September - October

Year 10

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:

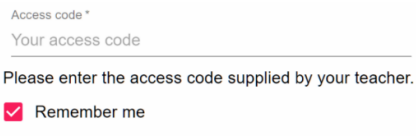
- You should complete 1 task per day, 5 days a week.
- The tasks will be set on Class Charts to help you keep track of what you need to do.
- You must bring your ILB and application book to school every day.
- You can choose the subject/topic you want to work on.
- Your tutor will check your ILB regularly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

USING CLASS CHARTS

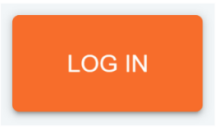
All of your homework will be set by your teachers using the Class Charts System.
You should check Class Charts every day to make sure you are up to date, and that you meet all your deadlines.
Below, shows you how to log on and track your homework.

Logging in to Class Charts

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



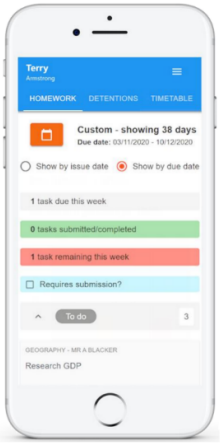
2. Click on the Log in button



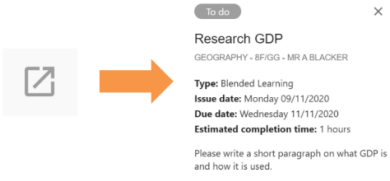
3. Enter your date of birth if prompted and click on the OK button

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.

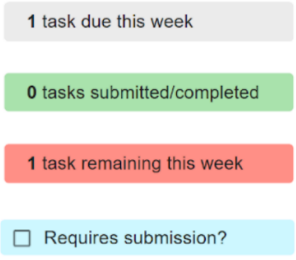


To view a homework task in more detail, click on the expand icon in the bottom right hand corner of the homework tile. A popup will appear that contains the a description of the homework task, the estimated completion time and any links or attachments that may have been included.



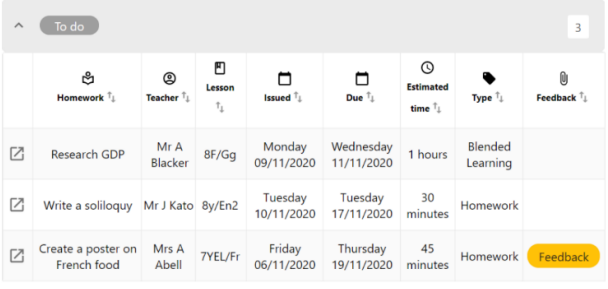
Keeping track of homework

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.



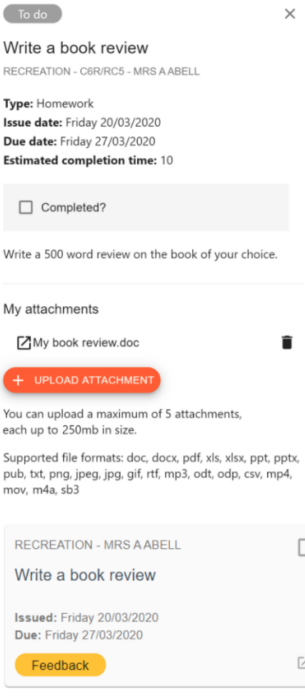
To only see homework tasks that require an attachment submission, tick the checkbox labelled Requires submission.

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
SELF-QUIZZING

Expectation this ½ term: Self-Quizzing

1. Use/Create 6 questions
2. Answer 6 questions

- This should be done once a day, for approximately 20 minutes.
- All quizzing 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: 01/09/2025	English: KG1 & 2	Science: KG2 & 4	History: KG4 & 5	PSHCE: KG 1 & 2	Drama: KG 1 & 3
8/09/2025					
15/09/2025					
22/09/2025					
29/09/2025					
06/10/2025					
13/10/2025					
20/10/2025					

SELF QUIZZING - INSTRUCTIONS

1. 

Identify knowledge

Identify the subject and knowledge groups you are going to cover.
Look at one knowledge group at a time.

2. 

Review

Spend around 5 minutes reviewing the knowledge group you have chosen.
Use this time to create questions if you need too.
Read it to yourself
Highlight keywords

3. 

Cover and answer

Cover up your knowledge and answer the questions from memory.
Take your time and where possible answer in full sentences.

4. 

Revisit

Go back to the content and self-mark your answers in **green** pen.

5. 

Review

Review the areas where there were gaps in knowledge, and self-quiz this area again.

SELF-QUIZZING QUESTIONS

These are taken straight from a knowledge organiser. These are examples of questions in your KO that can help you with self quizzing.

What is happiness?
What is gratitude?
What is vulnerability?
What is courage?

You can directly answer these questions in your application book.

OR

A. Structure of the Earth and Plate Tectonics		
1	 Structure of the earth	**Crust** – The outer layer of the Earth. It is a very thin layer (think of an apple skin on an apple) and ranges between a thickness of 6 and 70 km. Broken in pieces called tectonic plates. **Mantle** – Due to the high temperatures of this thick layer, the mantle has the consistency of jam! Temperatures within the mantle range from 5000ºC near the core to 1300ºC just below the crust. **Outer Core** – This layer is liquid and made up largely of iron. **Inner Core** - This layer is solid and is also made of iron. Temperatures within this dense core can be 5500ºC.

Using your KO, you can create your own questions, such as:

Structure of the Earth
1. What is the Crust?
2. What is the Mantle?
3. What is the Outer Core?
4. What is the Inner Core?

Subject: Business | Topic: 1.2 Spotting a Business Opportunity | Year Group: 10

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1. Customer Needs

1	**Why is it important to meet customer needs?**	It will ensure the business is successful: - Increase sales - Increase reputation - Increase brand awareness
2	**Difference between goods and services**	**Goods** – something that you buy and you can touch. Laptop (TANGIBLE) **Services** – Something that you buy but cant touch. Eg, Haircut (INTANGIBLE)
3	**What are the most important customer needs**	1. Price 2. Choice 3. Quality 4. Convenience

3. Market Segmentation

1	**How do we segment the market?**	Markets can be broken down in to different groups: age, gender, lifestyle, income, location, ethnicity, demographics
2	**Why do market maps help?**	They analyse 2 different factors in a market: price V quality They identify any gaps in the market They can analyse Business competitors
	What is customer profiling?	Building a **customer profile** can help run a better marketing campaigns that, in turn, increases profits

2. Market Research

1	**What is market research**	Market research is used to find out what potential target market customers need and wants
2	**Different types of research**	**Primary Research (field research):** Surveys, Questionnaires, Focus Groups Pop up ads, interviews **Secondary Research (desk research):** Market Reports, Internet, books
3	**Types of Data**	**Qualitative Data (Quality) based on OPINIONS** hard to analyse, more time consuming to collect, but offers more indepth answers **Quantitative Data (Quantity) based on STATISTICS** Easier to analyse, quicker to collect, but limited feedback
4	**How has social media change market research?**	Social media has offered new ways of collecting data. It is fast, directed at specific target markets globally, offers a wider range of answers
5	**Reliable data sources**	Market research can only be done on reliable information, like Gov Reports, credible sources. NOT google or Wikipedia

4. The Competitive Environment

1	**What do we know?**	Assessment of the competition in the market
2	**How does it work?**	S – Strengths W – Weaknesses O – Opportunities T – Threats
3	**What impact does this have?**	It allows the Business to make informed decisions based on their competitors

Key Word	Definitions
Market Segmentation	Breaking down a market to identify different target markets
Dynamic Market	A market that is constantly changing
Demographic	**Demographic segmentation** is market **segmentation** according to age, race, religion, gender, family size, ethnicity, income, and education
Focus Groups	a group of people assembled to participate in a discussion about a product before it is launched, or to provide feedback
Market Map	**Market mapping** is the process of using a graph to plot competitors and their products to understand competitor behaviour and spot a gap in the **market**
Gap in the market	**Gaps in the market** represent opportunities for Business to expand their customer base
Risk	Possibility of making a loss
Primary Research	Research that is collected for a specific reason and has never been collected before
Secondary Research	Research that has been carried out before by another person, for a different reason.
Qualitative Data	Data gathered using opinions 'I think that…..'
Quantitative Data	Data that can be expressed by numbers – statistics or percentages Gathered by multiple choice options for answers

Subject: Computer Science	Topic: Fundamentals of Algorithms	Year Group: 10

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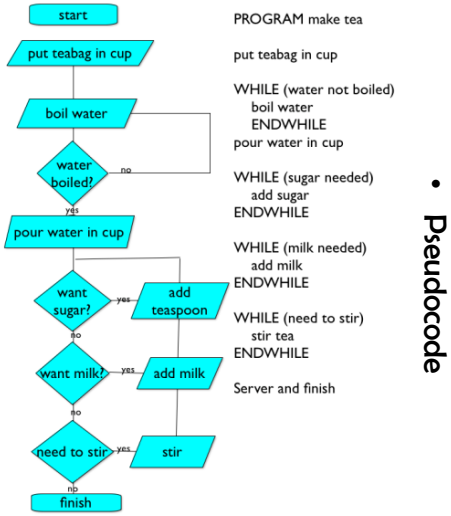
Algorithms

1 There are two ways to write algorithms:

- Flowchart

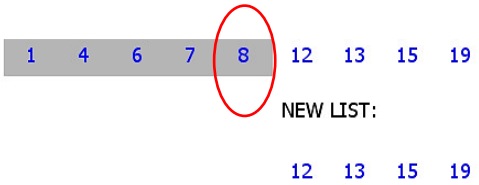


- Pseudocode

```
PROGRAM make tea
put teabag in cup
WHILE (water not boiled)
    boil water
    ENDWHILE
pour water in cup
WHILE (sugar needed)
    add sugar
ENDWHILE
WHILE (milk needed)
    add milk
ENDWHILE
WHILE (need to stir)
    stir tea
ENDWHILE
Server and finish
```

Searching Algorithms

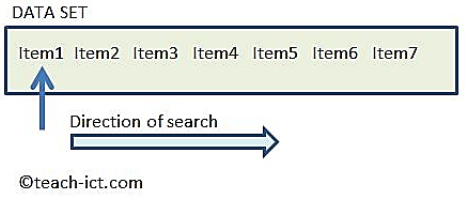
1
- Binary Search
  - Find the center of the list
  - N + 1 / 2
  - Compare the middle item



  - Discard half of the list
  - Repeat until found

Searching Algorithms

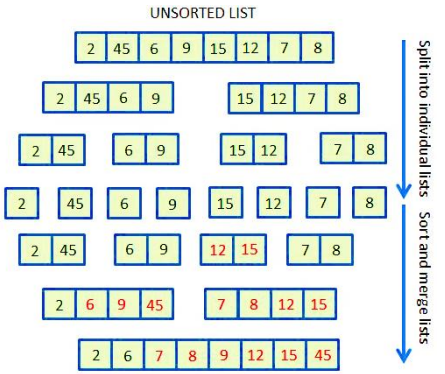
2
- **Linear Search**



Sorting Algorithms

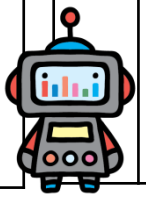
1
- Bubble Sort

2 **Merge Sort**



Key Vocabulary

1	**Abstraction**	picking out the important bits of the problem and removing unnecessary detail from a problem.
2	**Decomposition**	breaking a problem into a number of sub problems these sub problems can then be solved individually
3	**Algorithm**	is a step by step set of rules or instructions.
4	**Pseudocode**	is a set of step by step instructions in the style of a programming language but using plain English.



Subject: Computer Science	Topic: Programming	Year Group: 10

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Comparison Operators

Operator	Meaning
==	Is equal to
>	Is greater than
<	Is less than
<> or !=	Is not equal to
>=	Greater than or equal to
<=	Less than or equal to

Data Types and Operations

- Integer e.g. 23
- Real e.g. 23.7
- Character e.g. A or 5
- String e.g. A546TH
- Boolean e.g. TRUE or FALSE.

Operations

- ADD +
- SUBTRACT –
- DIVIDE /
- MULTIPLY *
- MOD
- DIV
- EXPONENTIATION **

Translators & Facilities of Language

Low level languages:
- Machine language
  - Op-code & Operand
- Assembly language
  - Mnemonics

High level languages:
- Closer to human language

1. Assembler
2. Compiler
3. Interpreter

Integrated development environment (IDE)
- Source code editor.
- Error debugger.
- Run time environment.
- Translator (compiler or interpreter).
- Automation tools

Robust Programs

- Defensive design considerations:
  - Input validation
  - Planning for contingencies
  - Anticipating misuse
  - Authentication
- Maintainability:
  - Comments & Indentation
- Types of testing
  - Iterative
  - Final / terminal
- Logical errors, syntax errors, and runtime errors

Key Vocabulary

1	**Variable**	A named value which can be changed as the program is running.
2	**Constant**	A named value which cannot be altered as the program is running.
3	**Syntax**	The arrangement of words and phrases
4	**Boolean**	A way of defining 1 or 0. Sometimes used as a way of defining algebraic notation

GCSE Economics | Resource allocation | 1.2.1-1.2.3

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1.2.1

Markets

A market is a place where buyers and sellers come together to exchange goods and services
A market can be a physical location such as a shop or a non physical location such as a web site
Buyers and sellers will interact in order to set a price
This will be based on the demand for and supply of scarce resources

Key concepts

Markets	A market is an opportunity for buyers and sellers to interact in order to establish price and agree to buy/sell
Consumers	People who buy goods/services produced by businesses
Producers	These are businesses who provide/make goods /services
Factor market	**Factor markets** are those where factor inputs are bought and sold e.g. Land, labour, capital
Produce markets	**Product markets** are those where goods and services that are produced by firms are sold to households and other firms.

1.2.2

Economic sectors

There are three economic sectors of the UK's economy (and any other economy)
Everyone that has a job will work in one of these three sectors.

The UK's service sector represents about 80% of the economy, manufacturing only 9% and primary roughly around 11%

Economic sectors

Primary sector (extraction, farming)	The primary sector includes those activities that are related to natural resources These activities include agriculture, fishing, mining and forestry
Secondary sector (manufacturing)	involves the transformation of raw or intermediate materials into goods, as in steel into cars, or textiles into clothing.
Tertiary sector (services)	This sector doesn't extract or manufacture. Instead the service sector provides services. This includes banking, finance, insurance, education, tourism, the health industry and the defence industry

Changes in the relative sizes of the economic sectors over time

The UK's economy used to have a very large secondary sector and a reasonable primary sector. There used to be many textile mills in the north of England, coal mines and car manufacturing plants based around the midlands. However, overtime the textile mills have closed, coal mines abandoned and car manufacturing shifted to cheaper locations in other parts of the world. This is an example of how our sectors have changed over time. Today the tertiary sector is the most important sector for the UK economy

1.2.3

What is specialisation?

Specialisation occurs when individuals, firms or countries focus on the production of particular tasks, products or industries

- When each employee in an organisation becomes an expert at their specific job
- When firms become experts in their field
- When countries concentrate on specific industries e.g. tourism or finance

Benefits of specialisation for producers	Costs of specialisation for producers
Firms can produce higher quality output at a lower cost due to faster and more skilled workers.	Mistakes in part of production line may impact overall production
Economies of scale	Changes in consumer tastes and fashion may mean specialised workers skills are redundant and the product may no longer be in demand
Producers may develop expertise and hence a good reputation when they specialise in something	Harder to cover staff as other workers are only trained in specific roles so there may not be any other available cover.

