Year 11 Learning Journal

Learning Cycle 1

Student Name:_____

NEWQUAY TRETHERRAS

4 simple steps

Summarise

Summarise your class notes, handouts and wider reading to **condense and transform** them **as you go along** (saves time and stress closer to exams).

40%

Organise

Organise your notes and revision using PLCs (or Exam Specifications) and create **Revision Timetables**, to **focus** time and effort **on weaknesses**.

10%

Recall

Use **active recall** and **spaced repetition** to **memorise** the information.

30%

Test Yourself

Test Yourself using **low stakes and high stakes** questions to check you can **apply knowledge and understanding**.

20%

NEWQUAY TRETHERRAS

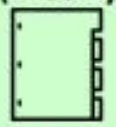
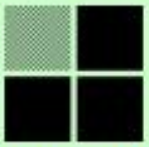
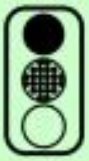
SORT

4 Steps to Success with your Studies

Summarise

- Condense 
- Flash Cards 
- Revision Clocks 
- Cornell Notes 
- Transform 
- Mind Maps or Organisers 
- Sketchnotes 
- Dual Code 

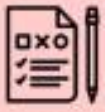
Organise

- PLCs or Exam Specs 
- Organise Folders (Weekly) 
- Chunk 
- Traffic Light (RAG) 
- Revision Timetable (Weekly Review) 
- Interleave 

Recall

- Active Recall (Testing Effect) 
- Look Say Cover Write Check 
- Leitner System (Flash Cards) 
- Memory Journey 
- Blurt - Blank Page Retrieval 
- Mnemonics 
- Group Games 
- Spaced Repetition 

Test Yourself

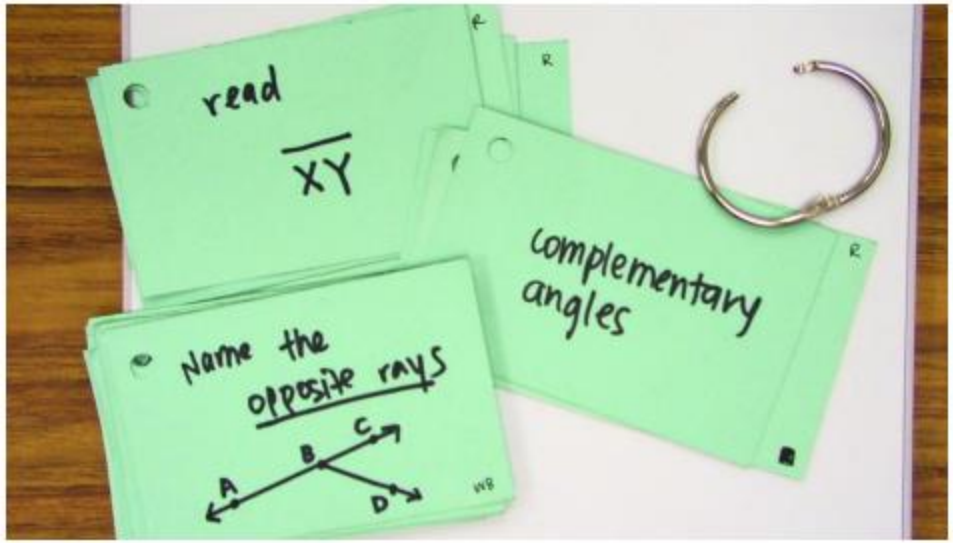
- Low Stakes
- High Stakes 
- Write Plans & Mark Schemes 
- Multiple Choice 
- Past Paper Questions 
- BUGS the Question 
- Online Quiz or App 
- Write Qs using PLC 
- Traffic Light (RAG) Qs 

Find out more at: tretherras.net/nt-revision-resources/

How to Summarise using …

NEWQUAY TRETHERRAS

Flash Cards



What is the idea?

A card with a key word or question on the front, and the definition or answer on the reverse.

What is it useful for?

- Learning definitions/meanings
- Learning a language/translations
- Learning short case study/topic facts

Pros	Cons
Useful for revising on the go (easy to carry). You can test yourself using the front or the back of the card. You can buy Ready made flashcards or use online flashcards e.g. Quizlet.	Simply copying questions and answers/definitions out of textbooks to make the cards, or just reading them over and over, doesn't improve your recall. You can make them too simple (long question, one word answer.) Doesn't help your visual memory (unless they have images). Does not help you make links/ apply facts and detail to high tariff questions.

How do I make one/use one?

1. Break down topics/subject into different units (you can use different colour cards)
2. Use bullet points (to help readability)
3. Doesn't always have to be question and answer – use variety
4. Don't cram too much on one flash card (or just use one word answers!)
5. Don't keep going over flash cards you know well. The 'Leitner System' is a good way to RECALL flashcards. You can also Quiz-Quiz Trade with others.

SORT

How to Summarise using …

NEWQUAY TRETHERRAS

Intelligent Graffiti (Sketchnotes)

What is the idea?

Filling a page with notes and diagrams about a topic. Making connections between ideas and emphasising important information.

What is it useful for?

- Case studies/topic overview
- Making links between different parts of a topic and emphasising the importance of information.

How do I make one/use one?

1. The first rule of intelligent graffiti is THERE ARE NO RULES! (The following are just suggestions)
2. Don't write down everything and use abbreviations.
3. Your notes do not need to be linear – it's up to you how they flow (they only need to make sense to you).
4. Vary handwriting & add emphasise to draw eye to key points.
5. Use connectors and containers to link and organise ideas.
6. Include diagrams and images to represent ideas.

Pros	Cons
There are no rules (flexible depending on you and the topic you are studying) Your notes will be compact, colourful and visual so this makes them easier to review. You can make connections between ideas within the topic. Converting notes into images and words helps your brain learn as it combines visual and verbal memory (dual coding).	They can be time consuming to create. Students do not always include enough detail (not helpful if you need to remember a lot of detail!) The notes may be so 'free' they are hard for you to follow again/ make sense of.

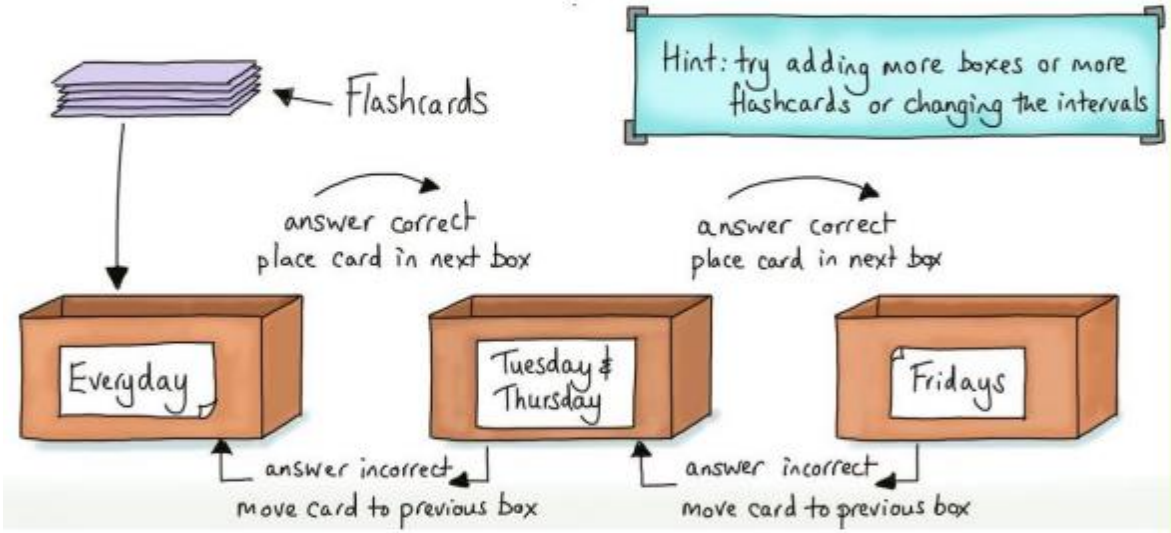
How to Recall using ...

NEWQUAY TRETHERRAS

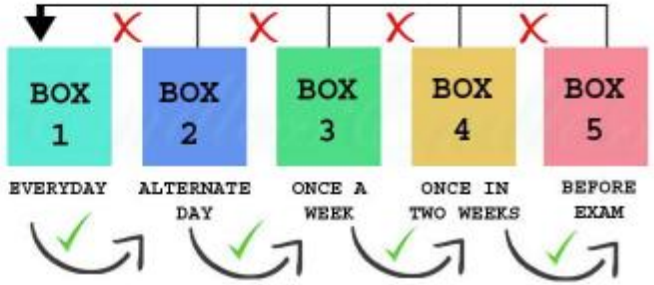
Leitner System (For Flash Cards)

What is the idea?

To revisit flash cards you don't know more frequently and the ones you do know less frequently. Making your revision more efficient.



YouTube Tutorial Video Link



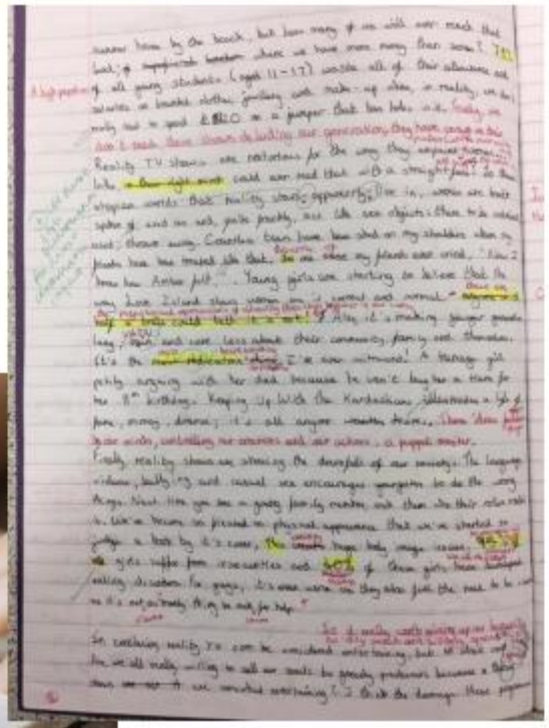
How do I use this method?

1. Create 3 to 5 boxes, folders or piles.
2. Label them as shown in the diagram below.
3. Put all your flashcards (or a set number) in Box 1
4. On day 1 try to recall the information on the flashcards in Box 1
5. If you get a flashcard correct move it into Box 2
6. If you get a flashcard wrong it stays in Box 1
7. On day 2 go through Box 1 and Box 2.
8. Every time you get a card correct it moves forward one box, every time you get it incorrect it goes all the way back to Box 1!
9. Keep visiting the boxes at the time indicated on the label.
10. You can add more cards to Box 1 at any time.

How to Recall using …

NEWQUAY TRETHERRAS

Blurting



What is the idea?

To write everything you remember on the topic you have been revising. It doesn't matter what form this takes (e.g. notes/mind map etc). Check against your revision notes to see what you got right/wrong and make corrections in a different colour. Repeat.

YouTube Tutorial Video Link

How do I use this method?

1. Revise a topic/sub-topic
2. When you think you know it, put your revision notes away.
3. 'Blurt' what you remember onto a piece of blank/scrap paper or a mini whiteboard.
4. Use any method of organizing your ideas on the paper.
5. Once you have got down everything you remember, get out your notes and see what you missed/got wrong.
6. Make corrections in red pen.
7. Focus on learning the bits you missed/got wrong next time you revise.
8. Repeat! *Always start again from scratch and try to recall everything (don't just try and recall the bits you missed/got wrong), this will strengthen your knowledge of the whole topic.*

SORT

Art Personal Learning Checklists

Art	Evidenced	Refined
Art - Personal Project: AO1- Develop ideas through investigations, demonstrating critical understanding of sources.		
Be able to research and annotate artists appropriate to the theme of your choice demonstrating your knowledge, opinions and understanding of the work.		
Know how to create a title page with a collection of secondary sources, mind maps and notes to explain your ideas and intentions.		
Be able to show the planning of ideas through either design sketches, digital drawing and collage for development work and final outcomes.		
Know how to reflect on the techniques explored, what worked well, areas for improvements and how those techniques link with the artists I am looking at.		
Art - Personal Project: AO2- Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.		
Know how to explore ideas using a printmaking process such as Dry-point Etching, Lino printing or Mono-print.		
Be able to experiment with a range of techniques that link effectively with chosen artists.		
Be able to experiment with various compositions to plan my development pieces and outcomes.		
Be able to experiment with digital and traditional collage to create ideas.		
Have experimented with…….		
Art - Personal Project: AO3- Record ideas, observations and insights relevant to intentions as work progresses.		
Know how to record through observational drawing using a technique that shows off my best skills, create a sustained study.		
Be able to use Photography to record and creatively explore a chosen theme.		
Evidence of writing about your ideas- how you intend to use photographic techniques, how you intend to develop your idea within your chosen theme, evaluating your work and ideas as you progress.		
Art - Personal Project: AO4- Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.		
Be able to present a personal and sustained outcome(s) that shows links with chosen artists and bring together the ideas explored throughout my project.		
Know how to present sustained development work.		
Understand how to select and present my best photographs.		
Have learnt how to select, present and mount work professionally.		

Art Knowledge Organiser: Personal Project.

1 TIER THREE VOCABULARY

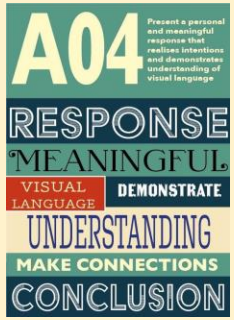
Composition	Composition is the arrangement of elements within a work of art.
Analyse	Examine (something) methodically and in detail, typically in order to explain and interpret it.
Portrait	A painting, drawing, photograph, or sculpture of a person, especially one depicting the face or head and shoulders.
Mixed-media	A variety of media used in an entertainment or work of art.
Message	The statement the artist is trying to make.
Mood	The emotions that are elicited in the viewer of a piece of artwork, intentionally or unintentionally
Subject Matter	What the artwork is trying to portray. If, for example, you are looking at a painting of birds, then the subject matter is the birds.
Annotation	Written explanations or critical comments added to art or design work that record and communicate your thoughts Conceptual - an art form in which the underlying idea or concept and the process by which it is achieved are more important than any tangible product.
Influence	Be inspired by the style of art styles and movements.
Proportion	Proportion is the relationship of one part of a whole to other parts.
Photomontage	A montage constructed from photographic images.
Collage	a piece of art made by sticking various different materials such as photographs and pieces of paper or fabric on to a backing.

2 Themes and ideas.

In year 11 you get to develop your own personal project, based on your own interests and preferences in art.

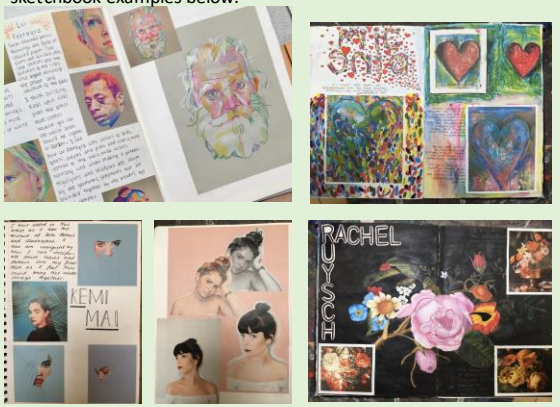
3 How you are assessed at GCSE.

The assessment objectives are equally weighted so each is worth 25% of your coursework grade. Evidence can be found throughout your project so for example a set of photos can gain you marks across several of the objectives.



4 Artist inspiration.

Analyzing and investigating how other artists work and then using this to inspire your work is an important part of a GCSE, here are some sketchbook examples below.



5 LINKS & FURTHER READING

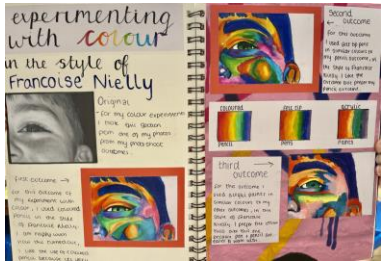
BBC Bitesize videos on: Artists and designers look for inspiration to use as a starting point for their creative projects. Many artists and designers find inspiration in the work of others.

BBC Bitesize videos on annotating work.

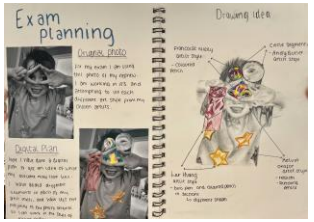
Art Knowledge Organiser: Portraits

6 Student examples of planning.

Experimenting and refining with a range of ideas, techniques in various media to show your planning.



7 Evaluating



8 Examples of final outcomes/ visual conclusions.

Final outcome:

Computer Science Personal Learning Checklists

Unit 1: Systems Architecture	S	O	R	T
I can describe the purpose of the CPU				
I can describe Von Neumann architecture				
I can describe common CPU components and their function				
I can describe the function of the CPU as fetch and execute instructions stored in memory				
I can describe how common characteristics of CPUs affect their performance				
I can describe embedded systems				
I can explain the difference between RAM and ROM				
I can explain the need for virtual memory				
I can describe the need for secondary storage				
I can describe data capacity and calculation of data capacity requirements				
I can compare common types of storage				
I can compare suitable storage devices and storage media for a given application, and the advantages and disadvantages of these				
Unit 2: Data Representation	**S**	**O**	**R**	**T**
Define different capacities of data				
Convert positive denary whole numbers (0-255) into 8-bit binary numbers and vice versa				
Convert between binary, denary and hexadecimal equivalents of the same number				
Add two 8-bit binary integers and explain overflow errors which may occur				
Understand the use of binary shifts				
Understand the use of binary codes to represent characters				
Understand the term 'character set'				
Explain the need for image metadata				
Explain the relationship between file size and image resolution				
Understand how sound is sampled and stored in digital form				
Explain how sampling intervals and resolution affect the size of a sound file using the terms:				
Explain the difference between lossy and lossless compression				
Explain the need for compression				

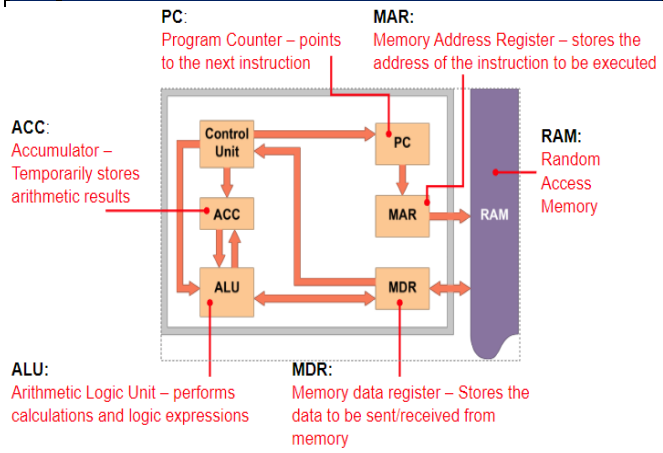
Unit 7: Programming	S	O	R	T
Run simple Python programs in Interactive and Script mode				
Write programs using selection to give different outputs based on conditions				
Write programs using different types of data (e.g. strings and integers)				
Correctly use different variable types (e.g. integer and floating point), assignment statements, arithmetic operators				
Use multiple selection statements to give more than 2 outcomes of code				
Write programs that use a loop to repeat sections of code				
Use a while loop to repeat code based on a condition				
Use counters correctly in for loops				
Be able to use for loops with 3 arguments				
Use string manipulation on values stored in variables				
Write programs that use lists				
Create a list and append or change elements in the list				
Create and call a subroutine				
Unit 6: Algorithms	**S**	**O**	**R**	**T**
I can state what is meant by an algorithm				
I can state what is meant by abstraction				
I can state what is meant by decomposition				
Be able to produce structure diagrams				
Understand and use binary and linear search				
Understand the standard sort algorithms				
Be able to apply each algorithm to a data set				
Be able to Identify an algorithm if given the code for it				
Understand flowchart symbols				
Create, interpret, correct, complete and refine algorithms using flowcharts				
I can use pseudocode to define the steps in a complex algorithm				
Understand how to identify and correct errors in algorithms				
Create and use of trace tables to follow an algorithm				

Computer Science Knowledge Organiser: Systems Architecture

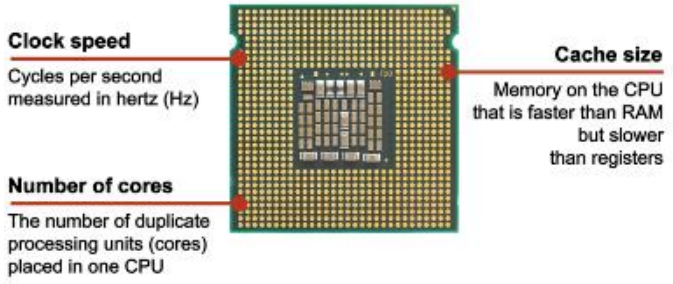
1 TIER THREE VOCABULARY

Accumulator	A special register that stores intermediate results of arithmetic and logical operations performed by the CPU.
Arithmetic Logic Unit (ALU)	Responsible for performing arithmetic operations and logical operations
Cache Memory	A type of high-speed memory that is used to store frequently accessed data and instructions
Central Processing Unit (CPU)	The primary component of a computer system responsible for executing instructions and performing calculations.
Clock Speed	The speed at which the CPU operates, measured in hertz
Control Unit	The component of the CPU that coordinates and manages the execution of instructions.
Magnetic Storage	A method of storing data using magnetized particles on a surface. Used in hard disk drives (HDDs)
Memory	The component of a computer system that stores data and instructions that are being actively used by the CPU
Memory Address Register (MAR)	A register that holds the memory address of data or instructions being read from or written to the memory.
Memory Data Register (MDR)	A register that temporarily holds the data being read from or written to the memory.
Non-volatile Memory	Permanent memory that retains stored data even when power is removed.
Optical Storage	Optical discs, such as CDs, DVDs, and Blu-ray,
Primary Storage	The main memory of a computer system, including RAM and cache memory, used to hold data and instructions currently being processed.
Program Counter (PC)	A special register that stores the memory address of the next instruction to be fetched and executed.
Random Access Memory (RAM)	Volatile memory that is used by the computer to store data and instructions temporarily. It provides fast access for reading and writing data.
Read-Only Memory (ROM)	Non-volatile memory that stores permanent instructions and data that are not typically modified.
Registers	Small, high-speed memory locations within the CPU used to store data and instructions that are currently being processed.
Secondary Storage	Non-volatile storage devices, such as hard disk drives (HDDs) or solid-state drives (SSDs), used for long-term storage of data and programs.
Solid-State Storage	Solid-state drives (SSDs), USB drives
Virtual Memory	Part of secondary storage that is used when RAM is full
Volatile Memory	Temporary memory that requires power to maintain stored data. When power is removed, the data is lost.
Von Neumann Architecture	instructions and data are fetched from the same memory using the fetch-decode-execute cycle.

2 Von Neumann Architecture



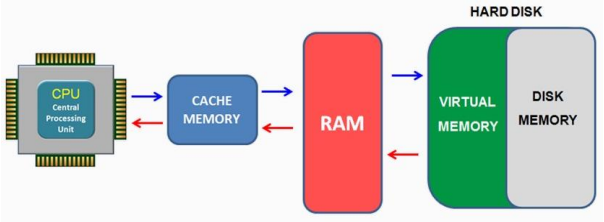
3 CPU Performance & Embedded Systems



Characteristic	Embedded system	General purpose machine
CPU speed	Typically slow	Typically very fast
Software	Has one purpose and cannot install new software	New software can be installed
Storage	Programs stored on ROM	Programs stored on hard drives
Reliability	Typically very reliable – e.g. a microwave should not have a bug that changes defrost to full power	As it runs many software programs it may be less reliable and need restarting the device

4 Primary Storage

Characteristic	RAM	ROM
Size	Typically 4 GB – 32 GB	Typically 4 MB – 8 MB
Used to store	Running programs and operating system	BIOS and bootstrap
Read ability	Yes	Yes
Write ability	Yes	No
Volatile	Yes	No



4 Secondary Storage

	Magnetic HDD	Solid State Drive (SSD)	Optical Media
Cost	Medium	High	Very low
Capacity	High	Medium	Very Low
Durability	Medium	High	Medium
Reliability	Medium	High	Low
Portability	Medium	High	Very High
Speed	Medium	High	Slow

Computer Science Knowledge Organiser: Data Representation

1 TIER THREE VOCABULARY

ASCII	A character encoding standard that assigns unique numeric codes to represent characters. 7 or 8 bits per character
Binary	A number system that uses a base-2 representation, consisting of only two digits: 0 and 1.
Binary Arithmetic	Mathematical operations performed on binary numbers
Binary Conversion	The process of converting a number from one base to binary (base-2) or vice versa.
Binary Representation	The representation of data or instructions in binary format.
Binary Shift	A binary operation that shifts the bits of a binary value Left shifts multiply the value by 2, while right shifts divide the value by 2.
Bit	Short for "binary digit," a bit is the smallest unit of data. It can represent a value of either 0 or 1.
Byte	A unit of digital information that consists of 8 bits.
Character	A single symbol or letter that can be represented using ASCII or other character encoding standards.
Compression	Reducing the size of a file to make it quicker to transmit and store on devices
Kilobyte (KB)	1,000 bytes.
Megabyte (MB)	1,000 kilobytes
Gigabyte (GB)	1,000 megabytes.
Terabyte (TB)	1,000 gigabytes.
Petabyte (PB)	A 1,000 terabytes.
Image	An image can be represented using pixels. Each pixel is assigned a binary value to represent its colour
Hexadecimal	Hexadecimal (or hex) is a number system which uses base 16.
Metadata	Data about data i.e Date created, author
Overflow error	An error that occurs when the computer attempts to handle a number that is too large for it.
Sample Rate	The number of samples taken per second
Sample resolution	The number of bits (audio bit depth) used for each sample
Sound	Sound waves are sampled at regular intervals, and each sample is converted into a binary number to represent the amplitude of the sound a point in time.
Unicode	An extension on ASCII uses 32 bit to include all world languages

2 Number Representation

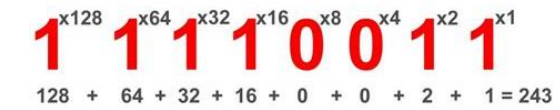
Units of Data Storage

- Bit
- Nibble - 4 bits
- Byte - 8 bits
- Kilobyte (KB) - 1,000 bytes
- Megabyte (MB) - 1,000 KB
- Gigabyte (GB) - 1,000 MB
- Terabyte (TB) - 1,000 GB
- Petabyte (PB) - 1,000 TB

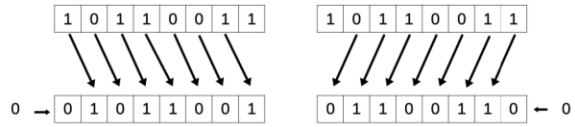
Addition

		Carry Over	Result
1.	0 + 0	0	0
2.	0 + 1	0	1
3.	1 + 0	0	1
4.	1 + 1	1	0
5.	1 + 1 + 1	1	1

Numbers



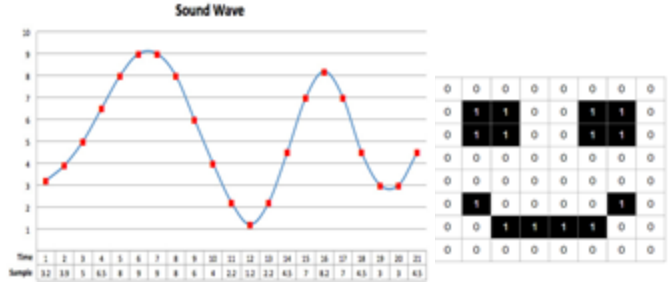
Shifting



3 Characters, images and sound

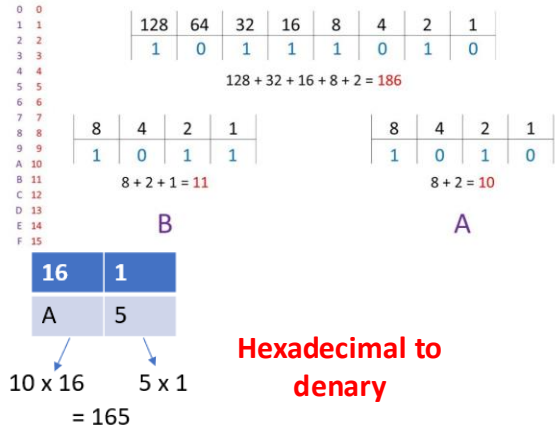
Binary	01100111	01101111	01101111	01100100	01100010	01111001	01100101
Decimal	103	111	111	100	98	121	101
Letter	g	o	o	d	b	y	e

goodbye



4 Hexadecimal

Convert 186 from Denary to Hexadecimal



4 Compression

Lossless:

- Decompressed file is the same as the original
- Doesn't compress as well as lossy
- For data you want to preserve
- Logs, documents, binaries, configuration

Lossy:

- Decompressed file might have lost information from the original
- Drops "unimportant" information from the file to make it compress better
- Images, sound, movies

Computer Science Knowledge Organiser: Programming

1	TIER THREE VOCABULARY
Abstraction	The process of simplifying complex systems or concepts by focusing on essential features while hiding unnecessary details.
Algorithms	Step-by-step instructions or procedures for solving a specific problem or performing a specific task.
Array	A collection of data items stored in sequential order
Arithmetic operators	Symbols used to perform mathematical operations such as addition (+), subtraction (-), multiplication (*), division (/), and others.
Boolean	A data type that represents logical values, either True or False.
Comments	Annotations in code that are not executed but provide information or explanations
Comparison operators	Symbols used to compare values, such as equal to (==), not equal to (!=), greater than (>), less than (<), greater than or equal to (>=), and less than or equal to (<=).
Concatenate	link together in a chain or series. Used in program to join data together
Conditional statements	Programming structures that allow different paths of execution based on specified conditions.
Data types	The classification of data in programming languages, including string (text), integer (whole numbers), float (decimal numbers), and Boolean (true/false).
Debugging	The process of identifying and fixing errors or bugs in a program to ensure it runs correctly.
Elif statement	A conditional statement that allows multiple conditions to be checked in sequence and executes if any of the conditions are true.
Else statement	A conditional statement that executes a block of code if the condition(s) in an if statement are false.
Error handling	Techniques used to catch and handle errors or exceptions that may occur during the execution of a program.
Float	A data type that represents numbers with decimal places.
For loop	A loop that iterates over a sequence of elements, such as a list or a defined number of times
If statement	A conditional statement that executes a block of code if a specified condition is true.
Indexing	The process of accessing specific elements in a list or string by their position using square brackets
Input	The process of providing data or information to a program during its execution.
Integer	A data type that represents whole numbers without decimals.
Iteration	The repetition of a process in order to generate a sequence of outcomes.

3 Output

```
# Printing a simple text
print("Hello, world!")

# Printing a variable
name = "Alice"
print("Hello,", name)

# Printing multiple variables
age = 25
print("Hello,", name, "You are", age, "years old.")
```

4 Input

```
# Taking input as a string
name = input("Enter your name: ")
print("Hello,", name)

# Taking input as an integer
age = int(input("Enter your age: "))
print("You are", age, "years old.")

# Taking input as a float
height = float(input("Enter your height in meters: "))
print("Your height is", height, "meters.")
```

5 Selection

```
# Example: Checking a number and string input using if statements
number = int(input("Enter a number: "))
if number > 0:
    print("The number is positive.")
elif number < 0:
    print("The number is negative.")
else:
    print("The number is zero.")

secret_word = "banana"
guess = input("Enter your guess for the secret word: ")
if guess == secret_word:
    print("Congratulations! You guessed the secret word correctly!")
else:
    print("Sorry, your guess is incorrect.")
```

Computer Science Knowledge Organiser: Programming

1 TIER THREE VOCABULARY

Lists	**A data structure in Python used to store an ordered collection of items.**
Logical operators	Operators used to combine or manipulate logical expressions, including AND, OR, and NOT.
Loops	Structures that repeat a block of code until a certain condition is met.
Nested conditionals	Conditionals within other conditionals, allowing for more complex decision-making.
Output	The result or data produced by a program after performing operations or calculations.
Parameters	Values passed to a function to customize its behaviour or provide inputs for calculations.
Programming language	A formal language with a set of rules and syntax that allows programmers to write instructions to be executed by a computer.
Python	A high-level programming language known for its simplicity and readability
Random module	A Python module that provides functions for generating random numbers and selecting random elements.
Return	A statement within a function that specifies the value to be returned as the result of the function.
Selection	Selection is a programming construct that allows you to execute different blocks of code depending on a condition.
Slicing	Extracting a portion of a list or string by specifying a range of indices.
String	A data type that represents a sequence of characters, typically used to store and manipulate text.
Subroutines	Blocks of reusable code that perform specific tasks or operations.
Syntax Error	The rules and structure governing the arrangement of words, symbols in a programming language. If they're not correct a program will not run
Testing	The process of verifying the correctness of a program by running various test cases
Variable	A named container that holds a value that can be changed and accessed during the program's execution.
While loop	A loop that repeats a block of code as long as a specified condition is true.

6 Comparisons

Operator	Description	Example
==	Equal	5 == 5
!=	Not equal	5 != 3
>	Greater than	5 > 3
<	Less than	3 < 5
>=	Greater than or equal to	5 >= 5
<=	Less than or equal to	3 <= 5

9 String Manipulation

```
1   x = "Hello year 9"
2   print(x.find("year"))
```

The find Command
Finds the starting index that the item being searched for starts at.
For example: this will output 6

String Slicing

Using the square brackets [and] we can output specific characters from a variable. The : separates the beginning and ending values

Example 1: would output "Hello"
Example 2: would output "year 9"

Example 1

```
1   x = "Hello year 9"
2   print(x[:5])
```

Example 2

```
1   x = "Hello year 9"
2   print(x[6:])
```

The len Command

```
1   print(len("Hello"))
```

Finds the number of characters in a variable
For Example: This would output 5

7 For Loop

```
# Example: Using a for loop with specified start, end, and increment values
print("Printing numbers from 1 to 10 with an increment of 2:")
for i in range(1, 11, 2):
    print(i)

print("\nPrinting numbers in reverse order:")
for i in range(10, 0, -2):
    print(i)
```

8 While Loop

```
# Example: Using a while loop to repeatedly ask the user for input
secret_word = "python"
guess = ""

while guess != secret_word:
    guess = input("Enter your guess for the secret word: ")
    if guess == secret_word:
        print("Congratulations! You guessed the secret word correctly!")
    else:
        print("Sorry, your guess is incorrect. Try again.")
```

10 Arrays

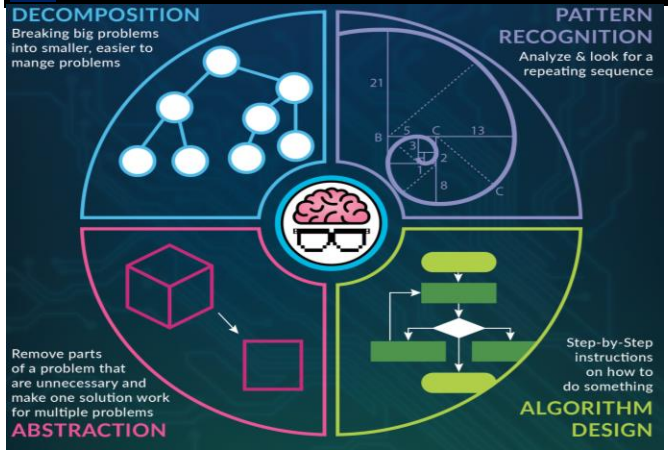
```
# Step 1: Creating a list
animals = ["cat", "dog", "bird"]
print("Initial list:", animals)

# Step 2: Adding an element
animals.append("fish")
print("After append:", animals)

# Step 3: Modifying elements
animals[2] = "parrot"
print("After modifying element at index 2:", animals)

animals[-1] = "lizard"
print("After modifying the last element:", animals)

# Step 4: Accessing elements
first_animal = animals[0]
print("First animal:", first_animal)
```

Computer Science Knowledge Organiser: Algorithms

1 TIER THREE VOCABULARY

Abstraction	Focusing on the essential details while ignoring unnecessary or irrelevant information.
Algorithm	Set of rules used to solve a specific problem or accomplish a task.
Binary Search	It repeatedly divides the search space in half by comparing the target value with the middle element of the list. If the target is less than the middle element, the search continues in the lower half; if it is greater, the search continues in the upper half.
Bubble Sort	Compares adjacent elements and swaps them if they are in the wrong order. It continues this process until the entire list is sorted.
Computational Thinking	Computational thinking is a problem-solving approach that involves breaking down complex problems into smaller, more manageable parts, identifying patterns, and developing algorithms to solve them.
Decomposition	Decomposition is the process of breaking down a complex problem or task into smaller, more manageable parts or subproblems.
Flowchart	A flowchart is a visual representation of the steps or actions in an algorithm or process. It uses various shapes, symbols, and arrows to illustrate the flow of control and the sequence of operations.
Insertion Sort	Starting with the second value in the list. If this value is greater than the value to the left of it, no changes are made. Otherwise this value is repeatedly moved left until it meets a value that is less than it.
Iteration	Iteration, also known as looping or repetition, is a programming construct that allows the execution of a set of instructions repeatedly.
Linear Search	Checks each element in a list or array one by one until the target element is found or the end of the list is reached.
Merge Sort	Divide-and-conquer sorting algorithm that recursively divides the list into smaller sublists, sorts them, and then merges them back together to produce a sorted list.
Pseudocode	A step-by-step description of an algorithm using simple English language text.
Selection	A programming construct - allows the execution of different sets of instructions based on certain conditions or criteria.
Sequence	A programming construct - Sequence is the order in which the statements are executed.
Trace Table	A table containing all the variables a program. Whenever the value of a variable changes, the change is indicated in the trace table.

