy myself I love pizza.

Subject: German — Higher Tier Knowledge Organiser — KS4

BECKFOOT SCHOOL enjoylearnsucceed

Present Tense

1	Ich bin	I am
2	Ich habe	I have
3	Ich mache	I do/make
4	Ich gehe	I go
5	Ich fahre	I travel
6	Ich mag	I like
7	Ich hasse	I hate
8	Ich spiele	I play
9	Ich esse	I eat
10	Ich trinke	I drink
11	Ich lese	I read
12	Ich sehe	I see
13	Ich kaufe	I buy
14	Ich arbeite	I work

Present tense other subjects

1	Er/sie fährt Wir fahren	He/she travels We travel
2	Er/sie sieht Wir sehen	He/she sees We see
3	Er/sie isst Sie essen	He/she eats They eat
4	Er/sie liest Sie lesen	He/she reads They read

Perfect Tense

1	Ich bin gegangen	I went
2	Ich bin gefahren	I travelled
3	Ich bin geflogen	I flew
4	Ich bin geblieben	I stayed
5	Ich habe gemacht	I did/made
6	Ich habe gespielt	I played
7	Ich habe gegessen	I ate
8	Ich habe getrunken	I drank
9	Ich habe gekauft	I bought
10	Ich habe gearbeitet	I worked
11	Ich habe gesehen	I watched
12	Ich habe gelesen	I read
13	Ich habe gefunden	I found
14	ich habe besucht	I visited

Past tense other subjects

1	Er/sie hat…gespielt	He/she played
2	Sie/er ist… gegangen	She/he went
3	Wir haben…gemacht	We did/made
4	Sie sind…gefahren	They travelled

Simple Past

1	ich war	I was
2	es war	it was
3	sie waren	they were
4	ich hatte	I had
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Conditional Fancy

1	ich wäre	I would be
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Future/Conditional Tense

ich werde/möchte/will
= I will/would like to/want to

Er/sie wird = he/she will
Wir werden = we will

1	…sein	be
2	…werden	become
3	…gehen	go
4	…fahren	travel
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Subject: German — Higher Tier Knowledge Organiser — KS4

BECKFOOT SCHOOL enjoylearnsucceed

Sentence Starters

1	Meiner Meinung nach	In my opinion
2	Meines Erachtens	In my opinion
3	Im Großen und Ganzen	All in all
4	Auf der einen Seite	On the one hand
5	Aber auf der anderen Seite	But on the other hand
6	Es scheint mir, dass	It seems to me that
7	Ich denke, dass…	I think that
8	Ich würde sagen, dass	I would say that
9	Obwohl ich weiß, dass	Although I know that
10	Ich glaube, dass…	I believe that
11	Ich muss sagen, dass	I have to say that

Connectives

1	und	and
2	aber	but
3	denn	because
4	sondern (neg)	but
5	jedoch	however
6	deshalb	therefore
7	trotzdem	nevertheless
8	außerdem	furthermore
9	weil/da	because
10	dass	that
11	obwohl	although
12	wenn	if/when

Intensifiers

1	ein bisschen	a bit
2	ziemlich	quite
3	sehr	very
4	wirklich	really
5	echt	genuinely
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1	es hat eine Menge Spaß gemacht	it was loads of fun
2	ich habe mich wirklich amüsiert	I really enjoyed myself
3	es hat sich wirklich gelohnt	it was really worth it
4	das hat mir gefallen	I liked it
5	ich hätte nie gedacht	I would have never thought
6	je (heißer), desto besser	the (hotter) the better
7	ich freue mich schon darauf	I am already looking forward to it
8	es wird bestimmt viel Spaß machen	it will definitely be lots of fun

Subject: Health and Social Care	Topic: RO32 Principles of care in Health and Social Care - Topic Area 3	Year Group: 10

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Topic area 3 – Effective communication in health and social care settings		
3.1	**What is verbal communication?**	• Verbal communication involves communicating clearly through speech in a way that can be understood and that does not offend the service user. • A practitioner will need to adapt their verbal communication to different circumstances.
3.2	**What is non verbal communication**	• Non verbal communication is about how we use our eyes, facial expressions and gestures, and the way we position ourselves to communicate.
3.3	**What is active listening?**	• Active listening skills positively influence communication as they allow a care practitioner to focus and pay attention to the service user. • Active listening skills can both be used and interpreted by those involved in the communication.
3.4	**What is special methods communication?**	• Special communication methods are important in health and social care as service users have a wide range of needs, and the care practitioners need to interact with them effectively.

Examples and importance		
3.1	**Give examples of verbal communication**	• Type, clarity, empathy, patience, appropriate vocabulary, tone, volume, pace, willingness
3.2	**Give examples of non verbal communication**	• Type, eye contact, facial expressions, gestures, positioning, space, height, personal space, positive body language, sense of humour
3.3	**Give examples of active listening**	• Open posture, eye contact, nodding, empathy, clarifying, summarising
3.4	**Give examples of special methods**	• Advocate, Braille, British Sign Language, Interpreters, Makaton, Voice Activated Software
3.5	**The importance of effective communication**	• Supports the person-centred values • Meets service users' needs • Protects rights • Empowers service users • Makes a service user feel valued • Makes a service user feel respected

Key words:	
Advocate	Independent people who act on behalf of a service user to ensure their views, wishes and beliefs are heard and listened to.
Braille	Braille is a tactile reading and writing system used by those who are blind or have a visual impairment.
Interpreters	Helps to support communication by translating spoken or sign language to another language.
Makaton	Makaton uses symbols, signs and speech to enable people to communicate so it can help with understanding what someone is saying if speech is unclear or they have limited speech.
Voice activated software	Helps individuals with physical or learning disabilities to communicate.

Subject: History | Topic: A Revolution in Medicine | Year Group: 10

BECKFOOT SCHOOL enjoylearnsucceed

Key idea: What changed in the Industrial Revolution?

1	**Enlightenment ideas**	People became much more willing to experiment and to challenge traditional ideas.
2	**Technology**	Allowing further research into the cause of disease.
3	**Factories developed**	Thousands of people migrated to towns and cities, having a huge impact of housing and public health.

1. Understanding of Disease

1	**What had changed ?**	1. With the invention of the microscope, people had discovered germs and bacteria 2. This led to the theory of Spontaneous Generation – that something rotted and **then** created bacteria
2	**The Impact of Pasteur**	1. In 1861, French chemist Pasteur conducted experiments with flasks of water that proved germs caused decay – disproving spontaneous generation 2. He published his work but didn't apply this work to humans until later
3	**The impact of Koch**	1. German doctor Koch was inspired by Pasteur's work and became the first to link specific bacteria to specific diseases 2. He proved this using scientific experiments and photographic evidence
4	**Understanding specific diseases**	1. From 1860 to 1900, Pasteur and Koch competed with each other to link bacteria to different diseases 2. Koch and his team identified the bacteria that caused TB, cholera and anthrax 3. Pasteur built on these discoveries to develop vaccinations for different diseases e.g. Chicken cholera
5	**Lasting impact of Koch**	1. Koch's work and methods inspired other scientists 2. By 1900 different teams had found the bacteria that caused typhoid, pneumonia meningitis, plague and dysentery 3. By 1950, different teams had developed vaccines against typhoid, TB, diphtheria, tetanus, measles and polio

2. Treatments

1	Changes in treatments	1. In 1889, Ehrlich (was part of Koch's team) started working on finding chemical cures that would work like antibodies 2. In 1909 his team developed the Salvarsan 909 as a cure for syphilis – the first 'magic bullet' 3. This was a big discovery, however it didn't affect Britain much until the mid 1900s
2	Everyday treatments and remedies - continuity	1. Treatments were slow to develop and the most common treatment was still home remedies 2. If home remedies didn't work, people could buy 'patent medicines' that were advertised by their makers. 3. There was no control over these manufacturers or the claims they made and many were dangerous 4. In the 1880s the government introduced laws to control the use of harmful ingredients

Key dates

1	**1844-47**	Development of first effective anaesthetics
2	**1848**	First Public Health Act
3	**1854**	Major cholera outbreak in Broad Street
4	**1858**	The Great Stink in London
5	**1861**	Pasteur publishes paper on germ theory
6	**1867**	Lister develops anti-septic surgery
7	**1875**	Second Public Health Act
8	**1871-1885**	Identification of germs and vaccines by Pasteur and Koch

Key word	Definition
Germ Theory	Theory that germs (bacteria) cause disease
Miasma	Bad air/smells – it was believed up until the 19th Century that this was the cause of disease
Spontaneous Generation	The belief that bacteria appear after an object has rotted
Vaccine	Using the dead germs of a disease or one like it to give a patient immunity

Key Individuals

1	**Pasteur**	Developed the germ theory and proved disease was caused by bacteria
2	**Koch**	Developed Pasteur's work and linked specific bacteria to specific diseases
3	**Lister**	Developed the first antiseptic and promoted clean surgery
4	**Simpson**	Developed the first effective anaesthetic
5	**Chadwick**	Commissioned by the government to write the first report into the spread of cholera
6	**Snow**	Proved that cholera was spread through contaminated water not from
7	**Bazalgette**	Commissioned by the government to design and build London's sewer system