What is division of labour?

The division of labour is the process of **splitting a job into smaller, interconnected tasks and assigning each task to an individual worker**, thereby generating efficiency gains due to the positive effects of specialisation.

Benefits of specialisation for division of labour	Costs of specialisation for division of labour
Workers become experts int heir area of work	May lead to boredom due to repetitive nature of work
Repetition of the same skill increases speed and ability.	Workers may have limited skills and therefore may not be able to do other things required by the business
Workers focus on tasks they are good at and are more likely to enjoy the work and be more motivated and hence more productive	

Engineering Manufacture	Unit R014: Principles of engineering manufacture Topic Area 2: Engineering Materials	KS4	BECKFOOT SCHOOL enjoylearnsucceed

2.1 Mechanical Properties of Materials

1	**Yield Strength**	The **maximum** force that can be applied before a material begins to **change shape permanently** (will return to its original shape before this point is reached).
2	**Tensile Strength**	The maximum force that a material can take before breaking when it is stretched (pulled).
3	**Compressive Strength**	The ability of a material to withstand loads that reduce the size of that material (squash it).
4	**Elasticity**	The ability of a metal to resume its normal shape after being stretched or compressed.
5	**Ductility**	The ability of a material to be drawn out into wire or thread without losing strength or breaking.
6	**Hardness**	The measure of the resistance of a material to surface indentation, abrasion, or scratching.

2.2 Other Properties Influencing Manufacturing

7	**Malleability**	Is capable of being extended or shaped by beating with a hammer or by the pressure of rollers.
8	**Machinability**	A characteristic of a metal that makes it easy to drill, shape, cut, grind, etc. Materials with good machinability can be cut with relatively little power and low cost.
9	**Material Cost**	Material costs can be a balancing act between the function of the part and the cost. Usually the more expensive materials will be harder, greater wear and corrosion resistance, improved appearance.
10	**Manufacturing Cost**	The material selected will have an impact on the cost of manufacture. Some materials will be harder to machine and will take more time to work with which will have costs implications. Wear and tear on tools, greater energy costs, regular maintenance of machines.
10	**Sustainability**	Meeting the needs of **today** without **compromising** the ability of **future generations** to meet their own needs. **Definition;** The process of **using resources** in a way that **does not** compromise the environment or deplete the materials for future generations.

Standard Plastic Stock Shapes –


Sheet


Rod

Tube


Granules

Standard Metal Stock Shapes –


Angle, Channel, I-Beam,, Sheet, Rod, Flat, Hex, Tube, Threaded Rod, Square Bar

Engineering Manufacture

Unit R014: Principles of engineering manufacture
Topic Area 2: Engineering Materials

KS4

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2.3.1 Materials; Metals

Ferrous Metals	These Metals Contain **IRON** (Fe).	
1	**Iron**	Machine Bases, Metalworking Vices
2	**Tool Steel (Carbon Steels)**	Screwdrivers, Hammers, Saws
3	**Low Carbon Steel (Mild Steel) (<0.6% Carbon)**	Low carbon steel has good enough strength for **building frames in construction projects**
4	**High Carbon Steels (Tool Steel) (>0.6% Carbon)**	Extreme hardness and resistance to wear, very high carbon steel often used for **cutting tools that retain their sharp edge.** (Not as high carbon content are used for Screwdrivers, hammers, saws)
5	**Stainless Steel**	Sinks, Rules, Cutlery
6	**High Speed Steel**	Drill Bits, Lathe Tools
Non-ferrous Metals	Metals which **do not** contain IRON.	
7	**Copper**	Plumbing & Electrical Components
8	**Aluminium**	Cooking Foil, Sauce Pans, Ladders
9	**Zinc**	Coatings On Steel Products
Alloys	A mixture. of **two or more** metals.	
10	**Brass**	Plumbing Accessories
11	**Bronze**	Boat Propellers

2.3.2 Materials; Polymers

Thermoplastics	**Can** be remoulded numerous times with the application of heat.	
1	**Acrylonitrile-butadiene-styrene (ABS)**	Appliance casings
2	**High Impact Polystyrene (HIPS)**	Vacuum Forming, electronics casings
3	**Polycarbonate**	Safety Goggles, Bullet Proof Windows.
4	**Polylactic acid (PLA**	Eco-Products; **cups, lids, cutlery, straws and containers** made from a biopolymer called PLA. Made from starchy plants like corn. Also **Medical Equipment, Food Containers**.
Thermosetting Plastics	Polymers which **cannot** be remoulded once set in shape.	
5	**Polyester Resin**	Used in GRP – Car/ Boat bodies
6	**Urea-formaldehyde**	Electrical fittings, Door Handles.
7	**Epoxy Resin**	Glue, Casings, Coatings.
8	**Phenol-formaldehyde**	Heat resistant saucepan handles

2.3.3 Materials; Ceramics

Ceramics have a high resistance to heat and wear

1	**Tungsten Carbide**	Cutting Tool Tips
2	**Silicate Glass**	Resistant to very high temperatures and very strong, used in the lining of melting furnace burners, as blocks with windows for pyrometers.
3	**Silicon Glass**	Silicon glass is widely used in **optics, photometry and spectroscopy**. It is used in laser lenses and mirror prisms

2.3.4 Materials; Composites

A material made from **two or more** different materials that, when combined, are stronger than those individual materials by themselves. The microstructure can be seen to the naked eye.

1	**Glass Reinforced Plastic (GRP)**	Car / Boat Bodies, Bike frames
2	**Carbon Fibre**	Bicycle Frames, Sports equipment

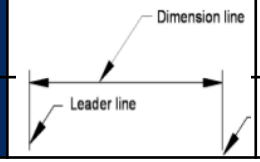
2.3.5 Materials; Smart & New Materials

Smart materials react to a stimulus in a controlled way, the change can also be reversed.

1	**Shape-memory Alloys**	Dental Braces, surgical implants, fire prevention.
2	**Thermochromic Materials**	React to heat - Thermometers for rooms, refrigerators, aquariums, and medical use.
4	**Quantum Tunnelling Composite (QTC)**	Responds to pressure to create circuits -Switches on mobile phones, pressure sensors and speed controllers
5	**Photochromic Pigment**	Reacts to light - Used **to protect your eyes from harmful UV rays**

Standard conventions in **BS 8888** and how these are applied

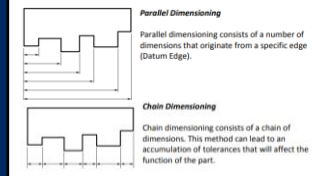
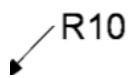
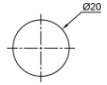
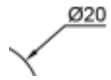
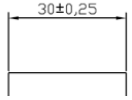
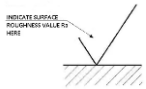
Meaning Of Line Types:

Outlines		Visible outlines & edges
Hidden Detail		Hidden outlines and edges.
Centreline		Chain thin: Centre lines and lines of symmetry.
Projection, Leader Line		Continuous thin line
Dimension		Continuous thin line

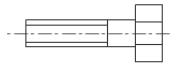
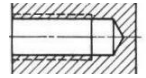
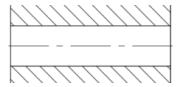
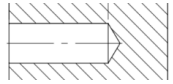
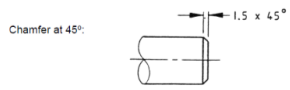
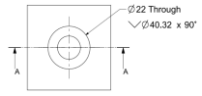
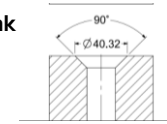
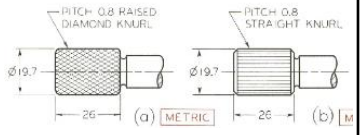
Abbreviations

Across Flats	AF	Width across flats is **the distance between two parallel surfaces on the head of a screw or bolt, or a nut.**
Centre Line	CL	Centre lines denote **a circular feature such as a shaft or a hole**. Or a plane of symmetry.
Diameter	⌀	
Drawing	DRG	
Material	MATL	
Square	SQ	❑ If preceding a dimension

Standard Conventions For Dimensions

Linear Measurements		
Radius		
Diameter		
Tolerances		⌀ 16±0.1
Surface Finish		Known as a 'tick' symbol.

Representation Of Mechanical Features

Threads	**Male** 	**Female** 
Holes	**Through Hole** 	**Blind Hole** 
Chamfers		**A Symmetrical Sloping Surface At An Edge Or Corner**
Countersinks	**Countersink Plan view** 	**Countersink Side view** 
Knurls		**Knurling** is a manufacturing process, whereby a pattern of straight, **angled or crossed lines** is rolled into the material

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

BECKFOOT SCHOOL enjoylearnsucceed

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; and is irritated by Christmas as it interrupts his business. • After returning home, Marley's ghost appears and 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**	**Role**: Protagonist. **Represents**: Greed, ignorance and selfishness.	6	**Bob Cratchit**	**Role**: Scrooge's hardworking and unpaid clerk. **Represents**: The hard working, deserving poor.
2	**Marley**	**Role**: Scrooge's deceased business partner who appears as a ghost. **Represents**: Purgatory and acts as a warning to Scrooge.	7	**Tiny Tim**	**Role**: Bob Cratchit's ill and vulnerable son. **Represents**: All poor Victorian children.
3	**Ghost of Christmas Past**	**Role**: A shape changing spirit. **Represents**: Memory and has light/a flame at the top of its head.	8	**Fred**	**Role**: Scrooge's patient, jovial nephew. The son of his beloved sister, Fan. **Represents**: Christmas, happiness, family.
4	**Ghost of Christmas Present**	**Role**: A jolly spirit (resembles Father Christmas). **Represents**: Generosity and Christmas spirit.	9	**Fezziwig**	**Role**: Scrooge's former employer. **Represents**: Generosity.
5	**Ghost of Christmas Yet to Come**	**Role**: A silent, sinister spirit in a black, hooded cloak. **Represents**: Death.	10	**Belle**	**Role**: Scrooge's former fiancée who breaks off their engagement. **Represents**: Love.

Themes

1	**Greed and selfishness**	**Example**: Scrooge represents the middle classes who sought to hoard rather than share their wealth.
2	**Poverty**	**Example**: The Cratchits, Ignorance and Want. At the end, Scrooge realizes he can share his wealth with the poor.
3	**Transformation**	**Example**: The spirits guide Scrooge throughout the novella to become a kinder human being.
4	**Christmas**	**Example**: Scrooge learns the true meaning of Christmas is to spend time with your family and loved ones.
5	**Social responsibility**	**Example**: Without social responsibility, children suffer – e.g., Tiny Tim, Ignorance and Want. Scrooge becomes socially responsible by the end of the novella.

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**	• The Poor Amendment (1834) 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 developing as a celebration. • During Queen Victoria's reign, workers were given two days holiday for Christmas. • The rich ate turkey; the poor ate goose.

Key Vocabulary

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

English Literature | Frankenstein | Year Group: 10 & 11

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Plot Summary

1	**Letters 1-4** Walton's POV	The novel begins with a series of letters from Walton to his sister, Margaret. He is captain of the ship in a voyage to the north Pole. Walton and his men rescue Victor and help him recuperate on the ship. He eventually tells Walton his story.
2	**Ch. 1-2** Victor's POV	Victor begins his narration and tells of his childhood growing up in Geneva with his doting parents. He also shares that Elizabeth was adopted. As a teenager, Victor was fascinated by the mysteries of Science.
3	**Ch. 3-5** Victor's POV	Victor's mother dies from Scarlet fever after catching it whilst nursing Elizabeth. Victor leaves to attend university in Ingolstadt and becomes obsessed with anatomy. He decides to animate a creature and is horrified when it is brought to life. He abandons the creature and falls ill.
4	**Ch. 6-8** Victor's POV	Victor is nursed back to health by his friend, Henry Clerval. He receives a letter from his father informing him that William has been murdered. Returning to Geneva, Victor sees the monster and knows who is to blame, however Justine is executed for William's murder.
5	**Ch. 9-10** Victor's POV	Victor contemplates suicide but a trip to Belrive, planned by his father, cheers him up slightly. When he feels negative again, he decides to climb Montonvert to clear his head and sees the monster who shares his story.
6	**Ch. 11-12** Creature's POV	The monster describes the confusion in its first moments of life. He then describes people fleeing whenever he tried to approach them, so he decided to stay away from them. He developed skills and began observing the De Lacey family to educate himself.
7	**Ch. 13-14** Creature's POV	Winter turns into Spring and the creature has now learnt language. He notices that the family seem unhappy, until Safie arrives. He learns that the people are called Felix, Agatha and De Lacey and they used to be affluent.
8	**Ch. 15-17** Creature's POV	The creature finds books and learns to read and also learns how he was created. He hopes to befriend the cottagers, starting with the old, blind De Lacey, however Felix drives him away. When the family have left, the creature burns down their cottage and leaves for Geneva. He confesses that he killed William and framed Justine. He then implores Victor to make him a mate and Victor agrees.
9	**Ch. 18-20** Victor's POV	Victor visits England with Clerval, but he leaves Clerval in Scotland so that he can work on the female creature alone in the Orkney Islands. Mid-way, he destroys it in front of the monster. The monster promises revenge on Victor's wedding night. Victor then gets rid of the remains in the sea. When he lands in a town, he is suspected of a murder.
10	**Ch. 21-23** Victor's POV	Victor is taken to the body, which is Clerval's . He collapses and falls ill. When he awakens, he is found innocent. Elizabeth and Victor marry, however, he remembers the creature's threat and plans to battle him. On the wedding night, Elizabeth is killed by the creature and Alphonse dies from shock. Victor vows revenge on the creature.
11	**Ch. 24** Victor's POV- **Walton in Continuation** Walton's POV	Victor relentlessly tracks down the creature through ice and snow. He is found by Walton, to whom he warns not to make the same mistakes as him and Walton decides to call the voyage off. Victor asks Walton to continue his mission and then dies. Walton then sees the creature weeping over Victor's body. He is tormented and states he has no purpose left, now that his creator is dead. He leaves into the darkness.

Characters

1	**Robert Walton**	A young, ambitious English man leading an expedition to the North Pole.
2	**Victor Frankenstein**	Protagonist. Driven by ambition and Science. His quest for power leads him to his own downfall.
3	**Alphonse Frankenstein**	Victor's father. An example of kindness and selflessness.
4	**Caroline Frankenstein**	Victor's loving mother. A paradigm of motherly concern and generosity. Her death provides the catalyst for Victor to transcend death.
5	**William Frankenstein**	Victor's youngest brother who was murdered by the creature.
6	**Justine Moritz**	Frankenstein family servant, who is more like family. She was framed by the creature and executed for William's murder.
7	**De Laceys**	Parisian's turned rural farmers. They are poor, but kind, loving and good.
8	**The Creature**	A product of Victor's scientific experiment that went wrong. He is rejected by everyone and longs for acceptance.
9	**Henry Clerval**	Victor's best friend. He is an idealised character. Henry takes care of Victor and is also another one of the creature's victims.
10	**Elizabeth Lavenza**	Victor's adopted sister and bride. She is a passive and idealised character and is presented as angelic. She is killed by the creature.

Themes

1	**Ambition/ obsession**	Both Victor and Walton aim for major discoveries/achievements. Victor's tale is a warning to not be overly ambitious.
2	**Family/Love**	Family is important to Victor and the Creature. The Creature longs for family/love but is always rejected.
3	**Death**	Several people die in the novel and Victor's mother's death is what spurred Victor on to transgress the boundaries of life and death.
4	**Revenge**	Both Victor and the creature feel wronged and seek revenge even at the cost of their own safety, health and happiness.
5	**Man vs God**	Both Victor and Walton talk of conquering nature with science which emphasizes there risk-taking and ambitious natures.