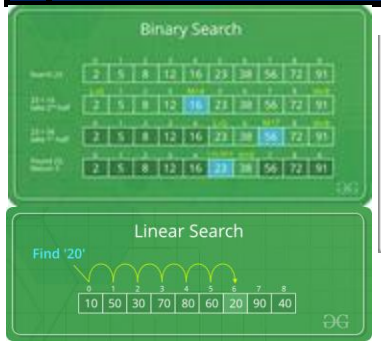
2 Computational Thinking



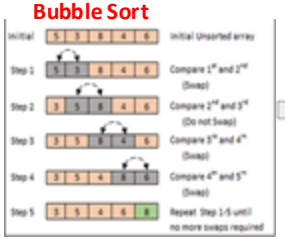
4 Flowcharts

Symbol	Usage
Start/Stop	The beginning and end points in the sequence.
Process	An instruction or a command.
Decision	A decision, either yes or no.
Input/Output	An input is data received by a computer. An output is a signal or data sent from a computer.

3 Searching & Sorting

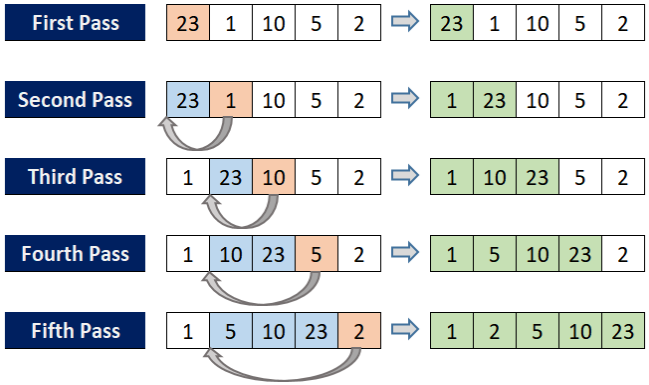


Bubble Sort



Merge Sort

Insertion Sort



4 Trace Tables

```
turns = 0
X = 3
while turns < 22
    X = X * 3
    turns = turns + 3
endwhile
print (X)
print (turns)
```

Turns	X	Output
0	—	—
0	3	—

Creative iMedia Knowledge Organiser: R095 Characters and Comics

1	TIER THREE VOCABULARY
Antagonist	The character who opposes the protagonist, often a villain.
Background Art	The artwork that represents the setting or environment in a comic.
Character Design	The process of creating the appearance, personality, and background of characters in comics.
Character Traits	The attributes, qualities, and personality of a character.
Client	An individual or organisation that commissions and receives the final media product.
Client Brief	A document that outlines the objectives, audience, and guidelines for a creative project.
Color Theory	The study of colors and how they interact, often used to evoke emotions.
Conflict	The central struggle or problem that drives the plot.
Dialogue	The spoken words between characters, often enclosed in speech bubbles in comics.
Exporting	The process of saving digital artwork or projects in specific file formats suitable for different uses, such as printing, online publishing
Facial Expressions	Visual representations of a character's emotions through their facial features.
Illustration	Creating images to accompany a story or text, often used in comics to visualize characters and scenes.
Narrative Structure	The organised way in which a story is told, including the sequence of events and plot development.

1	TIER THREE VOCABULARY
Narrative Text	Text within a comic that provides additional information or background, often found in boxes separate from speech bubbles.
Panel Layout	The arrangement of individual comic frames or panels on a page.
Plot	The sequence of events that make up the main story in a comic.
Protagonist	The main character around whom the story revolves.
Resolution	The conclusion of the story where conflicts are resolved.
Scene Composition	The arrangement of visual elements within a scene.
Speech Bubbles	Enclosed shapes containing dialogue or thoughts of characters.
Storyboarding	A sequence of drawings representing the shots planned for a comic or film.
Symbolism	The use of symbols to represent ideas or concepts in a story.
Target Audience	The specific group of people for whom the comic or media is intended.
Thought Bubbles	Bubbles that represent the thoughts of a character, usually cloud-shaped.
Typography	The art and technique of arranging type to make written language legible, readable, and visually appealing.
Visulisation Diagrams	Preliminary visual representations used to convey ideas for characters, settings, and scenes.

Creative iMedia Knowledge Organiser: R095 Characters and Comics

TA 1	TASKS

Task 1.1 A: Produces an effective interpretation of the client brief.
Task 1.1 B: Explanation of how the intended why it appeals to the target audience is comprehensive.

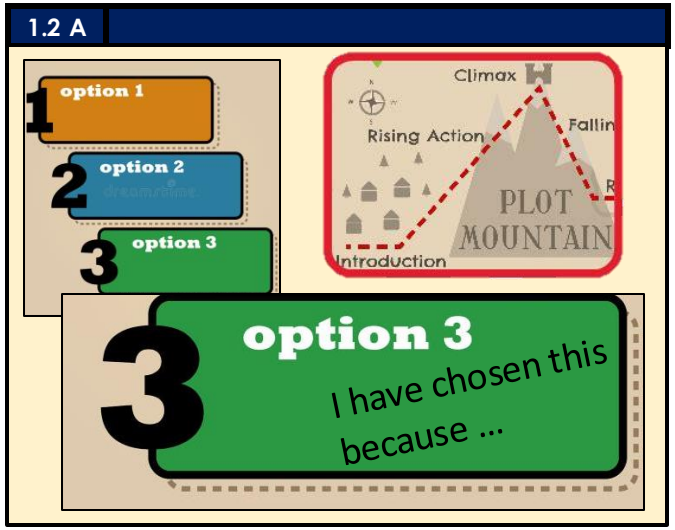
- An interpretation of the client brief and explanation of your target audience and how you will meet their needs.

Task 1.2 A: Produces detailed pre-production and planning documentation.

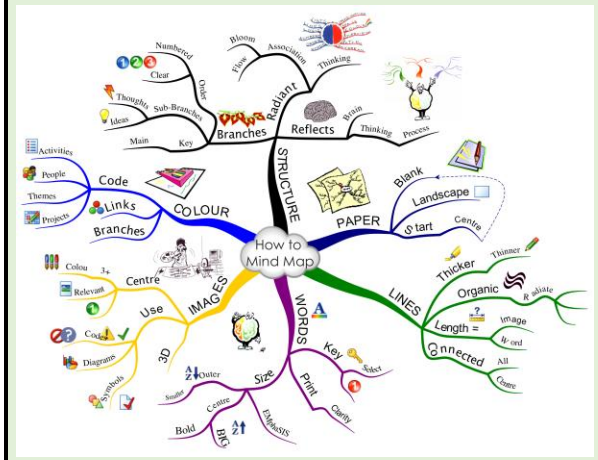
- Create a Story Mindmap
- Write Three possible story Ideas
- Justification of chosen story
- Write your chosen story in more detail.

1.1

1.2 A



1.2 A



TA1	LINKS & FURTHER READING

[What Is a Target Audience? Definition and Examples (cyberclick.net)]

[Exploring Plot Mountain: What It Is and How to Use It - The Teach Simple Blog]

Creative iMedia Knowledge Organiser: R095 Characters and Comics

TA 1 TASKS

Task 1.2 B: Pre-production and planning documentation support the creation of all elements of the final product. Character Planning -

- Create a Mindmap
- Create a Moodboard
- Create Visulisation Diagrams
- Justify Your chosen character designs

Task 1.2 C: Pre-production and planning documentation support the creation of all elements of the final product. Comic Planning –

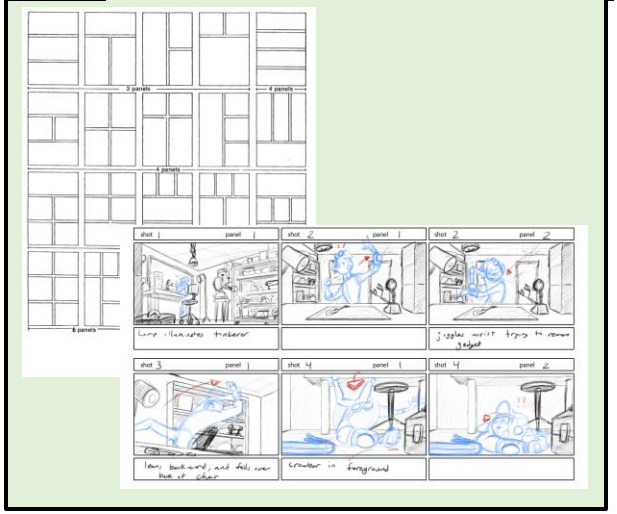
- Create a Panel layout / Design
- Create a storyboard for your comic (Template available)

Task 1.3: Demonstrates comprehensive understanding of how assets will contribute to the effectiveness of the final product.

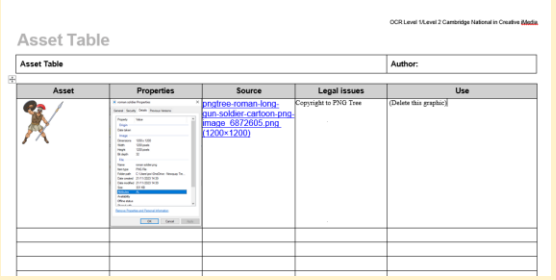
- Using the Template provided by OCR, identify all the assets you are going to need and explain why you need them.

1.2 B

1.2 C



1. 3



TA1 LINKS & FURTHER READING

What is a Mood Board — Definition & Examples Explained (studiobinder.com)

How to storyboard like a pro! (youtube.com)

Creative iMedia– R095 Characters and Comics

TA 2 **TASKS**

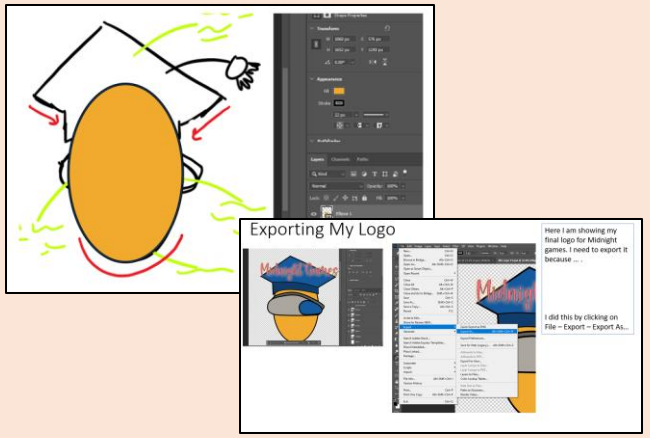
Task 2.1 A: Character and Asset Creation-

- You need to use appropriate tools on Photoshop to create the assets for your comic book.
- Your graphics need to be appropriate and creative, then evidence the properties of the graphics explaining why these file types were chosen(2.3).
- Create a range of assets that will be used in your graphic evidencing how you made them.

Task 2.1 B: Comic Book Creation

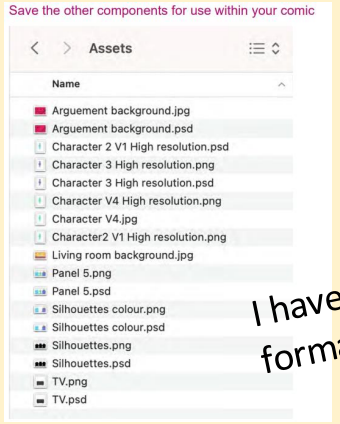
- You need to use appropriate tools on Comic Life to create the assets for your comic book.
- Your comic need to be appropriate and creative.
- Evaluate how your comic book is suitable for the target audience and how it meets the needs of the client.

2.1 A



2.1 B

2.1A



I have chosen this format because ...

TA2 **LINKS & FURTHER READING**

How to use Photoshop for beginners - learn the basics – Adobe

comiclife-3.0-gettingstarted1.1b (plasq.com)

Creative iMedia Knowledge Organiser: R095 Characters and Comics

TA 2 & 3 TASKS

Task 2.1 C: Exporting your Character, Assets and Final Comic Book.

- Evidence the properties of the graphics used explaining why these file types were chosen (Completed in 2.1).
- Evidence the properties of the comic explaining why these file types were chosen.

Task 3.1 A: Testing your Character, Assets and Final Comic Book.

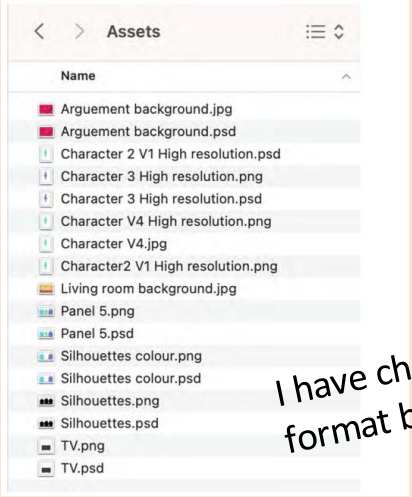
- Test the technical properties of the assets you used to create your comic. How are they suitable for the comic.
- Evaluate the effectiveness of your comic and how it meets the needs of the client and the needs of the Target Audience.

Task 3.2 B: Exporting your Character, Assets and Final Comic Book.

- Identify multiple areas you could improve if you had more time and fully explain how this would improve the comic. Easier to read, look better, more appealing to the Target Audience.

2.1 C

Save the other components for use within your comic



I have chosen this format because ...

3.1 A

I have created the character at 300dpi which is technically suitable for print. It is a JPG which is not the ideal format as it doesn't support transparency. I think the characteristics of the character were suitable for the simplified style of character I was aiming to achieve. The level of detail in the character design could be seen as lacking but it suited the style and aim of the comics story telling aim. The facial expressions were a little similar throughout the comic which is probably one of the less successful elements of the design, this was largely due to the limitations put on my character design but my artistic ability which isn't great!

Asset	Technical fitness for purpose
Living room background	The image I sourced from Getty images, is a high quality 300dpi resolution, this is a jpg format also but as this is a background transparency not really problem.
Argument background Panel 4	I created this background at 300 dpi and created it on a larger canvas to ensure that it would fill the panel and could be made smaller if needed.
Friend characters	I modelled the 2 other characters on the main character so they have the same technical properties.
Friend silhouettes	I modelled the 2 other characters on the main character so they have the same technical properties.
Television	I created this item on a small canvass but ensured it was a png so supported a transparent background and was also 300dpi.
Controller	I created this item on a small canvass but ensured it was a png so supported a transparent background and was also 300dpi.
Speech bubbles	I made these in the comic creation software I am not sure what the technical properties are, but the quality appears to be sufficient to make the product effective.

3.1 B

Explain how you could improve the character you have created

I think I could improve my character by giving it a more expressive face. For example, in the scene where the character is embarrassed it would be good to see this in the facial expression.

Explain how you could improve the comic you have created

I think I could improve my comic by adding some onomatopoeia to my comic. I could do this in the argument scene, this would make the comic look more like a comic and more exciting for the audience. Also, the styling on the first and last panels are different so doesn't suit the theme, the final panel also has a different chap which I would change. I have used onomatopoeic style text in the last panel but it doesn't work, I would change this.

Explain how your comic and character could be developed further

As I mentioned above my character is not as expressive as it could be, this might mean that I would need to develop my character to make a series of different faces that could be used. I could also develop the character to have them in different positions, such as sitting and standing which would have made the comic more realistic.

TA2&3 LINKS & FURTHER READING

comiclife-3.0-gettingstarted1.1b (plasq.com)

JPEG vs. PNG: Which one should you use? | Adobe

Designing Skills	S	O	R	T
Key Idea: Generating a range of imaginative and original design ideas				
Generating design ideas, taking inspiration from a designer or design movement				
Communicating design ideas using a range of techniques				
Annotating design ideas to clearly show likes and areas for improvement				
Selecting materials and providing justification based on their working characteristics				
Objectively comparing design ideas to the original specification				
Carrying out ongoing research where appropriate to inform design ideas				
Key Idea: Developing a design solution using the iterative design process				
Developing an idea based on comparison to specification and client opinion				
Modelling an idea using compliant materials; analysing this model to identify further areas for improvement				
Considering the advantages of CAD/CAM and how this can be used to develop the prototype				
Use CAD as a modelling tool to communicate your design development effectively				
Carrying out materials research and testing to establish the preferred choice of material with justification				
Carrying out surface finish research and testing to establish the preferred choice of material with justification				
Consult with your client throughout the development process, clearly changing your design to reflect your client's likes and opinion				
Carrying out ongoing research where appropriate to influence design ideas				
Produce a manufacturing specification to enable third party opinion of the finished product				

Design Technology Knowledge Organiser: Designing Skills

Designing—Students should explore a range of possible ideas linking to the contextual challenge selected. These design ideas should demonstrate flair and originality and students are encouraged to take risks with their designs. Students may wish to use a variety of techniques to communicate.

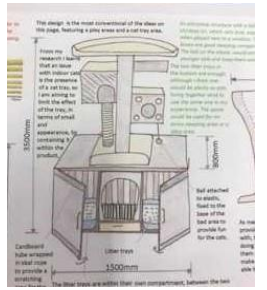
Mark band	Description
16–20	Imaginative, creative and innovative ideas have been generated, fully avoiding design fixation and with full consideration of functionality, aesthetics and innovation. Ideas have been generated, that take full account of on-going investigation that is both fully relevant and focused. Extensive experimentation and excellent communication is evident, using a wide range of techniques. Imaginative use of different design strategies for different purposes and as part of a fully integrated approach to designing.

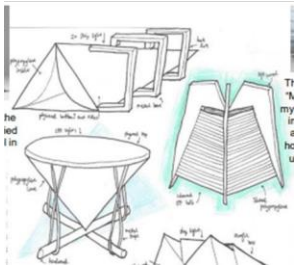
A range of 6 very different ideas which have variation in each. They consider the function (what it will do), how it looks and should be innovative and exciting. Take risks and design something new !

Drawing skills and styles are varied and of the highest quality. Look at the examples to show what is expected.

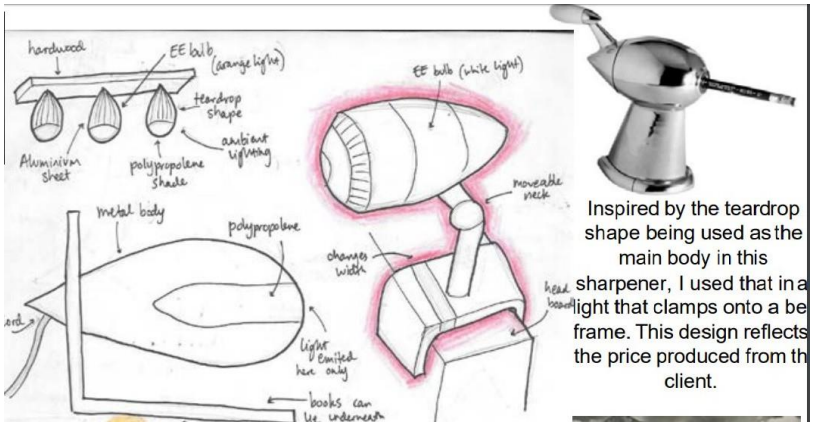
The ideas link fully to your specification & design brief. Your research obviously influences your ideas now and as you work through the design process. Make sure you link back to them when annotating. You should get client feedback on all of you ideas.

You understand that designing can take many forms iterative, modelling, CAD etc. These are demonstrated through your highly varied ideas.



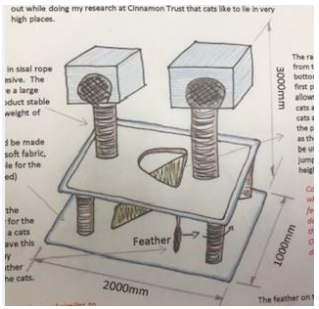


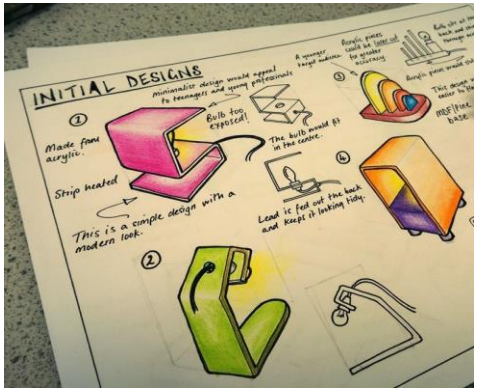
Do	Don't
Draw in pencil	Draw in felt tip
Draw in 3D	Colour using felt tip
Add colour using colouring pencils	Copy someone else's idea
Use an inspiration image	Draw in 2D
Annotate fully	Repeat ideas



Inspired by the teardrop shape being used as the main body in this sharpener, I used that in a light that clamps onto a be frame. This design reflects the price produced from th client.

Examples of excellent design communication





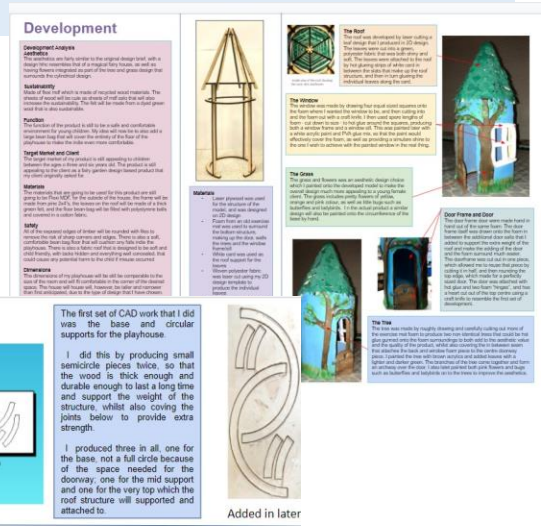
Annotation should include:

- Sizes in mm
- Specific material choices with justification
- Your likes and dislikes with justification
- Client feedback (likes and dislikes) with justification
- Where your inspiration came from
- How you will make it

Design Technology Knowledge Organiser: Designing Skills

Developing design ideas; students will develop and refine design ideas. This may include, formal and informal **2D/3D drawing including CAD, systems and schematic diagrams and models**. Students will develop at **least one model; however marks will be awarded for the suitability of the model(s) and not the quantity produced.** Students will also select suitable materials and components communicating their decisions throughout the development process. Students are encouraged to **reflect on their developed ideas by looking at their requirements; including how their designs meet the design specification.** Part of this work will then feed into the development of a manufacturing specification providing sufficiently accurate information for third party manufacture, using a range of appropriate methods, such as measured drawings, control programs,

Mark band	Description
16–20 We would like to see a range of both hand made &CAD/CAM models. Evaluate each model fully & get client feedback. Demonstrate clear development & improvement at every stage.	Very detailed development work is evident, using a wide range of 2D/3D techniques (including CAD where appropriate) in order to develop a prototype. Excellent modelling, using a wide variety of methods to test their design ideas, fully meeting all requirements. Fully appropriate materials/components selected with extensive research into their working properties and availability. Fully detailed manufacturing specification is produced with comprehensive justification to inform manufacture.



Manufacturing Specification

Stage	Task	Time	Materials, Tools, Equipment	Health & Safety / Quality Control
1	Sanding & gluing circular pieces of CNC plywood to create 3 circles	100 mins	Wood glue, g clamps	Goggles for eye protection and face mask for lung protection when sanding
2	Cutting, gluing and screwing beams between the 'circles'	100 mins	Wood glue, g clamps, screws, drill, 2x4 pine beams	Goggles for when drilling, being aware of hands for when the drill bit passes through the wood
3	Adding 'reinforcement' beams beside the door frame to add areas of attachment for the flexi-plywood	60 mins	Wood glue, screws, drill, 2x4 pine beams	Be careful not to split wood when drilling/screwing
4	Developing 2D Design for my door and cutting using the CNC	60 mins	CNC, MDF, 2D Design Program	Making sure that the CNCis completely set p right to prevent any potential damage to the machine
5	Sanding and painting playhouse door	100 mins	Sand paper, grey undercoat, eggshell brown topcoat, roller, brush	Making sure that all edges are smooth and completely covered for an even coat
6	Attaching flexi-plywood to frame and covering all pine with filler and cutting door and window	100 mins	Wood glue, g clamps, panel pins, pin hammer, flexi-ply, filler	Tie hair back to prevent glue getting in hair. Be careful not to hit hands/fingers when using pin hammer
7	Cutting, drilling, sanding and painting hinges for door	60 mins	MDF, eggshell paint, hand saw, sandpaper	Wear goggles when using the hand saw , be careful of hands not a cut or be in the way when drilling
8	Sand, undercoat and overcoat the flexiplywood	100 mins	Grey undercoat, roller, paint tray, blue eggshell paint sandpaper	Wear a apron to prevent paint from getting on clothing
9	Attaching the window frame and window sill into the hole in flexi-ply sanding and painting	200 mins	Grey undercoat, brown overcoat, paint brush, paint roller, masking tape	Use the masking tape to prevent any brown getting on the blue eggshell paint
10	Cutting notches and attaching roof beams to the top of the playhouse	100 mins	Hand saw , 85cm 2x4 pine, drill, screws	Wear goggles when using saw and watch hands/fingers when using drill
11	2D design and cutting of all my leaves need for the roof	60 mins	2D Design software, green felt, universal laser cutter	Make sure all felt is lined up properly to prevent waste
12	Cut, sand , undercoat, overcoat and attach the flexi-plywood tree to the side of the playhouse	100 mins	Hand saw , sandpaper, grey undercoat, brown eggshell overcoat, wood glue, panel pins wood filler	Wear goggles when using hand saw
13	Attaching flexi-ply beams between the main roof beams and angling the leaves to it	200 mins	Hand saw, panel pins, staple gun, felt leaves, flexi-ply	Be careful of hands when using staple gun, wear goggles when using hand saw
14	Attach door to the playhouse with the hinges from the inside to the outside.	60 mins	6cmx6cm wood panels, screws, drill, hinges, door, washers	Beware of hands/ fingers when using the drill.
15	Paint the flowers, grass, leaves and ladybirds on the playhouses exterior	300 mins	Acrylic paints, paint brushes	Wear an apron and tie hair back

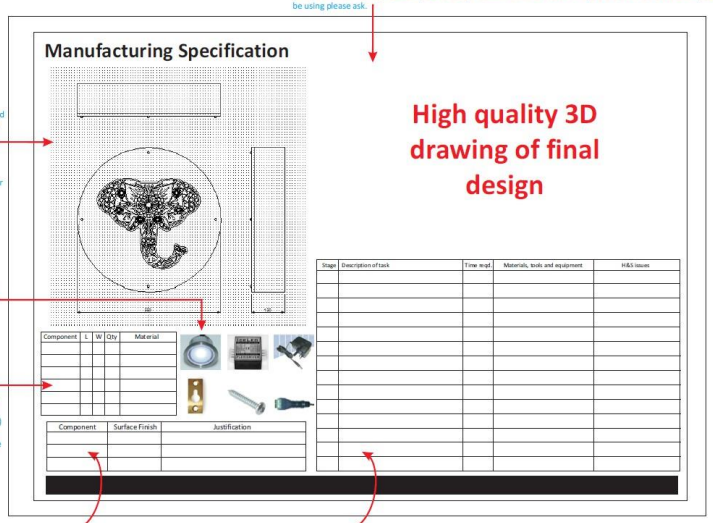
Component	Surface Finish	Justification
Flexi-plywood outer	Enamel and acrylic paints	Acrylics and bright, cheap and water based so they are an easy to use medium that is also safe for children.
Tree trunk and branches (flexi-ply) Window Door	Grey undercoat followed by a brown egg shell paint	The grey undercoat helps to improve the dark colour of the brown top coat Egg shell is durable and wipe-clean which is a great choice for young children
Decoration (paint)	Egg shell top coat & acrylic	Egg shell is durable and wipe-clean which is a great choice for young children
Felt	Different shades of green and different sizes	A comfortable, easy to work with and cheap material

Component / Material	Length	Width	Height
Flexi-plywood (1)	251cm	/mm	115cm
Roof beams, 1x2 inch pine (12)	2 inches	1 inches	58 cm
Frame beams, 1x2 inch pine (9)	2 inches	1 inch	30cm
Frame beams, 1x2 inch pine (10)	2 inches	1 inch	35cm
Window frame, 1x2 inch pine (8)	2 inches	1 inch	40cm

Manufacturing Specification Helpsheet

Manufacturing spec should include

* Cutting list
* List of components
* Surface finishes with justification
* Plan of making inc time
* Final 3D drawing
* Third Angle Ortho-graphic drawing.



Drawing of Final Design
Ideally 3D, but if you are not confident at 3D, then 2D is ok. This needs to be your very best quality work and you should take alot of time and effort over this. You need to apply coloured pencil and make sure that you label all of the materials and surface finishes. You should also label any components which you will use, but be precise, for example rather than say 'screws' you would say '20mm roundhead screws'. If you are at all unsure of what you will be using please ask.

Surface Finishes
You need to list the surface finishes you will use on each part of your design. Make sure that you list them all and that you get the name and the colour correct. You then need to justify your choice.

Planning of Making
You will need to plan how you are going to make your product. List the stages, then for each estimate how long it will take you, the tools, equipment and materials you will need (be specific) and any health and safety issues which might arise at each stage, along with what you will do to avoid these risks. Make sure that this is as detailed as possible.

Engineering Personal Learning Checklists

	S	O	R	T
Key Idea: Identifying features of engineered products				
Mechanical function				
should understand any mechanisms in a solution, gears, cams and levers, as well as mechanical fixings such as clamps and catches should be explained.				
Electrical function				
should detail the electrical or electronic details of a solution. Details on inputs, outputs and components could feature in this area.				
Interrelating components				
should also understand details, especially if unclear from an engineering drawing. Electrical input resulting in a mechanical output, for example.				
Key Idea: Developing a range of engineering solutions				
Aesthetics: seeing how the overall product looks from a visual sense				
Materials: testing on materials to see if they are fit for purpose.				
Ergonomics: can be tested to see if the interface between product and user meets expectations.				
Mechanical: simple tests to check if mechanisms work in the way expected				
Electronic: tests on circuits using breadboards or prototypes				
Communicating design Ideas				
Sketching and annotating				
Modelling and testing function				
Use of materials for specific functions				

Primary features of engineering products

Engineers need to be familiar with a range of components and parts that may appear in potential briefs or projects. These should include:

Electrical components

- **Connections:** these can include push fit electrical tabs, solder, screw down, etc.
- **LEDs:** a range of LED forms and sizes including bar graph, eight segment blocks and LED panels.
- **Resistors:** fixed and variable resistors.
- **Fuses:** their application and purpose.
- **Diodes:** identifying and understanding their use in a circuit.
- **Power supplies:** battery types, mains and low voltage systems.

Mechanical components

- **Fixings:** nuts, bolts, washers, etc.
- **Clamping devices:** cam locks, level locks, etc.
- **Adjusting mechanisms:** screw threads, ratchet systems and cams.

Properties of component materials

- **Conductivity:** looking at conductivity of both heat and electrical current, plus how these can be isolated when needed.
- **Friction:** the effects that friction can have on a product including intentional friction.
- **Durability:** how durable is the product, look at the materials and construction.
- **Quality:** does the quality of the product look high or low grade, flash on mouldings, sink marks in plastic, uneven fit of parts, etc.

Identifying features of other engineering products allows engineers to research and compare other similar products to determine if there are features that could be replicated or adapted to meet the criteria for the new-engineered product in the brief.

For example:

- **Aesthetics:** looking at how the aesthetic of other similar products meet the brief. Aesthetics focus on how a product looks.
- **User/customer/client needs:** how the products final outcome meet the needs of user and client.
- **Safety:** what safety factors or features are evident in the design.
- **Ergonomics:** how well do the ergonomics of the product function (comfort, use etc.).
- **Anthropometrics:** does the product conform to standard anthropometric data.
- **Mechanisms:** what mechanisms are featured, gears, levers, cranks, etc.
- **Electronics:** how have electronics been incorporated, what components have been used.
- **Sustainability:** has sustainable materials been used, is it easy to recycle the product?
- **Material properties:** what properties are required or seen in the materials used. Look at hardness, toughness, malleability, brittleness, etc.

Function of the proposed solution

Functional requirements are identified in briefs and specifications for engineered products and are an explanation of what the expectations of the product are.

Engineers need to ensure that details of how the product functions is clearly explained. This is often undertaken using notes and sketches to further detail their solutions.

Details should be given on areas such as:

- **Mechanical function:** should include any mechanisms in the solution, gears, cams and levers, as well as mechanical fixings such as clamps and catches should be explained.
- **Electrical function:** should detail the electrical or electronic details of a solution. Details on inputs, outputs and components could feature in this area.
- **Interrelating components:** should also be details, especially if unclear from an engineering drawing. Electrical input resulting in a mechanical output, for example.

Engineering Knowledge Organiser

Generating a range of engineering solutions

Engineers create new products through a process of research and iterative development.

Research can include the analysis of products that may have similar solutions or even parts of them could be incorporated into a new idea.

The **brief** should be followed in all areas to ensure that solution and proposals meet the specific requirements of the task. If a specification is issued alongside the brief, then those points should also appear in annotation within the design process.

Sketches should be used to explore a range of ideas but should be fully supported by clear and detailed annotation. Where appropriate, links or references to a brief and specification should be present.

Development should be clearly annotated and form a part of an iterative process that clearly shows how the idea has progressed through to a final conclusion. Again, annotation and links to the specification and brief should clearly be evident.

CAD can be used to show clear development and is an excellent tool to make the iterative process clearer. Designs can be modified and saved in stages prior to presenting. It is also a good way of generating engineering drawings for the final solution. CAD also allows the production of high quality and realistic visuals.

Testing is used to support development of ideas and can focus on a number of areas:

- **Aesthetics:** seeing how the overall product looks from a visual sense.
- **Materials:** testing on materials to see if they are fit for purpose.
- **Ergonomics:** can be tested to see if the interface between product and user meets expectations.
- **Mechanical:** simple tests to check if mechanisms work in the way expected.
- **Electronic:** tests on circuits using breadboards or prototypes.

Developing ideas through to a conclusion

Ensuring that all aspects linked to the brief and design specification are addressed is a vital part of the designing stages. As a part of this process, evaluative methods such as a SWOT analysis should be undertaken against a small number of design ideas.

SWOT analysis looks at four key areas of selected design proposals:

1. **(S) Strengths:** these focus on the strengths of the design, what works well, what makes it better than the competitions' products, etc.
2. **(W) Weaknesses:** explore areas that need improving to ensure the design is successful.
3. **(O) Opportunities:** unexpected benefits from the design.
4. **(T) Threats:** looks at what could be problematic for the design, such as a better product being launched by a competitor.

Communicating design ideas

The information in design proposals needs to be relevant and use a suitable media to display the information. Sketches and CAD are the most common form of displaying ideas and development stages.

It's important that sketches have a logical structure so that the iterative nature of the development of ideas can be seen. Annotation should include appropriate terminology associated with design and engineering.

Ideas are often easier to explain when supported by models and detail sketches showing more complex sections in possibly enlarged details, exploded views or isometric.

Models, such as the above example (of a torch), can use a variety of materials including paper and card, foam, clay or other materials. They are not required to be fully detailed or functional but to be a visual aid to assist in the design process.

English Personal Learning Checklists

	S	O	R	T
Why does Shakespeare open the play with witches? Why is it good for Macbeth not to appear first? How does Shakespeare structure the witches language and why? (Why is James 1st significant here?)				
When Macbeth is told of his new title, how do he and Banquo demonstrate the differing attitudes to witchcraft in the Jacobean era? Can you think of reasons for the difference in reactions?				
What does Lady Macbeth fear about her husband, after she has read his letter?				
How does Lady Macbeth make sure that her husband murders Duncan? (Use the dash'd its brains out quotation!)				
When Lady Macbeth says, "That which hath made them drunk hath made me bold", what does she mean? Who are *"them"* and why should she want them to be drunk?				
Sometimes Shakespeare shows killing onstage (mostly at the end of a play). Why, in your view, is the killing of Duncan not shown, but understood to happen offstage?				
How does Shakespeare present Macbeth's state of mind after the murder of Duncan?				
Explain the significance of the motifs of sleep and blood in the play.				
What does Banquo mean when he says "Thou hast it all….and I fear thou play'd most foully for't"				
Using Macbeth's soliloquy beginning "To be thus is nothing" explain what Macbeth's primary concern is and how this reflects what matters most to men of the time.				
How does Lady Macbeth attempt to control Macbeth during the banquet scene? What other event does she remind him of? (Macbeth has not told her of this in the dialogue of the play, so we must suppose he has told her between scenes.)				
What is Hecate's strategy for Macbeth? Comment on the way the audience learns of this before he does.				
How are the witches presented as evil and manipulative in this second meeting?				
How does Macbeth feel after his second meeting with the witches? What things might reassure him, and what things might trouble him?				
How does Shakespeare present Lady Macduff? Why has he done this?				
In Act 4, scene 3, there is an account of the miraculous healing powers of the English king - what is the purpose of this? What effect does it have on the audience?				
How does Lady Macbeth's behaviour in Act 5, scene 1 affect the way the audience sees her?				
Macbeth claims that he has "almost forgot the taste of fears". Is this a convincing claim? Give reasons for your answer.				
Perhaps the most famous speech in the play is the one that begins "Tomorrow and tomorrow and tomorrow". In your own words, summarize the main points that Macbeth makes in this speech.				
How does Macbeth feel about fighting Macduff? What makes up his mind to do so? How does Old Siward feel about the death of his son? He makes a joke at this point - does this suggest that he doesn't care, or that he is controlling his feelings?				