Subject: History — Topic: A Revolution in Medicine — Year Group: 10

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3. Surgery

1	**How did anaesthetics develop?**	1. In the early 1800 scientists found that some chemicals reduced pain 2. In 1799 Nitrous Oxide was suggested, but it wasn't always effective 3. From 1846, Ether was used effectively in operations but it was flammable and difficult to inhale 4. In 1847, James Simpson discovered chloroform would cause unconsciousness. He started using it for childbirth 5. There was initial opposition to the use of chloroform but it was publicly supported by Queen Victoria
2	**Why were anaesthetics important?**	1. Anesthetics allowed surgeons to operate more slowly and carefully without fear of their patients dying from shock 2. It allowed more complex operations 3. Chloroform encouraged more research into anesthetics leading to chemicals which relaxed the muscles and local anesthetics later
3	**How did antiseptics develop?**	1. Joseph Lister was inspired by Pasteur's work and wanted to apply it to surgery 2. He experimented with treating compound fractures using carbolic acid soaked bandages 3. Lister published his results in 1867 and developed his work so that bacteria was being killed at every stage 4. There was opposition to Lister from surgeons who disliked the irritating acid, the extra steps needed in operations among other reasons 5. Lister persevered with demonstrations and education
4	**Why were antiseptics important?**	1. Antiseptics vastly reduced deaths from infection 2. His work led to aseptic surgery by the 1890s

4. Public Health

1	**Conditions in towns and cities**	1. With the Industrial Revolution, the urban population increased dramatically. 2. Houses were built quickly and built close together. 3. Houses would have a shared outside toilet and a shared water pump 4. Little government involvement in people's health and living conditions
2	**Hospitals and healthcare**	1. Most poor people were treated in workhouses – conditions here were poor 2. Over the 1800s some hospitals were founded by universities or medical school. These were used as training schools for doctors 3. From 1860 onwards, cottage hospitals run by local doctors provided care for rural areas 4. Florence Nightingale published her work on nursing in 1859 based on the poor conditions she saw in the Crimean War hospitals. 5. She emphasised the need for hygiene and raised money to train nurses

Key word	Definition
Anaesthetic	A substance that stops a patient from feeling pain
Antiseptic	Something that stops disease spreading organisms growing and spreading in the body
Aseptic	Sterile or totally free from contamination by viruses or disease
Cholera	A water borne disease that causes severe vomiting and diarrhoea
Laissez-Faire	A policy where the government should not get involved in people's lives
Miasma	Bad air/smells – it was believed up until the 19th Century that this was the cause of disease
Reform	To make changes in order to improve something
Vaccine	Protecting someone from a disease by giving them a weakened or dead organism

5. Public Health – Cholera

1	**What was cholera?**	1. Cholera is a disease caused by water contaminated with sewage 2. It reached Britain in 1831 and over the next 35 years there were several cholera epidemics killing tens of thousands of people each time
2	**Edwin Chadwick's report**	1. In 1842, Edwin Chadwick published a report stating that living conditions in towns were worse than in the country. 2. He suggested the government should pass laws for drainage and sewerage systems funded by taxes. 3. Chadwick's report and the 1848 cholera outbreak triggered the First Public Health Act 4. However, he still believed cholera was caused by miasma
3	**John Snow's report**	1. Snow conducted a scientific study in 1854 of the cholera outbreak in the Broad Street area of London. 2. He proved the real cause of cholera and the need for clean water. 3. The government didn't act on his report; many scientists still believed in miasma 4. Even after a further epidemic in 1865, the government wouldn't act on his report due to their laissez-faire attitudes – they believed it wasn't their responsibility to help the poor and get involved in people's lives

Subject: History | Topic: A Revolution in Medicine | Year Group: 10

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6. Public Health –The Sewer System

1	**The Great Stink**	1. In 1858 a heat wave in Britain forced the British government to recognise the building problems with public health. 2. The heat wave revealed tonnes of rotting and stinking waste in the Thames – this affected the government directly.
2	**The building of the sewers**	1. The government hire Joseph Bazalgette to build a new sewer network throughout London 2. The government invested £3 million to build the network. 3. Bazalgette's planning and engineering genius meant that the sewer system was complete by 1866.
3	**What was the impact of the sewers?**	1. Short term: Bazalgette's ideas were still based on miasma, but it unintentionally provided clean drinking water. 2. Long term: Bazalgette predicted that London's population would grow and planned for it: many of his sewers are still in use today

7. Public Health – Improvements by the government

1	**Public Health Act 1848**	1. Councils could set up a board of health but it was not compulsory.
2	**Vaccination Act 1853**	1. Vaccination against smallpox was made compulsory
3	**Sanitary Act 1866**	1. Towns had to have a health inspector and were made responsible for sewers, water and street cleaning.
4	**Artisans Dwellings Act 1875**	1. Councils had the power to buy and demolish slum housing.
5	**Public Health Act 1875**	1. Councils had to appoint a medical officer. 2. They also had to provide clean water, cover sewers and keep them in good condition, collect rubbish and provide street lighting.
6	**Sale of Food and Drugs Act 1875**	1. Guidelines were set up to check the quality of food and medicine before it was sold to the public.
7	**What was the impact of these acts?**	1. This was a big change in the Laissez-faire attitude of the government 2. In 1800 the death rate in Britain was 39 per 1000 people. By 1900 this had dropped to 18 by 1900

Key factors in the Early Modern period

1	**Individuals**	1. Individuals made significant breakthroughs in this time period. 2. Individuals like Lister, Snow and Simpson continued their work despite opposition
2	**Government**	1. The government funded the research of a lot of individuals during this time 2. However the government also held back the development of public health for longer than necessary due to their laissez-faire attitude 3. In 1867 working men were given the vote, giving them more influence in law-making
3	**Science and technology**	1. Developments in science and technology allowed scientists to prove and develop new ideas – like germ theory 2. It also allowed previous scientists work to be correct – e.g. germ theory could be used to prove Jenner's work 3. The scientific method helped Snow to prove that cholera was carried by water. 4. Advances in engineering made Bazalgette's sewer network possible.
4	**Chance**	1. Some developments like those of Simpson were discovered by chance 2. The Great Stink in 1858 forced the government to take action.
4	**Communication**	1. Inventions like the electric telegraph and the beginning of medical journals, allowed ideas to spread quickly. 2. Scientists also began to showcase their work, e.g. Louis Pasteur demonstrated his experiments to journalists 3. Tyndall delivered lectures supporting germ theory. 4. Cheyne translated Koch's work into English 5. The reports of Chadwick and Snow were published and distributed to the public

Design & Technology; Food	Unit 2 – Ages & Dietary Needs	Year Group: 10

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Age groups – dietary needs

1	**Young Children**	5 a day / Eat Well Guide recommendations Starchy carbs – energy Protein growth Calcium/vit D Full fat options – limit salt/sugar
2	**Teenagers**	Same as young children Extra iron for menstruation / muscle growth
3	**Adults**	No change between age 19-50. 5 a day / eat well guide recommendations Lower fat – increase fibre
4	**Pregnancy**	Calcium, iron, B12 (folic acid) No need to increase calories. Avoid too much vit A
5	**Elderly**	Protein to repair body cells Calcium & vit D to maintain bones / teeth More fat to keep warm in winter Soft foods – to help with chewing Fibre to prevent constipation
6	**Active**	More calories will be required Carbohydrates for energy Protein for muscle repair Water for hydration
7	**Sedentary (inactive)**	Less calories will be required Cautious of fat intake (if not used as energy it will be stored)

Special Diets – dietary needs

Religion / Lifestyle		
1	**Halal (Muslim)**	All food must adhere to Islamic Law. No Pork
2	**Hindu**	No not eat beef – sacred animal
3	**Kosher (Judaism)**	No pork. Do not mix dairy and meat in the same meal.
4	**Buddhist**	Usually vegetarian. Do not eat meat or fish
Health – related		
5	**Coeliac**	Sufferers react to gluten - must avoid it
6	**Lactose Intolerant**	Sufferers cannot digest lactose. They will experience cramps wind and diarrhoea if consumed.
7	**Nut/ other allergies**	Must avoid food they are allergic to. Can results in anaphylaxis and even death if eaten
8	**Coronary Heart Disease**	Advised to follow a low sugar, low saturated fat, high fibre , Mediterranean style diet
9	**Type 2 Diabetes**	Avoid processed meat, low salt, wholegrains and lots of fruit and veg
10	**Anaemia**	Caused by iron deficiency
Ethical		
11	**Vegetarian**	Do not eat meat or fish but do eat dairy.
12	**Vegan**	Avoid eating ALL animal products – meat, fish, diary, honey
13	**Pescatarian**	Do not eat meat but will eat fish
14	**Flexitarian**	Choose to eat vegetarian/ vegan some days of the week,

Key Vocabulary

1	**Food Allergy**	A damaging immune response to a food
2	**Intolerance**	An inability to eat a food without negative effects
3	**Gluten**	A protein found in wheat.
4	**Lactose**	A sugar found in milk
5	**Haram**	Food that is forbidden under Islamic law
6	**Mediterranean diet**	A diet high in vegetables, olive oil and moderate protein intake
7	**Anaphylaxis**	A serious life threatening response to an allergic reaction. Happens in seconds.
8	**Comparison**	Looking at the similarities and differences between two things
9	**BMR**	Basal metabolic rate
10	**PAL**	Physical activity level

- ❑ **Research the RDI amounts for each target group**
- ❑ **Is there an Eat Well Guide for vegans vegetarians?**

Subject: Maths	Term: Half term 4	Year Group: 11F

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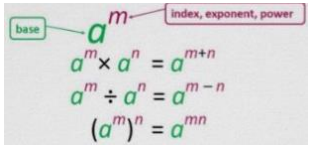
Algebra: Formula

1	Substitute numbers into a formula	Eg. Substitute numbers into the formula for the area of a trapezium:  $\frac{(a+b)h}{2} = \frac{(3+7)\times 6}{2}$ $= 30$
2	Rearranging formula	Make a the subject of the formula $b = 5a + 21$ $-21 \quad -21$ $b - 21 = 5a$ $\div 5 \quad \div 5$ $\frac{b-21}{5} = a$

Key Vocabulary

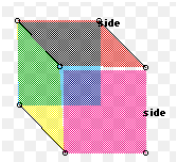
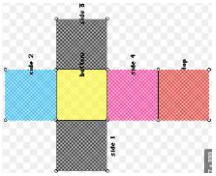
1	Expression	Numbers, symbols and operators (such as + and ×) grouped together with no equals sign
2	Equation	4x+7=5 terms that's are equal.
3	Formula	Has an = and 2 or more terms. It can help work out area, volume, speed etc.