Context

1	**Mary Shelley**	Born in 1797, most famous for *Frankenstein*. Shelley experienced a great deal of death in her own life: her mother, her 3 children and her husband (Percy Bysshe Shelley).
2	**Science**	Many advancements in science had been made, biologists were finding out a great deal about the human body and its capabilities. Science was breaking boundaries.
3	**Religion**	Parts of Europe were heavily religious. Therefore, occurrences that could not be explained were viewed as an act of God or from another supernatural force.

Key Vocabulary

1	**Epistolary Novel**	Novel written in the form of letters which allows the writer to establish the narrative POV clearly.
2	**Frame Narrative**	A narrative within a narrative. This allows us to see events from different perspectives.
4	**Allegory**	Characters/events represent ideas about religion, morals or politics.
5	**Foreshadowing-**	When something gives the reader a hint about what will take place in the future.
6	**Transgression**	An act that goes against a law, rule or code of conduct; an offence.
7	**Age of Enlightenment**	An intellectual and philosophical movement that dominated the world of ideas in Europe during the 17th-19th Century.

Beckfoot School

Subject: Fine Art | Topic: Observations | Year 10: HT1

Beckfoot School enjoylearnsucceed

Knowledge Group 1: Pencil Drawing

1	**Grades of pencil**	Graphite pencils are classified as either soft black (B), hard (H), hard black (HB), and firm (F). The degree of these qualities is then further classified by numbers, the higher the number the higher the intensity.
2	**"B" Pencils**	Pencils which feature softer and darker graphite.

Knowledge Group 2: Chalk Pastel

1	**Tortillon (Blending stump)**	A tortillon (blending stump) is a cylindrical drawing tool, tapered at the end and usually made of rolled paper, used by artists to smudge or blend marks made with charcoal, Conté crayon, pencil or other drawing utensils.

Knowledge Group 3: Artists/Periods

1	**Ian Murphy**	A UK based Fine Artist who travels the world and produces observational drawings of unusual architecture.
2	**Clara Lieu**	Visual artist who uses the human figure as a vehicle for expression in multiple techniques in drawing, printmaking and sculpture.
3	**Elizabeth Wilson**	Fine artist who uses oil pastels to create vibrant portraits with gestural marks.

Key Vocabulary

1	**Observational drawing**	Observational drawing is drawing what you see and typically implies drawing from life.
2	**Tonal Modelling**	Tonal modelling is a means for the artist to create a sense of three-dimensional form in a drawing or painting.
3	**Hatching**	Artistic technique used to create tonal or shading effects by drawing (or painting or scribing) closely spaced parallel lines.
4	**Cross-hatching**	A method of line drawing that describes light and shadow. Light is represented with the openness of the lines, while shadow is recorded using the density of crossed lines.
5	**Contour-hatching**	When the lines follow the contours of the subject recording form.
6	**Highlights**	The areas on an object where light is hitting.
7	**Shadows**	The darker areas on an object where light is not hitting.
8	**Depth**	The perceived distance between the background and the foreground of a composition
9	**Detail**	A distinctive feature on a piece of art which can be seen most clearly close up.
10	**Implied texture**	Texture in art that cannot be felt by touch, but which resemblance is instead achieved through the masterful use of artistic tools and materials.

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

BECKFOOT SCHOOL enjoylearnsucceed

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!

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

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…

Subject: French

Higher Tier Knowledge Organiser

KS4

BECKFOOT SCHOOL enjoylearnsucceed

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 — Higher 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

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

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

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

Exclamations!!

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

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

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

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

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: The challenge of natural hazards	Year Group: 10

BECKFOOT SCHOOL enjoylearnsucceed

A. Natural hazards pose major risks to people and property.

1	**Natural Hazard**	A natural processes that could cause death, injury or disruption to humans.
2	**Types of natural hazard**	Tectonic hazards, metrological hazards, hydrological hazards, climatological hazard.
3	**Hazard risk**	The probability or chance a natural hazard will take place.

B. Earthquakes and volcanic eruptions are the result of physical processes

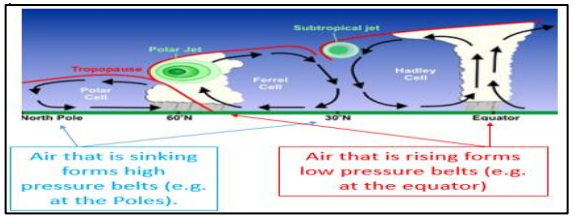
1	**Plate tectonics theory**	Is a theory that the earth is divided up into tectonic plates. Plate boundary types; Constructive destructive, conservative.
2	**Distribution of tectonic hazards**	The majority of tectonic hazards happen along plate boundaries. The Pacific Ring of Fire is the location of most tectonic hazards.

C. The effects of, and responses to, a tectonic hazard vary between areas of contrasting levels of wealth.

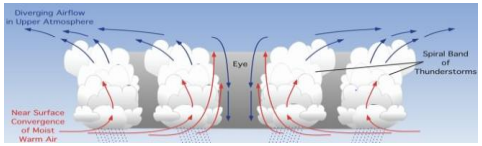
1	**Examples**	HIC- Italy 2009	LIC- Nepal 2015
2	**Primary effect**	300 deaths, 1500 people injured, 67,500 people homeless	9000 people dead, 20,000 people injured, 3 million homeless
3	**Secondary effects**	Fires in some collapsed buildings, broken water pipe caused a landslide.	Earthquake lead to an avalanche killing 19 people, road blocked.
4	**Immediate response**	Hotels provided shelter, Italian red cross carried out search and rescue.	Search and rescue teams, water and medical aid.
5.	**Long term response**	New settlement for 20,000 residents was built, Investigation into why buildings collapsed.	Roads repaired and stricter building regulations.

D. Global atmospheric circulation helps to determine patterns of weather and climate.

1



E. Tropical storms (hurricanes, cyclones, typhoons) develop as a result of particular physical conditions.

1	**Distribution**	All Tropical storms are located between the Tropics.
2	**Causes**	Tropical storms form over ocean water that is 27°C and low pressure, water vapour evaporates and rises, this draws in more air creating strong winds, the storm then rotates due to the spin of the Earth.
3	**Structure**	
4	**Climate change**	Climate change will increase the intensity and distribution of Tropical storms
5.	**Example**	Typhoon Haiyan, 2013
6.	**Effects**	Primary- 7500 people dead, 1.9 million homeless Secondary- Oil leak damaging fish stocks, seawater damaging farmland.
7.	**Response**	Immediate- 800,000 people evacuated, medical aid and search rescue. Long-term- Upgrade and rebuild damaged building 'build back better'

F. The UK is affected by a number of weather hazards.

1	Drought, river flash flooding, coastal flooding, slow onset river flooding, surface water flooding, extreme cold/heavy snow, heatwave, thunderstorm.

G. Extreme weather events in the UK have impacts on human activity.

1	**Example**	Somerset floods 2014
2	**Effects**	Social- 600 homes flooded, people without power Economic- £10 million damage, 16 farms damaged. Environmental- Contaminated water affecting natural habitats.
3	**Response**	Immediate- Villages cut off used boats to act as transport, livestock was evacuated. Long-term- £20 million given by Government for a flood action plan., dredged 8km of the River Tone.

F. Climate change is the result of natural and human factors, and has a range of effects.

1	**Evidence**	Increased global temperatures, reduced ice coverage, irregular weather patterns.
2	**Causes**	Natural- changes in earth orbit and tilt, volcanic activity, increased solar energy. Human- enhanced greenhouse effect due to increased burning of fossil fuels.
3	**Mitigation**	Use of alternative energy and renewable energy source's to reduce carbon dioxide emissions.
4	**Adaptation**	Use of carbon capture to reduce carbon. Tree planting to capture carbon Use of drought resistance seeds to help adapt to warmer climate.

Subject: Geography	Topic: The challenge of natural hazards	Year Group: 10

BECKFOOT SCHOOL enjoylearnsucceed

1) Low income country (LIC) and High income country (HIC)	- This subdivision of countries is based on the World Bank income classifications (GNI per capita), which in 2013 were Low Income $1045 or below, and High Income $12746 or above.
2) Newly emerging economies (NEEs)	- Countries that have begun to experience higher rates of economic development, usually with higher levels of industrialisation. They differ from LICs in that they no longer rely primarily on agriculture, have made gains in infrastructure and industrial growth, and are experiencing increasing incomes and high levels of investment, eg Brazil, Russia, China and South Africa (the so-called BRICS countries).
3) Hazard risk	- The probability or chance that a natural hazard may take place.
4) Natural hazard	- A natural event (for example an earthquake, volcanic eruption, tropical storm, flood) that threatens people or has the potential to cause damage, destruction and death.
5) Conservative plate margin	Tectonic plate margin where two tectonic plates slide past each other.
6) Constructive plate margin	- Tectonic plate margin where rising magma adds new material to plates that are diverging or moving apart
7) Destructive plate margin	- Tectonic plate margin where two plates are converging or coming together and oceanic plate is subducted. It can be associated with violent earthquakes and explosive volcanoes.
8) Earthquake	-A sudden or violent movement within the Earth's crust followed by a series of shocks
9) Immediate responses	- The reaction of people as the disaster happens and in the immediate aftermath.
10) Long-term responses	- Later reactions that occur in the weeks, months and years after the event.
11) Monitoring	- Recording physical changes, such as earthquake tremors around a volcano, to help forecast when and where a natural hazard might strike.
12) Plate margin	- The margin or boundary between two tectonic plates.
13) Planning	- Actions taken to enable communities to respond to, and recover from, natural disasters, through measures such as emergency evacuation plans, information management, communications and warning systems.
14) Prediction	- Attempts to forecast when and where a natural hazard will strike, based on current knowledge. This can be done to some extent for volcanic eruptions (and tropical storms), but less reliably for earthquakes.
15) Primary effects	- The initial impact of a natural event on people and property, caused directly by it, for instance the ground buildings collapsing following an earthquake.
16) Protection	- Actions taken before a hazard strikes to reduce its impact, such as educating people or improving building design
17) Secondary effects -	The after-effects that occur as indirect impacts of a natural event, sometimes on a longer timescale, for instance fires due to ruptured gas mains resulting from the ground shaking.
18) Tectonic hazard	- A natural hazard caused by movement of tectonic plates (including volcanoes and earthquakes).
19) Tectonic plate	- A rigid segment of the Earth's crust which can 'float' across the heavier, semi-molten rock below. Continental plates are less dense, but thicker than oceanic plates.
20) Volcano	- An opening in the Earth's crust from which lava, ash and gases erupt.

Subject: Geography	Topic: The challenge of natural hazards	Year Group: 10

BECKFOOT SCHOOL enjoylearnsucceed

21) Economic impact	- The effect of an event on the wealth of an area or community.
22) Environmental impact	- The effect of an event on the landscape and ecology of the surrounding area
23) Extreme weather	- This is when a weather event is significantly different from the average or usual weather pattern, and is especially severe or unseasonal. This may take place over one day or a period of time. A severe snow blizzard or heat wave are two examples of extreme weather in the UK.
24) Global atmospheric circulation	- The worldwide system of winds, which transports heat from tropical to polar latitudes. In each hemisphere, air also circulates through the entire depth of the troposphere which extends up to 15 km.
25) Immediate responses	- The reaction of people as the disaster happens and in the immediate aftermath
26) Long-term responses	- Later reactions that occur in the weeks, months and years after the event.
27) Management strategies	- Techniques of controlling, responding to, or dealing with an event.
28) Monitoring	- Recording physical changes, such as tracking a tropical storm by satellite, to help forecast when and where a natural hazard might strike.

29) Planning	- Actions taken to enable communities to respond to, and recover from, natural disasters, through measures such as emergency evacuation plans, information management, communications and warning systems.
30) Prediction	-Attempts to forecast when and where a natural hazard will strike, based on current knowledge. This can be done to some extent for tropical storms (and volcanic eruptions, but less reliably for earthquakes).
31) Primary effects	- The initial impact of a natural event on people and property, caused directly by it, for instance buildings being partially or wholly destroyed by a tropical storm.
32) Protection	- Actions taken before a hazard strikes to reduce its impact, such as educating people or improving building design.
33) Secondary effects	- The after-effects that occur as indirect impacts of a natural event, sometimes on a longer timescale, for instance impact on access to potable water can lead to spread of disease.
34) Social impact	- The effect of an event on the lives of people or community
35) Tropical storm	- (hurricane, cyclone, typhoon) An area of low pressure with winds moving in a spiral around the calm central point called the eye of the storm. Winds are powerful and rainfall is heavy.
36) Adaptation -	Actions taken to adjust to natural events such as climate change, to reduce potential damage, limit the impacts, take advantage of opportunities, or cope with the consequences.

37) Climate change -	A long-term change in the earth's climate, especially a change due to an increase in the average atmospheric temperature.
38) Mitigation	**-** Action taken to reduce or eliminate the long-term risk to human life and property from natural hazards, such as building earthquake-proof buildings or making international agreements about carbon reduction targets.
39) Orbital changes -	- Changes in the pathway of the Earth around the Sun.
40) Quaternary period	- The period of geological time from about 2.6 million years ago to the present. It is characterized by the appearance and development of humans and includes the Pleistocene and Holocene Epochs.

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
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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
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/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
5	…spielen	play
6	…essen	eat
7	…trinken	drink
8	…sehen	see
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6	man muss/kann/soll… machen	you must/can/should… do

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
6	zu	too
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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: Graphics	Topic: Pop Culture Convention Justin Maller Artist Study	Year 10 HT1

Knowledge Group 1: Tools

1	**Polygonal lasso Tool** 	This lasso tool creates a straight line in between each mouse click. To record triangles: Click – Move – Click – Move – Double Click
2	**Average blur** **(Filter – Blur – Average)**	It will turn the image to a solid colour by producing an average of all colours in the image. Keyboard shortcut: Ctrl F
3	**Deselect**	Ctrl D
4	**Step Backwards** **Short cut (Alt – Ctrl – Z)**	Undo/Redo step backwards multiple steps. Ideal if you have moved a layer in error or misaligned a pre-existing template.

Knowledge Group 1: Techniques

1	**Irregular triangles**	Different in sizes: large, medium and small.
2	**Isolate** (hues)	A colour that has been or become isolated.
3	**Hue**	The name of a colour.
4	**Saturation**	The intensity or purity of a hue.
5	**Shadows**	The darker areas on an object where light is not hitting.
6	**Highlights**	The areas on an object where light is hitting.
7	**Tonal Modelling** 	Tonal modelling is a means for the artist to create a sense of three-dimensional form in a drawing or painting.
8	**Contour**	An outline representing or bounding the shape or form of something. Record contours by placing triangles carefully along contours.
9	**Gradient**	A gradual blending from 1 colour to another.

Key Vocabulary

1	**Low Polygonal Art**	A minimalistic art style used in video game design, animation, and illustration.
2	**Aspect Ratio**	The ratio of the width to the height of an image or screen.
3	**Detail**	A distinctive feature of an object or scene which can be seen most clearly close up.
4	**High Resolution**	A large amount of detail. This would contain a lot of pixels to create.
5	**Pattern** (Avoid)	A design in which lines, shapes, forms or colours are repeated.