Character analysis [AO1 + AO2]:

Shakespeare opens the play with the three witches to create a sense of mystery and horror. They speak in trochaic tetrameter and rhyming couplets to emphasise their use of witchcraft.

They are associated with 'thunder' and 'lightning' to showcase the chaos that they are causing and their desire to disrupt the great chain of being.

They're likely forced to the outskirts of society.

They see Macbeth's psychological vulnerability and seek to tempt him into evil.

Shakespeare's purpose [AO3]:

Shakespeare perhaps included the witches to please King James I, a supernatural fanatic who wrote the book Demonology. Through Macbeth's downfall, Shakespeare is perhaps commenting on the dangers of believing misleading prophecies and truths.

The Witches

Key Quotes [AO1 + AO2]:

'hover through the fog and the filthy air'

'instruments of darkness'

'something wicked this way comes' – Describing Macbeth later in the play

Character analysis [AO1 + AO2]:

At the start of the play, Macbeth is depicted as somewhat heroic. He is described as 'brave Macbeth' and 'valour's minion' – setting him up as a hero. However, there are undertones of violence in how he is portrayed – 'Bellona's Bridgegroom' for example.

It is vital he is portrayed in this way, so he can be placed on a pedestal before his tragic downfall.

A downfall that comes as a result of his 'vaulting ambition' and weak mind.

Shakespeare's purpose [AO3]:

Shakespeare sets Macbeth up to be a tragic hero. The play's title clearly demonstrates Macbeth's importance. His 'vaulting ambition', along with the prophecies from the witches and Lady Macbeth's manipulation, ultimately leads to psychological deterioration and his tragic downfall. Therefore, Shakespeare seeks to highlight the dangers of unchecked ambition, disrupting the great chain of being and breaking the divine right of kings.

Macbeth at the start

Key Quotes [AO1 + AO2]:

'Valour's minion'

'unseamed him from the nave to the chops'

'stars hide your fires, let not light see my black and deep desires'

'vaulting ambition'

'Brave Macbeth'

'Is this a dagger I see before me?'

'Will all great Neptune's ocean wash this blood clean from my hand?'

Character analysis [AO1 + AO2]:

At the start of the play, Lady Macbeth is depicted as breaking Jacobean Social norms – she is strong willed, manipulative and powerful. She defies Jacobean fears of witchcraft, calling upon the 'spirits' to make her more ruthless. She manipulates Macbeth into breaking the Divine Right of Kings and Disrupting the Great Chain of Being.

She perhaps seeks to hold onto power more desperately than Macbeth due to her inability to provide an heir, and the risk that that poses.

Shakespeare's purpose [AO3]:

Through the characterisation of Lady Macbeth, Shakespeare perhaps seeks to highlight the dangers of being a woman in a man's world, whilst being unable to provide an heir. Her willingness to disrupt the great chain of being ultimately leads to her downfall and could be Shakespeare highlighting the dangers of not adhering to societal expectations.

Lady Macbeth

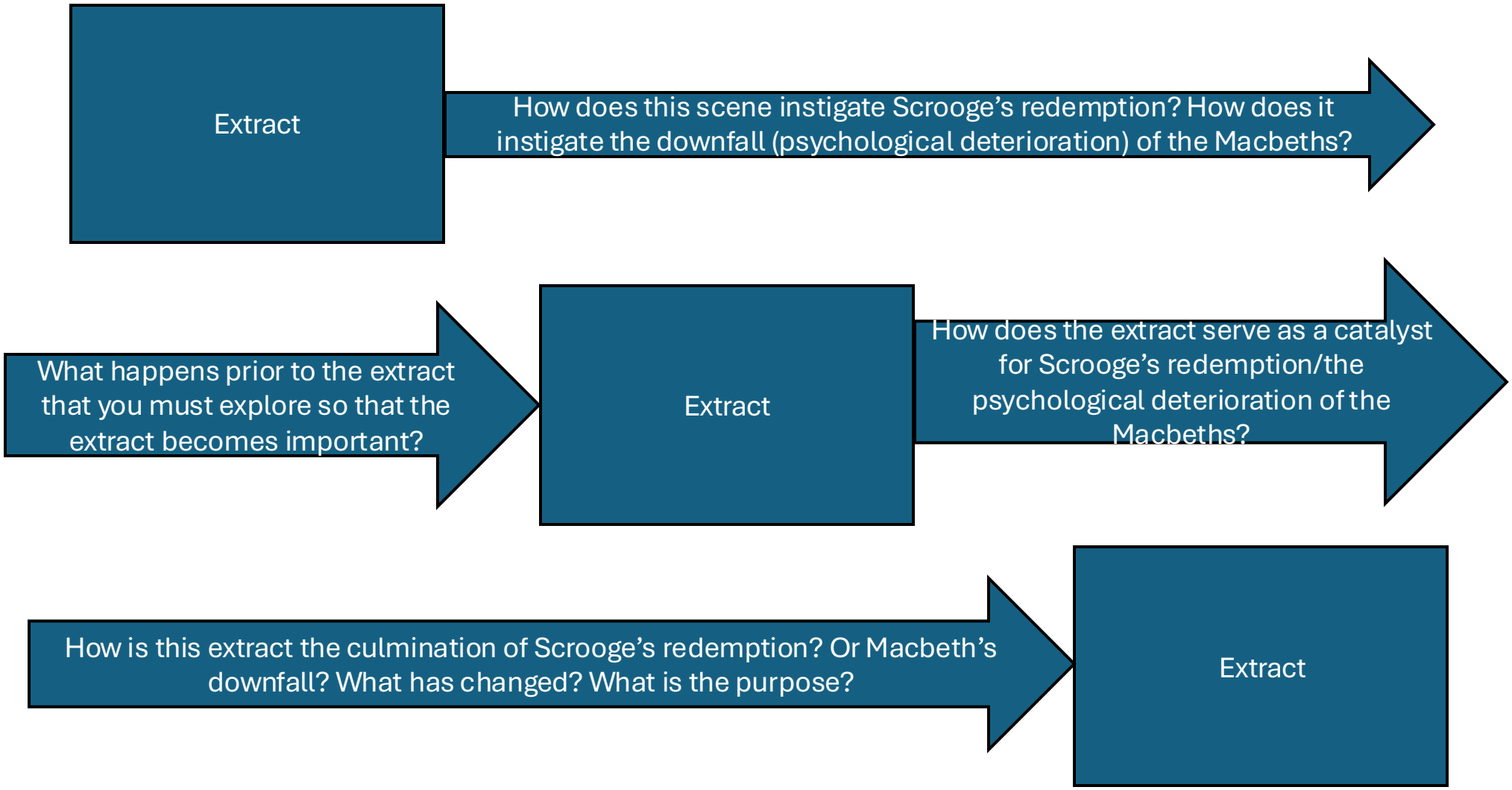
Key Quotes [AO1 + AO2]:

'Come, you spirits That tend on mortal thoughts, unsex me here And fill me from the crown to the toe top-full Of direst cruelty!'

'Look like the innocent flower but be the serpent underneath't'

"When thou durst do it, then you were a man"

'A little water clears us of this deed'


Extract
How does this scene instigate Scrooge's redemption? How does it instigate the downfall (psychological deterioration) of the Macbeths?
What happens prior to the extract that you must explore so that the extract becomes important?
Extract
How does the extract serve as a catalyst for Scrooge's redemption/the psychological deterioration of the Macbeths?
How is this extract the culmination of Scrooge's redemption? Or Macbeth's downfall? What has changed? What is the purpose?
Extract

SECTION B

This section is for writing. You will have 40 minutes to answer the question in the exam

On Paper 2, the writing question is about writing a non-fiction piece of point of view writing

Diary
Blog
Article
Letter
Speech

It doesn't matter, what you're asked to write – just do the same plan every time!

Use the statement for ideas

Make sure your points are all very different – but stick to the steer

Go political / global / social / environmental

Do this in 5 – 10 mins!

FEATURES TO INCLUDE

Heading with subheading after (rather than throughout) – use humour / pun – quite long
Hyperbole for humour
Relatable self-depreciating humour
Similes that are extreme
Relevant jargon – advanced vocabulary
Narrative / anecdote
Juxtaposition between tone and style
Expert quotes
Rhetorical questions; alliteration; one liners; emotive language
Phrases with dashes in
References to people and places that show you're cultured
Structural – interesting / creative rhetorical questions
Sarcasm

"Record it in HD, have David Attenborough record the voice over, and you've got a Sunday evening treat for millions!"

Level 4 Perceptive, detailed summary 7–8 marks	Shows perceptive or detailed synthesis and interpretation of both texts: • makes perceptive inferences from both texts • selects judicious references/use of textual detail relevant to the focus of the question • statements show perceptive differences between texts.
Level 3 Clear, relevant summary 5–6 marks	Shows clear synthesis and interpretation of both texts: • makes clear inferences from both texts • selects clear references/ textual detail relevant to the focus of the question • statements show clear differences between texts.

<u>Question 2 Top tips:</u>

This is the one question where you need to be more literal.

Don't spend too long on it – it's just 8 marks and you need to get to question 4. But still make sure you write a response for every question.

Quote & Inferences.

QUESTION 3 – 12 marks

How is language used to present / describe….

Outline the thing / the overview. How is the subject of the description generally presented? Is there something perceptive there? Think the 'bus one' the 'mountain one'… remember?

Find methods that show the 'thing' – layered analysis with terminology and effect on reader

Overall, the writer presents _____ and almost as though / to reflect / symbolise…..

Then, analyse methods and quotes / phrases that show that!

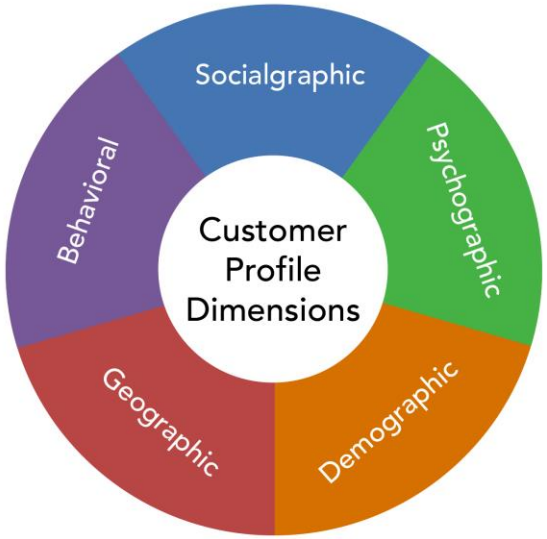
Semantic field
Metaphor / simile / personification
Verbs / adjectives
Listing
Sound (phonology / alliteration etc)
Imagery

Q 4 Top tips! → 16 marks! BOTH SOURCES

1. Compare the writer's feelings (attitudes / views) NOT the thing
2. Spot the attitude shift (they might change how they feel)
3. Be very specific with defining the attitudes (not just good / bad)
4. Consider WHY the attitudes may be different in each source (6+)
5. But include layered analysis of quotes that show the attitudes

Positive attitude	Negative attitude
Appreciate	Don't appreciate
Excited	Bored
Joy	Saddened
Confident	Fearful
Nostalgic / fond memories	Regretful / bad memories
Necessary	Unnecessary
Inspired	Uninspired
Fearless	Terrified / scared
Strong opinons	Ambivalent (neither good nor bad)

Enterprise and Marketing Knowledge Organiser Market and pitch a business proposal



TASKS

Task 1 – Developing a brand

Part One – Assess the current market for your product proposal.

You must:

• Briefly outline your product design and target customer profile from R068. • Research your competitors' products to find out strengths, weaknesses and their unique selling points.

• Carry out an analysis of the opportunities and threats in the external environment.

• Based on your research and analysis, review the strengths, weaknesses, and unique selling point of your product design.

TASKS

Task 1 – Developing a brand

Part Two – Develop a brand for your product proposal.

You must:

• Create a brand personality which considers:

□ brand identity

□ brand image

□ three branding methods, to include a logo.

• Justify the combination of branding methods you have chosen to create your brand personality.

• Assess the likely success of your brand with reference to your target customer profile and market research findings from R068.

Enterprise and Marketing Knowledge Organiser Market and pitch a business proposal

TASKS

Task 2 – Create a promotional campaign for your business proposal

You must:

- Explain the objectives and Key Performance Indicators (KPIs) for your promotional campaign.
- Create three different types of promotional materials to raise awareness of your product. The types used must be a combination of digital and non-digital materials.
- Justify your choice of materials based on how well they complement each other and meet the needs of your target customer profile.
- Produce a timeframe for your campaign and justify why it is appropriate

TASKS

Task 3 – Develop a pitch for your proposal

You have been asked to prepare a pitch to explain why you think your product proposal will be successful if introduced to the market. Your pitch will last 5–10 minutes.

You must justify the following:

- Your product design.
- Your brand personality.
- Your pricing recommendation.
- Your proposed promotional campaign.
- Any other relevant information

Enterprise and Marketing Knowledge Organiser Market and pitch a business proposal

TASKS

Task 3 – Develop a pitch for your proposal

Part One – An explanation of the factors you must consider when planning for the pitch.

You must:

• Explain the factors that you need to consider when planning to deliver the pitch for your design:

□ Objectives of the pitch.

□ Venue.

□ Audience.

□ Use of appropriate media.

□ Personal appearance.

• Produce a pitch and resources/supporting material to show that your business proposal will be successful.

This should include:

□ A visual aid to help deliver your pitch e.g. presentation slides, flip chart.

□ A second visual aid to hand out to your audience e.g. handouts, props, mood board from R068, advert storyboard/mock-ups.

□ Speaker notes/prompt cards.

□ Identification of possible questions from the audience and suitable responses that you could give to the questions.

□ Any other relevant information

TASKS

Task 3 – Develop a pitch for your proposal

Part Two – Carry out a practice pitch.

You must:

• Carry out a practice pitch in front of at least two of your peers. They should provide you with some support, ask you relevant questions, and offer feedback on your pitch. They must provide you with evidence of the feedback given on the OCR Practice Pitch Feedback form.

• Watch the practice pitch of at least one of your peers to provide support, ask relevant questions, and offer feedback. You will need to provide evidence of the feedback you have given on the OCR Practice Pitch Feedback form

Following the practice pitch, you must:

• Use the feedback received from your peers and your own judgement to:

□ Reflect on, review and refine your personal pitching skills, your pitch plan and supporting materials.

□ Demonstrate the changes that you have made following the feedback from the practice pitch, e.g. annotate the visual aids, handouts and other support materials prepared for the practice pitch to show the changes made.

Enterprise and Marketing Knowledge Organiser Market and pitch a business proposal

TASKS

Task 4 – Pitch your business proposal to an audience

Your pitch must last 5–10 minutes.

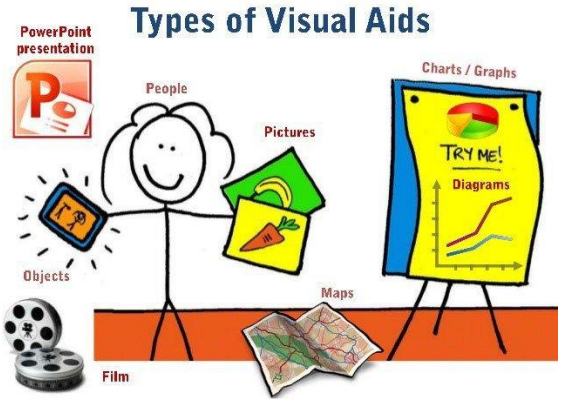
In your professional pitch you must demonstrate:

- The use of appropriate media/visual aids/supporting materials.
- Effective presentation skills.
- Time management skills.
- Appropriateness of your pitch to meet the needs of the audience.
- Persuasiveness to encourage your audience to produce your product proposal.
- Ability to answer questions asked by your audience.

Your pitch will be carried out to an audience of at least two people, one of which may be your teacher and the other will be independent of the class. If the panel is two independent people, your teacher will still supervise your pitch.

TASKS

Task 5 – Reflect on your pitch and business proposal



Now you have delivered your professional pitch, you must reflect on the whole experience by reviewing your pitching skills, brand and promotional campaign as well as your product proposal for R068. Within your reviews you should use a range of sources of evidence.

These must include:

- Self-assessment.
- Feedback from others.
- Your personal reflections following the practice and professional pitch.

Part One – Carry out a review of your pitching skills.

You must:

- Review your performance after completing your professional pitch. Within your review you must explain your strengths and areas for development.

You must include the following aspects:

□ Verbal communication
□ Non-verbal communication
□ Visual aids
□ Time management.
□ Ability to answer questions from the audience.
□ Value of rehearsing and practising your pitch.
□ Feedback received from others

Enterprise and Marketing Knowledge Organiser Market and pitch a business proposal

TASKS

Task 5 – Reflect on your pitch and business proposal

Part Two – Carry out a review of the likely overall success of the business proposal using a range of evidence.
You must:
• Review your business proposal, identifying strengths and areas for development.
You must review the following aspects:
□ Costs for your product proposal
□ Relevance and appeal of your brand
□ Suitability of the brand personality to your product proposal
□ Your promotional campaign
□ Your promotional materials and the approximate costs of producing them.
• Explain the likely overall success of your product proposal.
• Assess future developments/recommendations for further refinement of the brand and promotional campaign.

French Personal Learning Checklists

Le Grand Large (Holidays)	S	O	R	T
say what I normally do on holiday				
talk about holidays in the past, present and future				
talk about an ideal holiday				
use the conditional tense				
deal with a hotel stay				
book a hotel and understand reviews				
use reflexive verbs in the perfect tense				
order in a restaurant (recap)				
use *en* + present participle				
talk about travelling				
revise transport				
use *avant de* + infinitive				
use the comparative with transport				
use the *nous/notre/nos* forms				
use the present and perfect tenses				
buy souvenirs				
use demonstrative adjectives and pronouns				
talk about a holiday disaster				
use the pluperfect tense				
look at French cities and their tourist attractions				
USE YOUR VOCAB BOOKLET TO SORT YOUR LEARNING				

Au Collège and En pleine forme (School,Healthy Living)	S	O	R	T
revise school subjects and talk about timetable				
give opinions on school subjects and facilities				
understand direct object pronouns				
use the pronouns *il* and *elle*				
talk about my school and schools in France				
use *ils* and *elles* form of verbs				
discuss rules and regulations				
use *il faut* and *il est interdit de*				
use the imperative				
talk about school activities				
recognise and use the imperfect tense				
use the present and future tenses				
talk about successes at school				
use adverbs				
use past present and future time frames				
talk about a school exchange				
describe a photo about school				
write 40/90/150 words on the topic school				
talk about healthy eating and healthy lifestyles				
discuss diet related problems				
discuss vices				
USE YOUR VOCAB BOOKLET TO SORT YOUR LEARNING				

5.1 Climate change in the Quaternary Period	S	O	R	T
Specify what is meant by the Quaternary period (what period of time does it cover?)				
Define the terms *glacial* and *interglacial*.				
Describe how the climate changed during the Quaternary period.				
Indicate the natural causes of climate change.				
Identify the underlying greenhouse gases and the activities of the person who creates them.				
Outline the carbon cycle (draw a marked diagram including storage/streams/processes).				
Describe the sources of evidence used to show that our climate has changed (including ice cores and CO2 measurements).				
Describe how CO2 levels have changed over the past 50 years (Keeling curve).				
Explain how volcanic eruptions cause global cooling.				
Explain other natural causes of climate change.				
Explain how people create enhanced greenhouse effects.				
Explain how human activities affect the carbon cycle.				
Weigh the arguments about whether global warming is a natural or man-made phenomenon.				
Assess the reliability of the evidence used to prove that our climate has changed (including ice cores and CO2 measurements).				
Interpret evidence from CO2 and temperature graphs to analyse the association between CO2 levels and temperature changes and draw conclusions.				

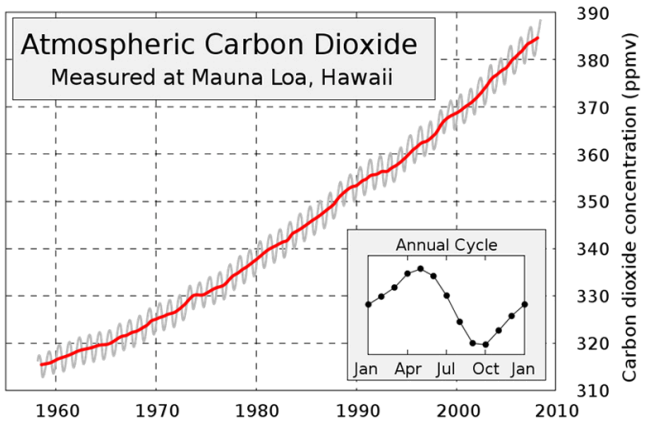
5.2 Weather Patterns and processes	S	O	R	T
Describe the global circulation of the atmosphere (draw a labelled diagram to show how heat is circulated around the globe and locate areas of high/low pressure).				
Describe the global distribution of hurricanes/cyclone and heatwaves/droughts.				
State Social (people), Economic and Environmental consequences of a **located Low-Pressure Hazard (California Drought)** and a **located High-Pressure Hazard (Cyclone Pam)**				
Describe how people respond to these hazards.				
Describe the pattern of rainfall and temperature in different regions of the UK (Comparing SW, NW, SE, NE regions)				
Describe the weather associated with a Depression and Anti-cyclone in the UK				
Identify factors which create a Micro-Climate.				
Use my understanding of the global circulation of the atmosphere to explain why some parts of the world have High or Low Pressure.				
Explain the formation (cause) of a **located Low Pressure Hazard (Hurricanes e.g. Cyclone Pam)** and a **located High Pressure Hazard (Drought in California).** *Use diagrams to explain their features/formation.*				
Explain why weather hazards occur seasonally and are increasing in frequency and magnitude.				
Explain how temperature and rainfall in the UK is affected by latitude, altitude and ocean currents.				
Explain how maritime and continental climates (and air masses) affect the UK.				
Use my understanding of the global circulation of the atmosphere to explain why some parts of the world have High or Low Pressure.				
Explain the formation (cause) of a **located Low Pressure Hazard (Hurricanes e.g. Cyclone Pam)** and a **located High Pressure Hazard (Drought in California).** *Use diagrams to explain their features/formation.*				
Explain why weather hazards occur seasonally and are increasing in frequency and magnitude.				
Assess (evaluate) the impacts of weather hazards by comparing their Social, Economic and Environmental consequences *(Consider Short & Long Term impacts, and impact on locations at Different Levels of Development)*				
Weigh up (evaluate) the success of different responses to Weather Hazards.				
Calculate mean frequency (recurrence interval) of a hazard				
Understand what is meant by magnitude and how the magnitude of these hazards is changing				
Draw and interpret climographs of different locations				
Read synoptic weather maps/satellite images to show understanding of low/high pressure and weather hazards.				
Assess (evaluate) the impacts of weather hazards by comparing their Social, Economic and Environmental consequences *(Consider Short & Long Term impacts, and impact on locations at Different Levels of Development)*				

5.3 Processes and interactions within ecosystems	S	O	R	T
Describe the global distribution of the main large-scale ecosystems (biomes) Tropical Rainforest and Savanna Grassland (*also Desert, Temperate Forest and Tundra*)				
Identify living (Biotic) and non-living (Abiotic) parts of an Ecosystem, and know how they are linked.				
Describe and compare the distinctive characteristics of Tropical Rainforest and **one** contrasting biome (Savanna Grassland); including climate, vegetation and food webs, and processes; nutrient cycles, water and carbon cycles.				
Define the term Biodiversity, Soil Erosion, Mono-culture and Intensive Farming				
Outline key services ecosystems provide for people				
Describe the key features of **one** located small-scale ecosystem (Sand-Dunes, e.g. Perranporth, UK)				
Define the term Biodiversity, Soil Erosion, Mono-culture and Intensive Farming				
Outline key services ecosystems provide for people				
Describe the key features of **one** located small-scale ecosystem (Sand-Dunes, e.g. Perranporth, UK)				
Explain the distribution of large-scale ecosystems (biomes) by linking to Global Climate Patterns (of temperature, pressure and precipitation)				
Analyse climographs, maps, satellite images and photographs of different biomes.				
Draw and interpret a Transect and Kite Diagram (through the zones of a sand dune)				

Geography Knowledge Organiser: 5.1 Climate Change in the Quaternary Period

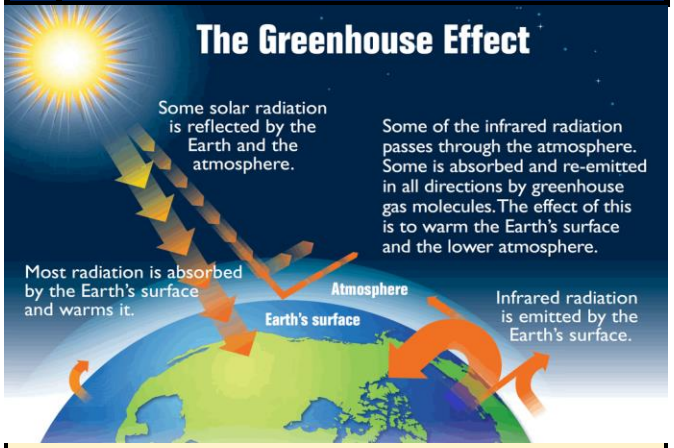
1	TIER THREE VOCABULARY
Carbon sinks	Places where carbon is stored over very long periods of time, for example, in fossil fuels.
Carbon-neutral	An activity in which any carbon dioxide emissions are equal to carbon being stored.
Glacials	Cold periods in Earth's history when glaciers have advanced and ice sheets increased in size.
Global cooling	The cooling of the climate at a global scale. This process can occur if the sun's radiation is blocked too much dust (**aerosols**) in the atmosphere.
Greenhouse effect	A process which traps longwave radiation in the atmosphere. This process is natural but has been enhanced (made stronger) by extra greenhouse gases.
Greenhouse gases (GGs)	Gases such as carbon dioxide and methane. These gases are able to trap heat in the atmosphere.
Ice Cores	Cylinders of ice drilled from Antarctica that contain gases that tell us CO2 and temperature levels in the past.
Inter-glacials	Warmer periods in Earth's history when glaciers have retreated, and ice sheets have decreased in size.
Long wave radiation	Energy in the form of heat that is given off by the Earth. Some long wave energy is absorbed by greenhouse gases.
Milankovitch Cycle	The way the orbit of the earth changes from a circular to elliptical (egg-shaped) orbit causing ice ages. This happens every 100 000 years.
Quaternary	The most recent period of geological time in Earth's history (last 2.5 million years).

2 The Keeling Curve



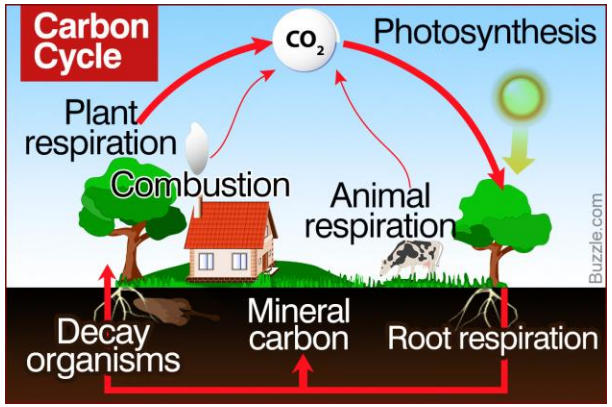
Measures CO_2 levels every day. Shows natural seasonal fluctuation BUT overall increase over last 60 years

3 Greenhouse Effect



Greenhouse Effect is natural but **ENHANCED** by human activity

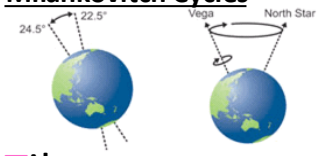
4 The Carbon Cycle



Nature's way of reusing carbon atoms, which travel from the atmosphere into organisms in the Earth and then back into the atmosphere over and over again.

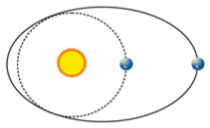
4 Natural causes of climate change

Milankovitch Cycles



Tilt 41 000 years

Wobble 26 000 years



Orbit 100 000 years

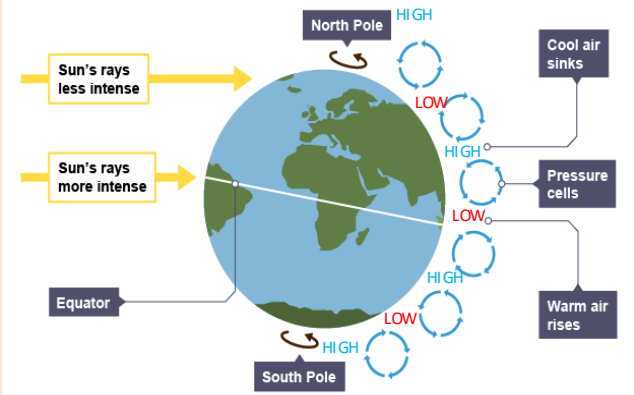
Volcanic Eruptions

Dust and sulphur dioxide into lower stratosphere form an aerosol, reflecting sunlight back into space, reducing temperatures

Geography Knowledge Organiser: Weather Patterns and processes

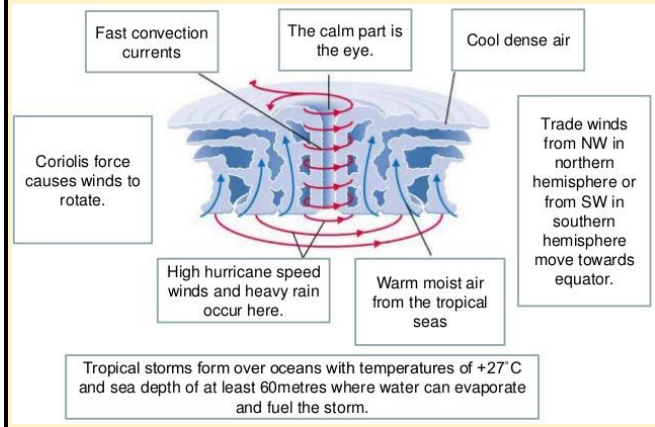
1	TIER THREE VOCABULARY
Anticyclone	A high-pressure system in the atmosphere associated with dry, settled periods of weather in the UK.
Climate	The average weather conditions in a particular location based on the average weather experienced there over 30 years or more.
Continental climate	The climatic condition of large land masses heating up and cooling down very quickly.
Coriolis Effect	Spinning effect due to the rotation of the Earth.
Cyclone	A **low-pressure system** in the atmosphere associated with unsettled weather, wind and rain (Indian Ocean). Also known as a **Hurricane** (Atlantic) or **Typhoon** (Pacific).
Depression	A weather system associated with **low air pressure**. Depressions bring changeable weather that includes rain and windy conditions in the UK.
Drought	A long period of time with much less precipitation than normal. Associated with **high pressure.** Often occur in Summer.
ITCZ	**Inter-Tropical Convergence Zone** – area between the Tropics of Cancer and Capricorn that has a lot of rainfall (due to warm air rising – **Low Pressure)**
Jet Stream	A strong ribbon of wind that circulated the globe, separating cold polar air masses to the north from warmer tropical air masses to the south.
Maritime climate	The climatic condition of land close to sea. The sea moderates temperatures meaning that there are only small variations in temperature.
Monsoon	A climate type experienced in South Asia in which a seasonal pattern of wind brings a distinct wet season.
Weather Hazard	A weather event which is significantly different from the average or usual weather pattern. This may take place over one day or a period of time. (Extreme Weather).

2 Global Atmospheric Circulation

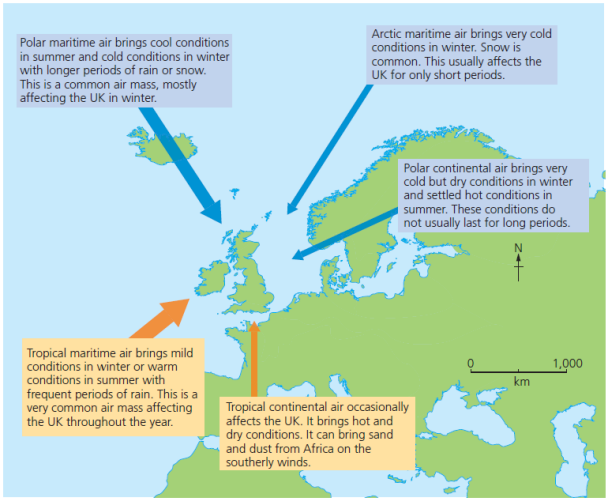


The movement of air across the planet occurs in a specific pattern. Circulation is driven by the equator, the hottest part of the Earth. Air rises at the equator, leading to low pressure and rainfall. The air becomes colder and denser, and falls, creating high pressure and dry conditions at around 30° north and south of the equator.

3 Formation of a Tropical Cyclone

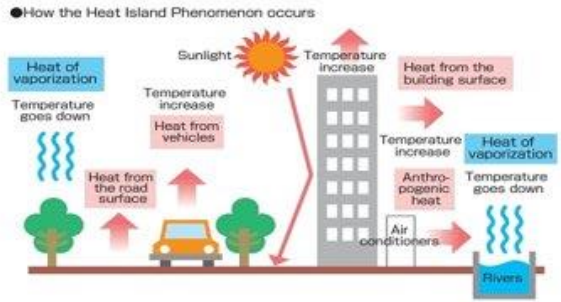


4 Air masses affecting the UK Climate



▲ **Figure 6** How do air masses affect the UK?

4 Urban Microclimates/Heat Islands

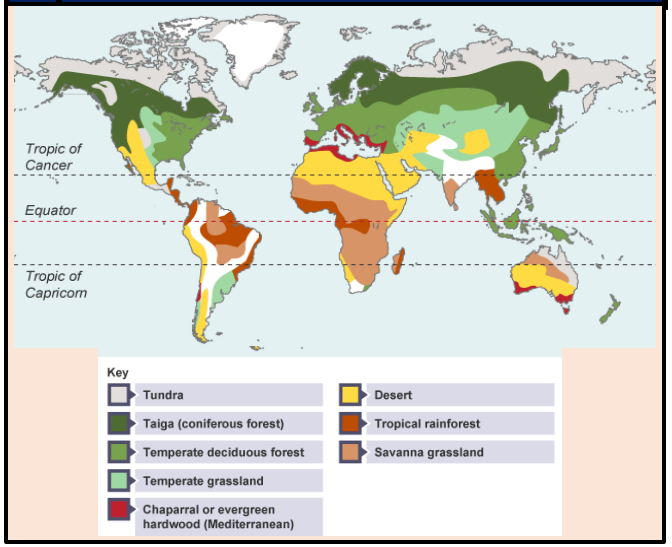


Microclimate - The small scale, local climate of a large city which is influenced by buildings/traffic.

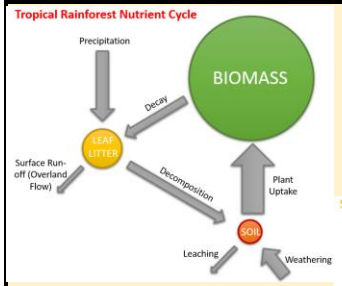
Geography Knowledge Organiser: Processes and interactions within ecosystems

1	TIER THREE VOCABULARY
Ecosystem	A community of plants and animals, and the environment in which they live.
Abiotic	The non-living part of an ecosystem e.g. climate, soils and rock
Biodiversity	The variety of living things.
Biomes	Very large scale ecosystems e.g. tropical rainforests or deserts.
Biotic	The living part of an ecosystem e.g. plants, which make their own food (Producers), and animals, which depend on others for food (Consumers). Also referred to as **Biomass.**
Carbon Cycle	The way in which Carbon flows and is stored in an ecosystem (Global Scale cycles and flows)
Food Web	The flow of energy from Producers to Herbivores: Primary Consumers to Carnivores: Secondary/Tertiary Consumers. Inter-linked food chains (Local Scale cycles and flows).
Nutrient cycles	The movement of minerals, through an ecosystem, from one store to another. Through a series of Nutrient Flows and Nutrient Stores (Local Scale cycles and flows).
Small-scale Ecosystem	An ecosystem which is found in a small area e.g. Sand Dunes (UK coastline e.g. Perranporth)
Solar Heating (Insolation)	The amount of sunlight received at different latitudes, due to the angle and concentration of sunlight.
Structure of Ecosystems	The distinctive characteristics of an Ecosystem e.g. Types, Layers or Zones of vegetation. E.g. Tropical Rainforest structure; Emergents, Canopy, Under-Canopy, Shrub Layer, Forest Floor.
Water Cycle	The way in which water is moved through an ecosystem through a series of flows and stores (Regional/Global Scale cycles and flows)

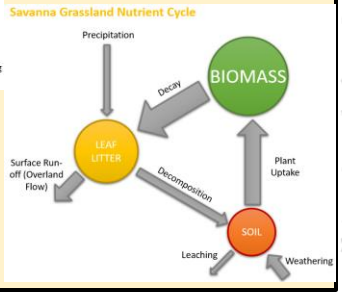
2 Global distribution of biomes



3 Nutrient cycles for two contrasting biomes

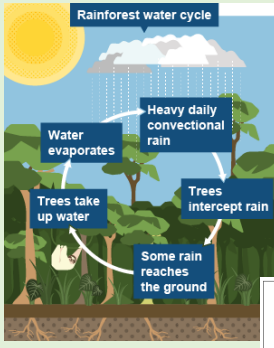


Tropical Rainforest - Large forest ecosystems (or biomes) that exist in the hot, wet climate found on either side of the equator.