Number: Indices

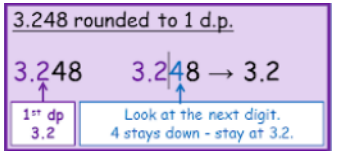
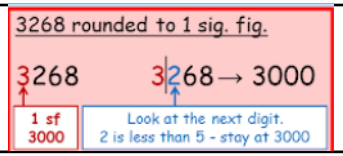
1	Squared numbers	$1^2 = 1 \times 1 = 1$ $2^2 = 2 \times 2 = 4$ $3^2 = 3 \times 3 = 9$
2	Cubed numbers	$1^3 = 1 \times 1 \times 1 = 1$ $2^3 = 2 \times 2 \times 2 = 8$ $3^3 = 3 \times 3 \times 3 = 27$
2	Index laws	
3	Standard form	Ordinary Number / Standard Form 29 — 2.9×10^1 350 — 3.50×10^2 0.3 — 3×10^{-1} 0.09 — 9×10^{-2}

1	**Add and subtract fractions**	**Make sure the denominators are the same before adding / subtracting the numerators**
2	Multiply and divide fractions	Multiplying: multiply numerators together then multiply the denominators together Dividing: multiply by the reciprocal

Geometry: Area and volume

1	Covert squared units	$3cm^2$ *to* m^2 Cm to m =÷100 Square this conversion 100^2 $3 \div 100^2 = 0.0003m^2$
2	Convert cubed units	$3m^3$ *to* cm^3 M to cm = x100 Square this conversion 100^2 $3 \times 100^2 = 30'000cm^2$
3	Vol of cube/cuboid Vol of prisms	Volume= length x width x height Vol= Cross section area x length
4	Surface area of prisms (work out the area of each side)	 

Number: Decimals

1	Round to decimal places (dp)	
2	Round to significant figures (sf)	

Subject: Maths	Term: HT4 January – Part 1	Year Group: 11 Higher

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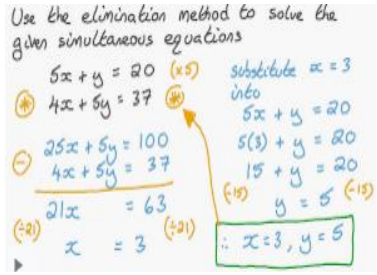
Algebra Simultaneous Equations, Quadratics Equations & Formulae

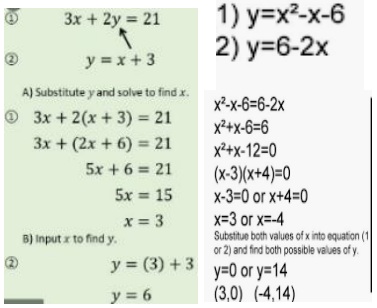
1 Solve simultaneous equations

Via elimination



2 Solve simultaneous equations

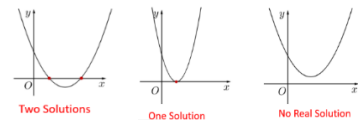
Via substitution



3 Solve quadratics via graphing

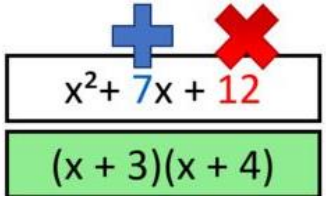
The x-intercepts of a graph are the solutions of the equation.

A quadratic equation can have one of three types of solutions:



4 Factorise & solve

2 numbers that X to give 12 and + to give 7



5 Factorise & solve a difference of 2 squares

$a^2 - b^2 = (a+b)(a-b)$

x = -3 x = 3

$x^2 - 9 = (x+3)(x-3)$

6 Factorise & solve complex quadratics

$3x^2 + 11x + 10$

3 x 10 = 30 Factors of 30 that + or – to make 11 are: 5 + 6 = 11

$3x^2 + 6x + 5x + 10$

$3x(x+2) + 5(x+2)$

$(3x+5)(x+2)$

so x = -5/3 or x = -2

7 Solve via quadratic formula

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

Eg $2x^2 + 11x + 6 = 0$ ⇨ a=2 b=11 c=6

$$x = \frac{-11 \pm \sqrt{11^2 - 4 \times 2 \times 6}}{2 \times 2} \qquad x = \frac{-11 \pm \sqrt{73}}{4}$$

x = -0.614 or -4.886 (3dp)

8 Complete the square Turning point (9, -1)

$x^2 - 18x + 80 = 0$

$(x-9)^2 - (-9)^2 + 80 = 0$

$(x-9)^2 - 81 + 80 = 0$

$(x-9)^2 - 1 = 0$

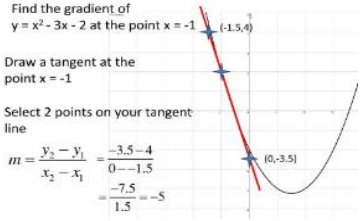
$(x-9)^2 = 1$

$x - 9 = \pm\sqrt{1}$

$x = -1 + 9$ $x = 8$

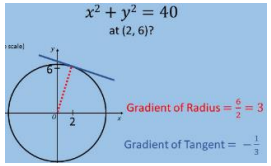
$x = +1 + 9$ $x = 10$

9 Gradient of tangent touching curve



10. Tangent to circle equation

To find equation we use y=mx+c



M = $-\frac{1}{3}$ & sub (2,6)

$6 = -\frac{1}{3}(2) + c$

$6 + \frac{2}{3} = c$ c = 6.67

$y = \frac{1}{3}x + 6.67$

11. Rearrange where a variable appears more than once

$2(2p + m) = 3 - 5m$

$4p + 2m = 3 - 5m$

$4p + 2m + 5m = 3$

$2m + 5m = 3 - 4p$

$7m = 3 - 4p$

$m = \frac{3 - 4p}{7}$

Subject: Maths	Term: HT4 January – Part 2	Year Group: 11 Higher

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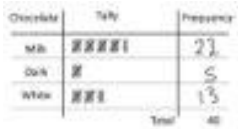
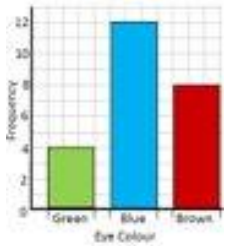
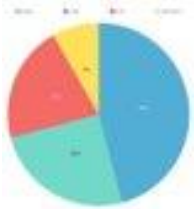
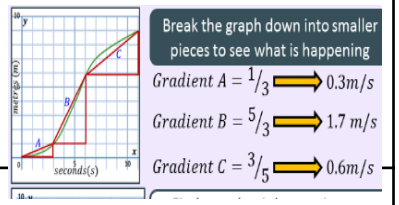
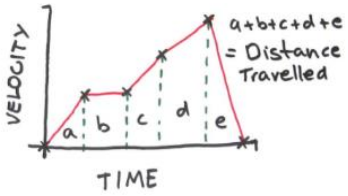
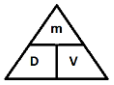
Statistics – Data Representation

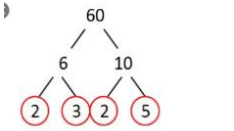
1	**Tally Chart** • Information you are collecting listed. • Column for tallies. • Column for frequency.	
2	**Bar Chart** • Frequency on y-axis. • Information you are collecting on the x-axis. • Bars same width. • Equal gaps between bars. • Title explaining what the chart shows.	Eye colours in a Year 8 Class 
3	**Pie Chart** • Divided into sectors which shows the relative size of the data. • Needs a key or labels to clearly show what each sector represents. • Sectors calculated using parts of 360◦.	