Health and Social Care	RO32 Principles of care in Health and Social Care – Topic area 1	Year 10

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1.1 Types of Care

Health care settings	Dental practice, GP surgery, Health centre, Hospital, Nursing home, Optician, Pharmacy, Walk-in centre
Health Care Examples	• Visiting the dentist twice a year for a check-up. • Pregnant woman visiting the hospital for an ultrasound scan on her unborn baby. • Visiting Accident and Emergency A and E) at hospital for a sports is.
Social care settings	Residential home, Retirement home, social services department, support group, community centre, day centre, food bank, homeless shelter.
Social Care Examples	• An individual staying at a homeless shelter. • Dementia resident cannot care for themselves in their own home, now living in a residential care home. • A family struggling to cope with the demands of caring for their physically disabled child.

1.2 The Rights of service users

Choice	• Choosing which activities they participate in • Choosing what to eat • Choosing the type of treatment
Confidentiality	• Service users have a duty of care to protect service users' personal information • (verbal and written) • Service providers cannot discuss service users care with their family and friends not directly involved in their care. • Conversations should be in a private room (cannot overhear) • Keep personal information secure in a locked cupboard or filing cabinet. Computers should be password protected • Providers would need a log in with a secure email and password to access data and wear a security badge
Consultation	• Service users should be involved in all decisions that are made about them. • Service providers must find out and respect the service users' opinions, beliefs and concerns to build trust. • Service users involved in decision-making will feel more in control reducing fears or worries they have.
Equal and Fair treatment	• Every service user can access health and social care services, regardless of who they are (not unfairly because of their colour, age, gender, money available or ability to care for themselves. • Misconception - we should treat everyone in the same way, but this means some will be disadvantaged. E.g., providing information in large print, different language, braille.
Protection from abuse and Harm	• Includes health and safety, safe working practices and knowledge of what to do if you have concerns. • Service providers have a duty to prevent harm and abuse - have a clear complaints procedure. • Staff should monitor behaviour, be vigilant and receive the correct training to be able to recognise signs of abuse and how to report them.
Harm	Can occur in unsafe or inaccessible to service users (inadequate lighting, slippery floors, missing handrails equipment not checked regularly, procedures not followed)
Abuse	Can occur deliberately or accidentally (racism, lack of training, sexual orientation) it could be cruel comments, physical action or isolation.

Key Terms

Consultation	Service providers share information with service users and vice versa, so care decisions can be made together.
Physical Hard	Includes smacking, hitting, kicking, shaking and biting. This type of harm can lead to physical injuries such as bruises, burns, bite marks or broken bones.
Emotional Harm	Includes shouting or swearing at a service user, insulting them or ignoring them completely.
Empowerment	Relates to the control or 'power' a service user feels they have over their life
Holistic approach	Consider the emotional and psychological needs as well as the physical health

1.3 The benefits to service users' health and wellbeing when their rights are maintained

Empowerment - Control or 'power' will support the resident to feel stronger and mare confident therefore more independent and self-reliant.	
Independence and self-reliance	Encourage service users to remain independent for as long as possible and self-reliance promoting self-worth and self-confidence. Provide physical and intellectual stimulation so the service users life remains interesting and has value. Maintain a service user right to choose leading to self-reliance (involved in all decisions about their care and contributing to self-esteem.
Feelings of Control	Empower service users by ensuring their rights are met giving them a sense of control e.g., Am I okay to listen to your chest?
Choice	Involved in their own care to increase their understanding and increase their self-esteem. A sense of control results in them being likely to agree to care.
High self-esteem - if rights are maintained they will feel valued and respected increasing their self-esteem	
Feeling valued	The right of choice will help service users feel valued and worthy of care. More likely to ask for additional support in the future.
Feeling respected	Gain respect by introducing themselves, asking their preferred name and listening to them properly. Will develop a partnership and an understanding based on honesty and trust. Health and wellbeing will improve because of the high standards of care. E.g. correct manual handling techniques used.
Positive mental Health	This contributes to a person's self-esteem and self-worth. Good mental health allows people to cope with change better and identify the benefits of care. Take a holistic approach considering how the person feels about their care.
Service users' needs are not met - care should be specific and well planned to the service user.	
Appropriate care or treatment	Service users receive care that is appropriate to their needs showing they are respected and worthy of support. They are more likely to use the service again. Settings should be accessible e.g. lifts, wide doorways and ramps.
Improvements in physical or mental health	If services are appropriate to their needs their health and wellbeing will benefit for example, hunger leads to tiredness and dizziness, lack of focus at school.
Trust - service users will feel safe and confident with the care provided.	
Safety from harm	Trusting relationships will allow confidence to develop because they feel safe. Settings should be secure (locks and keypads working, intruders cannot enter) Staff should wear identification to keep service users safe.
Best interests	Care should have their best interest at heart. Gives reassurance and confidence in their care. Staff training makes service users safe
Confidence in the care received	Trust gives service users confidence in their care and to ask questions. They will feel worthy, valued, respected and safe. Trust is linked to confidentiality where conversations are not overheard. This creates confidence.

Subject: History Topic: Americans' experiences of the Depression and New Deal Year Group: 10

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1. The Great Depression

1	What were the long term causes of the depression?	1. Over-speculation – too many people had bought shares with borrowed money hoping that their value would increase 2. Overproduction – the demand for products fell as everyone who could afford the products had already bought them 3. Credit – too many people had bought products with borrowed money, meaning there was a lot of debt 4. Tariffs – taxes on US imports in other countries meant companies struggled to sell their extra product aboard.
2	What were the short term causes of the depression?	1. Some shareholders began to lose confidence in the companies they invested in and from September 1929, they began selling their shares 2. As more people began to sell their shares, the value of these shares fell as the sellers were desperate to get rid of them. 3. This led to the Wall Street Crash
3	What was the Wall Street Crash?	1. On 24th October 1929, 13 million shares were sold – x5 sold on a normal day. Share prices for almost all companies dropped further. 2. This day became known as 'Black Thursday' or the Wall Street Crash.
4	What was the short term impact of the Wall Street Crash?	1. On 29 October there was another selling panic. 2. 16 million shares were sold. Shareholders lost a total of $8 billion on the day. 3. Many had borrowed money to buy the shares and now couldn't afford to pay back their loans 4. Many banks went bankrupt as they could not recover their money. In 1929, 659 banks folded and many people lost their life savings.

2. Effect of the Great Depression

1	What happened to employment after the Crash?	1. By 1932, around 13 million people were jobless (25% of the total labour force). 2. 12,000 people were losing their jobs every day by 1932 and 20,000 companies had shut down. 3. Between 1929 and 1932, factory production dropped by 45% and housebuilding by 80%.
2	Why did Hoovervilles develop?	1. Up to 250,000 people lost their homes as they couldn't pay their mortgage. 2. Many were forced to in Hoovervilles in improvised shacks built with unwanted materials 3. Many unemployed workers became 'hobos' and travelled the country looking for any work they could find. 4. Soup kitchens were set up in cities and many homeless people joined breadlines to find food.
3	How did the Depression affect farmers?	1. Many farmers were struggling before the Crash. 2. Many farmers had to pay back bank loans (e.g. for equipment) and often struggled to do this. 3. By 1932, 1 in 20 farmers had lost their farms and homes as a result. 4. Drought and farming methods had turned much of the Midwest into a 'Dust Bowl' in which the topsoil was blown away leaving dry soil.
3	How did President Hoover respond to the crisis?	1. He believed in 'rugged individualism' and felt the crisis would end quickly. 2. The Reconstruction Finance Committee lent money to farmers and struggling businesses. 3. A huge road and dam building programme created jobs. 4. $300m to help the unemployed was made available to the states but only $30m was used. 5. The Hawley-Smoot Tariff of 1930 taxed imports but led to other countries taxing US goods, making US exports fall
4	How did people react to the Depression?	1. Farmers in Iowa used guns and pitchforks to keep government officials from evicting farmers. 2. In summer 1932 250,000 ex-soldiers marched to Washington to demand their pension or 'bonus' to be paid early. 3. Hoover set the army on them and the 'Bonus Army' protesters were driven off with gas, guns and tanks. 4. People blamed Hoover's laissez-faire attitude for their suffering

Key word	Definition
Buying on the Margin	A method of buying shares where an investor pays 10% of the share price and repays the rest with their profits
Bonus Army	The war veterans who marched on Washington in 1932 to demand payment of their war pensions
Dust Bowl	Parts of the interior USA which had become infertile for farming
Hobo	The term used for a person who moved around the country seeking work
Hooverville	The temporary slums that arose as a response to high levels of homelessness
Laissez-faire	A government policy of not getting involved in people's lives
Rugged individualism	The belief that individuals should solve their own problems for hard work rather than relying on the state
Share	A part of a business that is sold to get investment in the company
Speculation	Gambling on the stock market, often with borrowed money
Stock Market	Where stocks were bought and sold
Under-consumption	When not enough money is being spent to sustain a particular business or the wider economy

3. The 1932 election

		Hoover	Roosevelt
1	Background	1. Elected as president in 1928 – part of the Republican Party. 2. Before politics he was a mining multi-millionaire.	1. Part of the Democrat Party 2. New York governor after 1928 and spent $20m of tax money helping the unemployed.
2	Policies	1. Believed in rugged individualism and wanted America to solve its problems through hard work and without government help. 2. He only began to introduce measures to help citizens a few years after the Depression began.	1. He promised a 'New Deal' for America 2. The 3Rs: 'Relief' (help for those in need), 'Recovery' (providing jobs) and 'Reform' (to improve America and minimise the impact of the Depression).
3	Reasons for outcome	1. He was a poor speaker and his beliefs made him sound uncaring. 2. The Republicans were associated with causing the Depression	1. Voters liked him due to his resilience and ideas. 2. He spoke all over the country up to 15 times a day. 3. He broadcast his policies on the radio in a series of 'fireside chats'

Subject: History Topic: Americans' experiences of the Depression and New Deal Year Group: 10

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4. The New Deal

1	What did Roosevelt do in his first 100 days?	1. The Emergency Banking Act closed and inspected all banks - only the well-run and fully financed banks were allowed to reopen. 2. The Economy Act cut government employees' salaries by 15% which saved the country $1billion. 3. The Beer Act ended Prohibition, put the gangsters out of business, and allowed the government to raise cash by taxing alcohol.
2	What were the Alphabet Agencies?	1. These were government organisations known by their initials. 2. The idea was that the government would create jobs by spending money, allowing buying to resume, therefore creating more jobs.
3	How did the New Deal help unemploy -ment?	1. The CCC temporarily employed 2.5 million 18-25 year olds working clearing up the countryside 2. The CWA created 4 million temporary jobs building schools, airport and roads 3. The FERA gave $500 million to states to help homeless, starving people.
4	How did the New Deal affect farmers?	1. The FCA lent money to farmers to repay loans - $100 million loaned in 18 months 2. The AAA paid farmers to produce less and destroy extra food. Between 1933-1939 famers' incomes doubled
5	How did the New Deal affect industry & workers?	1. The NRA encouraged workers and employers to create fair working conditions, including the right to join trade unions – 2.5 million companies joined the scheme 2. The TVA provided work building dams and electric power stations in one of the poorest areas of America 3. The HOLC gave loans to over 300,000 people to pay their mortgages

5. Opposition to the New Deal

1	Republicans	1. Many Republicans felt FDR was becoming too powerful and letting the government dominate the lives of individuals.
2	The Rich	1. The rich were annoyed at having to pay extra tax to support the New Deal.
3	Businesses	1. Business owners felt the government was interfering with business and giving workers too many rights.
4	The Supreme Court	1. The Supreme Court argued that it wasn't the President's place to make laws on local state business 2. In 1935, the Court ruled the AAA was illegal
5	Radical politicians	1. Some politicians felt the New Deal wasn't doing enough 2. Huey Long suggested 'Share Our Wealth' where the government would take all fortunes above £5m, and sharing them so every family could buy a car, house and radio. 3. Francis Townsend suggested everyone should retire at 60 to allow younger people to enter the job market.

6. Impact of the New Deal

1	What were the positive impacts of the New Deal?	1. The Social Security Act allowed the elderly, widows and disabled people to get pensions and for the sick or unemployed to get benefits. 2. The number of bank failures dropped dramatically. 3. Days lost to work strikes decreased between 1934 and 1938. 4. GNP (Gross National Product) rose between 1933-1941.
2	What were the negative impacts of the New Deal?	1. It interfered a lot in people's lives. 2. It failed to solve unemployment and 1 in 10 remained jobless. 3. Many people remained poor. 4. It wasted a lot of money on unsuccessful work programmes.
3	How did it affect women?	1. Many women found work in one of the Alphabet Agencies. 2. However the NRA set women's wages lower than men's - $525 per year compared to $1000 for men 3. Only 10,000 of the 2.5 million CCC jobs went to women
4	How did it affect workers?	1. The Alphabet agencies gave millions a basic wage 2. The Wagner Act gave workers the right to join trade unions 3. However big businesses remained powerful and unions were treated with suspicion
5	How did affect farmers?	1. Large-scale farmers benefited from rising prices and loans 2. But small farms continued to struggle in rural areas 3. Dust bowl farmers had to look for work elsewhere
6	How did it affect African Americans?	1. 200,000 African American employed by the CCC 2. But the CCC campsites were segregated 3. African Americans were not allowed to live in the newly built towns 4. Roosevelt refused to make changes to race discrimination because he feared losing support in the South
7	How did it affect Native Americans?	1. Government loans were provided to help Native Americans buy land and farming equipment 2. The Indian Reservation Act gave Native Americans the right to set up their own law courts 3. But many Native Americans still lived in poverty and suffered discrimination
8	How did the New Deal come to an end?	1. After FDR's re-election in 1936 he worried about the cost of his plans. 2. Fewer jobs were being created due to spending cuts. 3. Thousands of workers in the car and steel industries went on strike. 4. Unemployment rose to 10.5m in 1938 and production fell. 5. By January 1939 FDR acknowledged the New Deal was over.

Key word	Definition
Alphabet Agencies	Government agencies created during the New Deal
New Deal	FDR's policies designed to help the US recover from the Depression during the 1930s
Reservation	The term for an area of land given over to American Indians for their exclusive use
Social Security Act	The 1935 measure that created America's first social welfare system
Supreme Court	The USA's highest court that can challenge or overrule new and existing laws
Three Rs	Relief, Recovery, Reform: FDR's three main policy priorities after winning the Presidency

7. Popular Culture in the 1930s

1	How did entertainment change?	1. Jazz was very popular and top stars sold lots of records. 2. Gramophone sales increased along with vinyl records. 3. Over 100m people went to the cinema each week. 4. Musicals, comedies, historical dramas and horror films were all popular. 5. Comic books became a hugely popular industry.
2	How did the arts change?	1. Plays, poetry and sports were broadcast by radio. 2. Authors wrote about the Depression and social issues. 3. The Works Progress Administration (WPA) provided work for unemployed artists of all kinds. 4. Much of the artistic output of this era became important and is still studied and enjoyed today. 5. The WPA was criticized for wasting taxpayers' money.