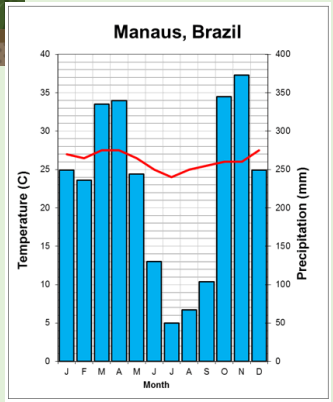


Savanna Grassland - Hot semi-arid grassland biome, found between the Tropics and the Equator.

4. Tropical Rainforest water cycle & climograph



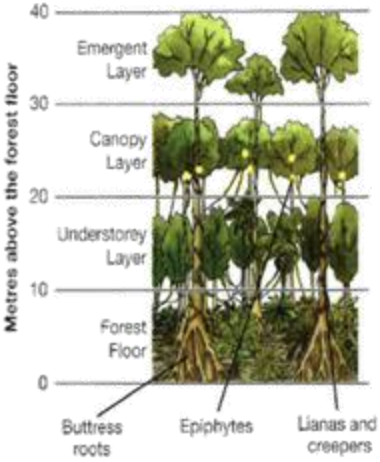
Climograph:
Red Line = temperature (°C)
Blue Bars = Precipitation (mm)



Rainforest Climate

- Very wet over 2,000 mm of rainfall/year.
- Very warm with an average daily temperature of 28°C. The temperature never drops below 20°C and rarely exceeds 35°C.
- The atmosphere is hot and **humid**.
- The climate is consistent all year round. There are no seasons (aseasonal).

4 Tropical Rainforest Structure



Hardwood, evergreen trees that have broken through the dense canopy layer below to reach the sunlight. Monkeys and birds live up here.

The dense canopy layer is home to tree snakes, birds, tree frogs and other animals because there is so much food available.

This layer contains young trees and those with large leaves, to capture sunlight; huge numbers of insects live in the understory layer.

The darkness of the forest floor means shade-loving ferns with large leaves live here along with mammals like the jaguar.

History Personal Learning Checklists

Origins of the Cold War 1941-1958		S	O	R	T
What were the key events after WW2?	Tehran, Yalta and Potsdam Conferences				
	Long and Novikov Telegrams				
	Iron Curtain speech				
	Soviet expansion into Europe				
How did the Truman Doctrine lead to the Berlin Airlift?	Marshall Plan and Truman Doctrine				
	Cominform and Comecon				
	Division of Germany (location of West Berlin)				
	Deutschmark				
	Bizonia and Trizonia				
	Berlin Blockade and Airlift				
	NATO and Warsaw Pact				
What were the causes and consequences of the Hungary Uprising?	Arms race, H Bomb and ICBM's				
	Khrushchev and Eisenhower				
	Destalinization				
	Nagy threatens to leave Warsaw Pact				
	Soviet Invasion and US response				

Cold War Crisis 1958-1970		S	O	R	T
What were the causes and consequences of the Berlin Wall 1961?	Refugee crisis				
	Khrushchev's Berlin Ultimatum				
	Summits (Geneva, Paris, Camp David)				
	Building of the wall (speed its built, division it causes)				
	Consequences (physical division, reduces tension in Europe)				
What were the causes and consequences of the Cuban Missile Crisis?	Cuban revolution 1959				
	Bay of Pigs invasion				
	Reasons for Soviet missiles being placed on Cuba				
	JFK's options and response				
	'Thirteen Days'				
	Hotline, Test Ban Treaty, Outer space Treaty				
What were the causes and consequences of the Prague Spring	Brezhnev				
	Dubcek 'Socialism with a human face'				
	Reforms introduced by Dubcek				
	Soviet response to reforms				
	The Brezhnev Doctrine				
End of the Cold War 1970-1991					
What impact did Détente have on Superpower relations?	SALT I				
	Helsinki Accords				
	SALT II				
What was the impact of the Soviet invasion of Afghanistan?	Ayatollah Khomeini				
	Regan elected				
	Boycotts of Moscow and LA Olympics				
	SDI or 'Star Wars' and Second Cold War				
What was the cause and consequence of the collapse of communism?	Gorbachev's 'New Thinking'				
	Superpower Summits (two examples)				
	Rise in nationalism and demonstrations across Europe				
	Consequences of the fall of the Berlin Wall				
	Collapse of the Soviet Union				

History Knowledge Organiser: Cold War & International Relations

Origins of the Cold War 1941-58

1 TIER THREE VOCABULARY

Cold War:	**A period of geopolitical tension between the Soviet Union and the United States and their respective allies.**
Ideology	: A system of ideas and ideals, especially one that forms the basis of economic or political theory and policy
Capitalism:	An economic system characterized by private ownership of the means of production and operation for profit
Communism :	A political and economic ideology advocating for a classless system in which the means of production are owned communally
Buffer Zone:	A neutral area serving to separate hostile forces or nations
Occupation Zones:	The division of Germany into areas controlled by the US, UK, France, and the Soviet Union after WWII.
Satellite States:	Countries that were aligned with, and under the influence and pressure of, the Soviet Union.
Collective Security:.	The cooperation of several countries in an alliance to strengthen the security of each
Joseph Stalin:	Leader of the Soviet Union (1924-1953).
Harry S. Truman:	US President (1945-1953), initiated the Truman Doctrine and Marshall Plan.
Winston Churchill:	British Prime Minister during WWII and early Cold War period
George Kennan	US diplomat and advocate of the containment policy
Truman Doctrine	A US package of economic aid to Greece and Turkey.

2 ORIGINS OF THE COLD WAR 1941-58

The origins of the Cold War (1941-58) are rooted in the geopolitical, ideological, and economic differences between the United States and the Soviet Union, which emerged during and after World War II.

World War II Alliances and Tensions1941-1945: The US, USSR, and UK formed an uneasy alliance against Nazi Germany. Despite their cooperation, significant ideological differences existed between the capitalist West (led by the US) and the communist East (led by the USSR).Yalta and Potsdam Conferences.

Yalta Conference (February 1945): Meeting of Churchill, Roosevelt, and Stalin to discuss post-war reorganization. Agreements included the division of Germany into occupation zones and free elections in Eastern Europe, which later became contentious.

Potsdam Conference (July-August 1945): Truman, Stalin, and Churchill (later Attlee) discussed the administration of defeated Germany, reparations, and the boundaries of Poland. Disagreements foreshadowed future conflicts.

Iron Curtain and Division of Europe

Iron Curtain Speech (March 1946): Winston Churchill's speech in Fulton, Missouri, described the division of Europe into Western democracies and Eastern communist states.

Eastern Bloc: The USSR established communist governments in Eastern Europe, creating a buffer zone against potential Western aggression.

Containment Policy and Truman Doctrine

Containment Policy: US strategy to prevent the spread of communism beyond its existing borders, articulated by George Kennan.

Truman Doctrine (1947): US policy to support free peoples resisting subjugation by armed minorities or outside pressures, initially applied to Greece and Turkey.

Marshall Plan and Economic Recovery

Marshall Plan (1948-1952): US program providing economic aid to rebuild war-torn European countries and prevent the spread of communism by promoting economic stability.

Berlin Blockade and Airlift

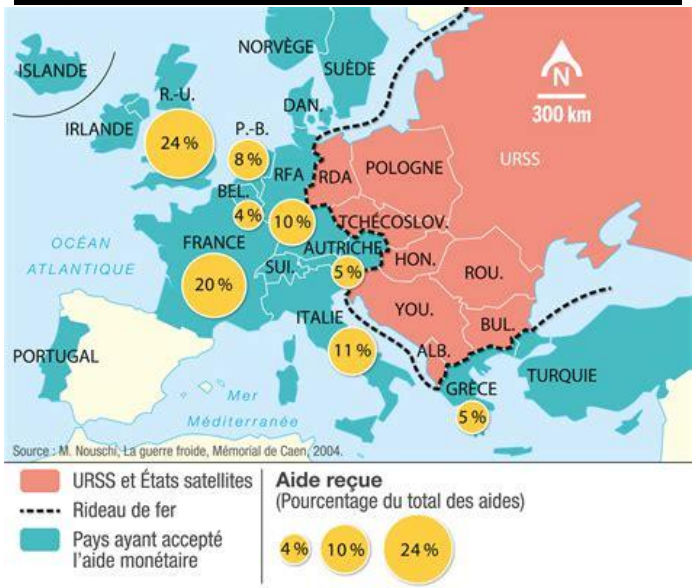
Berlin Blockade (1948-1949): Soviet blockade of Allied sectors in Berlin. In response, the US and its allies organized the Berlin Airlift to supply West Berlin with food and fuel.

Formation of NATO and the Warsaw Pact

NATO (North Atlantic Treaty Organization, 1949): Military alliance of Western nations to provide collective security against the Soviet threat.

Warsaw Pact (1955): Military alliance of Eastern Bloc countries led by the USSR, formed in response to NATO.

3 The Marshall Plan: June 1947



4 The Berlin Blockade: 24th June 1948- 12th May 1949

5 LINKS & FURTHER READING

How Did the Cold War Happen? (youtube.com)

History knowledge Organiser : Cold War & International Relations

The end of the Cold War 1970-91

1 TIER THREE VOCABULARY

Détente:	A period of relaxed tensions and improved relations between the US and the Soviet Union during the Cold War
SALT (Strategic Arms Limitation Talks):	Negotiations between the US and the Soviet Union to limit strategic arms.
ABM (Anti-Ballistic Missile) Treaty:	A treaty between the US and the Soviet Union that limited the use of missile defense systems
Helsinki Accords:	An agreement aimed at improving relations between the Eastern and Western blocs, emphasizing security, cooperation, and human rights.
Rapprochement:	The establishment or resumption of harmonious relations between countries
Mujahideen:	Afghan guerrilla fighters who resisted the Soviet invasion of Afghanistan, supported by the US and other Western nations
Martial Law	: The imposition of direct military control over civilian functions, often used to suppress dissent
Strategic Defense Initiative (SDI)	A proposed missile defense system intended to protect the United States from nuclear missile attacks
Able Archer 83	: A NATO military exercise that simulated a nuclear conflict, leading to heightened tensions with the Soviet Union.
Glasnost:	Policy of increased openness and transparency in government institutions and activities in the Soviet Union.
Perestroika:	Economic reforms aimed at restructuring the Soviet economy.
Solidarity:	Polish trade union and political movement that played a key role in ending communist rule in Poland
Velvet Revolution	Peaceful transition of power in Czechoslovakia from a communist government to a democratic one.

2 Attempts to reduce tension: 1969-79

SALT I (1972): The Strategic Arms Limitation Talks led to the signing of the SALT I treaty and the Anti-Ballistic Missile (ABM) Treaty. These agreements limited the number of strategic ballistic missile launchers and established a framework for limiting missile defense systems.

Helsinki Accords

Helsinki Accords (1975): A major diplomatic achievement of détente, the Helsinki Accords were signed by 35 nations, including the US and the Soviet Union. The accords focused on improving East-West relations, including the recognition of European borders, human rights, and economic and scientific cooperation.

SALT II Negotiations: While the SALT II treaty was signed in 1979, it was never ratified by the US Senate. However, the negotiations and agreement still reflected the ongoing efforts to limit the arms race.

3 Flashpoints in superpower relations 1979-84

Soviet Invasion of Afghanistan (1979)Background:
The Soviet Union invaded Afghanistan in December 1979 to support the communist government against a growing insurgency. This move was intended to secure Soviet influence in the region.

US Reaction: The United States, under President Jimmy Carter, viewed the invasion as a significant expansion of Soviet power. The US responded by providing support to Afghan Mujahideen fighters, implementing a grain embargo against the Soviet Union, and boycotting the 1980 Moscow Olympics.

Strategic Defense Initiative (SDI) (1983)

5.Announcement: In March 1983, President Ronald Reagan announced the Strategic Defense Initiative, a plan to develop a missile defense system capable of intercepting and destroying incoming Soviet missiles. The initiative, dubbed "Star Wars," aimed to protect the US from nuclear attacks.

6.Soviet Concerns: The SDI program alarmed the Soviet Union, which viewed it as a threat to the strategic balance of power and a potential catalyst for a new arms race in space.

4 Collapse of Soviet Union in Eastern Europe 1985-91

The collapse of the Soviet Union and the fall of communist regimes in Eastern Europe between 1985 and 1991 were momentous events that reshaped global politics. These changes were driven by a combination of internal reforms, economic crises, and popular movements demanding freedom and democracy.

Glasnost (Openness): Introduced in 1986, this policy aimed to increase transparency in government institutions and allow greater freedom of information and speech.

Perestroika (Restructuring): Launched in 1987, this set of economic reforms sought to decentralize the economy, introduce market-like reforms, and reduce the control of central planning

Solidarity Movement in Poland: Solidarity, a trade union and political movement led by Lech Wałęsa, gained momentum throughout the 1980s, pushing for labor rights and political reforms. By 1989, Solidarity had forced negotiations with the government, leading to semi-free elections and a peaceful transition to a non-communist government

Fall of the Berlin Wall (1989): The opening of the Berlin Wall in November 1989 became a powerful symbol of the end of communist control in Eastern Europe. The event led to the reunification of Germany in 1990.

Velvet Revolution in Czechoslovakia: Peaceful protests in Czechoslovakia led to the resignation of the communist government in December 1989, paving the way for democratic elections.

Hungary's Opening of Borders: In 1989, Hungary opened its borders with Austria, allowing East Germans to escape to the West. This act accelerated the collapse of the East German regime.

Romanian Revolution: Unlike other Eastern Bloc countries, Romania experienced a violent revolution in December 1989, resulting in the overthrow and execution of the communist dictator Nicolae Ceaușescu.

5 LINKS & FURTHER READING

https://www.youtube.com/watch?v=2ZrtuZ39TRo

History Knowledge Organiser: Cold War & International Relations

Cold War crisis, 1958-70

1 TIER THREE VOCABULARY

Quarantine	**A term used to describe the naval blockade of Cuba, chosen to avoid the more aggressive implications of the word "blockade"**
ICBM (Intercontinental Ballistic Missile):	A missile capable of traveling from one continent to another, carrying nuclear warheads
Brinkmanship:	The practice of pushing dangerous events to the brink of disaster in order to achieve the most advantageous outcome.
ExComm:	The Executive Committee of the National Security Council, a group of advisors assembled by Kennedy during the crisis
Hotline:	A direct communication link established between the US and Soviet Union after the crisis to allow for immediate contact between leaders.
Ultimatum:	A final demand or statement of terms, the rejection of which may lead to retaliation or a breakdown in relations.
Free City:	A city that is politically independent and not subject to the control of any particular country
Access Routes:.	Routes that allow passage into and out of a specific area or territory, often critical in strategic contexts
Emigration.	The act of leaving one's country to settle in another
Symbolic Visit	A visit made to show support or solidarity, often with significant political or social implication
Prague Spring:	The period of political liberalization and reform in Czechoslovakia in 1968.
Socialism with a Human Face:	Dubček's vision of a more humane and democratic socialism
Brezhnev Doctrine:	Soviet policy that justified the intervention in socialist countries where socialism was under threat, used to legitimize the invasion of Czechoslovakia.

2 Berlin 1958-63

Khrushchev's Ultimatum (1958)

1. November 1958: Soviet Premier Nikita Khrushchev issued an ultimatum demanding that the Western Allies withdraw their forces from West Berlin and declare it a "free city." Khrushchev gave the Allies six months to comply, threatening to transfer control of access routes to the East German government if they did not.
2. Western Response: The Western Allies, particularly the United States under President Dwight D. Eisenhower, rejected Khrushchev's ultimatum, insisting on maintaining their rights and presence in Berlin.

Diplomatic Efforts and Stalemate

3. Geneva and Paris Conferences (1959-1960): Attempts were made to resolve the Berlin issue through diplomacy, but these efforts ended in stalemate. Tensions remained high as both sides refused to back down.
4. U-2 Incident (1960): The downing of an American U-2 spy plane over the Soviet Union in May 1960 further strained relations, leading to the collapse of a planned summit in Paris.

Kennedy and the Berlin Crisis (1961)

5. John F. Kennedy's Presidency: With the election of President John F. Kennedy in 1960, the US took a firm stance on Berlin. Kennedy emphasized American commitment to West Berlin in his speeches.
6. Vienna Summit (June 1961): Khrushchev and Kennedy met in Vienna, where Khrushchev renewed his threats over Berlin. The summit failed to ease tensions and reinforced the possibility of conflict.

Construction of the Berlin Wall (1961)

7. Mass Emigration: By 1961, a significant number of East Germans were fleeing to the West through Berlin, undermining East Germany's stability and economy.
8. August 13, 1961: East German authorities, backed by the Soviet Union, began the construction of the Berlin Wall. The Wall physically divided East and West Berlin, effectively stopping the mass emigration.
9. Immediate Western Reaction: The Western Allies protested but took no military action to stop the Wall's construction. Kennedy made a symbolic visit to West Berlin in 1963, delivering his famous "Ich bin ein Berliner" speech to show solidarity with the city's residents.

5 LINKS & FURTHER READING

The Berlin Ultimatum - Superpower Relations & the Cold War GCSE Edexcel History (youtube.com)

3 Cuban Missile Crisis

1. **Cuban Revolution (1959)**: Fidel Castro overthrew the US-backed government in Cuba and established a socialist state, aligning with the Soviet Union.
2. **Bay of Pigs Invasion (1961)**: A failed US-backed attempt by Cuban exiles to overthrow Castro, which led to increased tensions between the US and Cuba and pushed Castro closer to the Soviet Union.
3. **October 14, 1962**: A US U-2 reconnaissance plane took photographs revealing Soviet missile bases under construction in Cuba, capable of launching nuclear missiles at the US.
4. **October 16, 1962**: President John F. Kennedy was informed of the missile sites, and he convened a group of advisors known as the Executive Committee of the National Security Council (ExComm) to discuss options.
5. **Options Considered**: ExComm debated between a military strike on the missile sites, a full invasion of Cuba, and a naval blockade (termed a "quarantine") to prevent further Soviet shipments of military equipment to Cuba.
6. **October 22, 1962**: Kennedy announced the discovery of the missiles to the public and declared a naval blockade of Cuba, demanding the removal of the missiles and warning that any nuclear missile launched from Cuba would be met with a full retaliatory response against the Soviet Union.
7. **October 24, 1962**: Soviet ships bound for Cuba approached the blockade line but turned back or were stopped and inspected.
8. **October 26-27, 1962**: Intense negotiations took place between the US and the Soviet Union. Soviet Premier Nikita Khrushchev sent two messages to Kennedy, one offering to remove the missiles in exchange for a US promise not to invade Cuba and another demanding the removal of US missiles from Turkey.
9. **October 28, 1962**: Kennedy publicly accepted the first offer and privately agreed to the removal of US missiles from Turkey. Khrushchev announced that the Soviet missiles would be dismantled and returned to the Soviet Union.
10. **Aftermath**: The crisis led to the establishment of a direct communication link between Washington and Moscow, known as the "hotline," to prevent future crises.

4 Czechoslovakia, 1968-69

January 1968: Alexander Dubček became the First Secretary of the Communist Party of Czechoslovakia (KSČ). He initiated a series of reforms aimed at creating "socialism with a human face.

"**Reforms Introduced:** Dubček's reforms included greater freedom of speech and the press, decentralization of the economy, increased political freedoms, and a reduction in the power of the secret police.

August 20-21, 1968: Warsaw Pact troops from the Soviet Union, Poland, East Germany, Hungary, and Bulgaria invaded Czechoslovakia to stop the reforms. The invasion was met with non-violent resistance from the Czechoslovak population, but the reform movement was quickly suppressed.

Dubček's Detention: Dubček and other reformist leaders were arrested and taken to Moscow. Although Dubček was temporarily reinstated, his power was significantly reduced.

Coursework		S	O	R	T
1a	Analyse the assignment brief and recommend one dish for each customer				
	Assess how the dish meets the nutritional needs of the customer.				
	You must show understanding of the importance of the following;				
	• Macro nutrients				
	• Micro nutrients (8 marks)				
1b	Explain the impact of cooking methods on the nutritional value of the chosen dishes (4 marks)				
2a	Discuss the factors which affected your choice of dishes (8 marks)				
2b	Plan for the production of your 2 dishes (10 marks)				

Hospitality and catering knowledge organiser

Skills and techniques

You need to be able to identify the different types of skills you need to produce your selected dishes. Some dishes will require the use of more complex skills. You will need to demonstrate a range of skills when producing your chosen dishes.

Preparation and cooking skills are categorised as follows: **basic**, **medium**, and **complex**.

Presentation

You should know and understand the importance of using the following appropriate presentation techniques during the production of dishes:

- creativity
- garnish and decoration
- portion control
- accompaniments.

Basic preparation skills and techniques

Blending, beating, chopping, grating, hydrating, juicing, marinading, mashing, melting, peeling, proving, sieving, tenderising, trimming, and zesting.

Medium preparation skills and techniques

Baton, *chiffonade*, creaming, dehydrating, deseeding, dicing, folding, kneading, measuring, mixing, puréeing, rub-in, rolling, skinning, slicing, spatchcocking, toasting (nuts/seeds) and weighing.

Complex preparation skills and techniques

Brunoise, crimping, de-boning, filleting, *julienne*, laminating (pastry), melting using *bain-marie*, mincing, piping, and segmenting, shaping, unmoulding and whisking (aeration).

Basic cooking skills and techniques

Basting, boiling, chilling, cooling, dehydrating, freezing, grilling, skimming, and toasting.

Medium cooking skills and techniques

Baking, blanching, braising, deglazing, frying, griddling, pickling, reduction, roasting, sautéing, steaming, stir-frying, and using a *sous vide* (water bath).

Complex cooking skills and techniques

Baking blind, caramelising, deep fat frying, emulsifying, poaching, and tempering.

Hospitality and catering knowledge organiser

Factors affecting menu planning

You need to be aware of the following factors when planning menus:

- **cost** (ingredients as well as business costs)
- **portion control** (value for money without waste)
- **balanced diets/current national advice**
- **time of day** (breakfast, lunch, and dinner menus as well as small plates and snacks)
- **clients/customers** (a menu with prices that will suit the people who visit your establishment).

Equipment available

You need to know and understand the type of equipment needed to produce a menu. The choice of dishes will be influenced by the equipment available to the chef.

This includes kitchen equipment such as:

- hobs, ovens, and microwaves
- fridge, freezer and/or blast chiller
- specialist equipment, for example a *sous vide* or pizza oven
- hand-held equipment, for example electric whisks or hand-blenders
- other electric equipment, for example food processors.

Skills of the chef

The skills of the chef must be suited to the type of provision and the menu offered.

A Michelin starred restaurant will require a chef who has complex skills in preparation, cooking and presentation of dishes.

A café will require a chef who has a range of medium and complex skills to produce a suitable menu.

A large restaurant will normally have a full kitchen brigade while a smaller establishment may only have a single chef with one or two assistants.

Time available

The type of provision will influence the amount of time a customer may be willing to wait for their dish to be prepared. Can the chef prepare, cook, and present more than one dish at the same time? Can some items be made in advance?

Time of year

The time of year can affect menu choices. Light and cold dishes such as salads are better suited to the summer months. Hearty dishes such as stews are more suited to the winter. Special dishes linked to holidays such as Christmas and Valentine's Day may also be included. The availability of **seasonal** produce can also affect menu choices as certain commodities, for example strawberries, are less expensive when in season.

Environmental issues

The chef will need to think about environmental issues when planning a menu. Can the chef **reduce** the amount of ingredients bought as well as reducing food waste? Can the chef **reuse** ingredients to create new dishes for example stale bread made into bread-and-butter pudding? Can the kitchen **recycle** waste wherever possible? Running the kitchen sustainably will save money.

Organoleptic properties

Organoleptic properties are the sensory features of a dish (**appearance**, **aroma**, **flavour**, and **texture**).

The chef will need to think about how the dish will look and taste. Is there a range of colours? Do the flavours go well together? Are there a variety of textures?

Hospitality and catering knowledge organiser

Nutrition at different life-stages

Adults:

- **Early** – Growth in regard to height of the body continues to develop until 21 years of age. Therefore, all micro-nutrients and macro-nutrients especially carbohydrates, protein, fats, vitamins, calcium and iron are needed for strength, to avoid diseases and to maintain being healthy.
- **Middle** – The metabolic rate starts to slow down at this stage, and it is very easy to gain weight if the energy intake is unbalanced and there isn't enough physical activity.
- **Elderly** – The body's systems start to slow down with age and a risk of blood pressure can increase as well as decrease in appetite, vision and long-term memory. Because of this, it is essential to keep the body strong and free from disease by continuing to eat a healthy, balanced diet.

Children:

- **Babies** – All nutrients are essential and important in babies, especially protein as growth and development of the body is very quick at this stage. Vitamins and minerals are also important. You should try to limit the amount of salt and free sugars in the diet.
- **Toddlers** – All nutrients remain very important in the diet at this stage as growth remains. A variety of foods are needed for toddlers to have all the micro-nutrients and macro-nutrients the body needs to develop.
- **Teenagers** – The body grows at a fast pace at different times at this stage as the body develops from a child to an adult, therefore all nutrients are essential within proportions. Girls start their menstruation which can sometimes lead to anaemia due to not having enough iron in the body.

Special Dietary needs

Different energy requirements based on:

- Lifestyles / Occupation / Age / Activity level

The amount of energy the body needs is determined with each of the above factors e.g. active lifestyle or physical activity level would need more energy compared to a person being sedentary.

Medical conditions:

- **Allergens** – Examples of food allergies include milk, eggs, nuts and seafood.
- **Lactose intolerance** – Unable to digest lactose which is mainly found in milk and dairy products.
- **Gluten intolerance** – Follows a gluten free diet and eats alternatives to food containing wheat, barley and rye.
- **Diabetes (Type 2)** – High level of glucose in the blood, therefore changes include reducing the amount of fat, salt and sugar in the diet.
- **Cardiovascular disorder** – Needing a balanced, healthy diet with low levels of salt, sugar and fat.
- **Iron deficiency** – Needing to eat more dark green leafy vegetables, fortified cereals and dried fruit.

Dietary requirements:

- **Religious beliefs** – Different religions have different dietary requirements.
- **Vegetarian** – Avoids eating meats and fish but does eat dairy products and protein alternatives such as quorn and tofu.
- **Vegan** – Avoids all animal foods and products but can eat all plant-based foods and protein alternatives such as tofu and tempeh.
- **Pescatarian** – Follows a vegetarian diet but does eat fish products and seafood.

Hospitality and catering knowledge organiser

The importance of nutrition

Listed below are the macro-nutrients and micro-nutrients. You need to know their function in the body and know examples of food items for each. You need to know why they are needed in the diet and why there is a need for a balanced/varied diet.

Macro-nutrients

Carbohydrates - Carbohydrates are mainly used in the body for energy. There are two types of carbohydrates which are:

- **Starch** - Examples include bread, pasta, rice, potatoes and cereals.
- **Sugar** - Examples include sweets, cakes, biscuits & fizzy drinks.

Fat - This is needed to insulate the body, for energy, to protect bones and arteries from physical damage and provides fat soluble vitamins. There are two main types of fat which are:

- **Saturated fat** - Examples include butter, lard, meat and cheese.
- **Unsaturated fat** - Examples include avocados, plant oils such as sunflower oil, seeds and oily fish.

Protein - Protein is mainly used for growth and repair in the body and cell maintenance. There are two types of protein which are:

- **High biological value (HBV) protein** - Includes meat, fish, poultry, eggs, milk, cheese, yogurt, soya and quinoa.

- **Low biological value (LBV) protein** - Includes cereals, nuts, seeds and pulses.

Micro-nutrients

Vitamins

- **Fat soluble vitamin A** - Main functions include keeping the skin healthy, helps vision in weak light and helps children grow. Examples include leafy vegetables, eggs, oily fish and orange/yellow fruits.
- **Fat soluble vitamin D** - The main function of this micro-nutrient is to help the body absorb calcium during digestion. Examples include eggs, oily fish, fortified cereals and margarine.
- **Water soluble vitamin B group** - Helps absorbs minerals in the body, release energy from nutrients and helps to create red blood cells. Examples include wholegrain foods, milk and eggs.
- **Water soluble vitamin C** - Helps absorb iron in the body during digestion, supports the immune system and helps support connective tissue in the body which bind cells in the body together. Examples include citrus fruits, kiwi fruit, cabbage, broccoli, potatoes and liver.

Minerals

- **Calcium** - Needed for strengthening teeth and bones. Examples include dairy products, soya and green leafy vegetables.
- **Iron** - To make haemoglobin in red blood cells to carry oxygen around the body. Examples include nuts, beans, red meat and green leafy vegetables.
- **Sodium** - Controls how much water is in the body and helps with the function of nerves and muscles. Examples include salt, processed foods and cured meats.
- **Potassium** - Helps the heart muscle to work correctly and regulates the balance of fluid in the body. Examples include bananas, broccoli, parsnips, beans, nuts and fish.
- **Magnesium** - Helps convert food into energy. Examples include wholemeal bread, nuts and spinach.
- **Dietary fibre (NSP)** - Helps digestion and prevents constipation. Examples include wholegrain foods (wholemeal pasta, bread and cereals), brown rice, lentils, beans and pulses.
- **Water** - Helps control temperature of the body, helps get rid of waste products from the body and prevents dehydration. Foods that contain water naturally include fruits and vegetables, milk and eggs.

Hospitality and catering knowledge organiser

How cooking methods can impact on nutritional value

Boiling

- Up to 50% of vitamin C is lost when boiling green vegetables in water.
- The vitamin B group is damaged and lost in heat.

Poaching

- The vitamin B group are damaged in heat and dissolve in water.

Roasting

- Roasting is a method of cooking in high temperatures and so this will destroy most of the group C vitamins and some of the group B vitamins.

Frying

- Using fat whilst frying increases the amount of vitamin A the body can absorb from some vegetables
- Cooking in fat will increase the calorie count of food e.g deep fat frying foods.

Stir-frying

- The small amount of fat used whilst stir-frying increases the amount of vitamin A the body can absorb from some vegetables.
- Some vitamin C and B are lost due to cooking in heat for a short amount of time.

Steaming

- Steaming is the best cooking method for keeping vitamin C in foods.
- Only up to 15% of vitamin C is lost as the foods do not come into contact with water.

Grilling

- Using this cooking method can result in losing up to 40% of group B vitamins.
- It is easy to overcook protein due to the high temperature used in grilling foods.

Baking

- Due to high temperatures in the oven, it is easy to overcook protein and damage the vitamin C and B group vitamins.

Maths Personal Learning Checklists

Maths Gradients and lines	Sparx Code	S	O	R	T
Plot straight line graphs	U741				
Interpret y=mx+c	U669				
Find gradients of a straight-line graph	U315				
Find the equation of a straight-line graph	U315				
Solve linear simultaneous equations graphically	U836				
Higher Tier only: Explore perpendicular lines and find their equations	U898				

Maths Non-linear Graphs	Sparx Code	S	O	R	T
Plot and read from quadratic graphs	U989				
Plot cubic and reciprocal graphs	U980				
Recognise graph shapes					
Understand and find roots & intercepts of quadratics	U601				
Higher Tier only: Understand & use exponential graphs	U229				
Higher Tier only: Understand the equation of a circle with centre at (0,0)	U567				
Higher Tier only: Find the equation of the tangent to any curve	U567				

Maths Expanding and factorising	Sparx Code	S	O	R	T
Expand & factorise with a single bracket	U179, 365				
Expand binomials	U768, 606				
Factorise quadratics	U178				
Solve equations equal to 0					
Solve quadratic equations by factorising	U228				
Higher Tier only: Factorise & solve complex quadratic expressions	U960				
Higher Tier only: Complete the square	U589				
Higher Tier only: Solve quadratic equations using the quadratic formula	U665				

Maths Knowledge Organiser

VOCABULARY

Gradient: the steepness and direction of a line

Linear: a scale in which the divisions are evenly spaced

Polynomial: a mathematical expression consisting of variables and coefficients

Coefficient: a number that multiplies a variable e.g in the expression 6x 6 is the coefficient of x

Quadratic: an expression, polynomial or equation of degree 2

Cubic: an expression, polynomial or equation of degree 3

Reciprocal: also called the multiplicative inverse

Tangent: a straight line touching a curve once at a given point.

Inverse: function that has the opposite effect.

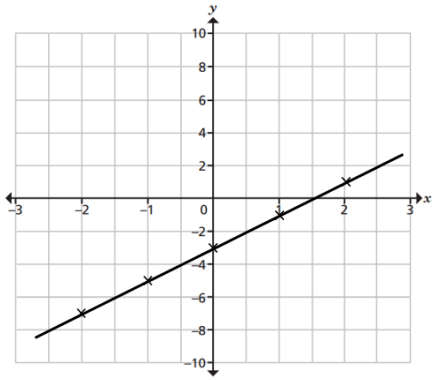
Factorise: finding the factors of an expression

Maths Knowledge Organiser: Gradients and lines

Plotting a straight line graph

$y = 2x - 3$

x	-2	-1	0	1	2
y	-7	-5	-3	-1	1

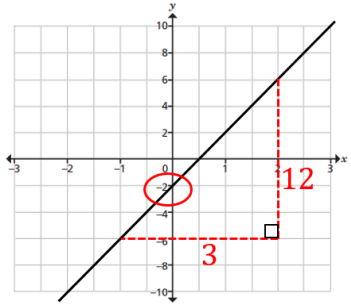


Interpret y = mx+ c

$$y = mx + c$$

- Graphs of the form $y = mx + c$ are straight lines
- Graphs of the form $y = mx + c$ intercept the y-axis at the point $(0\ ,\ c)$
- m is the gradient of the graph

Finding the equation of a straight line



Work out the equation of the line giving your answer in the form $y = mx + c$

$$\text{Gradient} = \frac{\text{Change in } y}{\text{Change in } x}$$

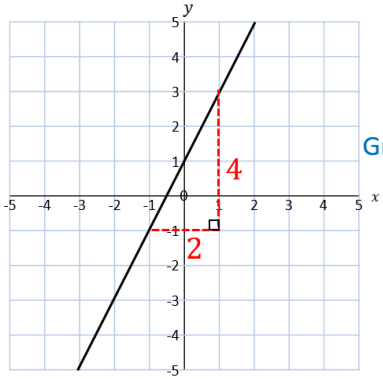
$$= \frac{12}{3}$$

$$= 4$$

$$c = -2$$

$$y = 4x - 2$$

Find gradients of a straight line



$$\text{Gradient} = \frac{\text{Change in } y}{\text{Change in } x}$$

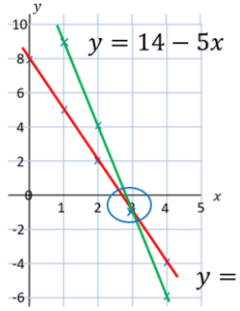
$$= \frac{4}{2}$$

$$= 2$$

Solve simultaneous equations graphically

$y = 8 - 3x$

$y = 14 - 5x$

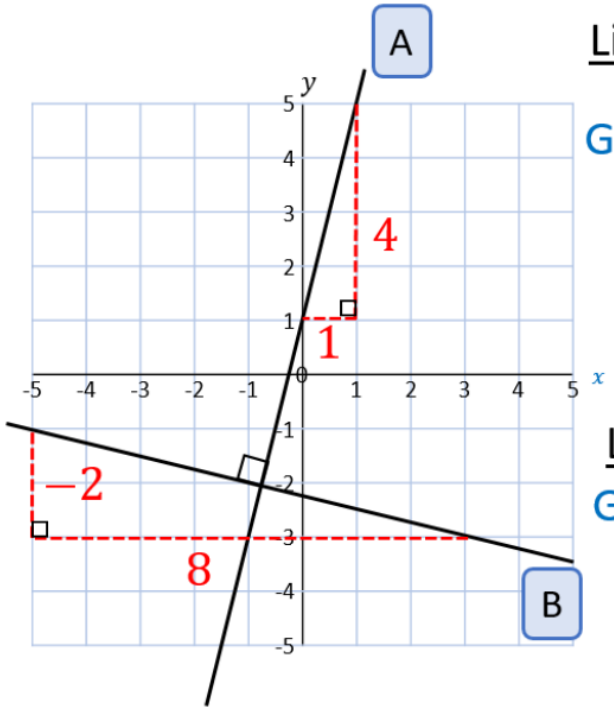


Find the coordinate where both graphs meet

$(3\ ,-1)$

Maths Knowledge Organiser: Gradients and lines (higher only)

Explore perpendicular lines



Line A

$$\text{Gradient} = \frac{\text{Change in } y}{\text{Change in } x}$$

$$= \frac{4}{1}$$

$$= 4$$

Line B

$$\text{Gradient} = \frac{\text{Change in } y}{\text{Change in } x}$$

$$= \frac{-2}{8}$$

$$= -\frac{1}{4}$$

If two lines are perpendicular, the product of their gradients is -1

$$4 \times -\frac{1}{4} = -1$$

Write down the equation of a line perpendicular to $y = 7 - 2x$ that passes through the point $(0, 4)$

The gradient of the line is -2

The gradient of any line perpendicular to this line will be the negative reciprocal of -2

The negative reciprocal of -2 is $\frac{1}{2}$

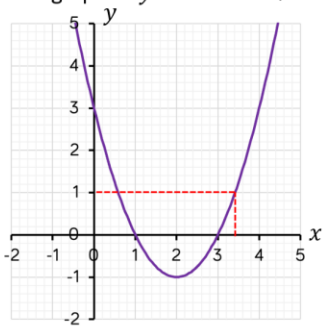
$y = \frac{1}{2}x + c$ $\qquad$ $y = \frac{1}{2}x + 4$

Maths Knowledge Organiser: Non linear Graphs

Plot and read from quadratic graphs

x	−1	0	1	2	3	4
y	8	3	0	-1	0	3

Here is the graph of $y = x^2 - 4x + 3$

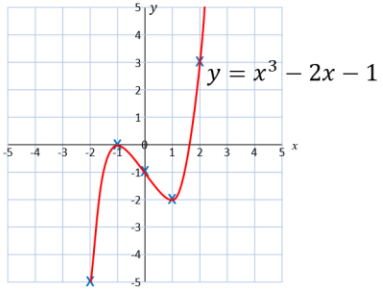


When $x = 3.4$, $y \approx 1$

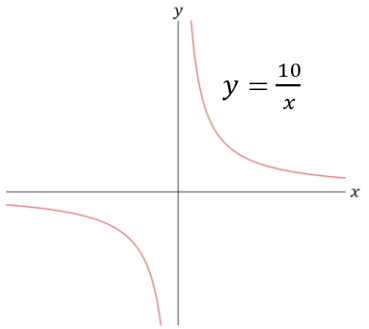
Plot cubic and reciprocal graphs

Draw the graph of $y = x^3 - 2x - 1$

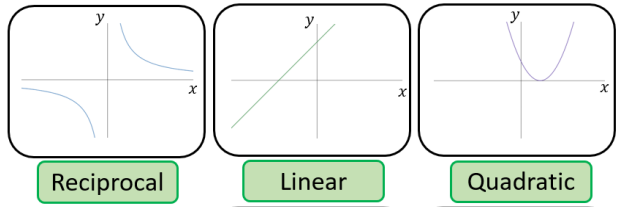
x	−2	−1	0	1	2
y	−5	0	−1	−2	3



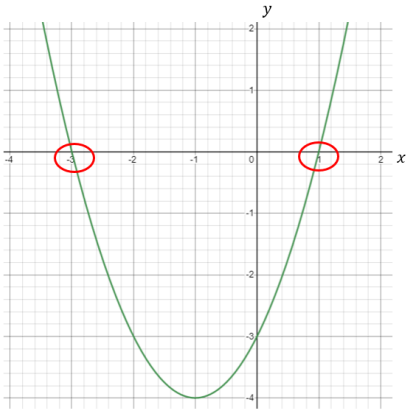
x	−4	−3	−2	−1	0	1	2	3	4
y	$-2\frac{1}{2}$	$-3\frac{1}{3}$	−5	−10	-	10	5	$3\frac{1}{3}$	$2\frac{1}{2}$



Recognise graph shapes



Roots and intercepts of quadratics



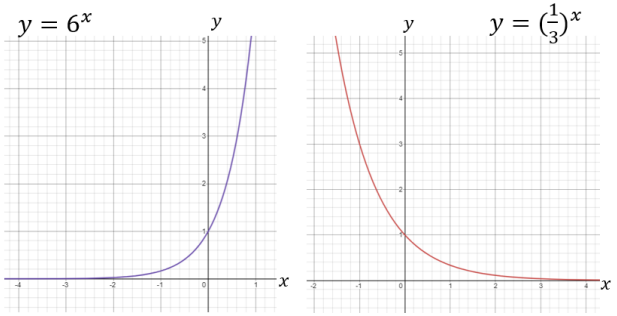
Write down the roots of the graph.