Ratio Proportion Rates of Change Real Life Graphs

1	**Calculate fastest average speed.**	
2	**Velocity time graphs**	
3	**Density**	$\text{density} = \frac{\text{mass}}{\text{volume}}$ 

Number - Primes

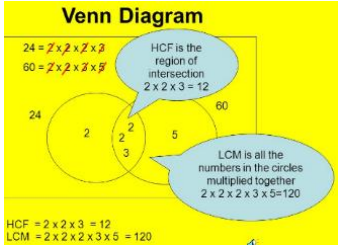
1. Prime factorisation



Either way, the result is:

$2 \times 2 \times 3 \times 5$ or $2^2 \times 3 \times 5$

2. Using Venn to find HCF/LCM



Key Vocabulary

1	**Velocity**	Is speed with direction.
2	**Tangent**	A straight line that touches a circle.
3	**Roots or solutions**	When we draw a quadratic equation, where the curve cuts through the x-axis are called the roots or solutions.
4	**Gradient**	Rate of change, so it could be the rate of water flow over time, or distance travelled over time.
5	**Bisect**	To mathematically accurately cut something in half e.g., an angle,
6	**Prime factorisation**	To break a number down into the primes we can multiply to make the original number.
7	**Coefficient**	This is the number in front for example the co-efficient of this term $3x^2$ is 3.

Subject: **GCSE PE**	Topic: **2.3 Health, fitness and well-being**	Year Group: **10/11**

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KG1 – Health fitness and well being		
	Key term	Definition
1	Health	A state of complete physical, mental/emotional (and social) well-being or free from illness/injury
2	Fitness	The capacity to carry out life's activities/exercise (without getting tired) **or** The ability to meet physical demands placed on them by the environment / ability to function effectively and efficiently
3	Well-being	The feeling of being contented / happy / prosperous and healthy

KG2 – Consequences of sedentary lifestyle			
	Aspect of health	Consequence	Benefit of exercise / how exercise reduces risk
4	**Physical**	– Decreased bone density	– Weight bearing exercise increases bone density therefore less chance of breaks and fractures.
		– Higher blood pressure	– Aerobic activity reduces high blood pressure by increasing elasticity of blood vessels and reducing risk of fatty deposits forming in blood vessels.
		– Coronary heart disease risk (CHD)	– Exercise reduces risk of CHD because: – Increases strength of heart muscle so can pump more efficiently/ increases stroke volume/ increased cardiac output/ increased circulation of blood/cardiac hypertrophy – Helps to maintain a healthy body weight and reduced obesity – Can reduce resting heart rate so less pressure on heart and circulatory system. – Reduces cholesterol/fatty deposits in the arteries. – Reduce blood pressure
		– Type 2 diabetes risk	– exercise reduces obesity risk which is one of the causes of type 2 diabetes.
		– Injury risk	– Exercise strengthens ligaments and tendons and increases pliability of muscles. – Exercise increases range of movement at joints. – Therefore, injury risk reduced, and recovery rate improved.
		– Obesity risk	– Exercise reduces risk of obesity
		– Poor posture	- Strengthens core/abdominal muscles - Strengthens muscles that support spine so can help to remain more upright- Strengthens muscles that stabilise pelvis and spine (in a neutral position)
		– Lower fitness	– Regular exercise improves fitness

KG2 (cont.) – Consequences of sedentary lifestyle			
	Aspect of health	Consequence	Benefit of exercise / how exercise reduces risk
5	**Emotional**	- Low self-esteem/confidence - Poor stress management - Poor self-image - Less happy/ more depressed	Exercise can lead to: - Improved self-esteem/ confidence - Less depressed/ lowers anxiety/ less worried/ forget problems - Stress release so helps to manage stress more effectively - Better/improved/increased/positive body image - Feel happier/feel good/ feel positive
6	**Social**	- Lack of friends - Not belonging to a group - Lack of social confidence. - Loneliness - Difficulty communicating with others/lack of social skills	Exercise and physical activity provide opportunity for: - Friendship / improved communication /meet new people - Sense of belonging - Not being lonely

Subject: **GCSE PE**	Topic: **2.3 Health, fitness and well-being**	Year Group: **10/11**

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KG 3 – Diet and Nutrition					
7	Balanced diet	A diet that contains the correct proportions of carbohydrates, proteins, fats, vitamins, minerals, fibre and water necessary to maintain good health.			
Components of a balanced diet		Function		Example	Impact/ relevance in sport
8	Carbohydrates	Provide energy for movement. Two types:			**Normal needs:** 50-60% of diet. Made up of mainly complex starches. **Endurance performers needs:** 60-70% of diet. Mainly complex starches. 'carbohydrate loading' 70-85% before an event to increase glycogen stores.
		Simple sugars	Break down quickly Give a burst of energy	Honey / jam Sweets / chocolate Fruit juice	
		Complex starches	Release energy slowly	Rice / pasta Potatoes Bread Porridge/Cereals	
9	Proteins	- **Repair/ make cells** - **Build /strengthen muscle** - Potential third source of energy - Production of haemoglobin		Meat (steak/ chicken/ turkey) Fish (e.g. Salmon) Eggs Pulses (beans/ seeds) Milk, cheese, yogurt	Needed by weightlifters and throwers to help with muscle growth and repair . Long distance runner would benefit from haemoglobin production – enabling them to carry more O2.
10	Fats	**- Fuel/ energy source** - **Protects organs** - **Insulates.** - Contributes to cell growth - Help absorb other nutrients		See below	Long distance athletes might eat reduced saturated/unhealthy fats to keep body weight low. Athletes might use unsaturated/healthy fats to boost secondary energy store.
		Saturated fats	Too much increases risk of developing heart disease.	Fatty meat, butter / cheese Cakes / crisps / biscuits.	
		Unsaturated fats	Healthier than saturated fats. Play a role in reducing risk of heart disease.	Oily fish Nuts Olive oil Sunflower oil Avocado.	

Subject: **GCSE PE**	Topic: **2.3 Health, fitness and well-being**	Year Group: **10/11**

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KG 3 – Diet and Nutrition				
Components of a balanced diet		Function	Example	Impact/ relevance in sport
5.	Minerals	- Strengthen bones - Growth - Healing - Production of red blood cells - Help utilise vitamins.	**Source of iron:** Shellfish / Almonds / water cress **Source of calcium**; Milk/ dairy **Source of potassium and sodium:** Some sports drinks –	Athletes takes on vitamins and minerals to aid preparation /recovery/injury prevention and for general heath.
6.	Vitamins	- Help immunity - Help to maintain healthy skin and vision - Bone development and growth/ repair - Help make red blood cells - Aid nerve function - Aid iron absorption	Vegetables Fruit Cereals	
7.	Fibre	- Important for healthy digestive system - Avoids constipation - Lowers blood cholesterol - Helps manage weight - Reduces some cancer	Fruit (e.g. apples) Vegetables (e.g. cabbage) Oats / Cereals / Wheat Beans /Lentils Wholemeal bread Nuts	Helps you feel fuller longer so able to maintain a healthy weight.
8.	Water and hydration	- Aids digestion - Transports nutrients - Hydration/ lubrication - Flushes out or excretes waste - Regulates temperature - Aids brain function	Water	Important for all performers as: 1. Replaces lost fluids, minerals, iron and salt and avoids dehydration 2. Body cells / tissues / organs need water to reduce risk of cramp/fatigue/headaches/dizziness and to maintain focus. 3. Water is important in urine / waste removal from body 4. Body uses water to regulate temperature / cool down. 5. Water is essential for maintaining blood viscosity

Subject: Drama GCSE	Topic: Costume and Makeup Design	Year Group: 11

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THE PURPOSE OF COSTUME

1	CHARACTER	Costumes help performers embody their characters. They give the audience key information such as age, gender, job, and social status. They can also show personality. Costumes can reveal a character's journey too, changing in appearance to reflect what they experience throughout the play.
2	LOCATION AND TIME PERIOD	Costumes help show the play's time period and location, reflecting the fashions of the era. For example, dinner jackets and top hats can signal a historical setting before anyone speaks. Clothing linked to local culture or climate can also indicate where the play is set.
4	STYLE	Costumes help reinforce a production's overall style. Naturalistic plays use realistic, everyday clothing, while more theatrical styles—like pantomime—use bold, colourful costumes to match the show's tone.
5	MOOD AND ATMOSPHERE	Costume colours, shapes and materials help express the play's mood. Dark, muted tones may suit tragedy, while bright colours fit comedy. Soft or loose fabrics can create a dream-like feel.

STYLES OF COSTUME

1.	**REALISM**	Costumes that reflect the time period and location accurately.
2.	**SYMBOLISM**	Costume that represent the characters in a more abstract (non-realistic) way.
3.	**MINIMALISM**	Use accessories or items of clothing to indicate a character to the audience instead of using full costume.
4.	**FANTASY**	Costumes that are not bound by real life. This gives the designer a lot of freedom and creativity.

COSTUME DESIGN ELEMENTS

1	M	**MATERIAL**	The choice of fabric – this will affect its weight and thickness and texture (how coarse or smooth it is).
2	A	**ACCESSORIES**	Accessories are additional items for a character which can give the audience important character information such as weather they are wealthy (holding a designer handbag) or indicating a style of time period.
3	G	**GARMENT**	The item of clothing the actor is wearing. For example, a t-shirt
4	I	**INTERACTION**	How the actor interacts with their costume. For example, fiddling with their sleeves or adjusting their tie.
5	C	**COLOURS** **CONTEXT**	Colours on stage can be used to create an atmosphere or tell an audience about the mood or personality of a character. Context will include thinking about the location and time period of the production. This could also mean when a play was written.
6	S	**SHAPE AND FIT**	The shape of the item of clothing and the outline of the actor in the costume. This includes whether the clothing is loose or tight.