Subject: History Topic: Americans' experiences of the Depression and New Deal Year Group: 10

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8. WW2 and the economy

1	What was the US stance on involvement?	1. America had not joined the League of Nations at the end of WWI and focused on building its own country 2. In 1935 the Neutrality Act banned loans to countries at war 3. In 1937, the government stopped the sales of weapons to any countries involved in conflict
2	How did this change?	1. In 1937 Roosevelt made a speech saying peace-loving nations needed to stand up to aggressive nations 2. When war broke out in 1939, America declared support for Britain and France.
3	How did this change affect the economy?	1. In Nov 1939, Britain and France began buying US weapons, warships and plans in the 'Cash and Carry plan' 2. In March 1941, FDR agreed to lend $7000 million worth of weapons to Britain in the Lend Lease Deal 3. This created valuable production jobs 4. Unemployed men became trainee soldiers, sailors and pilots 5. By 1941, there were only 5.5 million unemployed compared to 10 million in 1937
4	How did joining the war help the economy?	1. In Dec 1941, Pearl Harbor was attacked by the Japanese. The US joined WW2 on the side of Britain and France 2. In Jan 1942, the War Production Board converted peacetime industries to produce weapons 3. In 1944 96,000 planes were produced by US factories 4. More unemployed men joined the armed forces – by 1944 unemployment dropped to 670,000 5. Farmers benefitted from supplying food to the military 6. Coal, iron, steel and oil industries got a boost too

Key word	Definition
Isolationism	The US policy of staying out of European affairs
Lend Lease	America's policy of lending Britain military equipment free of charge
NAACP	The National Association for the Advancement of Colored People – group that worked for equality for African Americans
Neutrality	Not supporting or helping either side in a conflict or disagreement
WAC	Women's Auxiliary Corps – non combat group in the US army
WAVES	Non combat group in the US navy

9. How did WW2 affect the lives of women?

1	What was life like for women before WW2?	1. Women were employed in traditional 'female roles' like nursing and teaching 2. They were often expected to leave their jobs once they got married
2	What happened when war broke out?	1. As millions of men joined the military, women began to fill their jobs in factories, railways and shipyards 2. Between 1940 and 1945 the number of women in work rose from 12 million to nearly 19 million 3. Women occupied a third of all America's jobs
3	What did women do in the military?	1. Over 300,000 women took on non combat roles in the military 2. The WAC was formed in 1942, which allowed women to serve in the army 3. Women in the WAC would have jobs like mechanics, electricians, typists, drivers and switchboard operators 4. Women could also help in the navy by joining the WAVES
4	What was the impact of thee changes?	1. Women proved that they were capable of the same jobs that men were 2. Many more married women were employed – which wasn't common before the war 3. However, many men saw this as a threat 4. The government was reluctant to provide childcare help or more equal pay – women's pay was only 60% 5. Many expected women to return to their domestic role after WW2 6. The changes that were made were temporary

10. How did WW2 affect the lives of African Americans?

1	African Americans in the US	1. Early on in the war there was a march planned to protest the treatment of African American workers especially in weapons factories 2. The government set up the FEPC to investigate. It found widespread discrimination and recommended the government didn't use these companies 3. By 1944, 2 million African Americans worked in factories
2	What was it like for African Americans in the military?	1. Over 1 million African Americans fought for the US in WW2 2. They faced widespread discrimination, segregation and limits on the roles they could hold – e.g. they could not be officers or pilots 3. As the war continued African Americans began to hold these important roles but still in segregated units
3	What was it like for African American women?	1. African American women were not allowed to serve in the WAVES 2. There were limits on the number of African Americans joining the WAC and becoming nurses 3. African American nurses were often only allowed to treat African American patients
4	What was the impact of African American involvement in the war?	1. Soldiers fighting abroad found less racial discrimination in European countries 2. Many African American soldiers felt it was hypocritical that the US asked them to fight in a war against racism in Germany, while experiencing racism in the military and at home 3. The Double V campaign led by an African American newspaper called for victory in the war and victory against inequality in the US 4. Membership of the NAACP increased to around 500,000 by the end of the war, showing people were ready for change

Design & Technology; Food

Unit 2 - Macro/micro-nutrients

Year Group: 10

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Macronutrients

1	**Carbohydrates – starchy**	Provide slow releasing energy. Sources: bread, pasta, oats, rice, potatoes.
2	**Carbohydrates – sugar**	Provide instant energy. Can be natural or added. Sources: fructose, lactose, fizzy drinks, sweets
3	**Protein**	Essential for growth and repair. Provide a secondary source of energy.
4	**HBV**	Proteins that contain all the essential amino acids our body cannot produce itself. Sources: meat, fish, milk, cheese, yoghurt
5	**LBV**	Proteins that contain some of the essential amino acids our body cannot produce itself. Sources: beans, lentils, grains
6	**Fat**	Provides vitamins A, D, E and K. Keeps the body warm and offers insulation. Stored energy.
7	**Saturated**	Solid at room temperature often referred to as bad fat as can increase risk of heart disease Sources: meat, dairy, coconut
8	**Unsaturated**	Liquid at room temperature often referred to as healthy fat as can lower risk of heart disease Sources: olive oil, nuts, seeds, avocados
9	**NSP / Fibre**	Helps with digestion and lower cholesterol. Sources: wholegrains, nuts, seeds, fruit and veg
10	**Water**	Essential for existence. Transports nutrients, helps digestion, flushes out waste, maintains body temperature

Micronutrients & Minerals

Water soluble		
1	**Vitamin B complex**	Helps release energy from food. Consists of B1, B2, B9, B12 Each B vit is found in different food sources.
2	**Vitamin C**	Helps iron absorption. Improves immune system. Antioxidant. Sources: fruit and vegetables
Fat Soluble		
3	**Vitamin A**	Helps vision. Structure of skin and keeping immunesystem healthy. Sources: dairy, dark green veg, orange fuit/veg
4	**Vitamin D**	Helps calcium absorption. Prevents bones disease. Sources: fish oil, dairy, sunlight, fortified cereal and margarine
5	**Vitamin E**	Helps maintain healthy skin and eyes. Forms red blood cells. Sources: dairy, nuts, dark green veg
6	**Vitamin K**	Helps blood clot / needed for healthy bones Sources: dark green veg, fish, liver and fruit.
Minerals		
7	**Calcium**	Keeps bones and teeth health and strong Sources: dairy, dark green veg, fish bones
8	**Iron**	Needed to transport oxygen around the blood Sources: red meat, wholegrain foods, green veg
9	**Sodium**	Controls the amount of water in the body . Makes nerves and muscles work properly
10	**Potassium**	Help maintain fluid levelsinside our cells
11	**Magnesium**	Helps maintain normal nerve and muscle function

Key Vocabulary

1	**Macronutrients**	A nutrient your body requires in large amounts (grams)
2	**Micronutrients**	A nutrient your body requires in large amounts (mg)
3	**Water soluble vitamins**	Vitamins that are found in water (vitamins B,C)
4	**Fat soluble**	Vitamins that are found in water (vitamins B,C)
5	**Mineral**	Nutrients our body requires in small amounts (calcium, iron, sodium)
6	**RDI**	Recommended Daily Intake. A guide provided by the NHS with the quantities we should be aiming for daily.
7	**Portion control**	Healthy diets not only have the correct balance, but have the right portion sizes. **Vegetables** = double cupped palm. **Grains/Starches** = clenched fist. **Protein** = palm of hand. **Fruits** = clenched fist. **Thumb** = fats.
8	**Eat Well Guide**	A guide provided by the Government to show the amount each food group we should be eating daily
9	**Calories**	The amount of energy in an item of food or drink is measured in calories
10	**Source**	Where the nutrient is found e.g. which foods contain it

- ❑ **Research the RDI amounts**
- ❑ **Who is the Eat Well Guide not suitable for?**
- ❑ **How does food effect our mental health as well as physical?**

Subject: Maths	Term: Half Term 2 - September	Year Group:10F

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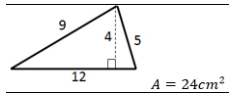
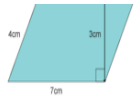
Algebra – Working with Symbols

1	**Simplifying expressions Collect 'like terms'.**	Be careful with negatives. x^2 and x are not like terms. $2x + 3y + 4x - 5y + 3 = 6x - 2y + 3$ $3x + 4 - x^2 + 2x - 1 = 5x - x^2 + 3$
2	**Bracket Expansion**	To expand a bracket, **multiply** each term **in the bracket** by the expression **outside** the bracket. $3(m + 7) = 3x + 21$
3	**Factorise**	The **reverse** of **expanding**. Factorising is writing an expression as a product of terms by '**taking out' a common factor**. $6x - 15 = 3(2x - 5)$, where 3 is the common factor.

Number - Percentages

1	Percentage multipliers	The multiplier for increasing by 12% is 1.12 The multiplier for decreasing by 12% is 0.88 (100% - 12%)
2	Percentage change	$\frac{(new\ value - original\ value)}{original\ value}$ x 100%
3	Reverse Percentage	A jumper was priced at £48.60 after a 10% reduction. Find its original price. 100% - 10% = 90% 90% = £48.60 1% = £0.54 100% = £54
4	Simplifying Ratios	**Divide** all parts of the ratio by a **common factor**. 5 : 10 = 1 : 2 (divide both by 5) 14 : 21 = 2 : 3 (divide both by 7)

Geometry and Measure – Area and Perimeter

1	Area of a rectangle/square **Length x Width**	 $A = 36cm^2$
2	Area of a Triangle **Base x Height ÷ 2**	 $A = 24cm^2$
3	Area of a parallelogram **Base x Perpendicular Height**	 $A = 21cm^2$
4	Area of a Circle	$A = \pi r^2$ which means 'pi x radius squared'.
5	Circumference of a Circle	$C = \pi d$ which means 'pi x diameter'

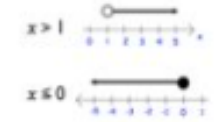
Ratio, Proportion and rates of change – Ratio

1	Unitary Method	Find the value of a single unit first, and then the value of the required number of units by multiplying

Key Vocabulary

1	Equation	A statement showing that **two expressions are equal i.e 2y-17=15**
2	Percentage multipliers	The **number** you **multiply** a quantity by to **increase or decrease** it by a **percentage**.
3	Reverse percentage	Find the **correct percentage given in the question**, then work backwards to **find 100%** Look out for words like '**before**' or '**original**'
4	Perimeter	The **total distance** around the **outside** of a shape.
5	Area	The amount of **space inside** a shape.

Algebra – Inequalities

1	Understanding inequality signs	
2	Representing inequalities on a number line	
3	Quadratic Inequalities	You should get **two pairs of solutions** Graphically, you should **have two points of intersection**

Subject: Maths	Term: Half Term 2 – September Part 1	Year Group: 10H

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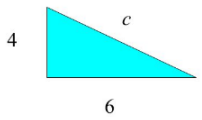
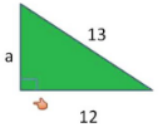
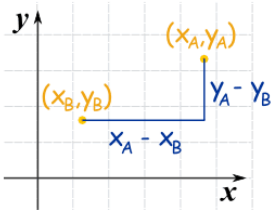
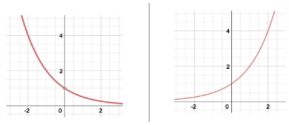
Geometry & Measure - Pythagoras

1	Finding the hypotenuse	Find c. $a^2 + b^2 = c^2$ $4^2 + 6^2 = c^2$ $c^2 = 52$ $c = \sqrt{52}$ $c = 7.21$ 
2	Finding the shorter side	Find the Value of a:  $c^2 = a^2 + b^2$ $a^2 = c^2 - b^2$ $a = \sqrt{c^2 - b^2}$ $a = \sqrt{13^2 - 12^2}$ $a = \sqrt{169 - 144}$ $a = \sqrt{25}$ $a = 5$
3	Find the distance between two points	 $\sqrt{(x_A - x_B)^2 + (y_A - y_B)^2}$

Number - Percentages

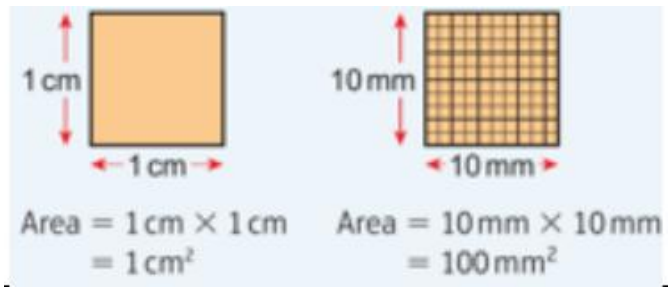
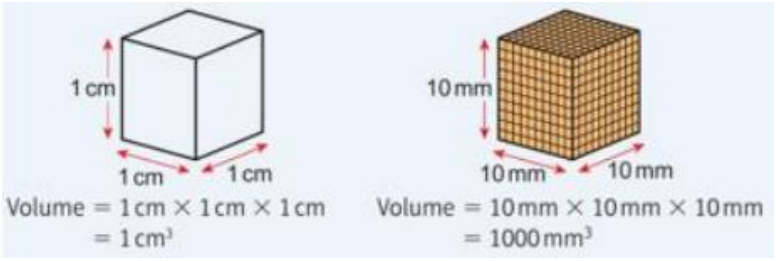
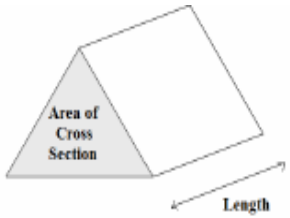
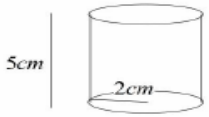
1	Percentage multipliers	The multiplier for increasing by 12% is 1.12 The multiplier for decreasing by 12% is 0.88 (100% - 12%)
3	Percentage change	$\frac{(new\ value - original\ value)}{original\ value}$ x 100%
2	Reverse Percentage	A jumper was priced at £48.60 after a 10% reduction. Find its original price. 100% - 10% = 90% 90% = £48.60 1% = £0.54 100% = £54
3	Compound Interest	A bank pays 5% compound interest a year. Bob invests £3000. How much will he have after 7 years? $3000 \times 1.05^7 = £4221.30$
4	Exponential Graph	The equation is of the form $y = a^x$, where a is a number called the **base**. If $a > 1$ the graph **increases**. If $0 < a < 1$, the graph **decreases**. The graph has an **asymptote** which is the **x-axis**. 

Key Vocabulary

1	Hypotenuse	The longest side on a right angled triangle
2	Unit Ratio	Used to compare ratios, one of the parts is 1. The only time it is permissible to have a decimal in a ratio.
3	Unitary method	Find the value of 1 item, before multiplying to find the value of more. Used to work out which products give the better value for money
4	Simple Interest	Interest calculated as a **percentage of the original** amount.
5	Compound Interest	Interest paid on the **original amount and the accumulated interest**.
6	Exponential growth	When we **multiply** a number **repeatedly** by the **same number** ($\neq 1$), resulting in the number **increasing by the same proportion** each time. e.g. $1, 2, 4, 8, 16, 32, 64, 128$ ...
7	Exponential decay	When we **multiply** a number **repeatedly** by the **same number** ($0 < x < 1$), resulting in the number **decreasing by the same proportion** each time. eg. $1000, 200, 40, 8$ ….