The root of an equation is given when $y = 0$

The roots are $x = -3$ and $x = 1$

Maths Knowledge Organiser: Non linear Graphs (Higher only)

Exponential graphs



y will never be equal to 0 in an exponential graph.

The x-axis is an asymptote.

Equation of a circle centre (0,0)

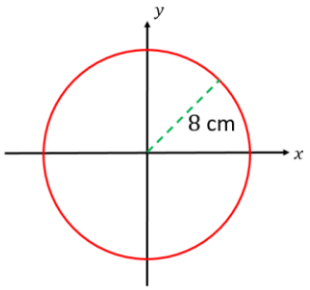
A circle has centre $(0\,,0)$ and a radius of 8 cm.

What is the equation of the circle?

Any circle with centre $(0\,,0)$ can be written in the form

$x^2 + y^2 = r^2$

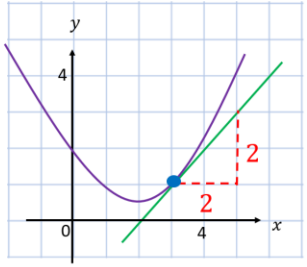
$x^2 + y^2 = 8^2$



The equation of the circle is $x^2 + y^2 = 64$

Equation of a tangent to a curve

The tangent to the curve at $(3\,,1)$ has been drawn.
Now find the equation of the tangent.



$y = mx + c$

$m = 1 \quad x = 3, y = 1$

$1 = 1 \times 3 + c$

$1 = 3 + c$

$c = 1 - 3$

$c = -2$

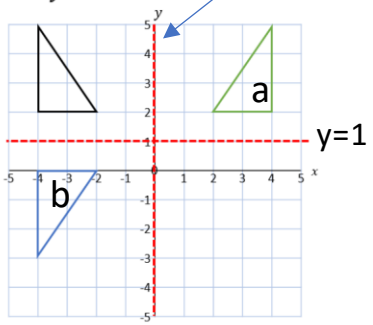
Equation of the tangent is $y = x - 2$

Maths Knowledge Organiser: Using graphs

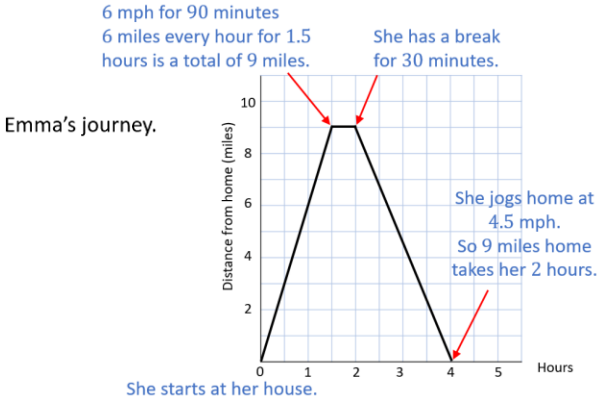
Reflect shapes in a given line

Reflect the triangle
a) in the y-axis
b) in the line $y = 1$

y axis or also known as the line x = 0

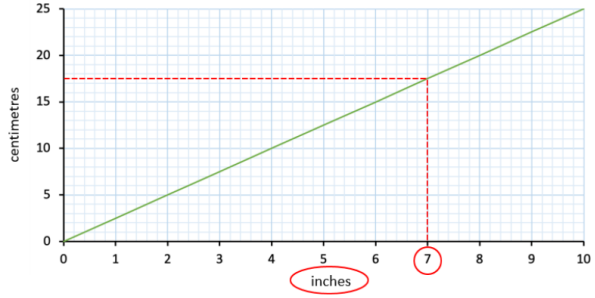


Distance time graphs



Construct and interpret conversion graphs

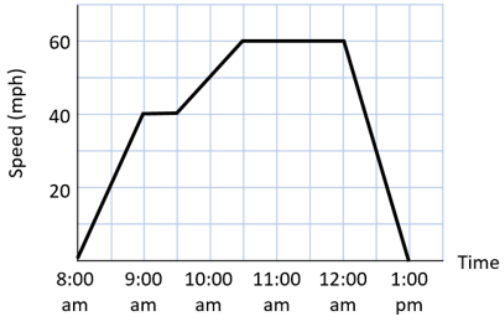
Here is a conversion graph between inches and centimetres.



Approximately how many centimetres are there in 7 inches?

7 inches ≈ 17.5 cm

Speed time graphs



Acceleration $= \frac{change\ in\ speed}{time}$

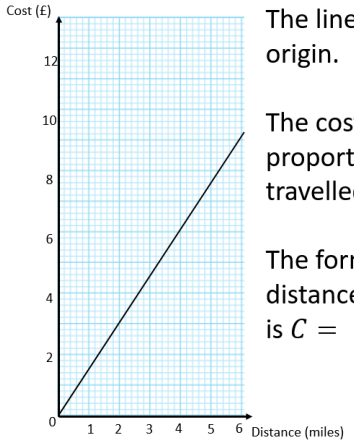
Distance travelled = area under the graph

Construct and interpret real life graphs

Speedy Cabs
- No call out fee
- £1.50 per mile

Complete the table.

Distance (miles)	0	1	2	3	4
Cost (£)	0	1.50	3	4.50	6



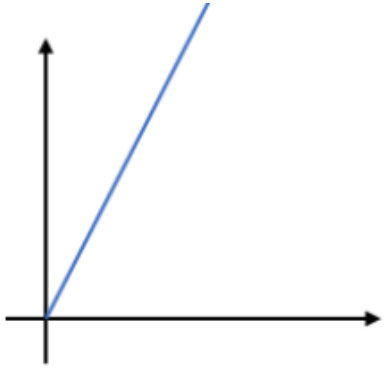
The line goes through the origin.

The cost is directly proportional to the distance travelled.

The formula connecting the distance (d) and the cost (C) is $C = 1.5d$

Maths Knowledge Organiser: Using graphs

Graphs of direct and inverse proportion



If two quantities are in direct proportion the graph will be a straight line through (0, 0).

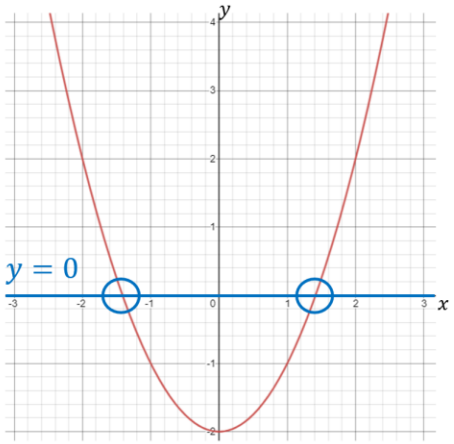
Graphs of inverse proportion relationships will be curves.

The curve never touches the axes.

The axes are called asymptotes of the curve.

Approximate solutions to equations

Here is the graph of $y = x^2 - 2$



Use the graph to estimate the roots of the equation $x^2 - 2 = 0$

$x \approx -1.4$

$x \approx 1.4$

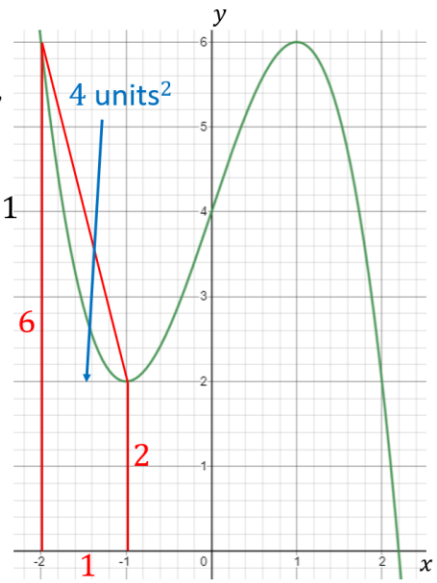
Estimate the area under a curve (Higher only)

Here is the graph $y = -x^3 + 3x + 4$

By drawing suitable trapezia, estimate the area under the curve $y = -x^3 + 3x + 4$ between $x = -2$ and $x = -1$

$\text{Area} = \frac{1}{2} \times (6 + 2) \times 1$

$= 4 \text{ units}^2$



Maths Knowledge Organiser: Expanding and Factorising

Expand and factorise a single bracket

Expand $3(x+2)$

x	2
x	2
x	2

$3(x+2) \equiv 3x+6$

Factorise 16g + 40

$16g + 40 \equiv 2(\ ? + \ ?\ )$

$\equiv 2(8g + 20)$

Expand binomials

Expand and simplify $(x+5)(x-4)$

$(x+5)(x-4) \equiv x^2 + 5x - 4x - 20$

$\equiv x^2 + x - 20$

	x	+ 5
x	x^2	+5x
-4	-4x	-20

Factorise Quadratics

Factorise $x^2 - 11x + 18$

Factors of 18

1 and 18	2 and 9	3 and 6
−1 and −18	−2 and −9	−3 and −6

-2 and -9 add to give -11 but multiply together to give 18

$x^2 - 11x + 18 \equiv (x-2)(x-9)$

Solve equations that equal zero

Solve the equation $(x+3)(x-3) = 0$

$(x+3)(x-3) = 0$

$x + 3 = 0$

$-3 \quad -3$

$x = -3$

$x - 3 = 0$

$+3 \quad +3$

$x = 3$

$x = -3$ and $x = 3$ are both solutions to the equation $(x+3)(x-3) = 0$

Solve quadratics by factorising

Factorise and solve

$g^2 - 5g - 24 = 0$

$g^2 - 5g - 24 \equiv (g+3)(g-8)$

$(g+3)(g-8) = 0$

$g = -3$ and $g = 8$

Maths Knowledge Organiser: Expanding and Factorising (Higher only)

Factorise and solve complex quadratics

Factorise and solve

$3x^2 + 4x - 15 = 0$

Factors of -15

1 and -15	-3 and 5
-1 and 15	3 and -5

We can factorise by trying different pairs of factors in the brackets to make the statement correct.

$3x^2 + 4x - 15 \equiv (3x - 5)(x + 3)$

$+9x - 5x = 4x$ ✓

$(3x - 5)(x + 3) = 0$

$x = \frac{5}{3}$ and $x = -3$

Complete the square

Write the expression $x^2 + 8x + 18$ in the form $(x + a)^2 + b$

To find the value of a, you halve the coefficient of x.

$8 \div 2 = 4$

$(x + 4)^2 + b$

$(x + 4)^2 + 2$

$(x + 4)^2 \equiv x^2 + 8x + 16$

$18 - 16 = 2$

$x^2 + 8x + 18 \equiv (x + 4)^2 + 2$

Solve quadratic equations using the quadratic formula

The Quadratic Formula

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

Solutions of the equation $ax^2 + bx + c = 0$ can be found using the quadratic formula.

$5x^2 + 3x - 4 = 0$

$a = 5, \quad b = 3, \quad c = -4$

$$x = \frac{-3 \pm \sqrt{(3^2 - 4 \times 5 \times -4)}}{2 \times 5}$$

$$x = \frac{-3 \pm \sqrt{(9 - -80)}}{10}$$

$$x = \frac{-3 \pm \sqrt{(89)}}{10}$$

$x = 0.643$ or $x = -1.24$

Music Personal Learning Checklists

Component 1: - I can recognise and define the term / I can apply the term in class discussion/listening tasks/exam questions.....		S	O	R	T
Dynamics	Italian terms with abbreviations				
	Pianissimo (pp)				
	Piano (p)				
	Mezzo-piano (mp)				
	Mezzo Forte (mf)				
	Forte (f)				
	Fortissimo (ff)				
	Crescendo <				
	Diminuendo >				
Rhythm	Rests, note durations				
	Syncopation				
	Time signatures				
	Tempos with Italian terms				
	Polyrhythm				
	Augmentation/diminution				
	Anacrusis				
Structure	Binary				
	Ternary				
	Rondo				
	Arch-shaped, through-composed				
	Theme and variations				
	Sonata				
	Concerto				
	Cadenza				
	Call and response				
	Song form				

Component 1: - I can recognise and define the term / I can apply the term in class discussion/listening tasks/exam questions.....		S	O	R	T
Melody	Conjunct				
	Disjunct				
	Arpeggio, broken chords, triadic				
	Scalic				
	Intervals within one octave				
	Passing notes				
	Diatonic				
	Chromatic				
	Slide/portamento				
	Ornamentation - Trills				
	acciaccaturas				
	appoggiaturas				
	Ostinato				
	Phrasing				
	articulation				
Instrumentation	The Orchestra – strings, brass, woodwind, percussion,				
	Pop/Rock instruments				
	Instrumental technique – pizzicato, tremolo, pitch bend, mute				
Texture	Polyphonic				
	Homophonic				
	Monophonic				
	Melody and accompaniment,				
	Heterophonic				
	Imitation				
Harmony and tonality	Chords, primary chords, major/minor chords				
	Keys and key signatures, major, minor, modal, bitonal, atonal				

Music Personal Learning Checklists

Popular Music		S	O	R	T
Meldoy	Riff				
	Pitch Blend				
	Melisma				
	Hook				
	Slide				
	Glissando				
	Improvisation				
	Ostinato				
	Blue notes				
Harmony	Power chords				
	Chord Symbols e.g. C7				
	Stock chord progressions e .g. I, VI, IV, V				
Tonality	Pentatonic				
	Modal				
	Blues Scale				

Popular Music		S	O	R	T
Structure	Into/Outro				
	Verse				
	Chorus				
	Break				
	12 bar Blues				
	Drum Fill				
Timbre	Pop instruments eg drum kit, electric guitar				
	Pop instrumental				
	Indian instrument technique eg pit ch bend				
Tempo/Metre/Rhythm	Bpm (beats per minute)				
	Metronome marking				
	Groove				
	Backbeat				
	Off beat				
	Swing				
	Shuffle				

Component 2 – Performing Music PLC (Solo)		S	O	R	T
Choosing a SOLO piece to record	I have discussed with my instrumental/vocal teacher that I am a GCSE musician and that I need to prepare a complete solo piece/song to record in the February performance exams.				
	I have chosen a suitable piece for the solo performance recording.				
	I have the sheet music/tab OR guide recording to learn from. Copy to teacher				
	I have given a copy to my music teacher.				
Practicing the piece/song	I am able to demonstrate technical control				
	I am able to demonstrate accuracy				
	I am able to demonstrate expression				
	I am able to demonstrate a sense of style and attention to detail				
	I am able to demonstrate ensemble skills such as timing and tuning				
Component 3 – Composing Music		**S**	**O**	**R**	**T**
Composition Basics	I have selected the following instruments/voices to write for.				
	I have chosen my intended audience				
	I have researched and selected a style/genre				
	Having researched appropriate artists, I want to include the following musical ideas in my own work (syncopated bass line? 2 part vocal harmony? Drum fill? Extension chords?)				

Musical forms and devices

Area of study 1 - Eduqas GCSE Music

Baroque era (1600-1750)

- Harpsichord
- Ornaments
- Terraced dynamics
- Basso continuo
- Small orchestra (mostly strings, plus some wind)
- Suite, sonata, oratorio, chorales, trio sonata
- **Bach, Handel, Vivaldi**

Classical era (1750-1810)

- Slightly larger orchestra
- Piano introduced
- Alberti bass
- String quartets
- Symphony, solo sonata, solo concerto
- Balanced, regular phrases
- **Haydn, Mozart, Beethoven**

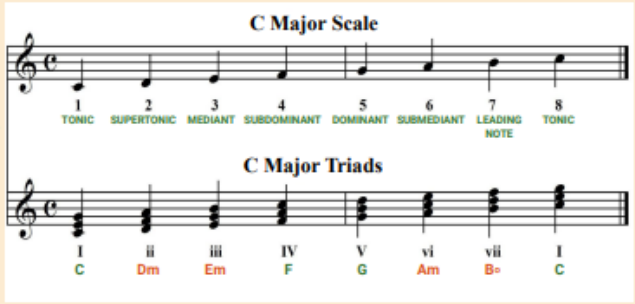
Romantic era (1810-1910)

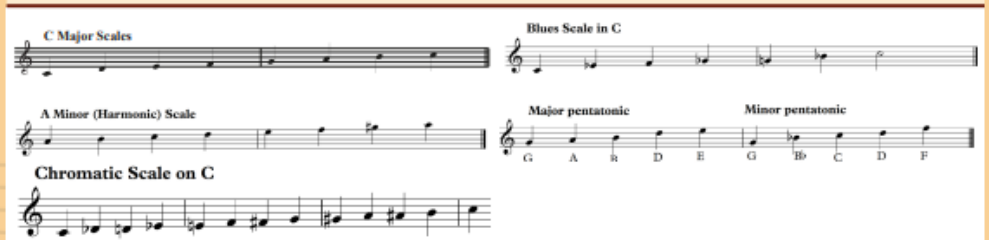
- Lyrical, expressive melodies
- Large orchestra
- Wider range of dynamics
- Richer harmonies and use of chromatic chords
- Programme music
- Opera symphony
- **Tchaikovsky, Grieg, Schumann, Dvorak, Brahms, Verdi, Wagner**

Scales and chords

A **CHORD** is a group of two or more notes played at the same time. A **TRIAD** has three notes. A **CHORD SEQUENCE/ PATTERN** is a series of chords. **DIATONIC HARMONY** is based on the chords of major/minor scales.

Primary chords I, IV, V
Secondary chords ii, iii, vi, vii





Form and structure

BINARY **A B**
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.

TERNARY **A B A**
Three sections: section B provides a contrast (e.g. new tune key change). A may return exactly or with some slight changes.

RONDO **A B A C A**
A longer form: A returns throughout the piece, with contrasting sections called 'episodes', containing new ideas and using different keys.

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).

VARIATIONS **A a A A 𝒜**
The main theme (tune) is repeated and developed a number of times in a variety of different ways.

STROPHIC **A A A**
A simple form where the song uses the same melody over and over.

Devices

Repetition	A musical idea is repeated exactly.
Imitation	An idea is copied in another part.
Sequence	Repetition of an idea in the same part at a higher/lower pitch.
Ostinato	A short, repeated pattern or phrase.
Drone	A long held or constantly repeated note(s).
Arpeggio/ broken chord	The notes of a chord played individually.
Alberti bass	A broken chord accompaniment (I,V,iii,V) common in the Classical era.
Anacrusis	An 'up-beat' or pick-up before the first strong beat.
Dotted rhythms	A rhythm using dotted notes (gives a 'jagged' or 'bouncy' type of effect).
Syncopation	Off beat accents.
Conjunct	Notes that move in steps.
Disjunct	Notes that move in leaps/ intervals.
Regular phrasing	Balanced parts of a melody (like the phrases in a sentence) e.g. four bar phrases.

Cadences

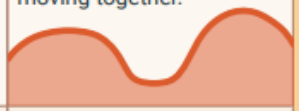
The two chords at the end of a phrase

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

Music for ensemble

Area of study 2 - Eduqas GCSE Music

Texture

MONOPHONIC	A single melodic line. 
HOMOPHONIC	A chordal style or melody and accompaniment: moving together. 
POLYPHONIC	A more complex (contrapuntal) texture with a number of different lines. 
Melody and accompaniment	A tune with accompaniment (e.g. chords).
Unison	All parts play/sing the same music at the same time.
Chordal	The music moves in chords (e.g. like a hymn/ chorale).
Descant	A decorative, higher pitched line.
Countermelody	A new melody, combined with the theme.
Round	A short (vocal) canon.
Canon	The melody is repeated exactly in different parts but starting at different times, with parts overlapping.
Drone	Long held notes.
2-3-4 part texture	Textures which have 2/3/4 different lines.

Jazz and blues

Scat: vocal improvisation using wordless/ nonsense syllables.
Improvised: music made up on the spot.
Blue notes: flattened 3rd, 5ths, 7ths.
Syncopation: off-beat accents.
Call and response: a phrase played/sung by a leader and repeated by others.
Walking bass: bass line that 'walks' up and down the notes of a scale/arpeggio.
Swing style: 'jazzy' rhythm with a triplet/ dotted feeling.

A jazz ensemble may contain:

Rhythm section

- Drums
- Bass (guitar or double bass)
- Piano/guitar

'Horn section'

- Trumpet
- Trombone
- Saxophone

Some groups use a wider range of instruments e.g. clarinet, violin.

12 bar blues

Chords

I	I	I	I
IV	IV	I	I
V	IV	I	I/V

Example in C major

C	C	C	C
F	F	C	C
G	F	C	C/G

Chamber music

Chamber music was music for a small ensemble, originally played in a small room in someone's home.

Baroque: The **trio sonata** featured one or two soloists, plus **basso continuo** (which consisted of a low-pitched instrument such as a cello playing a bassline, with an instrument playing chords e.g. harpsichord).

Classical: String quartets (two violins, a viola and a cello) were popular. They had **four** movements, with the 1st movement usually in sonata form.

Romantic: Chamber music groups were more varied in the Romantic era, using a wider range of instruments (e.g. piano quintet, horn trio). Performances happened in larger concert halls as well as in small 'chambers'.

A piece of music for:

DUET	2 performers
TRIO	3 performers
QUARTET	4 performers
QUINTET	5 performers
SEXTET	6 performers
SEPTET	7 performers
OCTET	8 performers

Musical theatre

Musical numbers may include:
Solo: a song for one singer.
Duet: a song for two singers.
Trio: a song for three singers.
Ensemble: a song sung by a small group.
Chorus: a large group (usually the full company/cast).
Recitative: a vocal style that imitates the rhythms and accents of speech.
Overture: an orchestral introduction to the show, which usually uses tunes from the show.
The orchestra/band is used to **accompany** the voices and to **underscore**.

Voices

Soprano
Alto
Tenor
Bass

The band/orchestra (sometimes called the 'pit' orchestra), may use **strings, woodwind** (sometimes called 'reeds'), **brass** and **percussion** and/or a rock/pop band, depending on the style. Most shows also use keyboards or synths.

Popular Music

Area of study 4 - Eduqas GCSE Music

Popular music includes:

- **POP**
- **ROCK**
- **RAP**
- **HIP HOP**
- **REGGAE**

Plus many other genres, e.g. soul, ska, heavy metal, R&B, country, rock'n'roll.

FUSION: when two different styles are mixed together. This can be two styles of popular music e.g. 'rap metal', or could combine a popular music genre with other styles, folk-rock, gospel, world music, classical to create a new and interesting sound. **Jazz fusion** (jazz and pop) is a popular genre.

Instruments

ELECTRIC GUITAR:

- Lead guitar: plays the melody/ solos/riffs
- Rhythm guitar: plays the chords/ accompaniment.

BASS GUITAR: plays the bass line.
DRUM KIT: provides the beat.
LEAD SINGER: the main vocalist.
BACKING VOCALS: singers who provide harmony.

Pop/rock groups may also include **acoustic** (not electric) instruments e.g. trumpet, trombone, saxophone and/or electronic keyboards/synthesizers.

Features and techniques found in popular music

Riff	A short, repeated pattern.
Hammer on	Finger brought sharply down onto the string.
Pitch bend	Altering (bending) the pitch slightly.
Power chords	A guitar chord using the root and 5th note (no 3rd).
Distortion	An effect which distorts the sound (creates a 'grungy' sound).
Slap bass	A percussive sound on the bass guitar made by bouncing the strings on the fret board.
Fill	A short, improvised drum solo.
Rim shot	Rim and head of drum hit at same time.
Belt	A bright, powerful vocal sound, high in the chest voice.
Falsetto	Male voice in a higher than usual range.
Syllabic	One note sung per syllable.
Melismatic	Each syllable sung to a number of different notes.
A cappella	Voices singing without instrumental accompaniment.

The structure of a pop/rock song may include:

INTRO: short opening section, usually instrumental.
VERSE: same music but different lyrics each time.
CHORUS: repeated with the same lyrics each time (refrain).
MIDDLE EIGHT: a link section, often eight bars, with different musical ideas.
BRIDGE: a link/transition between two sections.
OUTRO: an ending to finish the song (coda).
*You may also hear a pre-chorus, instrumental interlude or instrumental solo.

***Strophic songs, 32 bar songs (AABA) and 12 bar blues are also found in popular music.**

A typical rock ballad in verse-chorus form could follow the pattern:

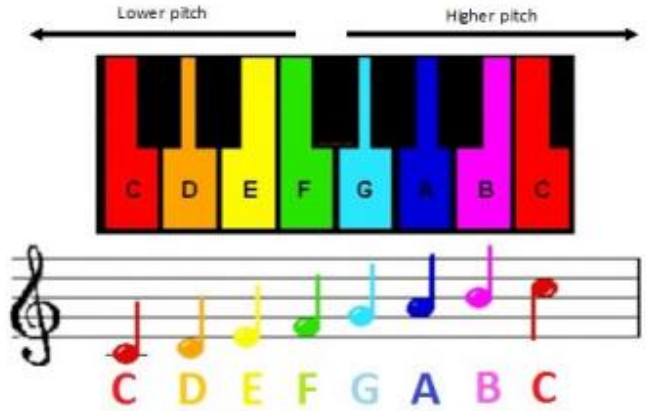
- Intro
- Verse 1
- Chorus
- Verse 2
- Chorus
- MiddleEight
- Chorus
- Outro

Technology

Amplified	Made louder (with an **amplifier**).
Synthesized	Sounds created electronically.
Panning	Moving the sound between left and right speakers.
Phasing	A delay effect.
Sample	A short section of music that is reused (e.g. looped, layered).
Reverb	An electronic **echo** effect.

Orchestral Families

Strings			Woodwind	Brass	Percussion	
Bowed	*Struck*	*Plucked*			*Tuned*	*Untuned*
Violin	Grand Piano	Harp	Piccolo	Trumpet	Xylophone	Bass Drum
Viola		Classical Guitar	Flute	French Horn	Marimba	Snare Drum
Cello			Oboe	Trombone	Vibraphone	Cymbals
Double Bass			Clarinet	Tuba	Timpani	Gong
			Bass Clarinet		Glockenspiel	Triangle
			Bassoon		Tubular Bells	Tambourine

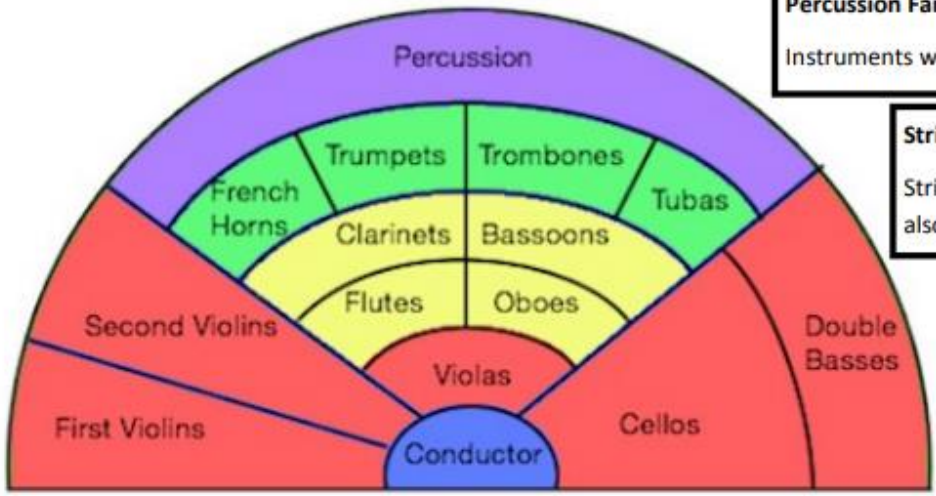


Woodwind Family

A selection of instruments divided into 2 sub families: flutes and reed Instruments. Flutes create sound by air passing over a small hole. It creates a light breathy tone. Reed instruments use a piece of bamboo reed to create a vibration (in turn creating sound).

Percussion Family

Instruments which are hit. These fall into 2 sub-families: tuned (able to play different pitch) and Untuned (drum)



String Family

String instruments are made from wood and have strings. They are usually played with a ***bow*** but can also be plucked. This is called pizzicato

Brass Family

Brass instruments are made out of metal. The sound vibrations are created by the players lips.

Program Music

A piece of orchestral music which tells a story. The instruments portray characters and moods, to create imaginative visual images. This style was popular in the 19th century, when music developed close links with literature and art.

The Conductor

The conductor stands at the front of an orchestra and directs it. The will indicate the main beats in the music using a 'baton' (white stick). All musicians look at the conductor whilst playing using peripheral vision. The conductor is ultimately in control of the whole piece.

Leitmotif

A melody used in film music to represent a character.

		S	O	R	T
Sports Psychology Paper 2	Information Processing – basic model and worked examples				
	Skill and Ability – Classifications and examples				
	Definitions and types of goals				
	The use of evaluation of setting performance and outcome goals, including the use of SMART targets to improve/optimise performance				
	Examples of and evaluation of the types of feedback and guidance				
	Arousal and the inverted U theory				
	Application of how optimal arousal has to vary in relation to the skill/stress management techniques				
	Aggression and Personality				
	Intrinsic and extrinsic motivation, including evaluation of their merits				
Health, fitness and well-being Paper 2	The meaning of health and fitness: Physical, Mental/Emotional and Social Health – linking participation in physical activity to exercise, sport, health and well being				
	The consequences of a sedentary lifestyle				
	Obesity and how it may affect performance in physical activity and sport				
	The different types of Somatotypes and their application to sport				
	Energy use				
	Reasons for having a balanced diet and the role of nutrients				
	The role of Carbohydrates, Fats, Protein, Vitamins and Minerals				
	Reasons for maintaining water balance (hydration) and further applications of the topic area				

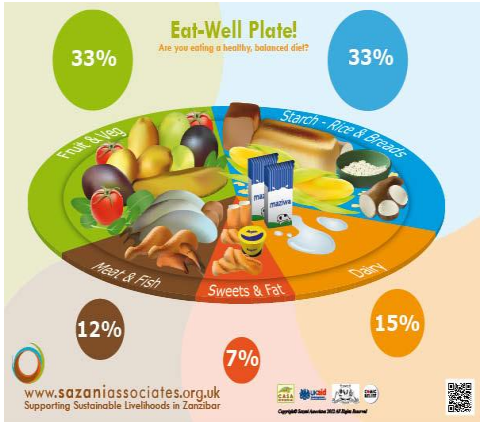
PE Knowledge Organiser

1	TIER THREE VOCABULARY
Adrenaline	Natural hormone released to speed heart rate up.
Aggression	A deliberate intent to harm or injure another person, which can be physical or mental (see direct and indirect aggression).
Anabolic Steroids	Artificially produced male hormones mimicking testosterone. They promote muscle and bone growth, and reduce recovery time. Often used by power athletes, eg sprinters.
Cardiac cycle	The process of the heart going through the stages of systole and diastole (see Blood pressure) in the atria and ventricles (see Heart chambers).
Closed season	Post (transition). It is defined as: x period of rest to recuperate x players doing gentle aerobic exercise to maintain general fitness x fully rested and ready for pre-season training
Closed skill	A skill which is not affected by the environment or performers within it. The skill tends to be done the same way each time.
Commercialisation	To manage or exploit (an organisation, activity, etc) in a way designed to make a profit. The specification refers to commercialised activity as being sponsorship and the media only.

1	TIER THREE VOCABULARY
Competition season (peak)	It is defined as: x playing season x taking part in matches every week x maintenance of fitness related to the activity but not too much training as it may cause fatigue, which would decrease performance x concentration on skills/set plays to improve team performance.
Ectomorph	A somatotype characterised by being tall and thin. Individuals with narrow shoulders and narrow hips.
Extrovert	Sociable, active, talkative, out-going personality type usually associated with team sports players.
Fine movement (skill classification)	Small and precise movement, showing high levels of accuracy and coordination. It involves the use of a small group of muscles.
Hypertrophy	The enlargement of an organ or tissue from the increase in the size of its cells.
Information processing	Making decisions. Gathering data from the display (senses), prioritising the most important stimuli to make a suitable decision.
Qualitative	More of a subjective than an objective appraisal. Involving opinions relating to the quality of a performance rather than the quantity (eg score, placing, number).

Maintaining a balanced diet

The nutrients that make up a balanced diet are shown in the 'eat well' plate below



Dietary Imbalance

If you do not maintain a balanced diet, it could lead to dietary imbalance:

- Malnutrition – insufficient nutrient intake causing physical weakness
- Obesity – overweight caused by overeating, leading to many health problems
- Anorexia – self-starvation due to the fear of gaining weight, usually occurring in females

Whole-School Food Policy

- Healthy eating is one component of the National Healthy Schools Programme
- The aim is to give children the confidence and knowledge to make healthy food choices for themselves.
- Healthy food and drink must be available across the school day.
- Works with the School Food Trust to support schools in delivering this programme.
- Whole-school approach is required, including pupils, parents, staff and the community, in order to successfully deliver the programme

Specific Diets

- **Carbohydrate loading –** used by endurance athletes, e.g. marathon runners. Involves eating excess starch-rich foods one week prior to an event to increase glycogen stores in the muscles. This helps delay tiredness by providing a slow release of energy.
- **High-protein diet** – used by bodybuilders to gain muscle and lose fat. However, eating extra protein does not directly add muscle and can be difficult to digest

School Lunches

Schools have to meet national nutritional standards for school lunches:

- Regular servings of quality meat and oily fish
- A minimum of two portions of fruit and veg with each meal
- Bread, cereals and potatoes regularly available
- Maximum of two portions of deep-fried food per week
- No fizzy drinks or confectionaries in meals or vending machines

Nutrient	What is it for?	Which foods contain it?
Carbohydrates	Main source of energy	Simple carbs, e.g. glucose and sugar Complex carbs e.g. pasta, bread and rice.
Fats	Major source of energy	Cheese, cream, meat, oils, butter
Proteins	Important for growth and repair of tissue	Animal products and plant foods
Vitamins	Essential for good health	Fruit and veg
Minerals	A number of different functions, required in small amounts	Vegetables and meat
Water/fluids	Lack of water leads to dehydration	Water
Fibre	Aids the digestive system	Cereals, wholegrain bread, oats

Aerobic respiration

- Occurs in the presence of oxygen
- Glucose + Oxygen- → Energy + Carbon Dioxide + Water
- Used during sustained exercise
- Constant supply of oxygen to the body is required

Anaerobic respiration

- Occurs in the absence of oxygen
- Glucose → Energy + Lactic Acid
- Used during short bursts of exercise
- During anaerobic respiration oxygen is 'borrowed', which is then 'owed' to the body – this is called the **oxygen debt**. It causes a build up of lactic acid in the muscles which causes pain. Completing a cool-down allows the lactic acid to disperse.