COSTUME VOCABULARY

1	**Applique**	A small colourful piece of embroidery
2	**Back stitch**	A closely worked stitch done by hand
3	**Colour palette**	A complementary set of colours that belong to a group such as pastel of dark
4	**Darting**	Sewing small, tapered folds into a garment to provide shape or otherwise alter the fit
5	**Embellishments**	Added extras such as lace, buttons, braids (decorative details)
6	**Finish**	The surface of fabric (usually dull or shiny)
7	**Monochrome**	Black, white and grey only
8	**Natural**	Non man-made (cotton, wool etc…)
9	**Rehearsal costumes**	Practice clothes and shoes before the final costume
10	**Seam**	Joining two pieces of fabric on the wrong side
11	**Subculture**	A cultural trend in society that is not the dominant one e.g. goth, punk
12	**Stylised**	Non- realistic – where style features are dominant
13	**Swatch**	A small sample of fabric that gives an idea of how an item made from it would look and feel
14	**Synthetic**	Man-mad (fabric)
15	**Upcycle**	Taking an existing garment and changing it in some way to make it something different.
16	**Weight**	How heavy or light the fabric is. This effects how it hangs.
17	**Hair and wigs**	Wigs let actors adopt hairstyles or colours different from their own. Hair can show the time period, as well as a character's status, personality, or age—for example, messy grey hair might suggest an elderly person who isn't looking after themselves.

Subject: Drama GCSE	Topic: Costume and Makeup Design	Year Group: 11

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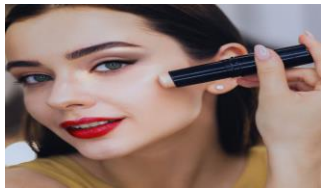
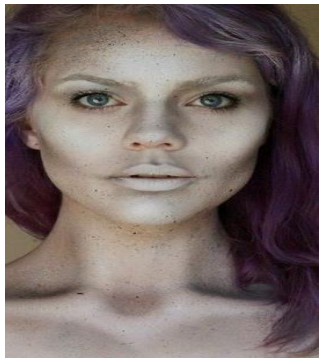
Makeup			
1	F	Foundation 	This is the base layer applied to the face. It creates the complexion of the character e.g. pale, medium or dark.
2	A	Accents 	You can accentuate certain areas and features of the face (e.g. the eyes) by adding pops or colour or thicker, bold makeup (e.g. eye liner or block colours of eye shadow)
3	C	Contour 	Contouring is makeup technique that uses light and shade to sculpt and define facial features, making them appear more sculpted and dimensional. It involves applying darker shades (often bronzer or contouring product) to areas that should recede (like hollows of the cheeks and sides of the nose) and lighter shades (highlighter) to areas that should stand out (like cheekbones and brow bone).
4	E	Effect 	Special effects such as cuts and wounds can be created using materials such as latex and fake blood etc…

PURPOSE OF STAGE MAKEUP:		
1	**CHARACTER**	Suggests significant aspects of a character (age, job, health etc…)
2	**MOOD AND ATMOSPHERE**	The colour and style of makeup can help to create a feel, for example, greyer foundation with black under the eyes could create an eerie look helping to convey this mood.
3	**FACIAL FEATURES**	Helps to make features more visible so audience can see expressions clearly.
4	**SPECIAL EFFECTS**	the use of prosthetic sculpting, moulding, casting and painting to create an effect such as an injury or fantasy character. A bruise wheel made up of yellows, reds, browns and cream is useful to create special bruise effects
5	**TIME AND LOCATION**	Makeup trends have changed throughout time so the makeup in a production should reflect this e.g red lipstick, rosy cheeks and drawn eyebrowns in 1920s. Some types of makeup are only usually worn in certain places e.g. at a special occasion on an evening.

Subject: RE | Topic: Muslim Practices | Year Group: Year 11

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Worship

1	**What are the five pillars?**	For Sunni Muslims, they are shahadah, salah, sawm, zakah and hajj. They are seen as pillars because they form the basis of faith.
2	**What are the ten obligatory acts?**	For Shi'a Muslims, they include salah, sawm, zakah, hajj and jihad. They also include khums, encouraging good, discouraging wrong, showing love for God and people, disassociation with enemies of God.
3	**What is the Shahadah?**	'There is no god but Allah, and Muhammad is the messenger of Allah' Muslims should declare this
4	**Why is Salah significant?**	• Muslims perform ritual washing (wudu) before prayer • Muslims pray facing Makkah • Daily prayers are made up of certain actions and recitations • At the mosque, men and women pray separately

Duties

1	**How do Muslims fast?**	• No food or drink in daylight hours. • To experience want and poverty • Encourages prayer and forgiveness.
2	**How do Muslims practice zakah?**	• The Qur'an doesn't give exact amounts but it is a small proportion of extra earnings • Charity brings communities together and fulfils ad duty God has imposed
3	**What happens on Hajj?**	• Remember the life of Ibrahim • Actions: Enter state of Ihram, circle the Ka'aba, travel to Arafat, throw pebbles at Medina • It brings sincerity, humility, discipline and unity.
4	**What is Jihad?**	• Lesser jihad is the duty to protect Islam against violent threat • Greater jihad is the personal struggle to follow Muslim rules and be faithful to Allah's will.

Festival

1	**What happens at Id ul-Adha?**	• The Greater Eid, and celebrates the prophet, Ibrahim, • Muslims remember Ibrahims's willingness to sacrifice his son and follow Allah's will. • Visit the mosque, and eat a slaughtered animal.
2	**What happens at Id ul-Fitr?**	• Festival of breaking the fast. The lesser Eid • Special prayers are made at home and mosques • Muslims wear new clothes and give gifts.
3	**What happens at Ashura?**	• Main Shi'a festival called the Day of Remembrance • Remember the death of Husayn. It is a day of mourning and martyrdom • Some re-enact the suffering but this has caused controversy.

Similarities and Differences: Sunni and Shi'a Islam

1	**Acts of Faith?**	• Sunni Muslims have five pillars • Shi'a Muslims add to the five pillars to have ten obligatory acts
2	**Giving alms?**	• Sunni Muslims tend to give 2.5% of earnings to charity or volunteer themselves • Shi'a tend to give 20% of extra earnings. This goes to the poor and to Muslim leaders
3	**Prayer?**	• Sunni Muslims pray five times a day • Shi'a Muslim combine these into three daily prayer.
4	**Ashura?**	Sunni Muslims recognise Ashura but as the Day of Atonement, when the Israelites escaped slavery in Eygpt.
5	**Leadership**	• Sunni Muslims support a caliphate • Shi'a Muslims support an imamte.

A students should be aware that the religious traditions of Great Britain are, in the main, Christian, and that religious traditions in Great Britain are diverse. They include Christianity, Buddhism, Hinduism, Islam, Judaism and Sikhism, and non-religious beliefs such as atheism and humanism.

Key Word	Definition
Ablution	Ritual washing before prayer (wudu)
Arafat	Part of the Hajj pilgrimage. Place where Prophet Muhammad preached his last sermon and pilgrims gather to pray.
Ashura	Important festival in Shi'a Islam, to commemorate the martyrdom of Hussein (Muhammad's grandson). Sunni Muslims observe Ashura as a day of repentance for sins in the belief that they will be forgiven.
Five Pillars	Important duties for Sunni Muslims which support the main principles of Islam. Shahadah, salah, zakah, sawm and hajj.
Friday Prayer /Jummah	Friday prayers in the mosque, where a sermon (khutbah) is heard.
Hajj	One of the Five Pillars/Ten Obligatory Acts; pilgrimage to Makkah, which all Muslims must undertake at least once in their lives, unless prevented by problems over wealth or health.
Id ul-Adha	Festival; celebration of the Prophet Ibrahim's willingness to sacrifice his son for Allah
Id ul-Fitr	Festival; celebration that comes at the end of Ramadan and marks the end of fasting.
The Ka'aba	Part of the Hajj pilgrimage; cube-shaped building in the centre of the Grand Mosque in Makkah. All Muslims face towards it when they pray.
Khums	One of the Ten Obligatory Acts in Shi'a Islam; practice of alms giving.
Mina	Site of pilgrimage during Hajj; where pilgrims take part in the stoning of pillars.
Rak'ahs	Actions and ritual movements made during salah (prayer) consisting of recitations, standing, bowing and prostration.
Muzdalifah	Site of pilgrimage during Hajj; where pilgrims hold a night prayer and rest after the Stand on Mount Arafat.
Night of Power	The night on which Muhammad received the first revelations of the Qur'an.
Recitations	Part of the practice of salah (prayer); the reciting of verses from the Qur'an.
Salah	Prayer; one of the Five Pillars/Ten Obligatory Acts.
Sawm	Fasting from dawn to dusk during Ramadan; one of the Five Pillars/Ten Obligatory Acts.
Shahadah	Muslim declaration of faith; one of the Five Pillars in Sunni Islam.
Ten Obligatory Acts	These are requirements for Shi'a Muslims.
Zakah	Giving alms means giving to those in need, eg money, food, time. One of the five pillars and 10 obligatory acts

Key quotes

'When you are about to pray...wash your body' **Quran**	'Pilgrimage to the house is a duty owed to Allah' Quran
'the alms are meant for only for the poor and needy' **Quran**	'There is no God but Allah and Muhammad is his messenger' Quran
'call on me and I will answer' **Quran**	'fight in the cause of Allah.. Those who fight you' Quran
'Recite in the name of your lord who created **Quran**	'Any who is present in that month should fast' **Quran**

Chemistry | Organic Chemistry | Y11

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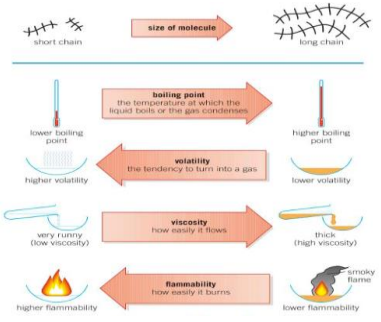
Crude Oil, Hydrocarbons & Alkanes

1	**What is crude oil?**	A mixture of mainly hydrocarbons that formed from the remains of ancient biomass , mostly plankton, that was buried in mud.
2	**Crude oil is mostly made up of alkanes**	General formula: C_nH_{2n+2} Alkanes are saturated (only single C-C bonds) hydrocarbons.