Subject: Maths	Term: Half Term 2 – September Part 2	Year Group: 10H

Geometry & Measure – Area & Volume

1	**Area units**	1 cm² = 100 mm² 1m² = 10000 cm² 
2	**Volume units**	1 cm³ = 1000 mm³ 1 m³ = 1000000 cm³ 
3	**Volume of a Prism** **= Area of cross section x length**	
4	**Volume of a Cylinder** $V = \pi r^2 h$	 $V = \pi(4)(5)$ $= 62.8cm^3$
5	**Surface Area of Cylinder**	$2\pi r^2 + 2\pi rh$

Ratio, Proportion and rates of change – Ratio

1	**Divide in a given ratio**	eg Divide £350 in the ratio 3:4 between Amy and Bob. 3+4 = 7 (There are 7 parts.) 350 ÷ 7 = 50 (Each part is worth 50) 3 x 50 = £150 for Amy 4 x 50 = £200 for Bob

Key Vocabulary

1	**Prism**	A 3D shape that has a constant cross-section through its length, eg cylinder, triangular prism

Music	Topic: Unit one – Musical forms and devices	Year Group: 10/11

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1. Baroque era

1	**Baroque period**	Era in Western music between 1600 and 1750. Composers included Bach, Vivaldi and Handel.
2	**Harpsichord**	Baroque keyboard instrument, used to play the ground bass, chords and melody.
3	**Terraced dynamics**	Dynamics that are loud or quiet, nothing in between
4	**Basso continuo**	A type of instrumental accompaniment, common in Baroque music, played by organ, harpsichord or cello. Keyboard players often added chordal harmonies.
5	**Small Orchestra**	Ensemble used in the Baroque period of strings and some wind
4	**Suite**	A group of works for instruments, often dances.
5	**Sonata**	Work for solo instrument with continuo
6	**Oratorio**	Work for instruments and voices based on the bible.
7	**Chorales**	A hymn for four part voices
8	**Trio sonata**	A piece for two soloists and continuo

2. Classical era

1	**Classical period**	Era in Western music between 1750 and 1810. Composers included Haydn, Mozart and Beethoven.
2	**Forte piano**	The first piano, was able to play dynamics.
3	**String quartet**	Small ensemble of two violins, viola and Cello.
4	**Symphony**	A work for Orchestra, normally in four movements.
3	**Solo sonata**	A work for soloist, often with piano accompaniment.
4	**Solo concerto**	A work for soloist, accompanied by an Orchestra
5	**Balanced, regular phrases**	Balanced parts of a melody (like the phrases in a sentence) e.g. four bar phrases.

3. Key vocabulary

1	Repetition	A musical idea is repeated exactly.
2	Imitation	An idea is copied in another part
3	Sequence	Repetition of an idea in the same part at a higher/lower pitch.
4	Ostinato	A short, repeated pattern or phrase.
5	Drone	A long held or constantly repeated note(s).
6	Arpeggio/ broken chord	The notes of a chord played individually
7	Alberti bass	A broken chord accompaniment (I,V,iii,V) common in the Classical era.
8	Anacrusis	An 'up-beat' or pick-up before the first strong beat
9	Dotted rhythms	A rhythm using dotted notes (gives a 'jagged' or 'bouncy' type of effect).
10	Syncopation	Off beat accents
11	Conjunct	Notes that move in steps.
12	Disjunct	Notes that move in leaps/ intervals.

Other baroque pieces listen to The four seasons (Vivaldi), Toccata and Fugue in D minor (Bach). For Classical pieces listen to Symphony N0. 40 by Mozart and string quarters by Haydn.

Music	Topic: Unit one – Musical forms and devices	Year Group: 10/11

4. Romantic era

1	**Romantic era**	Era in Western music between 1810 and 1910. Composers included Tchaikovsky, Grieg, Schumann, Dvorak, Brahms, Verdi and Wagner.
2	**Lyrical, expressive melodies**	Instrumental melodies that sound like someone singing, often with large leaps.
3	**Large orchestra**	An orchestra with all of the instrumental families, often 80 or more players.
4	**Wide range of dynamics**	Dynamics that go below quiet and above loud, large crescendo and diminuendo and sudden changes.
5	**Chromatic chords**	Chords with notes outside the normal key e.g. Neapolitan sixth.
6	**Programme music**	Music written to tell a story, often based on other art forms such as poetry or art.
7	**Opera**	A theatrical work that combines text, costume and music.

7 Form and Structure

1	**Binary (AB)**	Two sections: A usually ends in a related key (e.g. dominant or relative minor), but B returns to the tonic. B will contain with some change/contrast.
2	**Ternary (ABA)**	Three sections: section B provides a contrast (e.g. new tune key change). A may return exactly or with some slight changes
3	**Rondo (ABACA)**	Keys that share similar sharps and flats. These were common keys to modulate to in the Baroque period. E minor (dominant – bar 14) G major (relative major of E minor b.16) C major (sub dominant of G in b.21) A major (tonic major in b.23) and E minor in bar 27.
4	**Minuet and trio (**II: AB: II II:CD :II AB)	The minuet was a type of graceful dance from the 17-18th century, and was often used as the 3rd movement in symphonies in the Classical era. The minuet had two repeated sections, the trio had two new repeated sections, with a return to the minuet at the end (no repeat).
5	**Variations**	The main theme (tune) is repeated and developed a number of times in a variety of different ways.
6	**Strophic**	A simple form where the song uses the same melody over and over.

6. Cadences

1	**Perfect**	Strong ending – sounds 'finished'; a musical full stop. V-I
2	**Plagal**	Sounds finished but softer. Amen. IV-I
3	**Imperfect**	Sounds unfinished. I-V, ii-V, vi-V.
4	**Interrupted**	Moves to an unexpected chord. Surprise. V-vi.

8. Key vocabulary

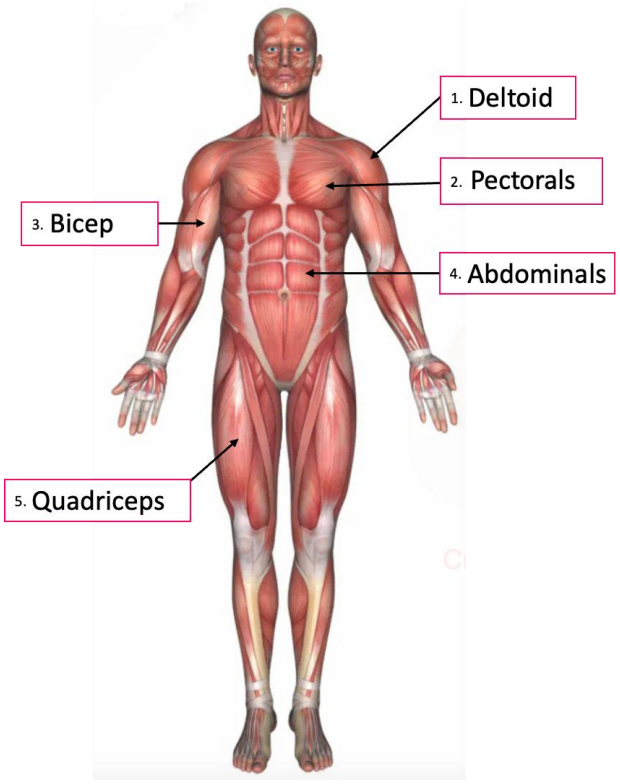
1	**Chord**	Two or more notes played together.
2	**Triad**	Three notes played together.
3	**Chord Sequence**	A series of chords.
4	**Diatonic Harmony**	The chords all belong to the key.
5	**C Major**	Happy sounding key – no sharps or flats.
5	**F Major**	Happy sounding key – 1 flat (Bb)
5	**G Major**	Happy sounding key – one sharp (F#)
5	**Bb Major**	Happy sounding key – two flats (Bb and Eb)
9	**D major**	Happy sounding key – two sharps (F# and C#)

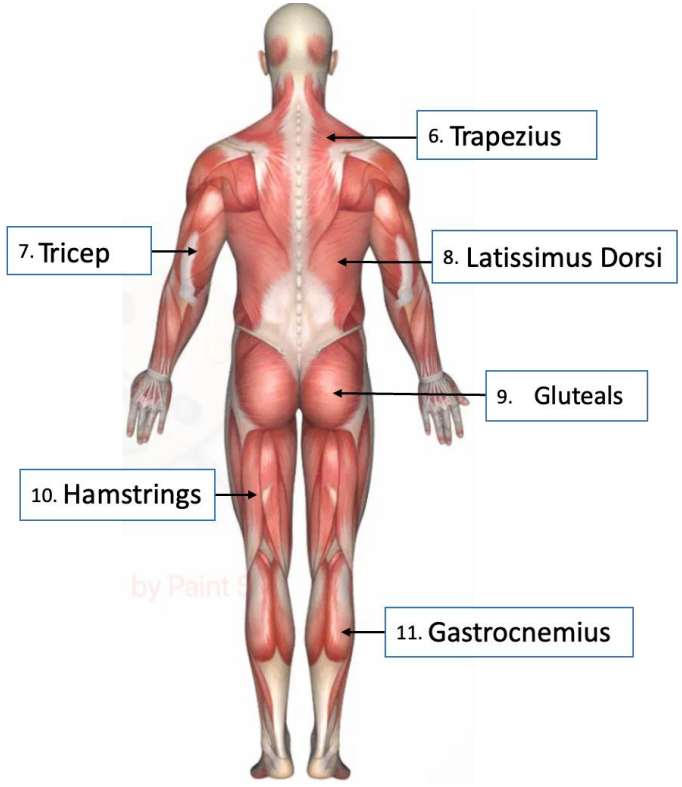
Wider listening: For Romantic pieces listen to Swan Lake by Tchaikovsky and Ride of the Valkyries by Wagner.

Subject: **GCSE PE**	Topic: **1.1 – Applied Anatomy and Physiology**	Year Group: **10/11**

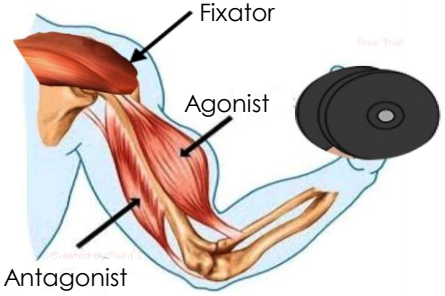
1.1.b The structure and function of the Muscular System

KG1 – Location of major muscle groups





KG2 – The roles of muscles in movement

	Role	Definition	Example	
12	Agonist	Muscle that **creates the movement** (Prime mover)		Bicep in upward phase of bicep curl
13	Antagonist	Muscle that **works in opposition** to the agonist		Triceps in upward phase of bicep curl
14	Fixator	Muscle that **stabilises** one part of the body to **prevent unwanted movement**		Deltoid in upward phase of bicep curl

Subject: **GCSE PE**	Topic: **1.1 – Applied Anatomy and Physiology**	Year Group: **10/11**

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KG3 - Antagonistic muscle actions

	Joint	Muscle Group	Movement	Example	
15	Elbow	Biceps	Flexion		Preparing to shoot in netball
16		Triceps	Extension		Execution of shot in netball
17	Shoulder	Deltoids	Flexion		Throwing the ball up in a tennis serve
			Extension		Preparing to bowl in rounders
			Abduction		Outward phase of star jump
18		Latissimus Dorsi	Adduction		Inward phase of star jump
19		Pectorals	Horizontal adduction		Releasing a discus
20		Trapezius	Extension of the neck		Binding with opponent during a rugby scrum
21	Knee	Hamstring	Flexion		Preparing to kick a football (kicking leg)
22		Quadriceps	Extension		Execution of kicking a football (kicking leg)
23	Vertebral Column	Abdominals	Flexion		Curl the torso up during a sit-up
24	Hip	Gluteals	Extension		During an arabesque in gymnastics
			Abduction		Outward phase of star jump
			Rotation		Moving into 1st position in ballet
25	Ankle	Gastrocnemius	Plantarflexion (pointing toes)		A ballet dancer as they go *en pointe*

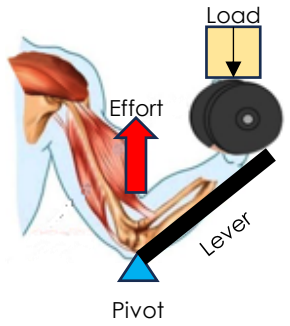
1.1.c Movement Analysis

KG1 – Lever Systems

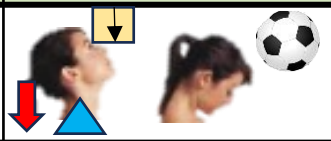
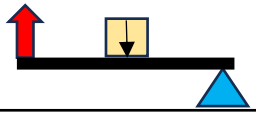
1	Lever	A rigid bar that moves around a fulcrum when effort is applied to move a load

	Component	Definition	Example
2	Lever	A rigid bar	The radius and ulna are the rigid levers
3	Fulcrum	A fixed pivot point	The elbow joint is the pivot point around which movement occurs
4	Effort	Force applied to move the lever	The bicep is the effort that applies the force to cause movement
5	Load	The weight / resistance to be moved	The dumbbell is the load being moved

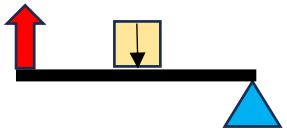
Bicep curl (upward phase)



KG2 – Classes of lever

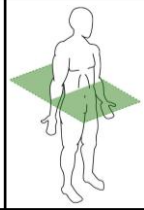
	Class of Lever	Description	Acronym	Example
6	First class lever	Fulcrum is between the effort and load 	**EFL**	 Heading a football
7	Second class lever	The load is between the fulcrum and the effort 	**ELF**	 Long jump take off
8	Third class lever	The effort is between the fulcrum and load 	**FEL**	 Bicep curl

Mechanical advantage

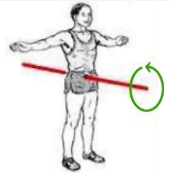
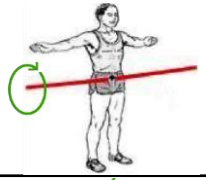
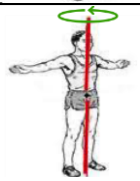
	Definition	Class of lever with mechanical advantage	Example
9	A lever can move a large load with a smaller effort because The load is closer to the fulcrum than the effort is	All second-class levers Some first-class levers 	 Long jump take off

Subject: **GCSE PE**	Topic: **1.1 – Applied Anatomy and Physiology**	Year Group: **10/11**

KG3 – Planes of movement

	Plane	Definition	Types of movement	Sporting Example
10	Frontal Plane	 A vertical plane dividing the body into **front** and **back**	Abduction Adduction	 Cartwheel
11	Transverse Plane	 A horizontal plane dividing the body into **top** and **bottom**	Rotation	 Discus throw
12	Sagittal Plane	 A vertical plane dividing the body into **left** and **right**	Flexion Extension	 100m Sprint

KG4 – Axes of movement

	Plane	Definition	Sporting Example
13	Frontal Axis	 **Front** to **back**	 Cartwheel in gymnastics
14	Transverse Axis	 **Side** to **side**	 Front somersault in diving
15	Longitudinal Axis	 **Top** to **bottom**	 Spin in ice skating

Drama	GCSE Component 3: An Inspector Calls	Year Group: 10

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Plot

1	Act 1	The Birlings celebrate Sheila and Gerald's engagement. Birling boasts to the men. The Inspector arrives: Birling admits firing Eva, and Sheila confesses to getting her sacked from Milwards
2	Act 2	Gerald admits 'rescuing' Eva, then leaves. Mrs Birling confesses she denied Eva help and demands the baby's father be punished, not realising it's Eric, who then enters
3	Act 3	Eric admits drinking, forcing himself on Eva, and stealing £50. The Inspector gives a final speech and leaves. Gerald returns. Sheila and Eric feel guilty but Mr and Mrs Birling refuse blame. They convince themselves it was a hoax — until a call says a girl has died and an inspector is coming.