The Recovery Period

After exercise:

- We **take in** extra oxygen to replace the oxygen debt.
- We **expire** carbon dioxide and other waste products.
- We **perspire** to remove excess sweat and let heat escape.
- We **excrete** urine and faeces to remove excess water and other waste products from lactic acid.

The Role of the Blood

- Transport oxygen and glucose to working muscles for respiration.
- Transports water, carbon dioxide and other waste products away from working muscles.
- Produces antibodies to fight infection.
- Clot to seal open wounds
- Regulate body temperature.

Types of Training

Circuit training involves a number of exercises set up at stations. It may incorporate skills. It can be useful to team sports, e.g. football, racquet sports, e.g. tennis and individual sports e.g. running. Advantage: varied, so doesn't get boring. Disadvantage: requires a lot of equipment and time to set up.

Interval training involves a short intense work period followed by a rest period. Advantage: good for game players because you can mix aerobic and anaerobic exercise. Disadvantage: can become boring.

Weight training uses resistance either by weight lifted or the number of repetitions the exercise is performed. It is useful for sports which require strength, e.g. long jump and rugby. Advantage: improves muscular strength and tone. Disadvantage: muscles can be sore after.

Fartlek means 'speed play' and involves fast and slow running over a variety of terrain or hills. Its useful for individual sports, e.g. athletics and team sports, e.g. football. Advantage: can be easily adapted for different sports and fitness levels. Disadvantage: difficult to see how much effort is being exerted.

Continuous training is slow and steady training. It is useful to improve aerobic fitness in, for example, cycling, running, and also for a sedentary adult who has not trained for a period of time. Advantage: doesn't require much equipment. Disadvantage: not useful for game players because it doesn't improve anaerobic fitness.

Aspects of Training

Repetitions	In weightlifting, the number of times you move the weights
Sets	In weightlifting, the number of times a weight activity is carried out, e.g. a set of repetitions
Thresholds	The minimum heart rate that must be achieved in order to improve fitness **Maximum Heart rate (MHR) = 220 - Age**
Training Zone	The heart rate zone in which a training effect will occur
Training Session	Training session is split into phases: Warm-up, Fitness phase, skill phase and a warm-down.

Further Training Methods

Altitude Training

Carrying out aerobic exercise at high altitude

Oxygen levels are lower at high altitude

It increases the oxygen-carrying capacity of the blood

Warm Weather Training

British weather is unpredictable

And, therefore, athletes often train

Abroad in warm weather where

Training will not need to be cancelled.

Principles of Training

Key Term	Definition
FITT	**F**requency – how often we train **I**ntensity – how hard we train **T**ime – the length of time we train **T**ype – the method of training chosen The requirements of a certain activity are Matched with training
Specificity	Matching training to the requirements of your sport
Progression	Making training gradually harder the fitter you are
Overload	Overloading your body by increasing the frequency, intensity or duration of exercise
Reversibility	Physical benefits gained from training will be reversed when you stop
Rest	Recovery time
Recovery	Allowing body tissues to recover and repair following training or competition
Individual Differences/Needs	Take into account a person's body build / level of fitness, the sport (and position played) and their particular aims

THE MEDIA

Television
- One of the most powerful forms of media
- Increase in the amount of televised sport when digital transmission was introduced
- Large numbers of channels dedicated to sport are now available
- The government set rules regarding events shown on TV, e.g. 'listed events' such as the FA Cup Final cannot be shown exclusively on 'pay per view' or satellite/ cable channels.

Radio
- Increase in the number of radio stations broadcasting sport since the introduction of DAB
- There are now a number of stations dedicated to sport
- Cheaper to broadcast via radio than TV, and cheaper and more accessible/portable for listeners

Magazines
- Often contain sport stories
- Increasing number of specialised magazines in specific sports

Newspapers
- Have dedicated sports section at the back

Books
- E.g. textbooks, autobiographies, novels

Information Technology
- Lots of information available on CD-ROMS and the Internet
- Increasing number of sites on the Internet broadcasting TV and radio

Sponsorship

Range and Scope of Sponsorship
- Individuals: individual sponsorship deals whereby the athlete gets given money to endorse a good, e.g. wearing a specific brand of footwear.
- Teams and clubs: payments made to the team, and used for equipment, kit etc.
- Sports: major sponsorship associated with the sport to promote leagues or competitions.
- Events: big events such as the Olympic Games attract many sponsors because it increases publicity

Unacceptable Sponsorship
- Anything associated with poor health, e.g. smoking and alcohol

Effects of Sponsorship
- Provision of equipment, clothing accessories, facilities, transport/travel
- Entry fees and expenses paid, e.g. hotel bills

Advantages of Sponsorship
- Financial support for the athlete
- Promotion of the sport
- Raise profile and image of sport
- Increased revenue for the sponsor, and gives them a good image

Disadvantages of Sponsorship
- Sponsors may start to dictate changes, e.g. to the rules, clothing, timings etc.
- Sponsors can withdraw if the image of the sport is damaged
- Difficult for minority (less well-known) sports to get sponsorship

How Can The Media Influence Performance and Participation?
- High standards of performance are shown – gives and example of people to follow
- Slow motion replays allow good points to be emphasised and the viewer can learn from it
- Promotion of physical activity and its health benefits

Edited Coverage
- Writers or directors can edit coverage so that an inaccurate representation of the action is seen by the viewer

Different Types of Output
- **Informative –** sports news
- **Educational** – documentaries
- **Instructional** – coaching DVD
- **Entertainment** – live matches

Role Models

Role models are people that others aspire to be like, and should therefore set a good example.

How can role models shape attitudes?
- The way in which they play, e.g. fairly, abiding by rules or playing unfairly against the rules.
- Setting trends
- The way in which they conduct themselves in both their sporting and private life.

How can role models influence participation?
- By being an inspiration
- By being successful through good performances
- By representing a group, e.g. ethnic group, gender group or disability

Photography Personal Learning Checklists

Photography	Evidenced	Refined
AO1- Develop ideas through investigations, demonstrating critical understanding of sources.		
Research and annotate artists appropriate to the theme of your choice demonstrating your knowledge, opinions and understandin g of the work.		
Create a title page with a collection of secondary sources, mind maps and notes to explain your ideas and intentions.		
Respond to photographers through your own practical work showing your understanding of their visual language.		
Show the planning of your ideas through either design sketches, digital drawing and collage for your development work and fin al outcomes.		
AO2- Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.		
Plan your photoshoots effectively considering **light**, location, weather, models, props, make up and camera kit.		
Refine your technical photographic knowledge, show evidence in your sketchbook through imagery and supporting annotations.		
Experiment with angles, viewpoints and composition and show this through exciting and varied contact sheets. (min 30 photos p er shoot)		
Experiment with digital software to edit and refine your photography. (show some evidence of before and after.)		
Experiment through re-shooting. Show improvements in your photography by making changes. (e.g. Props, location, model, compositions, camera settings)		
AO3- Record ideas, observations and insights relevant to intentions as work progresses.		
Use Photography to record and creatively explore your chosen theme.		
Be aware of line, shape, texture, pattern, tone and colour in your photography.		
Evidence of writing about your ideas- how you intend to use photographic techniques, how you intend to develop your idea within your chosen theme, evaluating your work and ideas as you progress.		
To use simple drawing sketches and diagrams to plans your ideas, compositions.		
AO4- Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.		
Present a personal and sustained outcome(s) that shows links with chosen artists and bring together the ideas explored throug hout your project.		
Present sustained development work. (The best edits form each shoot in sketchbook)		
Learn how to be **selective** and **present** a series of well edited and professional Photographs that link with your projects theme.		

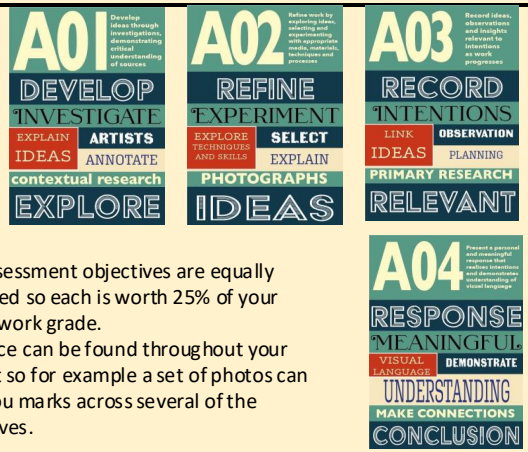
Photography Knowledge Organiser: Personal Project.

1 TIER THREE VOCABULARY

Composition	Composition is the arrangement of elements within a work of art.
Analyse	Examine (something) methodically and in detail, typically in order to explain and interpret it.
Exposure	The amount of light that reaches your camera's sensor. Therefore, this exposure determines how light or dark your images look.
Balance	The distribution of the visual weight of objects, colours, texture, and space.
Message	The statement the artist is trying to make.
Mood	The emotions that are elicited in the viewer of a piece of artwork, intentionally or unintentionally
Subject Matter	What the artwork is trying to portray. If, for example, you are looking at a painting of birds, then the subject matter is the birds.
Annotation	Written explanations or critical comments added to art or design work that record and communicate your thoughts Conceptual - an art form in which the underlying idea or concept and the process by which it is achieved are more important than any tangible product.
Influence	Be inspired by the style of art styles and movements.
Aperture	A space through which light passes in an optical or photographic instrument, especially the variable opening by which light enters a camera.
Photomontage	A montage constructed from photographic images.
Shutter Speed	The speed at which the shutter of the camera closes.

2 Themes and ideas.

3 How you are assessed at GCSE.



The assessment objectives are equally weighted so each is worth 25% of your coursework grade.
Evidence can be found throughout your project so for example a set of photos can gain you marks across several of the objectives.

4 Artsit Inpsiration

BBC Bitesize videos on: Artists and designers look for inspiration to use as a starting point for their creative projects. Many artists and designers find inspiration in the work of others.

BBC Bitesize videos on annotating work.

Photography Knowledge Organiser: Personal Project.

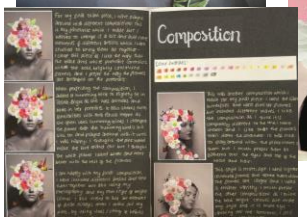
6 Student examples of planning.

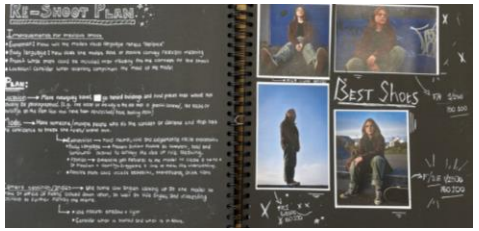
Experimenting and refining with a range of ideas, techniques in various media to show your planning.



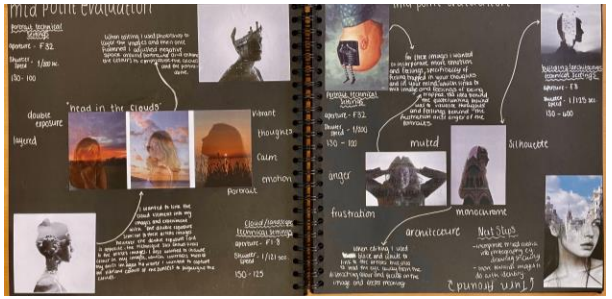


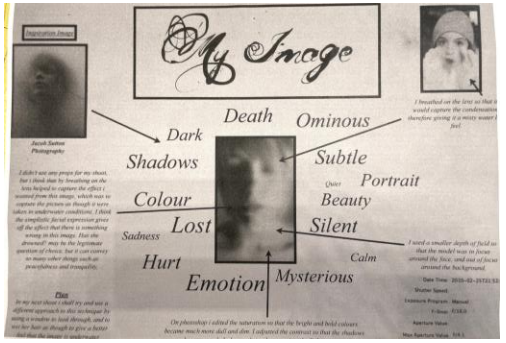






7 Evaluating





8 Examples of final outcomes/ visual conclusions.





Religious Studies Personal Learning Checklists

Can you?

- Describe each of these ideas accurately to another person?
- Explain how they work or why they are done?
- Can you use quotes and evidence to justify or challenge each point?
- Can you compare and contrast relevant ideas to create a critical argument?

The existence of God and Revelation		S	O	R	T
Origins of the Universe	Religious Views				
	Big Bang Theory				
	Relationship between Religion and Science				
	Evolution				
Value of the world	Stewardship				
	Dominion				
Environment	Recycling				
	Natural Resources				
	Pollution				
Animals	Food				
	Experiments				
	Animal Abuse				
Life	Sanctity of Life				
	Abortion				
	Euthanasia				
	Fertility Treatments				

Religion Peace and Conflict		S	O	R	T
Forgiveness	Forgiveness of others				
	Forgiveness by God				
	Reconciliation				
	Salvation through Christ				
Types of Pacifism	Absolute Pacifism				
	Contingent Pacifism				
	Realism				
	Quaker Church				
	Dietrich Bonhoeffer				
	Martin Luther King Jr.				
Use of violence	Terrorism				
	Holy War				
	Modern Warfare				
	Weapons of Mass Destruction				
Just War	St. Augustine				
	St. Aquinas				
	Just Peace				
	Peacekeeping				
	Liberation Theology				

Religious Studies Personal Learning Checklists

Can you?

- Describe each of these ideas accurately to another person?
- Explain how they work or why they are done?
- Can you use quotes and evidence to justify or challenge each point?
- Can you compare and contrast relevant ideas to create a critical argument?

The existence of God and Revelation		S	O	R	T
What is God like?	Holy Trinity				
	Apostle's Creed				
Divine Characteristics	Transcendence				
	Immanence				
	Omnipotence				
	Omnipresence				
	Omniscience				
	Personal				
	Impersonal				
Can we prove God exists?	Religious Experiences				
	Miracles				
	Conversions				
Intelligent design	William Paley				
	Darwin and Evolution				
	Richard Dawkins				
	Anthropic Principle				

The existence of God and Revelation		S	O	R	T
First Cause Argument	St. Thomas Aquinas				
	Way of Motion				
	Way of Causation				
	Necessary being				
	Assumptions Aquinas makes				
Evil and suffering	Inconsistent triad				
	Examples of evil				
Science as evidence against God	Big bang vs creationism				
	Evolution				
	Evidence				
Revelation	Special revelation				
	Conversion of Saul				
	General revelation – nature				
	General revelation – scripture				
	Validity of revelation				

Social Justice		S	O	R	T
Equality	Status and treatment of Women				
	Religious attitudes towards homosexuality				
	Attitudes towards freedom of expression				
Social Justice	Religious views on social justice issues				
	Role of religion in slavery				
	Causes of poverty				
	Religious teachings on wealth and charity				
	Religious views on exploitation				
PR	Religious views on personal responsibility				

Christian Beliefs and Teachings

1. Beliefs about God

Christianity is a monotheistic religion – they believe in ONE God. This Christians believe God is:

- Omnipotent (all powerful)
- Omniscient (all knowing)
- Omnipresent (everywhere)
- Benevolent (loving)
- Transcendent (beyond understanding)
- Immanent (personal)
- Just (fair and the perfect judge)
- Eternal (no beginning and no end)
- Forgiving (he will forgive sins)

2. The Trinity

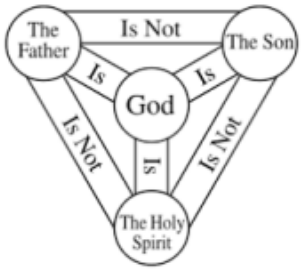
Means three in one God in three parts (God is divisible): The Father, the Son, and the Holy Spirit.

The Nicene Creed explains the nature of The Trinity:

The Father is the powerful creator of everything – "Maker of heaven and earth"

The Son is Jesus Christ, who came to Earth as God in human form.

The Holy Spirit is the invisible power of God that works within the world today to guide and inspire us.



"I believe in one God: The Father, Son and Holy Spirit."

3.Creation

In the book of Genesis it says that God created the world in 6 days, and on the 7th He rested.

Some Christians take this LITERALLY and read this story as fact (fundamentalist). Others see the Genesis story as a symbol or metaphor (Liberal). Adam is the first man and is created from the dust of the earth.

Eve sins, by being tempted by the devil and eating the forbidden fruit. Humans are banished from Eden. They must now work, feel pain and die.

"In the beginning God created the heavens and the earth."

"Then God said, "Let them rule over the fish of the sea and over the birds of the sky.'

4.Crucifixion

Jesus was sentenced to death by Pontius Pilate, the Roman Governor by crucifixion. There are several ways in which the crucifixion affects Christians today. It gives them confidence that if they accept Jesus' sacrifice, sin can no longer destroy their love because God forgives those who faithfully ask for forgiveness. They believe that suffering is a part of life, just as it was a part of Jesus' life and that, having experienced it, God understands what the sufferer is going through.

"Forgive them Father for they do not know what they do."

5. Incarnation

Christians believe Jesus is the Son of God. He is God in human form, or God 'incarnate'.

This means that he is fully human and fully God (divine) at the same time. This is important because it shows that Jesus is truly God on earth, but he understands our suffering and problems as he was a human.

He shows he is God as he forgives sins, performs miracles and was resurrected at death. He shows he is human as he feels pain, was born to a human mother, and died on the cross.

"The word became flesh and made his dwelling among us"

6.Jesus' resurrection & ascension

- ✓ Jesus was placed in a tomb on Good Friday.
- ✓ Some of Jesus' female followers went to the tomb
- ✓ Jesus was nowhere to be found and the stone had rolled away

The belief that Jesus rose from the dead is known as the resurrection and is a key teaching in the Christian faith. After meeting his disciples and asking them to carry on his good work, Jesus left them for the last time and ascended, body and soul, into Heaven.

"Jesus said to her, "I am the resurrection and the life. The one who believes in me will live, even though they die."

7. Parables

These are stories that Jesus told to his followers in order to teach them a message.

The Good Samaritan - A man is willing to save a stranger who has been attacked, even though their nations are enemies.

The sheep & the goats - Jesus teaches that those who will go to heaven are sheep, loyal and obedient. While those who don't do as they are told are goats, and will go to hell.

"Whatever you did for the least of these brothers of mine, you did for me"

8. Salvation

Salvation means to be saved from sin, and the consequences of sin (hell) to gain a place in heaven.

Sin has separated humans from God, and salvation enables humans to get close to God again.

Jesus' death makes up for the original sin committed by Adam & Eve and so can bring people back to God. There are three ways that we can find atonement and find salvation. Law (doing good deeds and following the law); Grace (believing in God and receiving his unconditional love); and Spirit (through Spirit (the guidance of the Holy Spirit)

"For God so loved the world that he gave his one and only Son, that whoever believes in him shall not perish but have eternal life."

9. Why do people believe in God?

Design Argument - Our world is too complicated to have just happened by chance. The only person powerful enough to do this is God.

Moral Argument - We all have a sense of right and wrong, and feel feelings of guilt when we do bad things. Christians believe the conscience is actually God.

Upbringing - Many people are Christians because they were brought up to be a Christian.

Christian Practices

1. Worship

- Liturgical – Follows a set routine e.g. RC
- Non-liturgical - Does not follow a set routine
- Informal – Can be anywhere following any pattern
- Private – worshipping alone
- Prayer – Communicating with God

Why is worship important?

- It brings a sense of togetherness as a community
- It makes a person feel closer to God
- It is peaceful – allowing for prayer and meditation
- It is an external expression of their faith.

2. Prayer

Nature and purpose of prayer

1. To get closer to God and communicate with him
2. To praise God and thank him for what he has done
3. To ask for God's help
4. To say sorry to God and ask for forgiveness

Set Prayers: Prayers that are in a prayer book that are said at certain times, for example during a church service.

The Lord's Prayer: The most famous prayer. Known by most Christians

Informal Prayer: Any prayer done personally and privately.

"Our Father who art in heaven, hallowed be thy name"

"Give us this day our daily bread. And forgive us our sins."

3. Eucharist/Communion

This is a Church service that recreates Jesus' last supper with his disciples. Members of the church come forward to receive bread and wine. The bread representing the body of Christ and the wine the blood.

The celebrates Jesus' sacrifice through his death and resurrection

It is considered a sacrament, and outward sign of inner grace.

It remembers The Last Supper.

It brings the Christian Community together.

Catholics believe in transubstantiation. This means they believe the bread and wine literally become flesh and blood.

Most other Christians see the bread and wine as symbolic.

"This is my body Eat this and remember me."

"This is my blood...drink this and remember me."

4. Baptism

This Sacrament is rite of passage. A physical act, that Christians believe, has a permanent effect on the soul.

Infant Baptism: A baby is taken to a church, where a priest or vicar will bless that child with holy water, making the sign of the cross upon them. Parent's and God Parent's are present, and a candle is lit. This welcomes the child into their Christian family, and cleanses the child of the Original Sin of Adam and Eve.

Adult /Believers Baptism: An adult, normally over 13, is asked questions about their faith. They are fully immersed (under water) to wash away their sins (not just original sin), and so they can start a new one in the church.

"Go and make disciples of all nations, baptising them in the name of the father the son and the Holy Spirit.

5. Pilgrimage

A religious journey made to a place of religious importance.

Lourdes: A town in France that Christians visit too remember the miracle performed by Saint Bernadette and to be healed by the waters.

Bernadette was said to have had visions of the Virgin Mary. She moved the mud at her feet and water appeared and is said to be a miracle.

Pilgrims visit the site to drink the waters in the hopes it will heal them and clear their sins.

Iona: An island off the coast of Scotland, discovered by St. Colomba. Said to be so beautiful that it must be the creation of God.

Called the "thin place", as the space between heaven and earth was so thin.

Christians go there on a residential to pray and fast in order to appreciate God and try and connect to Him.

They also complete chores, go on long walks to appreciate the area.

6. Role of the Church

The Church has always been involved in caring for others, a London church set up the first Samaritans phone service for those feeling suicidal. One way in to put their faith into action is food banks and street pastors.

Key organisations (research these!)

- Corrymeela – reconciliation & ecumenism
- Spring Harvest – Mission & evangelism
- CAFOD – Catholic Agency for Overseas Development
- Tearfund – Water for developing countries.
- Christian Aid – Short term aid following disasters.
- Street Pastors – Engage with those on the streets to care for them.

"For where two or three gather in my name, there I am with them."

7. Evangelism and Missions

Evangelism: This is the spreading of the faith, often done by preaching the words of the gospel.

Mission: This is a specific journey to a place to help spread the religion. Often to a country or area of a different faith. A person who does this is called a Missionary.

Locally: Local Churches might fund work in the community, have open events at the church, have courses to welcome people to the faith.

Nationally: Churches may be linked together and hold events like summer camps, special events held for people of different faiths (interfaith Dialogue)

Globally: People choose to go to poorer areas to help with education, host concerts or TV shows about religion.

"Go into all the world and preach the gospel to all creation."

8. Reconciliation

Reconciliation means to come to peace and harmony after a conflict. As Jesus is the prince of peace he would want us to forgive others for their sins, as they are forgiven by God.

Corrymeela: An organization which works to promote peace and pacifism across the world. They go into places of conflict, e.g Northern Ireland, and provide safe spaces to promote peace.

Quakers also aim to do this by protesting against violence and wars. For example, they were very vocal surrounding the wars in Afghanistan and are inspired by the teaching, 'blessed are the peacemakers.'

9. Persecution

Persecution is how people are treated badly for their beliefs or other factors. Christians, historically, have been persecuted against.

Christians believe that they should work to overcome persecution, but also promote positive relationships.

Organisations like the Barnabas Fund work to identify areas where Christians are persecuted, and how to help them.

Buddhism: Key Vocabulary

P = Pali
S = Sanskrit

Abhidhamma (P) **Abhidharma** (S) A section of the Tipitaka that gives philosophical and psychological explanations of the Dhamma.
Ahimsa 'Not harming', non-violence.
Anapanasati 'Mindfulness of the breath' in samatha.
Anatta No independent or permanent self.
Anicca The impermanent nature of all things.
Arahant In Theravada Buddhism, one who has attained Nibbana.

Bhavana 'Cultivation' or meditation.
Bhikkhu (Bhikshu – S)/**Bhikkhuni** (Bhikshuni – S): A Buddhist monk/nun.
Bodhisattva 'Enlightenment Being', one who seeks enlightenment for the sake of all beings.
Brahma viharas The four sublime states: compassion, loving kindness, sympathetic joy for others, and even-mindedness.
Buddha 1. One who is fully awake or enlightened; 2. Siddattha Gotama.

Canon The accepted Buddhist scriptures.
Chorten A Tibetan stupa.

Dagoba A Sri Lankan stupa.
Dana 'Generosity'.
Dhamma 1. The universal law of life; 2. The teachings of the Buddha.
Dhammapada A Buddhist scripture containing 423 sayings attributed to the Buddha.
Dharmachari (m), **Dharmacharini** (f) An ordained member of the Western Buddhist Order.
Dhyana 'Meditation'.
Dukkha Suffering, unsatisfactoriness.

Engaged Buddhism The use of Buddhism to help people by engaging mindfulness.
Enlightenment The state of having developed the wisdom to see life as it really is.

Five Khandhas The five elements that make up a human being.
Four Noble Truths Suffering; the cause of suffering; the end of suffering; the way to end suffering.
Four Sights Old age, sickness, death (i.e. suffering); a holy man (i.e. the determination to overcome suffering).

Gelong A Tibetan Buddhist monk.

Hinayana 'Small Vehicle', a term used by Mahayana Buddhists for the Theravada school.

Jataka 'Lives', stories of the Buddha's previous lives.

Kamma (P) **Karma** (S) 1. Actions that influence one's future; 2. The law of cause and effect.
Karuna 'Compassion', sharing in the sufferings of others.
Kasina An object of focus in meditation.
Kathina A festival during which lay Buddhists donate robes to the vihara.
Kesa 1. A robe worn by a Japanese priest; 2. A scarf worn by Dharmacharis and Dharmacharinis.
Koan A word or phrase intended to bring about satori in Zen Buddhism.
Kshanti 'Patience'.

Lama A guru, or senior teacher, in Tibetan Buddhism.
Lhagtong Vipassana in Tibetan Buddhism.

Mahayana 'Great Vehicle', the progressive Buddhist tradition of Eastern Asia.
Maitreya The next Buddha for our world.
Mala A string of beads used as an aid to mindfulness in puja.
Mandala A pattern created to represent spiritual reality.
Mantra A phrase chanted repeatedly during worship to evoke particular aspects of enlightenment.
Metta 'Loving kindness'.
Mitra A committed member of the Friends of the Western Buddhist Order.
Mondo Rapid questions and answers to bring about satori in Zen Buddhism.
Mudra Symbolic hand gestures used in Tibetan worship or on Buddha rupas.

Nembutsu Chanting 'Namu Amida Butsu' in Japanese Pure Land Buddhism.
Nibbana The state of peace achieved when suffering and its causes are overcome.
Noble Eightfold Path Eight steps towards overcoming desires and reaching Nibbana.

Pagoda A Burmese, Chinese or Japanese stupa.
Pansil The Five Precepts (short for Pancha Sila).
Patimokkha Rules for monks and nuns.
Pavarana Day A day when bhikkhus reflect on their behaviour during the Vassa.
Prajna 'Wisdom'.
Puja Worship.
Punna 'Merit', fortunate kamma.

Right Livelihood The principle that a person's employment should conform to Buddhist ethics.
Rupa 'Form', an image of the Buddha.

Samadhi State of deep meditation.
Samanera A novice, or trainee bhikkhu.
Samatha Meditation to establish calmness.
Samsara 1. The ordinary, ever-changing world; 2. The cycle of rebirths.
Sangha 'Assembly'. 1. The community of Buddhists; 2. The community of bhikkhus.
Satori 'Awakening', a flash of enlightenment in Zen Buddhism.
Sila 'Morality'.
Six Paramitas 'Six Perfections', virtues that lead a Bodhisattva to enlightenment.
Sky burial A traditional Tibetan funeral in which the corpse is exposed to the open air to be eaten by vultures.
Stupa Monument containing relics of the Buddha or important Buddhist teacher.
Sunyata 'Emptiness', the nature of things that have no fixed identity.
Sutta (P) **Sutra** (S) 'Thread', a text giving a teaching.

Tanha Desire, craving, wanting.
Tantra 'Pattern', mystic writings in Tibetan Buddhism. 1. The oneness of all things; 2. Techniques for visualisation.
Thanka In Tibetan Buddhism, a wall-hanging depicting the Buddha or an aspect of Buddhism.
Theravada 'The Way of the Elders', the main school of Buddhism in South-East Asia.
Three Poisons The causes of human unhappiness: greed, hatred, ignorance.
Three Refuges Devotion to the Three Treasures.
Three Treasures (Three Jewels) The Buddha, the Dhamma, the Sangha.
Three Universal Truths The characteristics of life: anicca, anatta, dukkha.
Tipitaka (P) **Tripitaka** (S) 'Three Baskets', the three collections of Buddhist texts: the Vinaya, the Suttas and the Abhidhamma.
Trikaya 'The Three Bodies', a way of explaining different aspects of buddhahood in Mahayana Buddhism.
Triple Gem The Three Treasures.

Upaya kausala 'Skilful means'.
Uposatha Day (Moon Day) The fortnightly recitation of the Patimokkha.

Vajra 'Thunderbolt', a symbol of power in Tibetan Buddhism.
Vajrayana 'Diamond or Thunderbolt Vehicle', a type of Mahayana Buddhism represented by Tibetan Buddhism.
Vassa The rainy season in South East Asia.
Vihara 'Resting Place', a Buddhist monastery.
Vinaya The rules of discipline for monks and nuns.
Vipassana 'Insight' meditation to see clearly the true nature of things.
Virya 'Energy'.

Wat A Thai Buddhist temple.
Wesak A festival to commemorate the birth, enlightenment and death of the Buddha.

Za-zen 'Sitting meditation' in Zen Buddhism.
Zhiney Samatha in Tibetan Buddhism.

Ecology	S	O	R	T
Describe the processes involved in the carbon cycle and the water cycle				
Describe the impact of human population growth and increased living standards on resource use and waste production				
Describe what biodiversity is, why it is important, and how human activities affect it including the impacts of pollution, land usage, peat bog destruction & deforestation				
Describe how the composition of the atmosphere is changing, and the impact of global warming on biodiversity				
Inheritance, variation and evolution	**S**	**O**	**R**	**T**
Describe features of sexual and asexual reproduction including being able to compare mitosis to meiosis				
Explain the term 'genome' and the importance of the human genome (specific examples from spec only)				
Describe the structure of DNA including its role in storing genetic information inside the cell, knowledge of nucleotide units and *complementary base pairing in DNA*				
Explain what mutations are including the possible effects of mutations, what non-coding parts of DNA are, and why they are important				
Describe how characteristics are controlled by one or more genes, and use Punnet square diagrams, genetic crosses and family trees				
HT Only: Construct Punnet square diagrams to predict the outcomes of a monohybrid cross				
Describe cystic fibrosis and polydactyly as examples of inherited disorders				

Science Knowledge Organiser

Key Vocabulary

Variation

Evolution

Natural selection

Selective breeding

Genetic engineering

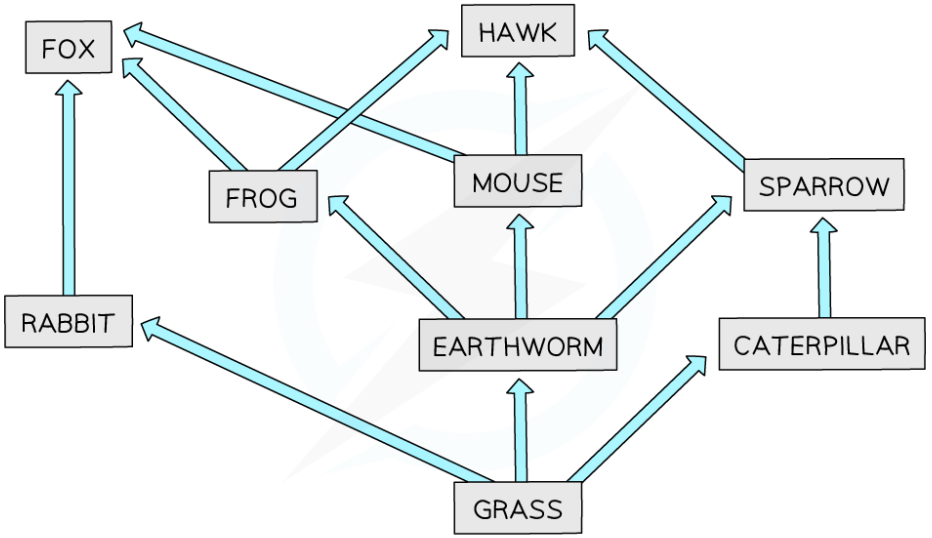
Stimulus

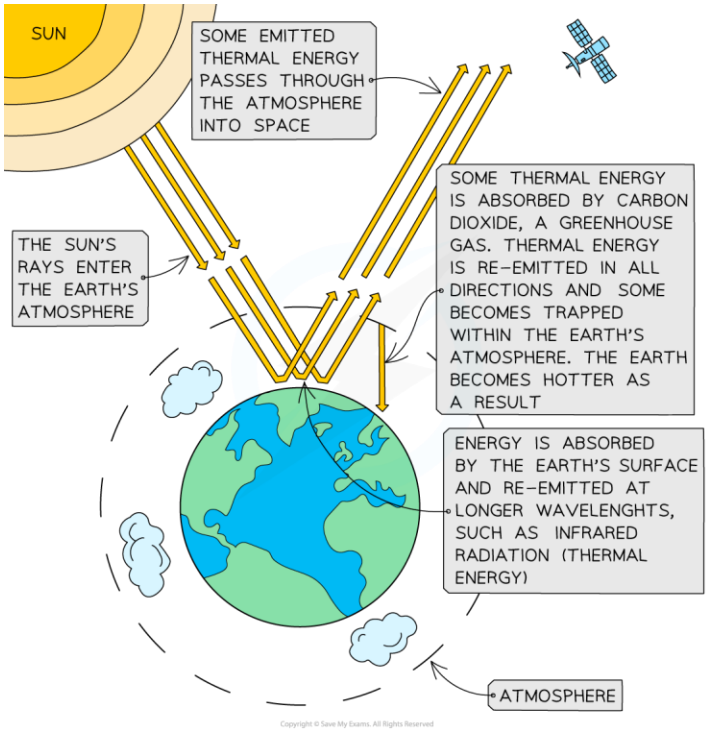
Receptors

Coordination centres

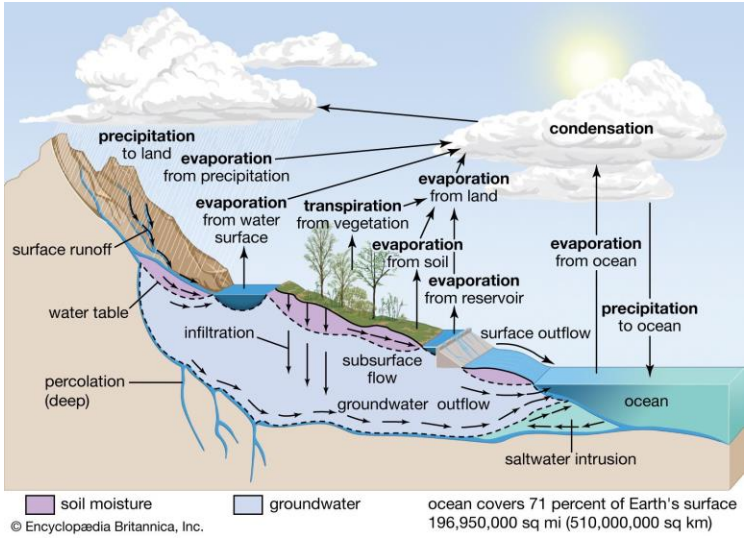
Effectors

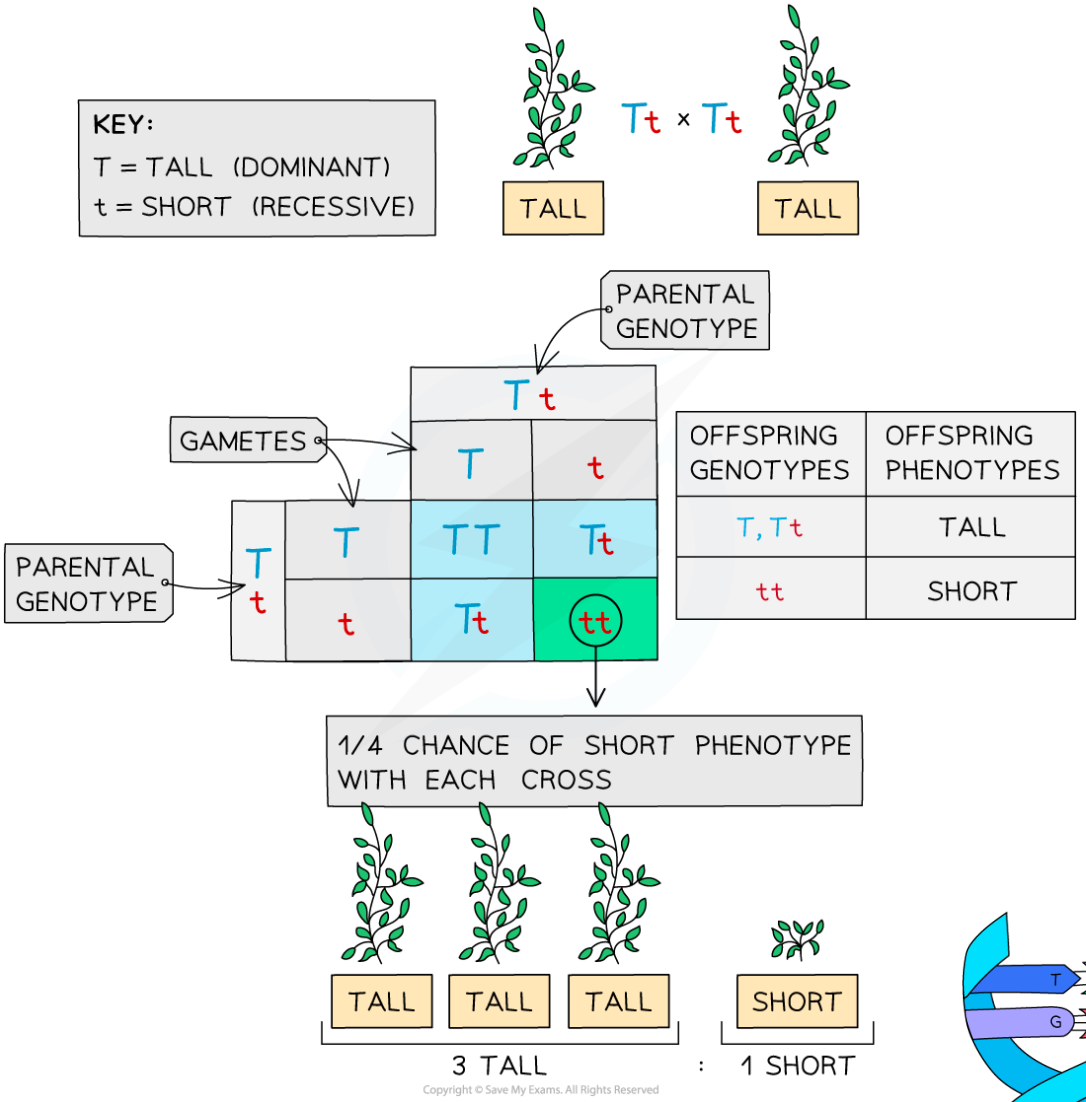
Reflex action

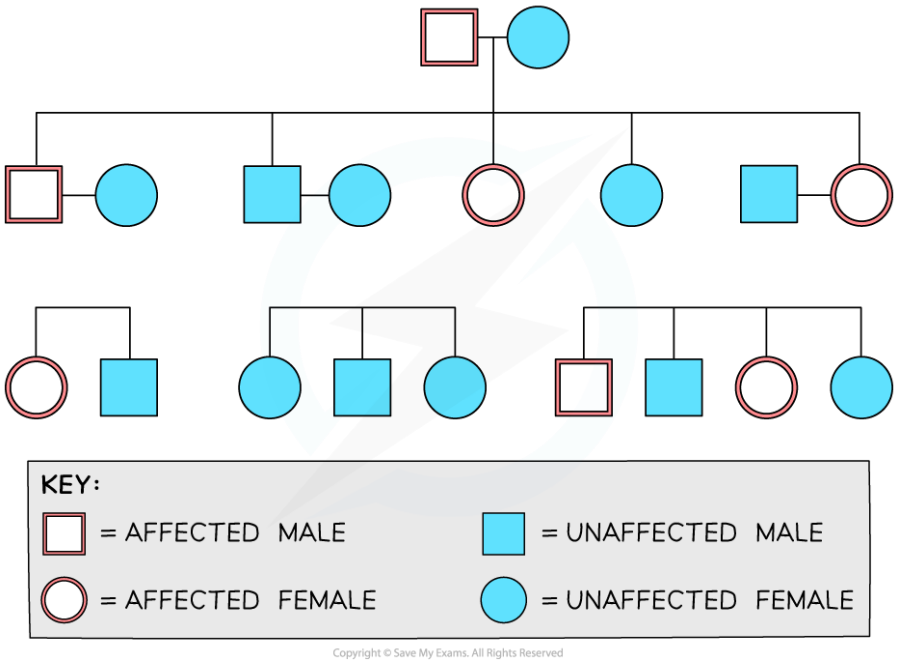




- A high biodiversity ensures the stability of ecosystems by **reducing** the **dependence** of one species on another for these three things
- For example, for the food web above:
  - If the mouse population was suddenly wiped out, the fox and the hawk populations might decrease but would not be wiped out too, as mice are **not their only food source**
  - This example ecosystem has **sufficient biodiversity** to **support** the fox and hawk populations
  - The fox population can still depend on the rabbit and frog populations for food
  - The hawk population can still depend on the frog and sparrow populations for food