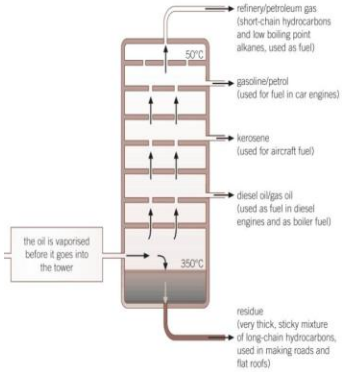
Key Vocabulary

1	**Hydrocarbon**	Molecules made up of carbon and hydrogen atoms only.
2	**Homologous Series**	A sequence of compounds with the same functional group and similar chemical properties.

Properties of Hydrocarbons & Combustion

1	**Complete combustion**	The combustion of hydrocarbon fuels releases energy. During combustion, the carbon and hydrogen in the fuels are oxidised. The complete combustion of a hydrocarbon produces carbon dioxide and water
2	**Properties of hydrocarbons**	

Fractional Distillation

1	**Process**	**The Process** 1) Heated crude oil enters a tall fractionating column, which is hot at the bottom and gets **cooler towards the top** 2) Vapours from the oil **evaporate** up the column 3) Vapours **condense** when they become cool enough liquids are led out of the column at different heights 4) The different fractions separate because they have **different boiling points**
2	**Diagram**	
3	**Products**	Useful petrochemicals produced: solvents, lubricants, polymers and detergents. Essential fuels produced from crude oil: petrol, diesel oil, kerosene, heavy fuel oil and liquified petroleum gases.

Cracking

1	**Supply & demand**	Long chain molecules have less uses and are in less of a demand, but they can be broken down into smaller more useful products by cracking.
2	**Products**	Both cracking processes result in the formation of two products; an **alkane** and an **alkene**.
3	**Method 1**	The alkane is brought into contact with a powdered aluminium oxide catalyst at moderate pressure and a temperature of around 500°C.
4	**Method 2**	The hydrocarbon is mixed with steam and heated to a very high temperature (approximately 850°C).

Alkenes

1	**Alkenes homologous series**	Alkenes are produced as one of the products of cracking. This double bond means that alkenes are more reactive than alkanes. Although it is the shorter chain alkane that is the desired product of cracking, alkenes are also useful to us. Alkenes can be used as monomers in polymerisation reactions to produce some of the plastics that we use in our everyday lives.
2	**General formula**	C_nH_{2n}
3	**Test**	Unsaturated hydrocarbon breaks its double bond & forms a new compound (Di-Bromo) it goes Colourless with **alkenes.**

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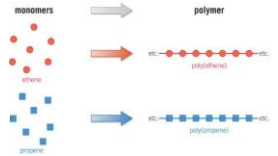
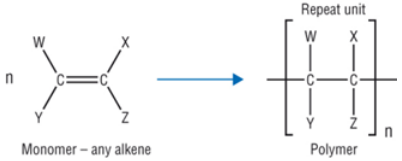
Functional Groups

1	**Alcohols**	A molecule that contains the functional group **–OH** is called an alcohol. General formula: $C_nH_{2n+1}OH$

Number of C in chain	Start of name	Full name
1	Meth-	Methanol
2	Eth-	Ethanol
3	Prop-	Propanol
4	But-	Butanol

2	**Esters**	Alcohol + Carboxylic Acid —> Ester + Water They have the functional group –COO Naming esters : First name is the **alcohol** and second name is the salt **name of the carboxylic acid** **Esters** are **volatile** compounds are often used as; Food flavorings, p…  , plastics , solvents and plasticisers.
3	**Carboxylic acids**	General formula: $C_nH_{2n+1}COOH$ Carboxylic acids have the functional group **–COOH**. They have the ending 'anoic' **Carboxylic Acids** are weak acids due to the fact they only **partially dissociate (ionize).** Forming H^+ ions

Polymerisation

1	**Polymers**	When small molecules are combined together they are able to create long chain molecules called **Polymers** 
2	**Addition polymerisation**	Small molecules, such as alkenes (**Monomers)** react together to form **Polymers** Alkenes are able to join together in a process called addition polymerisation because they can open up their double bonds and join (or add) together to form a chain. Naming polymers : add poly in front and put the **Monomer i**n brackets 
3	**Condensation polymerisation**	When different **Monomers** are added together they create a secondary product usually water. The different **monomers** will have different functional groups. General rule: 1) Dicarboxylic acid + dialcohol → polyester 2) Diol + dicarboxylic acid → polyester + water 3) Dicarboxylic acid + diamine → polyamide
4	**Naturally occurring polymers**	**Amino acids** are naturally occurring molecules that contain two functional groups. They have an amine group at one end of the molecule and a carboxylic acid group at the other.
5	**Natural polymers**	Sugars can undergo polymerisation in living things to make polymers, such as starch and cellulose.

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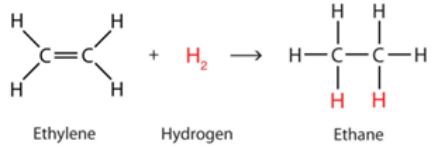
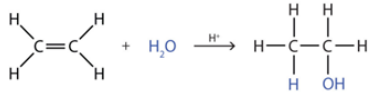
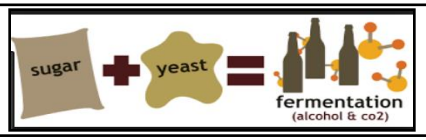
Reactions of Alcohol

1	**Combustion**	**Ethanol** is used as a fuel so combustion is common reaction for most alcohols.
2	**With sodium**	When reacting with Alkali metals It effervesces with Hydrogen gas.
3	**Oxidation**	When alcohols are oxidised they produce a **Weak Acid** Can use an **oxdising agent** to form a **Carboxylic Acid.** Ethanol + Oxidising agent —> Ethanoic Acid + Water C_2H_5OH + [O] —> C_2COOH + H_2O

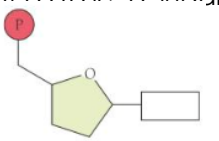
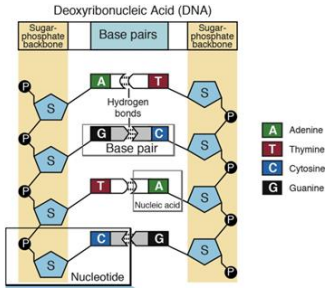
Reactions of Alkenes

1	**Reaction with hydrogen**	
2	**Reactions with halogens**	Naming : Give the name of the Halide first but; Chloro, Bromo and Iodo. 
3	**Reaction with water**	**C**an be added across the double bond by reacting an alkene with steam in the presence of a hot phosphoric acid catalyst. This reaction will only happen at 300°C and with the use of a nickel catalyst. 

Fermentation

I	$C_6H_{12}O_6$ —> 2 CH_3CH_2OH + 2 CO_2 glucose ethanol carbon dioxide
2	

DNA

1	**Structure**	DNA molecules are two polymer chains twisted together into a double helix. Each polymer chain is made up of nucleotides which are made up of a base, a sugar and a phosphate group. 
2	**Bases**	There are four bases and the interaction between the bases on each polymer strand holds the two DNA strands together and forms the double helix.
3	**Base pairing**	These four bases can only interact with others in pairs. Adenine (A) always pairs with thymine (T) and Cytosine (C) always pairs with Guanine (G). 

Subject: Science | Topic: Waves (6) | Year Group: 11

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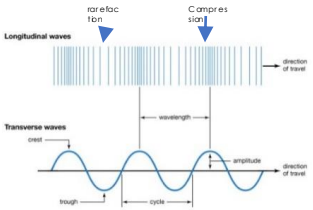
Properties of Waves

1	**Transverse waves** oscillate perpendicular (at right angles) to the direction of travel, e.g. ripples on water.	
2	**Longitudinal waves** oscillate parallel (in the same direction) to the direction of travel e.g. sound waves.	
3	Wavelength	The distance from one point on a wave to the equivalent point on the next wave.
4	Frequency	The number of waves that pass a point in one second.
5	Amplitude	The maximum displacement of a point on the wave from its undisturbed position.