Context

1	Priestley	Fought in WW1. Socialist and member of the Labour Party. Concerned about social inequalities. Influential in developing the idea of the welfare state.
2	Historical	• Set in 1912 at the end of the Edwardian era. • Titanic sank in 1912. • WW1: 1914-1918. • WW2: 1939-45. • First performed 1945 in Soviet Union. • First performed 1946 in Britain.
3	Political	• Liberal party in power in 1912. • Labour party in power in 1945. Formation of the 'Welfare State' 1945-1951. • In 1912 only men over 21 with property could vote. • 1903-1914 saw the rise of the Suffragette movement. • 1918 all men over 21 and women over 30 who met a property qualification could vote. • 1928: All people over 21 could vote.
4	Social	1912: 10% of the population owned 90% of the wealth. No government assistance available. Charities were the only source of help for the poor.

Themes

1	Social responsibility	The Inspector goes to the Birlings' to encourage them to be accountable for their actions, and to take responsibility for others
2	Age	Priestley shows hope lies with the young. While Mr and Mrs Birling stubbornly refuse to change, Sheila and Eric accept responsibility, suggesting the younger generation can learn and build a better future
3	Class	Before WWII, Britain was deeply divided by class. The war effort and rationing helped break down barriers, bringing people of different classes closer together.
4	Gender	Written after WWII, *An Inspector Calls* reflects changing gender roles. As women filled men's jobs, they gained freedom and independence, shown through Eva Smith. Priestley contrasts this with Mr Birling's old-fashioned sexism
5	Socialism	The play is a symbol of Socialism – he wants everyone to look after each other and to view community as very important. He is sent to uncover the family's wrongdoings and to make them see that they should take responsibility for others
6	Capitalism	Priestley shows Capitalism as self-centred and amoral, reducing people to profit. Mr Birling symbolises its arrogance and dominance at the start of the century

Dramatic Devices

1	Dramatic Irony	The audience knows more than characters.
2	Sounds	Doorbell, telephone interrupt the Birlings comfort and complacency.
3	Lighting	"pink and intimate" to "brighter and harder" when the Inspector arrives. Interrogating morals, cutting through the lies and pretence.
4	Entrances/ Exits	Increase tension e.g. Eric walks in just as the audience realise that he is the father. Gerald's 'exit' in Act 2 prevents his remorse developing.
5	Props	Photograph: All Eva? Symbolic of the faceless poor that the wealthy pretend not to see. Sheila's ring as a symbolic of patriarchal control.
6	Stage directions	Indicate character attitudes, development, relationships setting and mood.

Key Vocabulary

1	Socialism (Political theory)	Collective ownership of resources.
2	Capitalist	Private ownership of resources.
3	Didactic	Direct moral instruction.
4	Polemic	Verbal or written attack.
5	Patriarchal	Society controlled by men.
6	Fourth wall	The space between the actors and the audience.
7	Morality	Principles of right and wrong.
8	Caricature	Exaggeration of characteristics usually to ridicule.

Drama	GCSE Component 3: An Inspector Calls	Year Group: 10

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Characters

1 	**Arthur Birling**	- head of the Birling household. - wealthy 'hard-headed' business-man. - active member of the community - thinks that he might be in the running for a Knighthood.	5 	**Gerald Croft**	- Around 30 years old - Attractive young man about town - Comes from upper class business owner family - Confident and charming - Has affair with Eva Smith
2 	**Sybil Birling**	- Mr Birling's wife - cold hearted and snobbish - prominent member of a women's charity - still sees Eric and Sheila as children devoid of responsibility	6 	**Inspector Goole**	- Not a big man but creates an 'impression of massiveness, solidity and purposefulness'. - Has a tendency to interrupt and control the conversation.
3 	**Eric Birling**	- Son of Arthur and Sybil Birling - Half shy-half assertive, not at ease - Lacks confidence - Drinks a lot - Has an affair with Eva Smith - Steals money from father to help Eva	**7** 	**Eva Smith/Daisy Renton**	- Audience never meets Eva Smith - Young woman in 20's - Strong willed with a good sense of humour -Changes name to Daisy Renton
4 	**Sheila Birling**	- Daughter of Arthur and Sybil Birling - Early 20's - Celebrating engagement to Gerald Croft - Giddy, naïve, childish - Can be assertive, insightful and intelligent	Contextual Links: An Inspector Calls - GCSE English Literature Revision - AQA - BBC Bitesize An Inspector Calls - In Context (Part 1 of 2) – YouTube An Inspector Calls - In Context (Part 2 of 2) – YouTube An Inspector Calls (2018) - YouTube		

GCSE Drama	Steven Berkoff 1937-Present	Component 1 – Devising Theatre

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Berkoff's Background

Born 3rd August 1937.
From Stepney, London.
Actor, Director, Writer.
Romanian Jewish background.

Berkoff's Theory and Style

1	**Total Theatre**	-Non-naturalistic and expressionistic -Every aspect of theatre must have purpose: every movement, line, lighting, sound effect and prop must create a powerful experience for the audience. -Extreme moods to give the audience an overwhelming experience and to shock, amuse, scare, or amaze them.
2	**Minimalist**	-Usually uses minimal, bare stages and makes use of the actors' bodies over anything else.
3	**Political themes**	-His plays often criticise social systems, corruption, and the abuse of power

Key Influences

1	**Brecht influence**	-Verfremdungseffekt (alienating the audience - making the familiar seem strange).
2	**Artaud influence**	-Theatre of danger and cruelty, using the power of words and gestures to release intense emotions.
3	**Lecoq influence**	Mime, movement, masks, and ensemble acting are all characteristics of Lecoq's theatre, which Berkoff uses.

KEY TECHNIQUES IN TOTAL THEATRE

1	**Base Pulse**	The rhythm and ensemble movement used in choral work
2	**Chorus**	A group of performers found in Greek drama who comment together on the dramatic action both vocally and physically
3	**Ensemble**	a group of actors performing together
4	**Grotesque**	Extremely overexaggerated to the point where it looks disturbing and ugly
5	**Japanese Noh theatre**	Stylised classical Japanese dance drama using characters masks
6	**Kabuki**	A classical Japanese dance drama with elaborate face make up, elegant movement and melodramatic expressions.
7	**Mie**	A character pose using a heightened physical style
8	**Neutral state**	When you are in a state of balance before you become a character
9	**Neutral mask**	Used to make your body the focus of expression
10	**Mime**	Suggesting an action or handling of an object using gestures
11	**Motif**	A repeated pattern
12	**Burden**	Something that a character feels guilty about, a problem they have or a way that they are being oppressed by society. This is usually shown by the actor through their physicality
13	**Animalistic Trait**	Presenting a character as an animal
14	**Vocal colouring**	Painting a picture with words, using vocal skills to the extreme
15	**Tableaux**	Creating a picture on the stage (a still image)
16	**Mie**	'Mie' – when the actor strikes a pose and holds it for a while – rest of cast freeze.
17	**Direct Address**	Directly speaking to the audience
18	**Kvetch**	To complain all the time. Usually with humour.
19	**Levels of Tension**	A technique used by Lecoq but also in Berkoff's work 1 – Exhaustion: Heavy, like a jelly fish 2 – Laid back: No worries, relaxed, on a sunny beach 3 – Neutral: No story, blank 4 - Alert: Curious, lost something, confused 5 – Suspense: Suspicious, cautious 6 – Passionate: Melodramatic, despair 7 – Tragic: Grief, petrified, frozen with fear

Beckfoot School

Subject: Photography	Topic: Forces (Chemical Force/Applied Force)	Year 10

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Knowledge Group 1 Chemical/Applied Aesthetic

1	**Chemical Aesthetic**	Having the appearance of a chemical substance or reaction. Something that looks science related.
2	**Applied Force**	An item that has had a specific force applied to it, for example something that has been crushed.
3	**Lava lamp**	A vessel in which two liquids interact and move. Often different bright colours and lit from below. 
4	**Artificial/ Controlled Lighting**	Using electric light to improve the look of an object when photographing it. This can be a lamp or torch.
5	**Controlled background**	Creating a clear and featureless space in which to photograph your chosen object. This can be made of simple materials like coloured card.

Knowledge Group 3 Reviewing Photographs

1	**Contact Sheet**	An A4 sheet of 35 of your photographs that will enable effective review of your work.
2	**Annotation process**	Green or red boxes placed around images on the contact sheet, with comments to identify successes and areas to improve on. And including any photographic techniques used.
3	**Review slides**	These contain 1 or 2 of your best images from the contact sheets to help celebrate and analyse your work.
4	**Critical Reflection**	The process of analysing your work and explaining how you have gone from one idea to the next. *(What, How, Why?)*

Knowledge Group 2 Chemical Photography

1	**Framing**	The process of positioning the object you wish to photograph in the composition whilst also considering the background.
2	**Experimental photography**	Creating a wide range of photographic images that show a unique approach to use of lighting, framing and composition.
3	**Resourceful approaches**	Linked to experimental photography. Making use of available resources to improve the look of your photos eg; using a smart phone as a torch or source of coloured light.
4	**Adaptive approaches**	Reviewing photos as you go to ensure you create a wide range of successful images. Responding to the success of previous images to inform future ideas.

Knowledge Group 3 Editing

1	**Reframing**	Using the cropping technique to improve the composition of an image by removing unwanted elements from the edges of the image.
2	**Colour editing**	Enhancing the look of an image by adjusting **Hue Saturation, Contrast & Brightness** and **Vibrancy** in Adobe Photoshop.
3	**Creative edits**	Using **Filters** and **Layer Styles** in Adobe photoshop to create eye-catching and unique images that showcase your creative skills.

Key Vocabulary

1	**Brusho Ink**	A powered ink that can be added to water to create vibrant effects.
2	**Macro Setting**	Used for close up photography.
3	**Crop**	To remove part of an image.
4	**Focus**	When an image is clear and objects have sharp outlines.
5	**Brightness/ Contrast**	A tool to manipulate light and dark effects in a photograph.
6	**Hue Saturation & Vibrancy**	Tools to manipulate the colour effects of a photograph.
7	**Filters**	Special visual effects that can be added to a photograph.
8	**Layer Styles**	One or more layer effects and blending options applied to a layer.
9	**HDR Toning**	A tool in photoshop for advanced colour editing techniques.

Subject: RE Topic: Crime and Punishment Year Group:10

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Religion crime and causes

1	**What are good intentions?**	When an action intents to have a good consequence
2	**What are evil intentions?**	Having the desire or thought to intentionally harm someone else
3	**How does upbringing and poverty impact crime?**	People may be brought up thinking crime is acceptable or may use crime to better their lives e.g.: selling drugs for money
4	**How does mental illness and addiction impact crime?**	People are less aware of their actions and the consequences. Desperation for drugs may take over their desire to be moral.
5	**How do people oppose an unjust law?**	They believe the law is wrong so will break it. E.g. stealing from the rich

Religious Views on Criminals

1	**What is hate crime?**	Crime against a person because of race, gender, sexuality etc.
2	**How do religions respond to hate crime?**	Hate crime is not accepted and should be punished
3	**How do religions respond to murder?**	Punishment such as prison or going to hell
4	**How do religions respond to theft?**	Punishment then reformation, help the person if its through desperation
5	**Responses to people committing crime**	Seek help to reform the person, use places such as prison for rehabilitation. Punishment such as prison

Religion and Punishment

1	**What is the aim of retribution?**	Getting your own back- revenge
2	**What is the aim of deterrence?**	To stop people committing crimes through negative consequences
3	**What is the aim of reformation?**	To help people change their lives and stop their bad intentions/actions
4	**What is the purpose of prison?**	A form of punishment and to isolate them from society
5	**What is the purpose of corporal punishment?**	Cause physical pain or disability as a way of punishing wrong doing
6	**What is the purpose of community service?**	People can apologise to the community they wronged through helping actions

Treatment of criminals

1	**What are the aims of forgiveness?**	To help people become closer to God. Helps someone to reform. Most loving action
2	**Why do religions give forgiveness?**	Jesus forgave people. God is loving and just. Only God can judge
3	**What is the death penalty?**	Putting someone to death due to the severity of their crime
4	**Two reasons for the death penalty**	Stops reoffending Retribution
5	**Two reasons against the death penalty**	Teachings of forgiveness Religions are against murder

Subject: RE Topic: Crime and Punishment Year Group:10

BECKFOOT SCHOOL enjoylearnsucceed

Key Vocabulary

1	**Addiction**	Being addicted to/dependent on a particular substance; can be a cause of crime (eg stealing money to pay for illegal drugs).
2	**Community service**	Punishment involving the criminal doing a set number of hours of physical labour/work in their local community.
3	**Corporal punishment**	Punishment in which physical pain is inflicted on the criminal.
4	**Crime**	Action which breaks the law; can be against the person (eg murder), against property (eg vandalism), or against the state (eg treason).
5	**Death penalty**	Capital punishment; the execution of a criminal which is sanctioned by the state.
6	**Deterrence**	Aim of punishment; the threat of punishment as a way to put a person off committing crime (eg knowing they could go to prison if they steal).
7	**Evil intentions**	Having the desire to deliberately cause suffering or harm to another.
8	**Forgiveness**	Letting go of blame against a person for wrongs they have done; moving on.
9	**Greed**	Reason for committing crime – wanting or desiring something or more of something.
10	**Hate Crime**	A crime committed because of prejudice views about a person or group.
11	**Prison**	Imprisonment is a form of punishment where a criminal is locked in a secure guarded building (prison) for a period of time.
12	**Law**	The rules a country demands its citizens follow, the breaking of which leads to punishment.
13	**Mental illness**	A medical condition that can cause changes to a person's behaviour; can be a cause of crime.
14	**Murder**	Unlawfully killing another person
15	**Poverty**	The state of being without the things needed for a reasonable quality of life; can be a cause of crime.
16	**Principle of utility**	The concept of acting out of the greater good for the most people. (eg removing a dangerous criminal from society in order to protect others).
17	**Reformation**	Aim of punishment; helping the criminal see how and why their behaviour was wrong, so that their mindset changes for the better.
18	**Retribution**	Aim of punishment; getting the criminal back for their crimes.
19	**Sanctity of life**	Belief that life is sacred/special because it was created by God, or because we are each unique individuals.
20	**Theft**	Taking something without the owner's consent.
21	**Unjust law**	A legal requirement within a society that is believed to be unfair; a cause of crime if a person believes they cannot follow (or must act against) a law they believe is unjust.
22	**Upbringing**	The environment a child lives in, and the instructions they receive, while they are growing up; can be a cause of crime.

Key Quotes: Crime and Punishment

'Allah hears your hearts intention' Quran	'Forgive not 7 but 7x70 times' Bible NT	'Do not cast yourself into destruction with your own hands' Quran	'let everyone be subject to the governing authorities' Bible NT	
'Eye for an Eye' Bible OT Quran	'Thou Shalt not Kill' 6th commandment Bible OT	'Turn the other cheek' Bible NT	'love thy neighbour' Bible NT	'Blessed are the peace makers' Bible NT

Students should study religious teachings, and religious, philosophical and ethical arguments, relating to the issues that follow, and their impact and influence in the modern world. They should be aware of contrasting perspectives in contemporary British society on all of these issues.

Subject: Science (Physics) | Topic: Energy | Year Group: 10

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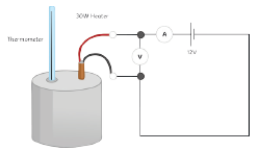
Energy equations

1	$E_k = ½ mv^2$	Kinetic energy = ½ x mass x speed^2
2	$E_p = mgh$	Gravitational potential energy = mass x gravitational field strength x height
3	$Ee = ½ ke^2$	Elastic potential energy = ½ x spring constant x extension^2
4	P = E/t	Power = energy ÷ time
5	P = W/t	Power = work done ÷ time
6	Efficiency = useful energy output ÷ total energy input	
7	$\Delta E = mc\Delta\partial$	Energy change = mass x specific heat capacity x change in temperature

Required Practical 1 – SHC

Independent variable – material tested
Dependent variable – SHC
Control variables – starting temperature, time taken and insulation.