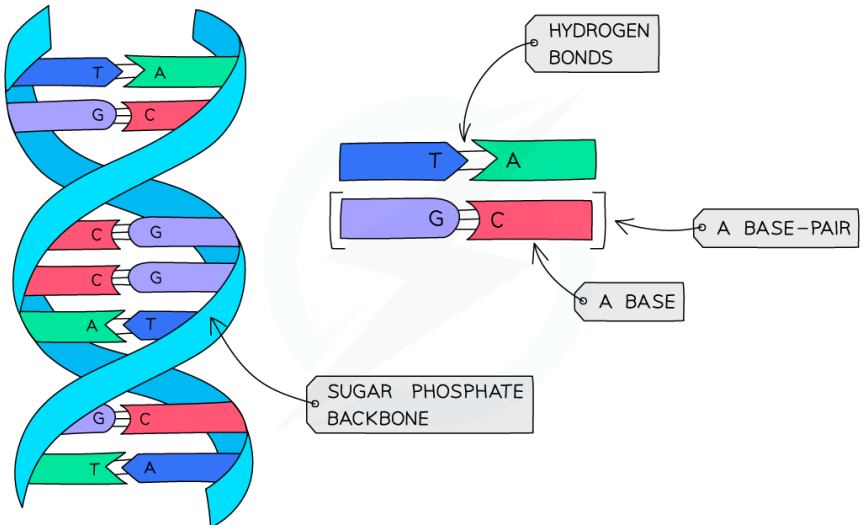






Family Trees

- Family tree diagrams are usually used to trace the **pattern of inheritance** of a specific characteristic (usually a disease) **through generations of a family**
- This can be used to work out the probability that someone in the family will inherit the genetic disorder



Science Personal Learning Checklists

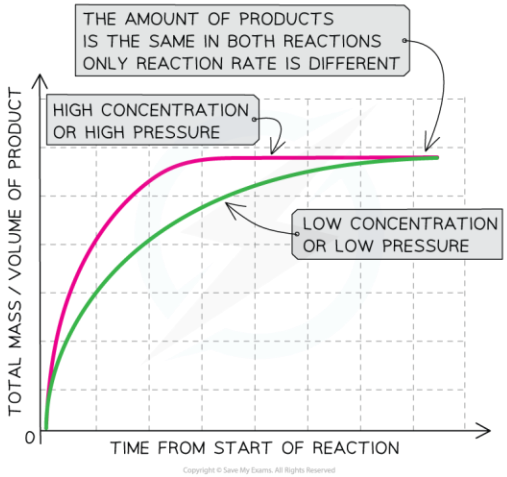
Rates and equilibrium	S	O	R	T
Recall the 5 factors that can affect the rate of reaction				
Use collision theory to explain how each factor changes the rate:				
• Temperature				
• Concentration				
• Pressure				
• Surface area				
• Catalyst				
Calculate the mean rate Rate=quantity of product/time *OR* Rate=quantity of reactant/ time				
Accurately plot points on a graph with a line (curve)of best fit				
Describe rate graphs in three sections				
Explain rate graphs in three sections				
HIGHER ONLY: Calculate the gradient using a tangent to measure rate a specific point				
Required practical activity 5- *investigate how **changes in concentration affect the rates of reactions** by a method involving measuring the **volume of a gas** produced*				
Required practical activity 5- *investigate how **changes in concentration affect the rates of reactions** by a method involving a **change in colour or turbidity**. Disappearing cross*				
The affect of catalyst on energy profiles				
Recognise and recall the symbol for a reversible reaction				
Describe what the term equilibrium means				
HIGHER ONLY: Recall and explain the factors that can affect the equilibrium of a reversible reaction. Link this to yield, rate and cost:				
• Concentration				
• Temperature				
• Pressure				

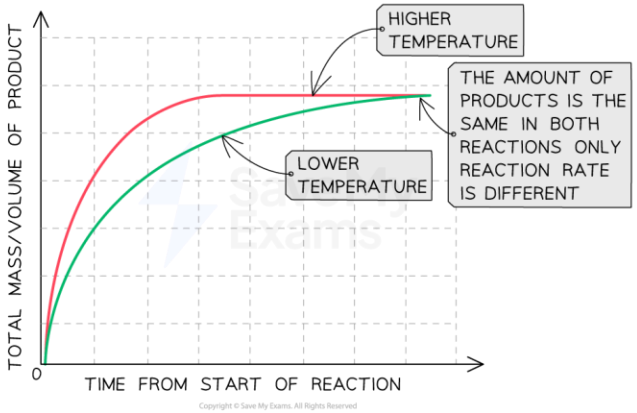
Chemical Analysis	S	O	R	T
Give scientific definition for pure and impure				
Describe the effect of impurities on melting and boiling point				
Interpret heating curves or cooling curves				
Describe what a formulation is				
Give examples of formulations				
Identify stationary phase and mobile phase				
Required practical 6 - *investigate how paper **chromatography** can be used to separate and tell the difference between coloured substances. **Calculate Rf values***				
Interpret chromatograms to identify unknowns				
Calculate Rf value Rf = sample distance/ solvent distance				
Identify common mistakes during chromatography				
Describe the test and recall the positive result for:				
• Hydrogen				
• Carbon dioxide				
• Oxygen				
• Chlorine				

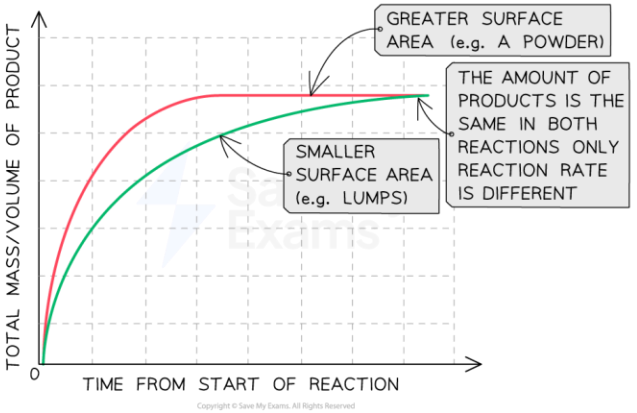
Key vocabulary

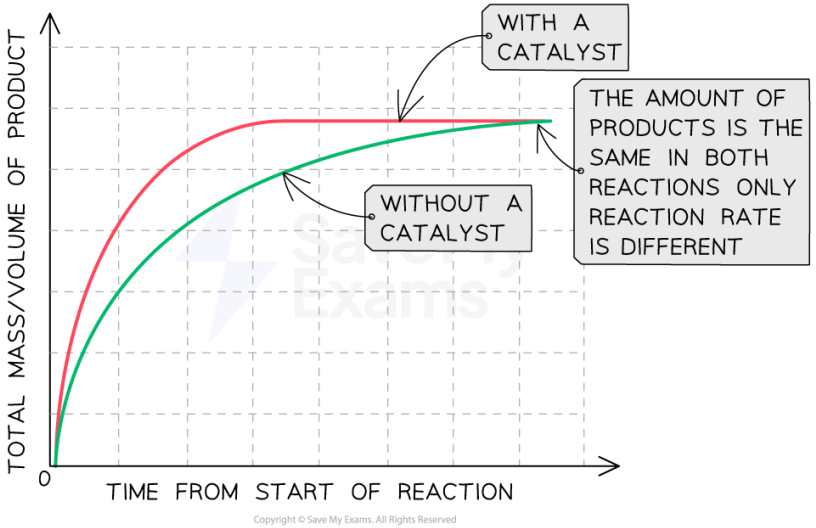
- Collison
- Activation energy
- Particles
- Catalysts
- Gradient
- Tangent
- Equilibrium
- Yield
- Rate
- Pure
- Impure
- Mixture
- Formulation
- Solvent
- Chromatogram
- Rf value
- Gas tests

Science Knowledge Organiser





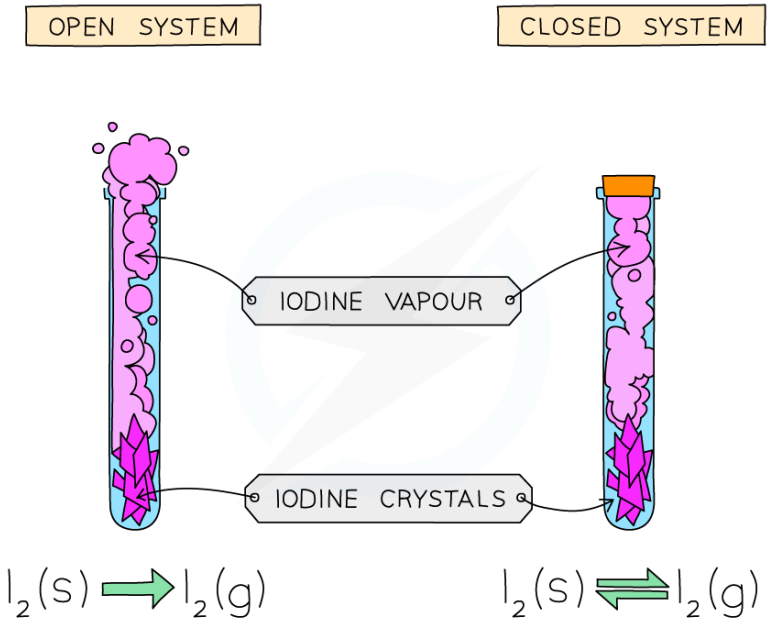




- Compared to a reaction without a catalyst, the line graph for the same reaction with a catalyst:
  - Has a steeper gradient at the start
  - Becomes horizontal sooner
  - Forms the same amount of product

- This shows that **the addition of a catalyst increases the rate of reaction**

Science Knowledge Organiser



Reversible reaction example

- Heating ammonium chloride produces ammonia and hydrogen chloride gases
  - This is an endothermic process as energy is provided for the reaction

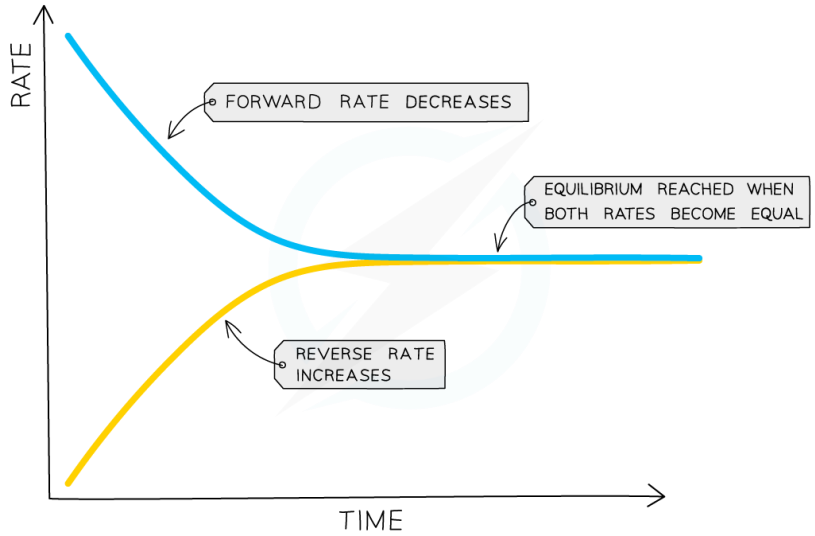
$$NH_4Cl\ (s) \rightarrow NH_3\ (g) + HCl\ (g)$$

- As the hot gases cool down they recombine to form solid ammonium chloride
  - This is an exothermic process

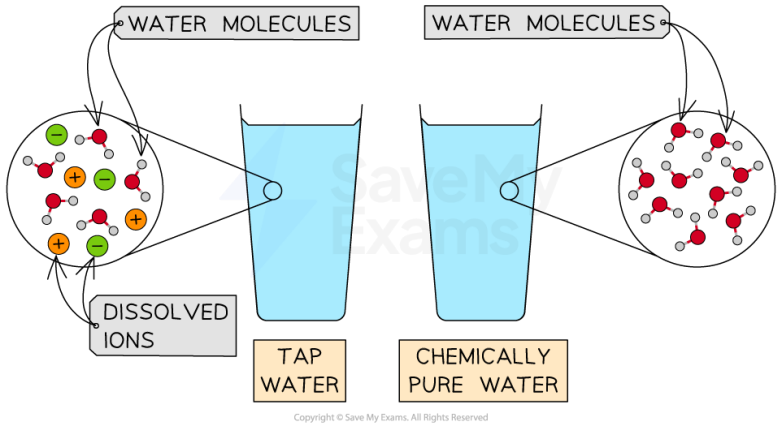
$$NH_3\ (g) + HCl\ (g) \rightarrow NH_4Cl\ (s)$$

- So, the reversible reaction is represented like this:

$$NH_4Cl\ (s) \rightleftharpoons NH_3\ (g) + HCl\ (g)$$



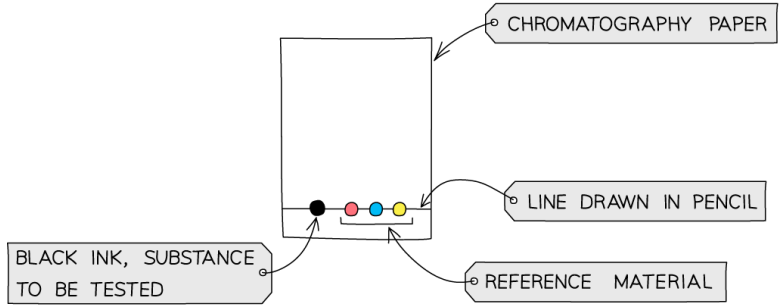
Science Knowledge Organiser



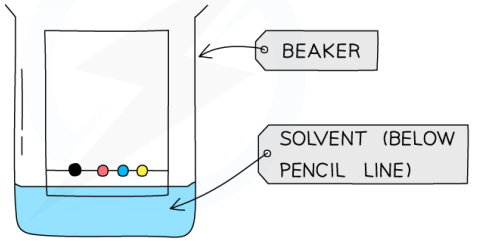
How can purity be distinguished?

- Pure substances melt and boil at **specific** and **sharp** temperatures
  - E.g. pure water has a boiling point of 100 °C and a melting point of 0 °C
- Impure substances have a **range** of melting and boiling points as they consist of **different** substances
- Generally, impure substances have **lower** melting points and **higher** boiling points than the pure substance
- Melting and boiling point data can therefore be used to distinguish pure substances from mixtures
- Melting point analysis is routinely used to assess the **purity of drugs**
- This is done using a melting point apparatus which allows you to slowly heat a small amount of the sample, making it easier to observe the **exact** melting point
- This is then compared to data tables
- The closer the measured value is to the actual melting or boiling point then the purer the sample is
- Measuring purity is also important in **foodstuffs**

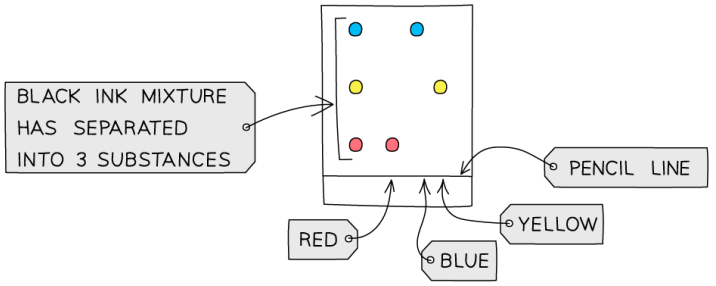
1 SET UP CHROMATOGRAPHY PAPER AS SHOWN



2 LOWER PAPER INTO A BEAKER WITH APPROPRIATE SOLVENT. WAIT FOR SOLVENT TO TRAVEL UP THE PAPER.



3 ANALYSE CHROMATOGRAM



Science Personal Learning Checklists

Car Safety & Momentum	S	O	R	T
Stopping Distances Define stopping, thinking & braking distances. Calculations & interpreting stopping distance graphs. How speed affects thinking, braking & stopping distance. Recall & apply: *stopping distance = thinking distance + braking distance*				
Reaction Times Recall average human reaction time (0.2 – 0.9s) How to test human reaction times with Ruler-Drop test. Calculate using $v2 - u2 = 2\,a\,s$ & $a = \Delta v / t$				
Braking & Energy Transfer Braking & Friction, KE to Thermal transfer.				
Higher: estimate braking force using $v2 - u2 = 2\,a\,s$ & $F = m \times a$				
Car Safety & Momentum	**S**	**O**	**R**	**T**
Higher: Momentum Describe & explain events (eg collisions) in terms of momentum. Conservation of Momentum definition & calculations. Recall & apply: $p = m \times v$				
TRIPLE Higher: Changes in Momentum Safety & rate of change of momentum. How seat belts, air bags, bike helmets & crash mats decrease the force of impact by increasing the time over which their momentum changes. Apply only: $F = m \times \Delta v / \Delta t$ *Derived from* $F = ma$ & $a = \Delta v / t$				

Space Physics (Triple only)	S	O	R	T
The solar system Recall that our Solar System consists of the Sun, eight planets and their natural satellites; dwarf planets; asteroids and comets				
Orbits State that gravity is the force which allows planets and satellites to maintain circular orbits Explain how for a circular orbit: the object has a constant speed but changing velocity				
Evolution of stars Describe the evolution of stars of similar mass to the sun through the following stages: nebula, main sequence star, red giant, white dwarf Describe the evolution of stars with a mass larger than the Sun				
Red shift Describe that if a wave source is moving relative to an observer there will be a change in the observed frequency and wavelength Explain that the red-shift of light from galaxies means that they are receding Explain that the change of each galaxy's speed with distance is evidence of an expanding universe				
Origins of the universe **1.State** the big bang theory that the Universe began from a very small region that was extremely hot and dense and exploded **2.Describe** evidence supporting the Big Bang Theory, limited to redshift only. 3.State that recent observations suggest the expansion of the Universe is accelerating				

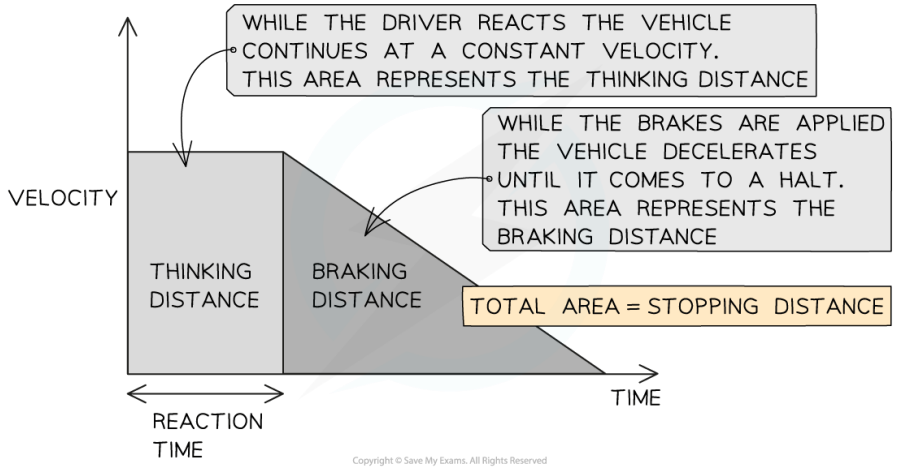
Waves: Property of waves	S	O	R	T
1. Waves basics 1.Describe how waves transfer energy & information but not matter. 2.Describe wave motion in terms of amplitude, wavelength, frequency & period. 3.Describe the differences between transverse & longitudinal waves & state examples of each.				
2. Calculating wave speed Recall and apply the equation: wave speed = frequency x wavelength				
3. Required Practical: Investigating wave speed *Make observations & appropriate measurements to identify the suitability of apparatus to measure the frequency, wavelength & speed of waves:* *a) in a liquid (ripple tank)* *b) in a solid (string)* *c) in a gas (air)*				
4. Reflection Describe the effects of reflection, transmission & absorption of waves at material interfaces; law of reflection; ray diagrams.				

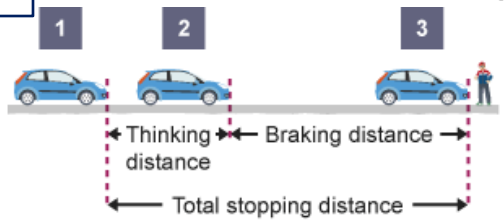
Waves: Property of waves	S	O	R	T
5. Required Practical: Investigating reflection (Triple) *Construct ray diagrams to illustrate the reflection of a wave at a surface. Use a range of objects to reflect ray (showing specular & diffuse reflection).*				
6. Refraction Construct ray diagrams to illustrate the refraction of a wave at a surface (eg air to glass, & glass to air).				
7. Required Practical: Investigating refraction (Triple) *Experimentally compare refraction angles when ray travels from air to glass, & glass to air, & show what happens when incident ray is increased/decreased.* *Higher:* Describe and construct wave front diagrams showing waves traveling through a boundary.				

Science Knowledge Organiser

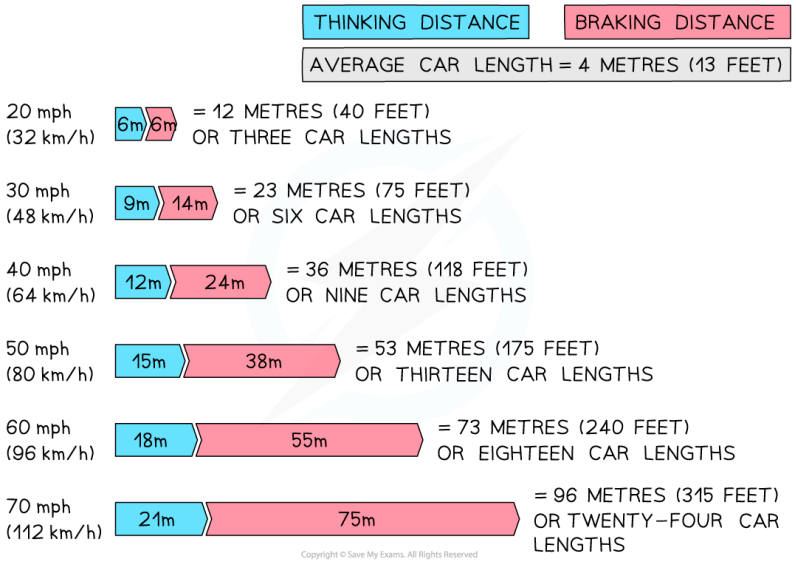
- **Stopping distance = Thinking distance + Braking distance**

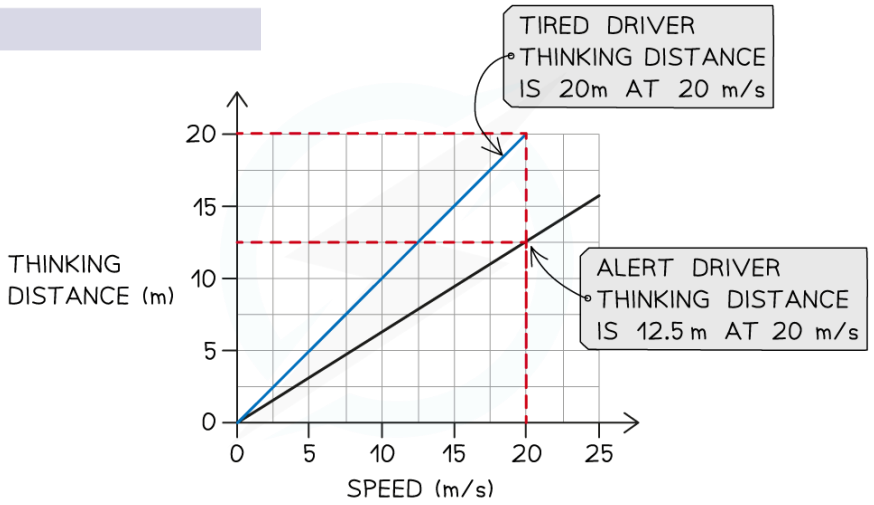
- **Thinking distance** = the distance travelled in the time it takes the driver to react (reaction time) in metres (m)
- **Braking distance** = the distance travelled under the braking force in metres (m)
- **Stopping distance** = the sum of the thinking distance and braking distance, in metres (m)





1. The driver sees an obstruction
2. The driver applies the brakes
3. The car stops

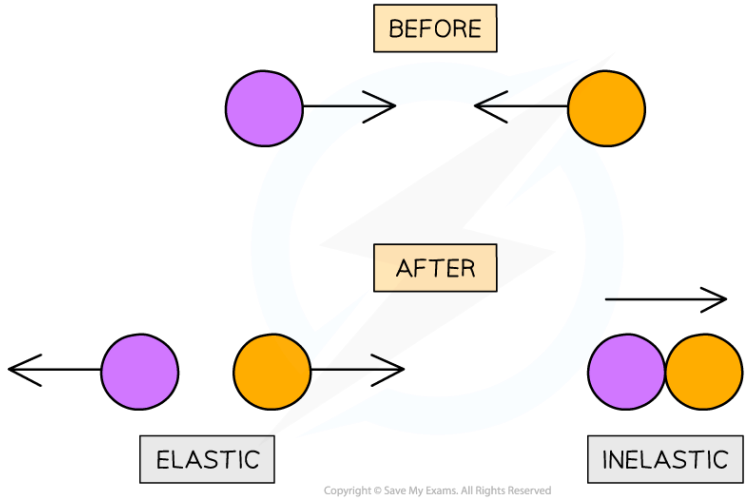


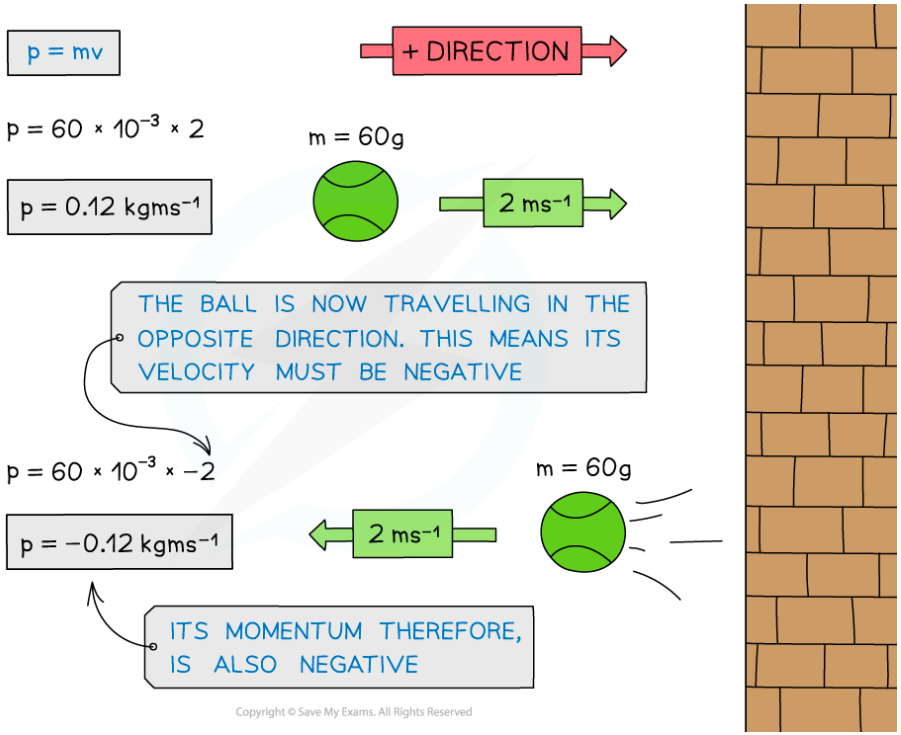


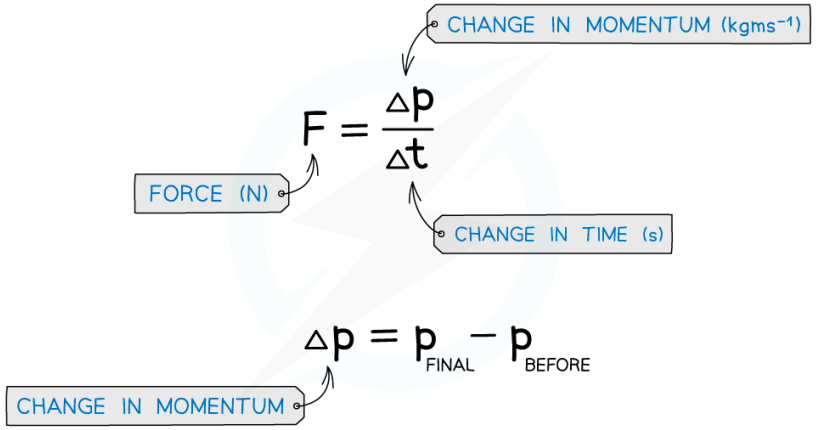
Science Knowledge Organiser

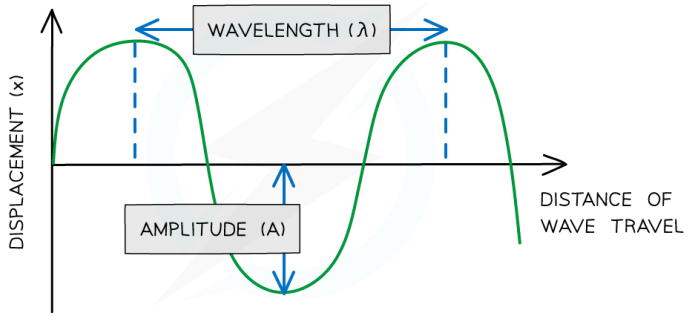
A moving object has **momentum** which is defined by the equation:

$$p = mv$$



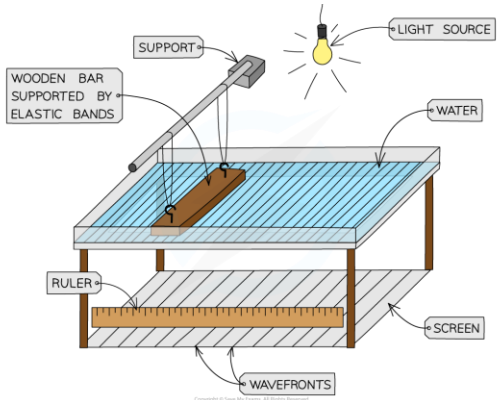


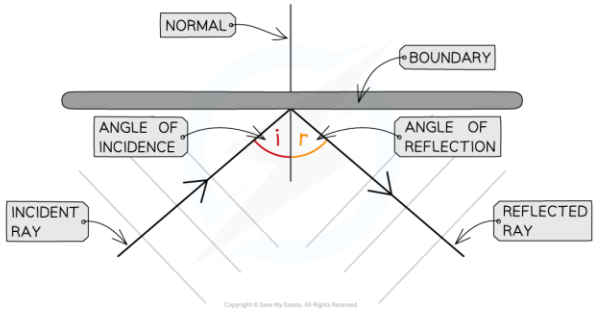


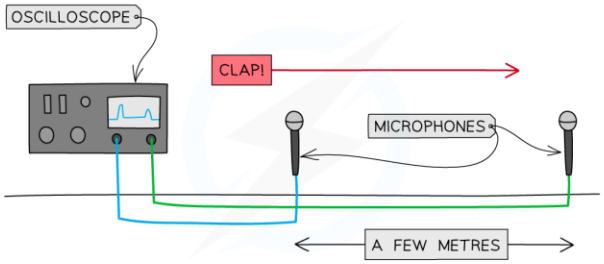


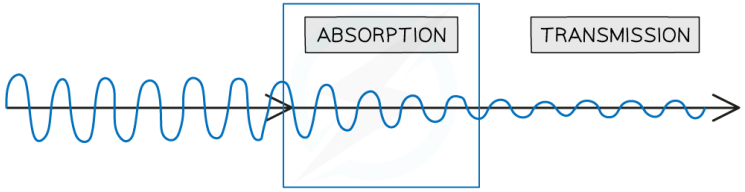
WAVE SPEED = FREQUENCY × WAVELENGTH

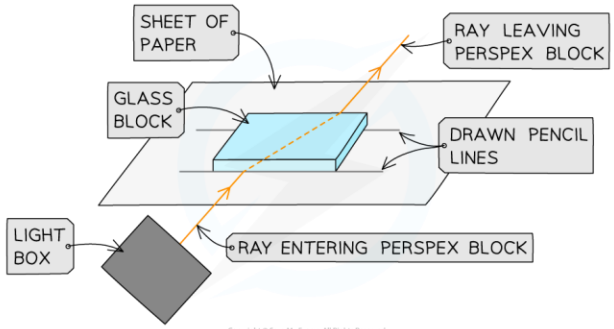
$$v = f \times \lambda$$

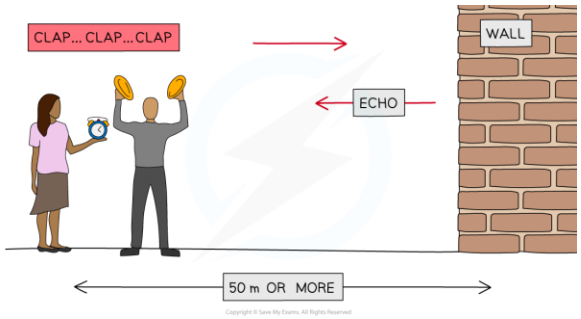


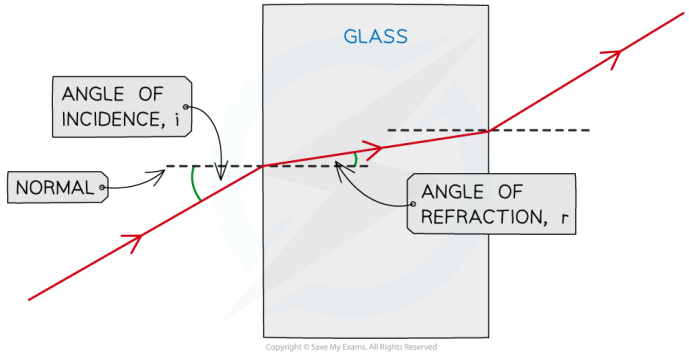












GCSE Sociology Knowledge Organiser
Sociological approaches and methods

Key introductory terms

Sociology	The study of society. Sociologists look at a range of factors in someone's social world.
Society	A social grouping that shares the same geographical territory and has the same political authority and expectations.
Culture	The whole way of life of a group of people in society e.g. clothes, food, music.
Norms	These define appropriate and expected behaviour in different certain settings e.g. classroom, cinema, restaurant.
Values	Ideas and beliefs that people have about what is desirable and worth striving for e.g. privacy & respect
Socialisation	Learning the norms and values of your culture and society.
Primary socialisation	This takes place in early childhood and is where we learn basic behaviours and skills we need. Family are responsible.
Secondary socialisation	This takes place in later childhood and beyond, learn norms, values and culture. Agencies include education and media.
Nature	The idea that behaviour and characteristics are innate (we are born with them) and due to biology.
Nurture	The idea that behaviour and characteristics are learnt from our environment (sociologists believe this)
Social structures	These form society's framework and set limits and guide behaviour e.g. family, class.
Social processes	The ways that humans are affected by their interactions with others in society e.g. racism.
Social issues	These form society's framework and set limits and guide behaviour e.g. family, class.
Status	A person's social standing or position in society. This can be affected by gender, age, class etc.