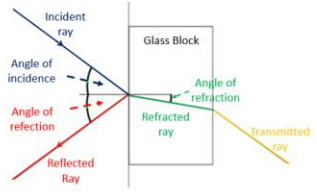
Properties of Waves Equations

1	Frequency	T = 1 / f T = time period in seconds, s f = frequency in hertz, Hz
2	Wave speed, frequency and wavelength	v = f x λ v = wave speed in metres per second, m/s f = frequency in hertz, Hz λ = wavelength in metres, m

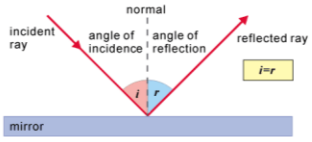
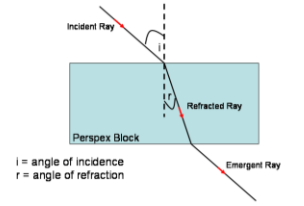
Measuring Wave Speed (RP)

1	**Investigating waves using a ripple tank.**	Oscillator creates waves in ripple tank. A light shines through meaning the waves can be seen on the screen below. If a strobe is set on the ripple tank at the same frequency as the waves, it appears as though they are standing still.
2	**Investigating waves using a string.**	An oscillator creates waves along the string, because the wave 'bounces back' when it reaches the end it can create a 'standing wave'.
3	Measuring speed of sound waves in air	Stand 100m from a wall, bang two wooden blocks together and time how long it takes to hear the echo. Divide this time by 200 (the distance travelled to the wall and back). Equation: Speed = distance /time.
4	Wavelength	Can be calculated by measuring the distance between waves – remember to take into account the effect of magnification on the screen. For a standing wave on a string, a measurement between two nodes is half a wavelength.
	Frequency	Frequency is shown on the oscillator or by calculating the number of waves passing a single point.
	Wave speed	Calculate using the equation v = f x λ.

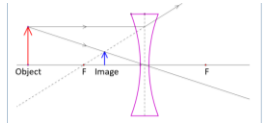
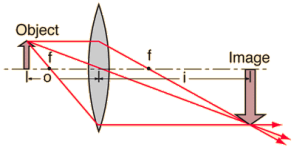
Reflection and Refraction (RP)

1	Use **a ray box** with a slit to create a beam of light. Place a **Perspex box** on a piece of white paper- draw an outline. **Shine the beam** towards the Perspex. Draw on the paper **where it enters and exits**. Some light will also reflect. Now find the angles with a protractor. Measure from the normal (a straight line 90˚ from the perspex).	 Angle of incidence = Angle of reflection. The angle of refraction tells you the refractive index (the difference in speed that light travels compared to air. Refractive index = sin (angle of incidence) / sin (angle of refraction).

Reflection and refraction

1	Waves can be **reflected** at a boundary between two different materials.	
2	Waves can be **refracted** when the density of the material it is travelling through changes, this makes the wave change speed and so the direction of travel.	

Lenses

1	**Concave** lenses make parallel waves spread out.	
2	**Convex** lenses make parallel waves converge (come together) to a focus.	
3	Focal length	Is the distance from the principal focus (where the rays are focused) to the lens.
4	Real image	Can be formed on a screen behind the lens.
5	Virtual image	Is formed where the rays appear to come from (e.g. a magnifying glass).

Subject: Science	Topic: Waves (6)	Year Group: 11

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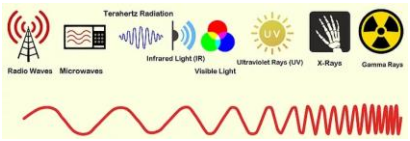
Electromagnetic Spectrum (Transverse waves)

1	Electromagnetic waves are electric and magnetic disturbances that can be used to transfer energy from a source to an absorber. This makes them useful for certain technologies.	
2	EM waves form a continuous spectrum, and all types can travel through a vacuum or air. 	
3	**Radio waves – long λ / low *f***	Used for communication (TV & Radio) When absorbed may create an AC with the same *f*
4	**Microwaves**	Used for communication. (satellite communications) Used for heating up food.
5	**Infrared (IR)**	All objects emit infrared radiation – the hotter the object, the more infrared it emits. Different surfaces absorb and emit different levels of IR radiation. Infrared cameras can be used to detect heat, so can be used for night vision or for medical purposes.
6	**Visible light (ROYGBIV)**	Light from the sun or from bulbs is white light, can be used for fibre optic communications
7	**Ultraviolet (UV)**	Can be used to mark valuable objects, then visible under certain light. Used for energy efficient lamps. Can be harmful to eyes and skin, link to skin cancer
8	**X-Rays**	Can travel straight through objects, if the are not too dense. Used for medical purposes. Can cause ionising radiation.
9	**Gamma rays – short λ / high *f***	Can travel straight through objects, if they are not too dense, so used for medical imaging. Used for killing harmful bacteria e.g. on food. Used for cancer treatments.

Visible Light

1	White light can be split into the colours of the rainbow (spectrum) using a prism.	Red, Orange, Yellow, Green, Blue, Indigo, Violet. Red has the longest wavelength Violet has the shortest wavelength
2	Objects absorb and reflect different wavelengths depending on their colour.	E.g. A red top will reflect light of red's wavelength, but absorb all other wavelengths.
3	Colours can mix to form different shades. There are 3 primary colours and 3 secondary. The 3 primary colours form white light.	Primary – Red, green, blue. Secondary – Cyan (green + blue), magenta (red + blue), yellow (red + green). (These primary and secondary colours are different to the ones you learn in art, because light is different to colour pigments, like paint).
4	Opaque	Allows no light through
5	Translucent	Allows light to pass through but distorts the image.
6	Transparent	Allows light through and provides a clear image (includes coloured filters).

Key Vocabulary

1	**Longitudinal Wave**	Oscillate parallel (in the same direction) to the direction of travel e.g. sound waves.
2	**Transverse Wave**	Oscillate perpendicular (at right angles) to the direction of travel, e.g. ripples on water.
3	**Wavelength**	The distance from one point on a wave to the equivalent point on the next wave.
4	**Frequency**	The number of waves that pass a point in one second.

Key Vocabulary Continued…

5	**Amplitude**	The maximum displacement of a point on the wave from its undisturbed position.
6	**Oscillator**	Machine used to make waves at a specific frequency.
7	**Ray diagram**	A symbol drawing used to demonstrate how light rays move.
8	**Normal**	A straight line perpendicular (90˚) from the object light is travelling towards.
9	**Angle of incidence**	Angle between the incident ray and the normal
10	**Angle of reflection**	Angle between the reflected ray and the normal (equal to angle of incidence).
11	**Angle of refraction**	Angle between the refracted ray and the normal.
12	**Convex**	A lens that makes light rays parallel to the principle axis meet at a point.
13	**Concave**	A lens that makes parallel rays spread out.
14	**Principle focus**	The point where light rays parallel to the principle axis of a lens focus.
15	**Real image**	An image formed by a lens that can be projected onto a screen.
16	**Virtual image**	An image seen in a lens or mirror, from which light rays appear to come after being refracted by a lens or reflected by a mirror.
17	**Electro-magnetic spectrum**	The continuous spectrum of electromagnetic waves, which have various uses.
18	**Sievert (Sv)**	A measure of radiation dose, a measure of the risk of harm resulting from an exposure of the body to radiation

Subject: Science	Topic: Waves (6) Physics only	Year Group: 11

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Sound Waves

1	Sound waves are longitudinal waves.	Particles vibrate in the same direction the wave travels.
2	Can pass travel through solids.	Create vibrations in the solid, transferring energy through the material.
3	Echo sounding, e.g. used in ships in deep water, and by bats and dolphins (echolocation).	High frequency sound waves can be used to detect objects, as the sounds waves are reflected from the object, then redetected, the time taken for the wave to return can be used to calculate the distance.

Hearing

1	Sound waves entering the ear cause the ear drum and other parts to vibrate.	
2	Humans can only hear a narrow range of frequencies. (20 Hz to 20,000 Hz (20 kHz)). Humans hear best at 3,000 Hz	This is because the conversion of soundwaves to vibrations of a solid (like those in the ear) only work at a limited frequency range.

Ultrasound

1	Ultrasound waves are…	Higher than the normal range of human hearing.
2	Can be partially reflected at the boundary between two different media.	This means a detector can be used to find how far away a boundary is, and so build an image. This is used in medicine (e.g. pregnancy scans) and industry.

Seismic Waves

1	Seismic waves travel through the Earth and across its surface.	These can cause earthquakes and subsequently tsunamis. Earthquakes are generated in the Earth's crust, at continental fault lines.
2	Primary waves (P-Waves)	Are **longitudinal** waves that cause the initial tremor. The push or pull on material as they move through the Earth.
3	Secondary waves (S-Waves)	Are **transverse** waves that appear a few minutes after the initial tremor. They move more slowly than p-waves and shake the material they pass through
4	Studies of seismic waves have led to discoveries about the Earth's structure	Measurements of the changes in speed of seismic waves have allowed scientists to measure the boundary between the crust and mantle.