Linking decrease in one energy store to an increase in temperature and an increase in thermal energy.



Energy stores and systems

1	8 stores of energy	Kinetic (movement), internal (thermal), chemical (from chemical reactions), elastic potential (stretched/squashed objects), gravitational potential (raised objects), electrostatic (opposite charges), magnetic and nuclear (energy from an atom).
2	3 methods of energy transfer	Mechanically – when work is done (force is used). Electrically – when moving charges are involved. Heating – energy is transferred from a hotter object to a cooler object.
3	Friction and lubrication	When solid objects move over a surface friction is created which leads to the transfer of thermal energy. Lubrication can be used to reduce friction and therefore heat loss.
4	Methods of insulation	Thick walls, loft insulation (reduces convection) cavity walls (reduced convection and conduction) and double glazing (reduced conduction).

Energy resources

1	4 types of non-renewable energy	Coal, oil and natural gas (fossil fuels) - all will run out, but give out the most energy. Nuclear is also non-renewable.
2	7 types of renewable energy	Solar (from sunlight), Geothermal (heat from earth), Wind (turbines), Hydroelectric (water in dams), Wave, Tidal (river barrages) and Biofuels (burning organic matter).
3	Key advantages	Renewable - (will not run out), less pollution produced. Non-renewable – meet higher energy demands
4	Key disadvantages	Renewable – Impact on environment to build plants, not very reliable, (can't always meet demands) costly so although less pollution not everyone willing to pay higher bills. Non-renewable – greenhouse gas emissions of carbon dioxide (cause global warming) and sulphur dioxide (acid rain).

Key Vocabulary

1	Conservation of energy	Energy can never be created or destroyed just transferred from one store to another.
2	Dissipated	A term used to describe ways in which energy is wasted.
3	System	An object or group of objects.
3	Power	The rate of transfer of energy OR the amount of work done in a given time.
4	Specific heat capacity (SHC)	The amount of energy required to raise the temperature of 1kg of a material by 1°C.
5	Conduction	How thermal (heat) energy is transferred in solids by particles colliding.
6	Convection	How thermal energy is transferred in liquids or gases. Relies on density of particles and convection currents.
7	Insulation	Methods to reduce heat loss from an object.
8	Efficiency	When energy is transferred, some is wasted. The less energy is wasted, the more efficient an object is.

Required practical 2 (PHYSICS ONLY) - investigate the effectiveness of different materials as thermal insulators and the factors that may affect the thermal insulation properties of a material. The better the insulator, the longer it takes the temperature to cool down.

Chemistry | Structure and Bonding | Year 10

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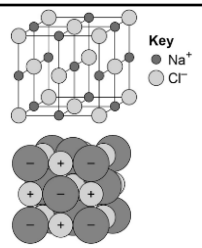
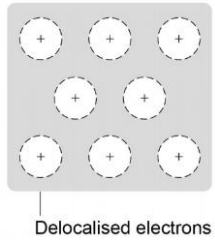
Ionic bonding

1	**Particles involved**	Oppositely charged ions
2	**Elements involved**	Compounds made from metals and non-metals
3	**Caused by**	Transfer of electrons from metal to non-metal, creating oppositely charged ions.
4	**Representation**	

Properties of ionic compounds

1	**Structure**	Giant ionic lattice
2	**Do they conduct electricity?**	When solid, no – ions cannot move. When molten or in solution, yes – ions can move.
3	**Melting and boiling points**	High – strong forces of attraction between oppositely charged ions

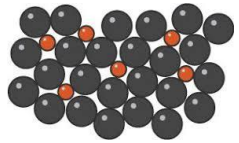
Metallic bonding

1	**Particles involved**	Atoms sharing delocalised electrons
2	**Elements involved**	Metallic elements and alloys
3	**Representation**	

Properties of metals

1	**Structure**	Regular lattice of positive metal ions in an 'sea' of delocalised electrons
2	**Do they conduct electricity?**	Yes, delocalised electrons can move through the metal
3	**Melting and boiling points**	High – strong forces of attraction between positive metal ions and delocalised electrons
4	**Hardness**	Metals are relatively soft – layers can slide. Alloys are hard.

Alloys

1	Structure	Metal atoms mixed with another element (metal or non-metal)
2	Representation	
3	Hardness	Harder than pure metal as layers are distorted and cannot slide

Key Vocabulary

1	**Melting point**	Temperature at which a solid turns to liquid.
2	**Boiling point**	Temperature at which a liquid turns to gas.
3	**Cation**	Positively charged particle
4	**Allotropes**	Different structural forms of an element.
5	**Delocalised**	Electrons that are no longer bound to a single atom, and are free to move

Chemistry | Structure and Bonding | Year 10

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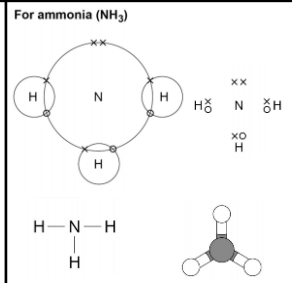
Covalent bonding

1	**Particles involved**	Atoms sharing a pair of electrons
2	**Elements involved**	Non-metallic elements and compounds
3	**Representation**	

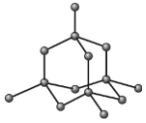
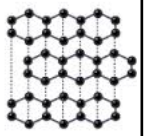
Properties of molecular compounds

1	**Bonding**	Strong covalent bonds between atoms, weak intermolecular forces between molecules.
2	**Do they conduct electricity?**	No, as there are no charged particles.
3	**Melting and boiling points**	Low – weak forces of attraction between molecules

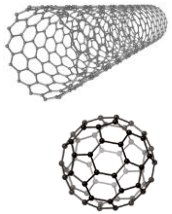
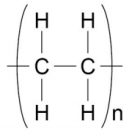
Giant covalent structures

1	**Bonding**	Strong covalent bonds between atoms
2	**Do they conduct electricity?**	Only those with delocalised electrons
3	**Melting and boiling points**	High – strong covalent bonds between atoms

Carbon

	Property	Explanation
Diamond 	**Hard, high melting point**	Every carbon bonded to 4 others with strong covalent bonds.
	Does not conduct electricity	No ions or delocalised electrons.
Graphite /Graphene 	**Soft**	Layers of carbon atoms can slide.
	Conducts electricity	Each carbon has a delocalised electron, which can carry charge.

Other giant structures

Fullerenes 	**Structure**	Molecules of carbon atoms with hollow shapes
	Uses	Fullerenes – drug delivery. Nanotubes – strengthen composite materials.
Polymers 	**Structure**	Repeating monomers connected by strong covalent bonds
	Properties	Relatively high melting points due to strong intermolecular forces.

Nanochemistry (chemistry only)

1	**Nanoscience**	Study of particles between 1 and 100 nm in size.
2	**Nanometre**	A billionth of a metre (1 x 10^{-9} m)
3	**Uses of nanotechnology**	Medicine, electronics, cosmetics, catalysts.
4	**Advantages**	Wide range of applications due to increased surface area to volume ratio and therefore reactivity
5	**Disadvantages**	Long-term impact on health not fully understood.

Subject: Science (Physics)	Topic: Energy	Year Group: 10

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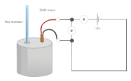

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Subject: Trilogy Science (Biology)	Topic: Infection and Response	Year Group: 10

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Knowledge: Human Defence System

Skin	Acts as a barrier and produces antimicrobial secretions
Nose	Traps particles that contain pathogens
Trachea	Secretes mucus which traps pathogens
Stomach	Produces acid which kills pathogens
White blood cells	Defend against pathogens by: phagocytosis, making antibodies and making antitoxins

Knowledge : Antibiotics and painkillers

Antibiotics	Treat disease caused by bacteria
	Specific antibiotics treat specific diseases
	Reduced deaths from infectious bacterial diseases
	Cannot treat viral pathogens
Penicillin	An antibiotic that helps cure bacterial diseases by killing bacteria inside the body
Painkillers	Treat symptoms of disease but do not kill pathogens
Problems	Greater use of antibiotics has led to the emergence of strains of bacteria that are resistant to antibiotics (superbugs)

Knowledge: Viral diseases

Measles	Fever and red skin rash – can be fatal. Spread by coughs and sneezes
HIV	Human Immunodeficiency Virus
	Flu-like illness. Virus attacks immune system. Spread by sexual contact or exchange of bodily fluids
TMV	Tobacco Mosaic Virus
	Plant pathogen causes discolouration (mosaic) in leaves and affects growth.

Knowledge: Bacterial Diseases

Salmonella food poisoning	Spread by bacteria in food. Causes fever, abdominal cramps, vomiting and diarrhoea.
Gonorrhoea	Sexually transmitted disease (STD). Causes thick yellow/green discharge from genitals.

Knowledge: Fungal diseases

Example	Rose black spot
Symptoms	Purple or black spots on leaves
Effect	Leaves turn yellow and drop off – no photosynthesis or growth
How it spreads	Water or wind
Prevention	Fungicides and remove affected leaves

Knowledge :Protist diseases

Example	Malaria
Symptoms	Fever and death
How it spreads	Mosquito spreads malaria protist by biting humans
Prevention	Mosquito nets and mosquito repellents

Key Vocabulary

1	**Communicable Disease**	A disease that can be passed on to others
2	**Non Communicable Disease**	A disease that cannot be passed on to others.
3	**Pathogen**	Microorganisms that cause infectious diseases.
4	**Bacteria**	Reproduce rapidly in body and may produce poisons (toxins).
5	**Virus**	Live and reproduce in cells, causing cell damage.

Knowledge: Vaccination

1	Small quantity of dead or inactive pathogen is injected into the body
2	White blood cells produce specific antibodies
3	If the same pathogen re-enters the body white blood cells can produce antibodies quickly
4	Antibodies prevent infection
5	If a large proportion of the population is immune, the pathogen is less likely to spread

Knowledge : History of drugs

Older drugs were extracted from plants and microorganisms

Drug	Extracted from
Digitalis (heart drug)	Foxgloves
Aspirin	Willow
Penicillin	Penicillium mould

Clinical trials use healthy volunteers and patients.

- Very low doses of the drug are given at the start of the clinical trial.
- If the drug is found to be safe, further clinical trials are carried out to find the optimum dose for the drug.
- In double blind trials, some patients are given a placebo.

Subject: Triple Science (Biology)	Topic: Infection and Response	Year Group: 10

BECKFOOT SCHOOL enjoylearnsucceed

Monoclonal Antibodies

Identical copies of one type of antibody produced in laboratory

1	A mouse is injected with pathogen.
2	Lymphocytes produce antibodies.
3	Lymphocytes are removed from the mouse and fused with rapidly dividing mouse tumour cells .
4	The new cells are called hybridomas
5	The hybridomas divide rapidly and release lots of antibodies which are then collected.

Knowledge: Monoclonal Antibodies can be used in a variety of ways

1) Diagnosis	2) Detecting Pathogens
Pregnancy test – measure the level of hormones	Can detect very small quantities of chemicals in the blood

3) Detecting molecules	4) Treatment
Fluorescent dye can be attached so it can be seen inside cells or tissues	Bound to radioactive substance, toxic drug or chemical Cancer cells are targeted to normal body cells are unharmed

Knowledge : Detection and prevention of plant diseases

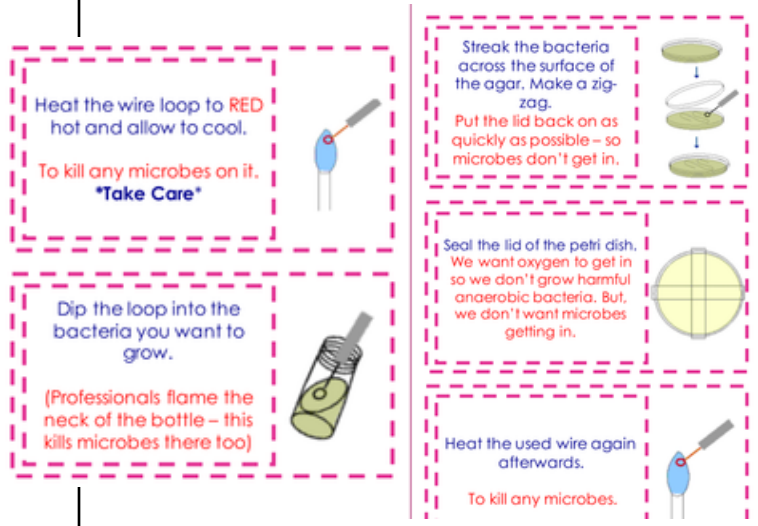
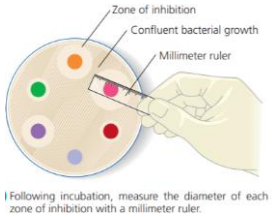
Detection	Identification
1-Stunted growth	Reference using gardening manual or website, laboratory test for pathogens, testing kit using monoclonal antibodies
2- Spots on leaves	
3- Area of decay	
4 -Growths	
5- Malformed stems/leaves	
6 - Discolouration	
7 - Presence of pests	

Plant Defences

Physical	Mechanical
Thick waxy layers, cell walls stop pathogen entry	Thorns, curling up leaves to prevent being eaten

Chemical
Antibacterial and toxins made by the plant.

Culturing microorganisms (BIOLOGY ONLY)

1	Bacteria multiply by simple cell division (binary fission), approx 1x per 40mins. Bacteria can be grown in nutrient broth solution or as colonies on an agar plate gel.
2	Aseptic techniques to prepare an uncontaminated culture: 
3	Required practical: Antibiotics and antiseptics can be used to inhibit the growth of bacteria and zones of inhibition can be calculated: Measure zone of inhibition with a ruler and use πr^2  Following incubation, measure the diameter of each zone of inhibition with a millimeter ruler. **HT ONLY**: use standard form (see sheet 1)

Beckfoot School	Subject: Art Textiles	Topic: Structures Photography, Leeds visit and repeat patterns	Year 10	Beckfoot School enjoylearnsucceed

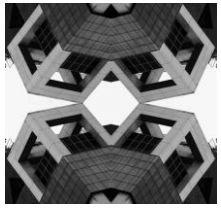
1. Process of creation

1		Use a primary photograph of a structure.
2		Abstract to create a pattern: Repeat Half drop Reflect Rotate
3		Transfer the image onto polyester fabric using the sublimation printer and the heat press.

2. Technical knowledge

1	**Repeat**		A rigid motion of repeating a motif over and over along horizontal or vertical lines.
2	**Half drop**		A rigid motion where every other line of the motif is staggered.
3	**Reflect**		A rigid motion where the original motif is reflected across a line or axis.
4	**Rotate**		A motion where the original motif is rotated around a single point.

3. Key Vocabulary

1	**Pattern**	A repeating motif.
2	**Sublimation Printer**	A printer that prints images onto paper, the images can be transferred using heat onto fabric/wood or metal.
3	**Heat Press**	A piece of equipment that heats up and can be used to transfer images onto fabric/wood or metal.
4	**Helder Santos** 	A Portuguese graphic designer
5	**'Shift'**	A repeating pattern.
6	**Primary Image**	An image you have taken yourself. (This could be a primary photographs you have taken)
7	**High Resolution**	An image that is not distorted or pixelated.
8	**Distorted**	Something that is not clear to the eye.
9	**Pixelated**	An image that appears to have lots of small dots or sections.
10	**Contact Sheet**	35 photographs that are annotated to say which are good and why and which are not so good and why.