Infrared Radiation and Black Bodies

1	All objects emit and absorb infrared radiation.	The hotter an object, the more infrared radiation it absorbs.
2	A perfect black body is one that absorbs all of the radiation on it – it doesn't reflect any.	Because it is the best absorber it is also the best possible emitter.
3	A body at a constant temperature absorbs radiation at the same rate it emits it.	If a body is increasing in temperature it is absorbing faster than emitting. If it is decreasing in temperature it is emitting faster than absorbing.
4	Certain objects are designed to emit infrared radiation quickly.	E.g. halogen hobs heat up food faster than ordinary hobs, as they emit more infrared radiation.
4	The temperature of the earth depends on the rate of absorption and emission and reflection of infrared radiation.	Changes in the levels of greenhouse gases absorbing and reemitting greenhouse gases can change the temperature of the Earth.

Radiation RP

1	You can compare how much surfaces emit infrared radiation by seeing how quickly it cools down.	The quicker it emits IR radiation, the faster it will cool down. If you are measuring the temperature of the surface, the one which emits more IR radiation will have a higher temperature.
2	Matt, black surfaces emit more IR radiation,	Shiny, light coloured surfaces emit less IR radiation.
3	A Leslie cube (a cube with different surfaces on each side) can be used for this experiment. Hot water goes in the cube, then measure the temperature of each side.	 

Key Vocabulary

1	Ossicles	Small bones in the ear, vibrate when sound waves enter the ear.
2	Ear drum	Thin membrane which separates the outer and inner ear. Sound waves cause vibrations when they hit this.
3	Ultrasound	Sound waves with a higher frequency than human hearing.
4	Seismic waves	Waves which travel through the Earth's crust, usually caused by an earthquake.
7	Infrared radiation	Electromagnetic waves with wavelengths between visible light and microwaves.
8	Black body	An object that absorbs all radiation that hits it.
9	Leslie cube	A device used to measure the IR radiation emitted from different surfaces.

Subject: Science (Physics) | Topic: Space (Physics only) | Year Group: 11

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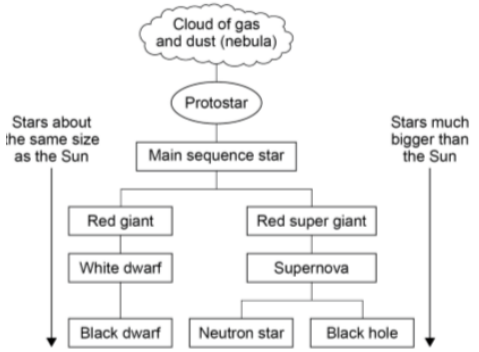
Our solar system is made up of …

1	Sun	The largest object in the Solar System. Powered by nuclear fusion.
2	Planets	They orbit the Sun. Generally, as the distance between the planet and the Sun increases, the temperature on the planet decreases and the time taken to orbit the Sun increases.
3	Moons	Natural satellites that orbit planets.
4	Dwarf planets	Unlike planets, their gravitational field is not strong enough to 'clear the neighbourhood' around it.
5	Asteroids	Move in elliptical orbits around the Sun. Made of metals and rock.
6	Comets	Orbit the Sun. Made of rock, dust and ice.

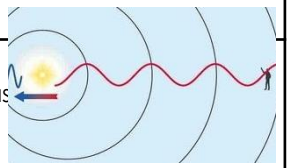
Life cycle of a star

1	Stars form from nebula that collapse inwards due to gravity. This causes the dust and gas to heat up. Eventually it is hot enough for fusion to occur and a star is born.	
2	A star goes through a life cycle. The life cycle is determined by the size of the star.	

Orbital motion

1	Planets orbit stars. Moons and artificial satellites orbit planets. This is possible due to gravity.	
2	When moving in circular orbits objects can have a changing velocity, even if their speed is constant, as when moving in a circle their direction is constantly changing (remember velocity has size & direction).	
3	For a satellite in a stable orbit, the radius must change if the speed changes.	If it is too fast, it will move off into space. If it is too slow, it will spiral into Earth.

Red shift

1	 Absorption spectrum	White light arriving at Earth from stars has certain colours (wavelengths) missing.
2	The dark lines in the absorption spectrum from stars in distant galaxies have all been shifted towards the red end of the spectrum (red-shifted).	
3	This shift tells us that the wavelength of their light has been stretched, indicating that these stars are moving away from Earth. 	
4	The more red-shifted the light from a galaxy is, the faster the galaxy is moving away from Earth. Galaxies that are further away are moving away from us fastest (shown by observations from supernovae).	
5	Red shift provides evidence that space is expanding which supports the Big Bang theory.	
6	There is still much about the universe that is not understood, for example dark mass and dark energy.	

Key Vocabulary

1	Galaxy	A system of billions of stars held together by gravitational attraction. Our solar system is in the Milky Way galaxy.
2	Nebula	A large cloud of gas and dust from which stars form.
3	Nuclear fusion	Light nuclei (e.g. hydrogen) join together to produce heavier nuclei and energy. Leads to the production of new elements.
4	Protostar	A very young star that is still gathering mass.
5	Main sequence star	The stable phase in a star's life. The gravity pulling the star inwards is balanced by the outward pressure produced by fusion.
6	Red giant	When all the hydrogen has been used up in fusion, larger nuclei begin to fuse. The star expands to become a red giant.
7	White dwarf	Nuclear reactions have finished. The star contracts under its own gravity.
8	Supernova	The explosion of a large star. Produces elements heavier than iron.
9	Black hole	A region where gravity is so strong that nothing can escape.
10	Red shift	There is an observed *increase* in the wavelength of light from distant galaxies.
11	Big bang theory	The universe began from a very small, hot, dense point.

PSHCE	Physical Health: Year 11	Half term 2

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Substance misuse: Addiction

1	**What is addiction?**	Addiction to something means by not having it, there will be withdrawal symptoms. This can be unpleasant, so it becomes easier to carry on having or doing whatever it is that is craved.
2	**Examples of chemical addictions**	Alcohol Illegal drugs Legal drugs Smoking
3	**Examples of behavioural addictions**	Shopping Phones / internet Work Gambling
4	**Physical effects of addiction**	Developing a tolerance to the drug. Withdrawal symptoms when trying to cut back or quit. Health problems, like irregular heart rate, high blood pressure, lung damage, and seizures. Injury, both accidental and self-inflicted. Overdose. Death.
5	**Psychological effects of addiction**	Mood swings. Having a negative outlook on life. Loss of motivation. Having episodes of drug-induced psychosis. Drugs can cause mental health problems as a results some people are more likely to try and harm themselves or take their own life
6	**Cycle of addiction**	An emotional trigger leads to a craving, which leads to the ritual of addictive behaviour. Guilt over this causes another emotional trigger, and the cycle continues.

Health prevention: Sleep

1	**How can sleep help the brain function?**	Activity in the brain during sleep improves concentration and mood. Overnight, information moves from our short-term to our long-term memory. Decision making and cognitive performance (our ability to think) are improved by sleep.
2	**How can sleep help the body function?**	Special proteins are released, which support the immune system. The hormone levels in the body are balanced out. The body works to grow and repair muscles, organs and other cells.
3	**Suggestions for a good sleep routine**	Spray a nice scent Turning your phone off Washing Brushing teeth Reading Limited screen time Meditation Relaxing music

The science behind: Stress

1	**What is stress?**	Short term stress (fight or flight) evolved as a way to help us survive. However long-term stress can have negative impacts
2	**Physical effects of stress on the body**	Stress causes hormones, such as cortisol, to be released. This can cause physical effects such as an increase in heart-rate
3	**Potential stress management strategies**	Meditation, exercise, time in nature, sleep well, connect socially, eat well, reduce caffeine, make lists, prioritise tasks.

Healthy eating: Food for the brain

1	**How can food support the brain?**	There are some foods/ food groups that can support the release of dopamine and serotonin – neurotransmitters that help to regulate emotions and make us feel good.
2	**Tips to boost serotonin and dopamine through our diet and lifestyle**	Consume regular meals to avoid a 'high' and crash in energy. Eat one portion of oily fish per week. Look after your gut! 70% of your immune system lives in your gut so keeping it happy is very important. Consume a variety of fruit and veg (fresh, frozen or dried) as well as plenty of fibre to boost the good bacteria in your gut. Keep foods that high in sugar, salt and caffeine to small amounts, less often.

Personal Safety: Recreational drug use

1	**What are recreational drugs?**	Recreational drugs are chemical substances taken for enjoyment, or leisure, rather than for medical reasons. Most are illegal.
2	**Why might someone take recreational drugs?**	To change the way the body thinks and feels. Because their friends are using them or to see what it feels like.
3	**The law related to recreational drugs**	Legal – such as nicotine and alcohol. Illegal – this means it is against the law to have them or supply them to other people; most recreational drugs are illegal. Controlled – these are drugs used in medicine. It is legal to take controlled drugs if a doctor has given you a prescription for them but it is illegal to have them if not, or to give them to anyone else.

Healthy vs Inactive lifestyles: Exam prep

1	**Diet related habit to develop**	Reduce use of energy drinks. While they help high bursts of energy, they are often followed by a 'crash', and are bad for your stomach and due to the caffeine in them, can become addictive.
2	**Time related habit to develop**	Space revision out; don't cram. You don't know the alphabet because you sat down for 2 hours and memorised it, it's taken regular revision over a long period of time.
3	**Sleep related habit to develop**	Get more sleep. Your brain needs regular, lengthy rest periods.

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