Functionalist approach

Key sociologist: Durkheim
✳Society is positive and is in harmony
✳There is value consensus – everyone agrees on what is important
✳Society is like a human body, we need all parts of it to be able to function
✳Agencies such as family, education and crime all help to keep society running smoothly and these are positive
✳No group in society has more power than another group
But… Functionalists are accused of viewing society too positively.

Marxist approach

Key sociologist: Karl Marx
✳Society is negative and is based on conflict
✳Capitalism creates a divide between two social classes
✳The ruling class (bourgeoisie) own the businesses and exploit the working class (proletariat) for profit
✳Family, education, crime etc. all work to keep the class divide and benefit the ruling class
✳The working class do not realise they are being exploited
✳The only way to overcome this inequality is a revolution (and society becoming communist)

Feminist approach

✳Society is negative and is based on conflict
✳Society is divided by gender and is based on patriarchy (male domination and power)
✳Men have power and dominance in society and women are oppressed
✳Family, education, crime etc. all work to keep the gender divide and exploit women
✳For example, women may be victims of domestic abuse and may be taught gender roles that limit their opportunities in society

Weber's approach

✳People's ideas, values and skills have more of an influence on their position in society than class and money
✳Status (someone's social position) is not always linked to their class/money
✳E.g. some people have high status but do not have a lot of money (junior doctors) whereas some people may have low status but lots of money (lottery winners)

Interactionist approach

✳Society does not influence everyone in the same way
✳Everyone's experiences are different, you can't generalise about behaviour
✳People can be labelled as something (e.g. clever, naughty) which can affect how they see themselves
✳People might accept and live up to the label through a self-fulfilling prophecy

New Right approach

✳Society should be based on traditional values such as marriage
✳People should not be reliant on welfare benefits as this can create an underclass
✳Nuclear families are the best type (with a married mum and dad) and lone-parent families can cause issues

Consensus vs. conflict theories

Consensus theories
✳These theories believe society is based on consensus (agreement) and is in harmony
✳Everyone shares the same norms and values and no one group has more power than another
✳E.g. functionalism
Conflict theories
✳These theories believe society is based on conflict (disagreement) and is divided
✳People in society have different norms/beliefs/values
✳Some groups have more power than others
✳E.g. feminism, Marxism

Key methods terms

Aim	A general statement about what a sociologist expects to find out in research
Hypothesis	A prediction about what the sociologist expects they will find in research
Pilot study	A small test-run of a study which is carried out before the main study to check for any problems (e.g. equipment)
Sampling	How participants are chosen to take part in a study (e.g. volunteer, opportunity)
Primary data	Data which is collected first hand by the researchers (e.g. using a questionnaire or interview)
Secondary data	Data that already exists and is used by the researcher (e.g. official statistics, letters)
Quantitativ e data	Data which IS in the form of numbers
Qualitative data	Data which is NOT in the form of numbers and tends to be visual or in letters (e.g. diaries, photographs)
Validity	The accuracy of the findings – how truthful the data is.
Reliability	How consistent the findings are. If we repeated the study, would we find the same results?

Sampling methods

Random – all participants have an equal chance of being chosen (e.g. names out of hat)
✓Less biased and likely to be more representative
✕May not be fully representative – could choose all males
Volunteer – participants choose/self-select to take part (e.g. responding to an advert)
✓Easy to gain a sample, less likely to drop out
✕May not be representative – only certain people will agree
Opportunity – participants who are available are chosen
✓Easy to gain a sample ✕ may not be representative
Stratified– participants chosen according to % in the population
✓Most representative ✕ difficult for the researcher to do

Primary research methods

Method	Advantages	Disadvantages
Questionnaires	✓ Participants are likely to be honest as anonymous ✓ Can be given to a large sample so more representative	✕Participants may not understand the questions ✕May not be honest as want to appear desirable
Structured interviews (set questions)	✓ Can compare responses easily between participants ✓ Less likely to be biased as set questions	✕May not get full detail or gain a deep understanding ✕Cannot ask additional questions
Unstructured interviews (no set questions)	✓ Can get full detail and a deep understanding ✓ You can build rapport/relationship so may be more honest	✕May not get full detail or gain a deep understanding ✕Cannot ask additional questions
Group interviews	✓ Can gain a variety of opinions ✓ May be more honest as have group support	✕Some participants might take over the interview ✕Participants might be embarrassed to be honest
Participant observation (researcher joins group)	✓ May understand behaviour more as joining in ✓ Can ask questions to help with research	✕Could be biased as too involved ✕Difficult to note behaviour so may not be accurate
Non-participant observation (watches from a distance)	✓ Less likely to be biased as not involved ✓ Easier to note behaviour so more likely to be accurate	✕May not get full understanding of behaviour as not involved in the group
Longitudinal study (follows a group over time)	✓ Can look at the influence of different factors over time ✓ Can gain detailed information of the group you study	✕Participants may drop out of the study ✕Sample is likely to be small so not representative

Secondary sources of data

Method	Advantages	Disadvantages
Official statistics (quantitative)	✓ Often large sample sizes – more representative ✓ Easy to analyse and compare over time as quantitative ✓ Likely to be accurate as collected by the government	✕May not give reasons for behaviour (just trends) ✕May not include all behaviours e.g. crime statistics may ignore the dark figure
Documents (qualitative) e.g. letters, diaries, school reports	✓ Lots of detailed data as qualitative ✓ Can find reasons behind behaviour	✕May be small sample sizes and not representative ✕May be time-consuming to analyse ✕Could be biased and not valid

Triangulation and mixed methods

Where a sociologist uses more than one method to find out lots of information about a topic e.g. using a questionnaire, interview and observation.
Is used to:
Gain more data on a topic
Check the validity/accuracy of the data
✕But, the data may be difficult compare as it is collected using different methods.

NEWQUAY TRETHERRAS

GCSE Sociology Knowledge Organiser: Education

Key terms

Comprehensive school - A type of school introduced in 1965 where all students are educated together regardless of ability.

Correspondence principle - schools reflect the workplace and through learning routine and obedience, children are prepared to be exploited in capitalist life.

Cultural capital - The skills and knowledge middle class parents have that they can use to give their children an advantage in the education system.

Deschooling - An alternative form of education proposed by Illich where formal schools are replaced by other methods of education such as home schooling.

Ethnocentric curriculum - A curriculum (things that are taught) that focuses on a particular ethnicity

Formal curriculum - The subjects and topics that are directly taught in schools

Further education - Education after compulsory level

Gendered curriculum - How stereotypes and expectations about gender are promoted through both the formal and hidden curriculum.

Hiddencurriculum - Things that are indirectly learnt in school (in and outside on lessons) e.g. competition.

Labelling- Attaching a name or trait to a person or group e.g. smart. This is often based on a stereotype

Marketisation - 1988 act and aimed to bring competition and choice into education

Material deprivation - When students lack the money and the things that money can buy to succeed

Meritocracy - The functionalist view that all students have an equal chance in education and success is based on ability and effort

Selective schools - Where students are selected for a school based on certain criteria such as academic ability or religion

Social capital - The networks of relationships/contacts that middle class parents have to help pupils succeed

Social cohesion - When individuals in society are brought together and share the same norms and values.

Social mobility - Movement up the social ladder (e.g. working class to middle class

Vocationalism - Education focused on more practical or technical skills aimed at a certain job or career

Sociological views of Education

Functionalist	Education is positive as it prepares individuals for work and creates a stable society All pupils have an equal chance to succeed as education is based on meritocracy Durkheim – Education transmits shared norms and values, promoting social cohesion. Schools act like a 'mini society' encouraging cooperation. Parsons – Education acts as a 'bridge' between family and society, children are judged by 'universalistic standards' and have an equal chance to succeed. × Education may not benefit all students equally (due to class, gender)
Marxist	Education is negative as it helps to maintain the class divide and benefits the middle classes who have a better chance of succeeding. Education prepares working class pupils for low paid jobs and to accept capitalism. Bowles and Gintis – 'correspondence principle' – school corresponds to (reflects) the workplace through teaching obedience, accepting boredom and to be motivated by external rewards (qualifications or pay) × Could be outdated as pupils are prepared for a range of jobs today
Feminist	Education is negative as it helps to maintain the gender divide and transmits patriarchal values and ideas. Females learn to adopt the stereotypical 'expressive'/housewife role in society through gender stereotypes shown in textbooks, the majority of headteachers being male and being encouraged to take 'softer' subjects which could lead to lower paid jobs than males. × Could be outdated as girls are encouraged to take 'STEM' subjects and more females are becoming headteachers.

What is taught in schools

Formal/official curriculum – Things that are directly taught in schools (e.g. English/maths) and this is mainly through the National Curriculum in England	Hidden curriculum – Things that are indirectly taught in education (rules, routines, regulations) and competition, hierarchy and gender roles

Functions of education

Serving the economy Education provides qualifications/skills which prepares pupils for jobs. This helps the economy as essential roles are filled in society.	Social mobility Education helps pupils move up the social class ladder through gaining qualifications and skills (through work and effort)	Social cohesion Education teaches shared norms and 'British' values which unites society and brings everyone together with shared beliefs.	Secondary socialisation Education is an agency of secondary socialisation teaching norms, values, beliefs, ideas through the formal curriculum and hidden curriculum.

Types of schools

State	Funded by the government (state) Free to attended (admissions by catchment) Teach the National Curriculum
Independent / private	Not funded by the government (state) Parents usually pay for their children to attend Do not have to teach the National Curriculum Usually have smaller class sizes and improved facilities / opportunities
Grammar	These select pupils based on academic ability Pupils must pass the 11+ to attend High ability pupils can be 'challenged' and 'stretched' in these schools
Faith	These select students if they are of a certain faith (e.g. Christian, Catholic, Muslim) Religious beliefs are promoted in school life and focused on in RE
Academies	These receive funding directly from the government (rather than the local authority) and have more control over how to spend it Do not have to follow the National Curriculum and may have different term dates
Free school	These can be set up by charities, universities, communities etc. and have control over how to spend funding, set term dates etc. Do not have to follow the National Curriculum and are 'all ability' schools
Special schools	These educate children with Special Educational Needs (SEN) and may follow a different curriculum Pupils can receive more one-one support and the use of special facilities/equipment

Alternatives to schooling

Deschooling – Illich believed schools should be replaced with alternative forms of education (e.g. homeschooling) where their learning is more personalised and less likely to promote capitalism

Homeschooling – Where children are educated at home by parents/tutors etc. rather than in school. They must receive a full time education and are inspected by the local authority. Gives children more personalised one-one support and less chance of behaviour issues.

GCSE Sociology Knowledge Organiser Education

Key studies

Durkheim (functionalist)

Major function of education is the transmission of society's norms and values. Education (especially history) provides the link between the individual and society. School enables children learn to cooperate with those who are neither their family or their friends so they can function in society. Rules should be strictly enforced to promote self-discipline and for society to run smoothly.

Parsons (functionalist)

School acts as a bridge between the family and society, taking over as the main agency of socialisation. Schools are based on meritocracy – ability and effort, not money. In school an individual is judged on universalistic standards. Schools socialise children into the basic values of the wider society, maintaining value consensus.

Bowles and Gintis (Marxist)

Correspondence principle – Schools reflect the workplace, students are prepared for work e.g accepting authority (hierarchy), this means that they don't question their position. They do not believe that schools are meritocratic. Class determines achievement.

Willis (Marxist)

Conducted a participant observation of boys in a Midlands secondary school. Working class boys joined a counter school subculture where they avoided attending lessons and resisted any attempt to control their behaviour. They were not obedient. Willis concludes that this prepared them for the kinds of jobs that they would have in the future. These would be unskilled or semi-skilled and quite repetitive.

Ball (Interactionist)

Conducted a participant observation at Beachside Comprehensive to look at the effect of setting / teacher expectations on achievement.
Pupils in lower sets were more likely to be working class, were not given as much support, were labelled and more likely to be disruptive as a result.

Ball and Gerwitz(Interactionist)

They used a range of methods to look at the effect of marketisation and parental choice.
They found that increased parental choice and league tables led to pressure for schools to introduce setting and streaming and to focus on higher ability students to improve their exam results. Middle class parents were better able to use their choices to get their children into higher achieving schools.

Factors affecting achievement

In school factors	Out of school factors
<u>Setting and streaming</u> Setting– pupils are in different sets for different subjects, streaming – in the same ability set for all subjects Improves achievement – pupils in higher sets could be challenged Could decrease achievement in lower sets	<u>Parental values</u> 1) Parents may value education and see it as important so encourage their child to work hard, get them a tutor etc. 2) Parents may not value education and don't see it as important so don't encourage their children
<u>Mixed ability teaching</u> The opposite to setting/streaming where all abilities are taught together Improves achievement – higher ability could help lower ability but could mean they are not 'challenged' or are held back	<u>Cultural deprivation</u> Children may not learn the correct norms and values to succeed in education (could affect working class children)
<u>Teacher expectations/labelling</u> Teachers could label pupils because of stereotypes which could lead to a self-fulfilling prophecy Improves achievement – if pupils accept positive label, could decrease achievement if pupils accept negative label	<u>Material deprivation</u> Parents may 'lack money and the things that money can buy' so cannot afford resources for their child to succeed (e.g. revision books, a computer) or may not have a quiet place for them to study
<u>Subcultures / peer groups</u> Pupils may join subcultures who have their own set of norms and values Improves achievement – joining 'pro-school' subcultures which value education, working hard (more likely with females), could decrease achievement if join 'anti/counter school subcultures who don't value education (more likely with males)	

Ethnicity and achievement

Trends	Chinese students are the highest performing ethnic group, black pupils and gypsy/Roma pupils are among the lowest performing (also white British)
Ethnicity is important	Material deprivation – some ethnic groups are more likely to be living in low income households so pupils could lack money to buy resources and succeed Cultural deprivation – some cultures may not value education as highly as others (such as Chinese families) and so do not encourage/push pupils Ethnocentric curriculum – the national curriculum may only be focused on White British culture and show negative aspects of other cultures (e.g. in history) – could decrease motivation Teacher labelling – teachers may label some ethnicities - self-fulfilling prophecy
Not important	Higher % of ethnic minorities going to University Worst performing group = white, working class boys

Class and achievement

Trends	Working class pupils achieve less 5 A*C grades than middle class pupils Achievement gap between FSM and non-FSM Working class less likely to go to University
Class is important	Material deprivation – w/c may lack resources to study Cultural deprivation/parental values – w/c parents may not value education as highly W/c parents may lack cultural capital (knowledge/skills) and social capital (social networks) to help their children succeed W/c pupils more likely to join counter school subcultures (Willis)
Class is not important	Functionalism – education is based on meritocracy (ability and effort not money) A higher % of w/c pupils are going to Uni Other factors (gender, ethnicity) more important

Gender and achievement

Trends	Girls are more likely to achieve 5 A*-C than boys, girls outperform boys at A Level in most subjects
Gender is important	Gender socialisation – girls may be socialised to be more hard-working and obedient so are better suited to achieve in school (boys may be more boisterous and less hard-working) Teacher expectations – girls may be labelled as bright but boys could be labelled as lazy or trouble makers Subcultures – girls more likely to join pro-school whereas boys more likely to join anti-school
Gender is not important	Functionalism – all pupils have an equal chance Marxists – class is more important in achievement The gender gap in achievement could be narrowing

Policies in education

To improve standards – Ofsted, league tables, academies
To increase competition – Marketisation, league tables. Ofsted
To improve opportunities for low income pupils – EMA, longer compulsory education
To make education fairer – comprehensive system (1965) which replaced the tripartite system)

GCSE Sociology Knowledge Organiser
Families and Households

Key terms

Breadwinner - The person in the family who earns the money, usually the male.
Cereal packet family - The 'ideal' nuclear family shown in the media and advertising.
Cohabitation - When two partners live together in a relationship without being married.
Commune - Self-contained and self-supporting communities where childcare, property etc. are shared.
Conjugal roles - The domestic roles of married partners- who does what in the home.
Domestic division of labour - The division of tasks such as housework and childcare in the family.
Double shift - When women are in full time employment and be responsible for household tasks.
Expressive role - Traditionally a woman's role in the family according to Parsons, where they look after the emotional needs of the family.
Extended family - A family which contains members beyond the nuclear
Family diversity - This means there are a range of families in society today e.g. lone-parent, reconstituted, same-sex.
Household - One or more people who live at the same address but may not related e.g. university students.
Instrumental role - Traditionally the male's role within the family to be the breadwinner and provide financially for the family.
Lone-parent family - A family of one parent and their dependent children Usually headed by the mother.
Neo-conventional family - A typical nuclear family but where both parents go to work.
Nuclear family - A family of one man and one woman with their dependent children. **Patriarchy** - Male power and dominance over women.
Reconstituted family - A family of one man and one woman with children from previous relationships.
Secularisation - A decline in religious belief and activity.
Stratified diffusion - How the roles adopted by those at the top of the social hierarchy (richer families) filters down to the rest of society.
Symmetrical family - Families which are equal on both sides where partners have joint roles

Sociological views of families

Functionalist	The family is a key social structure as it performs several essential functions for individuals and society. Murdock argue it performs four vital functions: 1. Sexual Function: regulates sexual behaviour that is approved by society, prevents breakdown and maintains stability 2. Reproductive function: creates the next generation to fill roles needed 3. Economic function: providing shelter, food & clothes, economic cooperation 4. Socialisation function: provides primary socialisation and learning of shared norms and values Parsons – the family performs two important functions today 1. Primary socialisation 2. Stabilisation of adult personalities (warm bath theory) × Functionalists ignore the dark side of the family and the impact of diversity
Marxist	The family helps to maintain the class divide and benefits capitalism. This happens in three main ways: 1. Inheritance: money and wealth is passed down in richer families through inheritance and is not shared with the working classes 2. Consumerism – families are targeted as consumers who buy products, children use 'pester power', profits go to the ruling class 3. Socialisation – children learn to accept hierarchy and that someone is in charge meaning they accept it in the workplace and don't revolt Zaretsky – The family provides an 'illusion' that society is fair and this maintains capitalism as it prevents a revolution × Marxists ignore positive functions and that not all families benefit capitalism
Feminist	The family helps to maintain the gender divide and promotes patriarchy in society (male dominance and power). This happens through: 1. Men acting as the breadwinner in the family (they usually earn more) so have more control and power 2. Women often have a double shift or triple shift and take on the majority of unpaid housework 3. Domestic abuse from men in the family 4. Gender socialisation in families teaching stereotypical roles for boys and girls × Feminists ignore that some women may enjoy/choose the housewife role and that positive changes have been made
New Right	Nuclear families are the ideal family type and are the best for members and society because: • They promote traditional values such as marriage • Children grow up with two role models (for better socialisation) • They are more likely to be financially stable and less likely to be reliant on benefits (and become part of the underclass) They see lone-parent and same-sex families as causing problems for society

Family diversity

	Increase or decrease	Reasons why
Nuclear	↓	Secularisation Increase in divorce Changing position of women
Reconstituted	↑	Increase in divorce Changing attitudes Greater individualism
Lone parent	↑	Increase in divorce Changing position of women Changing attiudes
Same sex	↑	Changing laws (gay marriage is legalised) Changing atittudes
Beanpole	↑	Increase in life expectancy Decrease in the birth rate
Neo-conventional	↑	Changes in law (equal pay) Changing attitudes Changing position of women
Cohabitating couple	↑	Changing attitudes Changing position of women Increase in divorce
One person household	↑	Increase in divorce Longer life expectancy Greater individualism

Alternatives to families

Living alone (increasing among younger and older individuals)
Living in a commune (shared property, resources, childcare etc.
An example: Living in a kibbutz

GCSE Sociology Knowledge Organiser
Families and Households

Key studies

Rapoport and Rapoport (functionalist)

Families are changing, there is increasing diversity
Five different aspects of family diversity: organisational (eg internal divisions of domestic labour), cultural (beliefs and values), class (eg how the family's position in the social class system affects the availability of resources), life course (stage in the family life cycle) and cohort (historical period).

Parsons (functionalist)

Family has two basic functions which are common to all families in all societies: primary socialisation of children and the stabilisation of adult personalities e.g to give and receive emotional support

Young and Willmott (functionalist)

Large scale social survey (over 2,000 respondents in Greater London and surrounding areas)
Families are more symmetrical with both husband and wife make similar contributions to the running of the household eg shared chores and decisions. More common in working cladss families.
Stage 4 is the 'managing director family'. This is work centred and the wife is responsible for home and children – more common in middle class families

Zaretsky (Marxist)

The family also helps to maintain capitalism in society. He thinks that the family helps to provide an ' illusion' that society is fair and provides a safe haven away from exploitation at work. Women become responsible for personal relationships within the family. This cushions them from capitalism.

Delphy and Leonard (Feminist)

Men benefit the most from the exploitation of women's labour. They believe that the family has a central role in maintaining patriarchy. Women are oppressed because even when wives have paid employment outside the home they still have to carry out household tasks which are not equally shared

Oakley (Feminist)

Segregated conjugal roles adopted by men and women are part of the conventional family also known as the 'cereal' packet' family. This contains married parents and at least one child, the father is the breadwinner and the mother stays at home to look after the house and Children. This type of family may actually exploit women and support patriarchy.

Criticisms of families: isolation, loss of functions, lack of contact, dysfunctions, patriarchy

Changing patterns of marriage

Trends	Reasons	Impacts
First time marriages are decreasing	Secularisation / changing attitudes Changing position of women Increasing cost of marriage	Less married nuclear families More cohabitating couples
Remarriages are increasing	Secularisation / changing attitudes Increase in divorce / changes to divorce laws	More reconstituted families Serial monogamy
Age of first time marriage is increasing	Changing position of women Increasing cost of marriage Changing attitudes	More couples cohabitate before marriage
Increase in same-sex marriages	Changing attitudes Changes in law	

Is marriage still important?

Yes	No
Remarriages are increasing Same sex marriages are increasing Married persons tax allowance was introduced (policies encourage marriage) People still aspire to be married	First time marriages are decreasing Cohabitation is more acceptable Divorce is increasing (suggesting marriage isn't valued) Some couples choose a civil partnership

Changing patterns of divorce

Trends in divorce	42% of marriages end in divorce The divorce rate has increased compared to 30 years ago The divorce rate has declined slightly over the past 10 years but is still high
Reasons for increases in divorce	Changes in law – Divorce reform act (1969) widened the grounds for divorce (to include irretrievable breakdown), waiting time for a divorce decreased from 3-1 years Changing attitudes – More acceptable to divorce Changing position of women – greater financial independence
Sociological views of divorce	Functionalist – divorce can lead to fewer dysfunctional families and greater harmony. Divorce creates jobs to help the economy. Divorce shows people have higher expectations of marriage. Marxist – divorce is more common in working class families due to stress/inequality caused by capitalism, Feminist – divorce can be positive to allow women to escape patriarchal relationships.

Changing relationships

Families over time

Pre-industrial: Extended families, worked as a productive unit, families performed most functions
Industrial: Nuclear families, male took on breadwinner role, government took over functions from families
Contemporary: Family diversity, diversity of roles, smaller families

Gender roles

Wilmott and Young: Families are more symmetrical with shared contributions and equal roles.
Reasons for symmetrical families: changing attitudes, commercialisation of housework.
Stratified diffusion: roles filter from middle to working class (will become less equal)

Are gender roles more equal?

Yes	No
Symmetrical families – joint conjugal roles The New Man Women take part in decision making	Double shift/triple shift The New Man is myth – women still responsible (men cherry pick) for housework/childcare Men still make the most important decisions ¼ women are victims of domestic abuse (evidence of patriarchy)

Parents and children

Relationships in the past: Parents had authority, strict discipline, children 'seen and not heard'
Relationships today: Parents show less discipline, children have more freedom, families are more child-centered
Reasons for changes: women are having less children (families are more child-centered), greater emphasis on children's rights, families more likely to be dual worker
Toxic childhood: children poisoned by junk culture of media and food, leading to poor behaviour and development

Extended families

In pre-industrial era, extended families were important
Extended families may be less important today due to: seeing less of each other (living far away), may only see for special occasions
Extended families may still be important today due to: Grandparents helping with childcare, better technology to keep in contact, still common in some cultures

GCSE Sociology Knowledge Organiser
Crime and Deviance

Key terms

Agencies of social control - The groups in society who control and regulate our behaviour
Anomie - A sense of normlessness where people feel like there are no strict rules (a cause of crime)
Chivalry thesis - The criminal justice system (police, courts) are less harsh on women as they are less likely to be seen as 'bad'
Corporate crime - Crime committed by businesses with the aim of making profit for that business
Crime - An illegal act which is punishable by law
Criminal justice system - The system of police/ courts /prisons to manage offenders and reduce re-offending
Dark figure of crime - All crimes that are not witnessed, reported or recorded by police
Deviance - An act which goes against societies norms but may not be illegal
Deviancy amplification - The process whereby the mass media can exaggerate the significance of a crime or deviance in society
Formal social control - Where behaviour is controlled by official agencies associated with the government
Informal social control - Where our behaviour is controlled by social pressure/agencies such as family
Institutional racism - Where an organisation e.g. police shows racism and discrimination overtly or covertly
Relative deprivation - Where an individual feels as though they are lacking the things that individuals who are similar to them have
Sanctions - The consequences of behaviour which are given by society
Self-report studies - Where individuals report crimes that they have committed themselves in a survey
Status frustration - Where working class males are disappointed with their position in society and cannot achieve well due to education
Strain theory – Where individuals do not have the legitimate means to achieve the goals of society
Subculture - A group of individuals whose norms and values are different from mainstream society
Victim survey - Individuals complete a questionnaire to report crimes that they have been victims of
White collar crime – Crime committed by middle class professionals

Definitions of crime and deviance

Crime - an illegal act which is punishable by law e.g. theft, murder	Deviance - n act which goes against societies norms but may not be illegal e.g. face tattoos

Why is crime and deviance difficult to define?

It varies by place – where the act takes place could mean it's seen as criminal	It varies by time – what is seen as criminal before may not be criminal now	It varies by culture – what is deviant in one culture may not be in another

Statistics on crime and deviance

Police recorded crime	All crimes recorded by the police.
	Advantage – Large scale data, can compare trends over time and between different places **Disadvantage** – Does not include the dark figure of crime, crimes may not be witnessed (e.g. drug taking, domestic violence), reported (due to fear) or recorded by the police (seen as trivial or time wasting) Only 60% of crimes are reported, only 40% of then recorded
Victim surveys	Crime survey for England and Wales (CSEW) - These surveys question people about their experiences of being victims of crime in the past 12 month
	Advantage – Can uncover crimes not reported/recorded by the police, can look at trends in who is likely to be a victim **Disadvantage** – People may not be honest due to fear or may over exaggerate crimes, people may not realise they have been a victim of crime so don't report
Self-report surveys	These surveys question ask people to report any crimes that they have committed themselves in the past 12 months
	Advantage - Can uncover crimes not reported/recorded by the police, can look at trends in who is likely to be a criminal **Disadvantage** - People may not be honest due to fear or may over exaggerate crimes – means statistics might not be accurate

Social control

Formal social control	Informal social control
Agencies associated with the government which enforce formal rules/written laws Examples: The police, courts, prison service, probation Sanctions can include fines, imprisonment	Agencies which enforce informal rules/norms/unwritten rules in society Examples: Family, peers, religion, media Sanctions can include social pressure, approval, disapproval, grounding etc.

Functionalists view social control positively as it maintains social order/cohesion
Marxists view it negatively as it is used by the ruling class to control the working class
Feminists view it negatively as it is used by men to control women

Functionalist theories

Crime is inevitable and universal. It occurs when individuals can't achieve the goals of society.

Durkheim – Crime can be positive for society through – 1) Boundary maintenance 2) Changing society 3) Acts as a warning device 4) Provides jobs

Merton – Crime occurs due to strain – people cannot legally achieve the goals of society due to poor education/opportunities. 5 reactions – conformity, innovation, retreatism, rebellion and ritualism.

Marxist theories

Crime is negative and helps to maintain capitalism/keep the class divide. The ruling class create laws which benefit them and scapegoat the working class
The working classes are targeted by police and so are more likely to appear in crime statistics.
Middle class/white collar crime less likely to be detected.

Feminist theories

Crime is negative and helps to maintain patriarchy in society. Crimes such as domestic violence and sexual crimes are not taken seriously and female victims are not supported.
Female criminals are seen as 'double deviants' as they go against the law and expectations.

Interactionist theories

An act is only seen as criminal/deviant if it is labelled as such by society. Labelling can lead to a self-fulfilling prophecy and criminal becoming a master status.
Individuals can spiral into a 'deviant' career and join deviant/criminal subcultures (Becker)

Subcultural theories

Criminal subcultures involve young males, show behaviour which goes against society's norms and are likely to show anti-social acts.
Cohen – working class boys experience status frustration and join delinquent subcultures to gain status/fight back against society

GCSE Sociology Knowledge Organiser
Crime and deviance

Key studies

Merton (functionalist)

Merton argued that all members of society hold the same values. However, Merton believed that they did not have the same opportunity to realise their shared goals. Strain theory says crime occurs when individuals cannot legally achieve the goals of society. There are 5 reactions to strain, not all are criminal – conformity, innovation, ritualism, retreatism and rebellion.

Cohen (functionalist)

Cohen argues that working class boys hold the same goals as the rest of society, but that because of educational failure and poor employment prospects, they have little or no opportunity to realise those goals. They experience status frustration and join delinquent subcultures where they show vandalism, graffiti, joyriding etc. to gain status in their group.

Becker (interactionist)

An act only becomes seen as criminal/deviant when it is labelled as such. An individual could accept the label through a self-fulfilling prophecy which becomes their master status (what they see as their most important characteristic). They could spiral into a deviant career by joining a criminal or deviant subculture and commit further acts.

Carlen (feminist)

Used unstructured interviews with 39 working class women to understand reasons for crime. They turned to crime because they had less to lose and couldn't conform to the gender deal or the class deal. For example, they were less likely to have stable and happy relationships or well-paid jobs – they were more likely to turn to crime as they had less to lose.

Heidensohn (feminist)

She uses control theory to explain how patriarchy in society means women commit less crime. Women are controlled at home (by husbands), at work (by male bosses) and in public (by the threat or fear of male violence). Girls develop a bedroom culture. They have less opportunity for crime due to more controls being put over their behaviour.

Social class and crime

Trends – Working class are more likely to be convicted offenders / in prison

Reasons	Material and relative deprivation, Inadequate socialisation, Poorer education (strain theory), Status frustration (Cohen)
Why might statistics not be accurate?	Bias within the criminal justice system – working class crimes (blue collar) are targeted more by police than middle class (white collar) White collar crimes (e.g. fraud, tax evasion) are less likely to be detected – they take place in private, may not have a direct victim and are not policed Corporate crimes (e.g. horse meat scandal) are less likely to be detected – may not have a direct victim and can be covered up

Gender and crime

Trends – 94% of the prison population are male, ¾ of convicted offenders are male

Reasons	Gender socialisation (men are socialised to be tough, risk taking) Lack of male role models in society More opportunity for crime / subcultures
Why might statistics not be accurate?	Chivalry thesis – women may be treated more leniently in the CJS, seen as 'sad not bad' so don't appear in statistics Female crime is increasing – women are committing more crime than before Ladette subcultures – women committing typically 'male crime' Carlen – working class women have less to lose by committing crime

Ethnicity and crime

Trends – 13% of the prison population are black vs. 3% in the general population, 9x more likely to be stopped and searched

Reasons	Higher chance of poverty/deprivation, poorer family backgrounds (more lone-parent), more chance of joining criminal subcultures
Why might statistics not be accurate?	Institutional racism / Macpherson Report – police/courts are more likely to target BAME individuals Stop and searches – 9X more likely for black individuals, 3x more likely to be arrested – more likely to appear in crime statistic Chief of Met policed voiced it is still racist, some forces have no BAME officers But… anti-racism training, increased recruitment of BAME officers

Age and crime

Trend – 15-24 year olds most likely to appear in crime statistics
Reasons: Socialisation, opportunity, subcultures, media
But… The police might target young people, crimes may be easier to detect

Treatment of young offenders

Sanctions available for young offenders: fines, referral orders, community sentences, CBOs, custody

Should young offenders be sent to prison/custody?

Yes	No
Protects the public, can access rehabilitation programmes, can act as a deterrent	Prisons may act as universities of crime, 73% reoffend, may join prison gangs

Prison as a punishment

Is prison the best form of punishment?

Yes	No
Functionalists – can rehabilitate offenders, act as a deterrent	Universities of crime, 45% reoffend, not suitable for those with disabilities/mental health issues

Violent crime

Is violent crime an issue in society?

Yes	No
Statistics may not show true extent of violent crime Gun crime/knife crime are increasing Influence of the media in promoting violence	Some statistics suggest violent crime has decreased since the 1990s Anti-violence and anti-gang education introduced into schools

The media and crime

Does the media show crime accurately?

Yes	No
Functionalist view – the media shows a range of views, pluralism, no one group dominates	Marxists – conflict view, agenda setting, media owned by ruling class, scapegoats working class, Exaggerates violent/sexual crimes

How can the media encourage crime?

Copycat crimes e.g. Daniel Bartlam, violence
Deviancy amplification – the media creates moral panics, labelling and a self-fulfilling prophecy e.g. mods&rockers
But… other factors may affect criminal behaviour

GCSE Sociology Knowledge Organiser
Social stratification

Key terms

Absolute poverty - Not being able to afford the basic things you need to survive in life e.g. food, clothing,
Achieved status - Social positions are earned through personal talent, merit and effort, not fixed at birth
Ascribed status - Social positions/status are fixed at birth (due to class) and do not change over time
Bourgeoisie - The ruling class who owned the means of production and exploited the working class
Culture of dependency – The welfare system encourages people to stay on benefits rather than support themselves through work
Glass ceiling - An invisible barrier in employment that prevents some groups such as women or ethnic minorities from gaining promotions
Life chances - The opportunity/chance of achieving positive or negative outcomes (e.g. healthy/ill, rich/poor) as you progress throughout life
Power - The ability to get what you want, despite opposition
Pressure group - A group formed to influence government policy on a particular issue
Relative poverty - Not being able to afford to meet the general standard of living compared to most other people in their society
Social exclusion - The inability of some groups in society (e.g. the elderly, the working class) to play a full part in society/access the full benefits
Social inequality - The uneven distribution of resources (e.g. money or power) and opportunities
Social mobility - The ability to move up the social ladder
Social stratification - How society is structured in a hierarchy of layers based on factors such as age, gender
Status - The social standing or prestige someone is given by other members of society.
Underclass - A group in society who have different attitudes and values to others. They experience long-term unemployment, tend to be reliant on benefits
Wealth - The ownership of assets (e.g. property, land, jewelry) and savings, shares etc.
Welfare dependency - When individuals are reliant on the government for income for a prolonged period of time

Theories of social stratification

Functionalist - Social stratification is positive for society. Society is based on meritocracy and status is 'achieved' through hard work and effort. 'Role allocation' – top roles are filled by those who are able, ambitious and competitive – allows society to run smoothly.
Marxists Social stratification is negative for society. Society is based on conflict and status is 'ascribed' – is fixed at birth by class and cannot be changed. Top roles are filled by the bourgeoisie and creates inequality.
Feminists Social stratification is negative for society. Society is based on conflict and patriarchy with the top roles being filled by men and women being lower in the hierarchy.

Social stratification and class

Working class Unskilled/manual work, lack of formal education	**Middle class** Professional jobs, formal education e.g. University	**Upper** Aristocracy, elite education, 'titles' given

How is class measured?	NS-SEC: Measures class by occupation (job) × Ignores wealth/status as a measure of class
Does class affect life chances?	**Yes -** Marxists – status is ascribed, working classes have poorer opportunities in education, employment, health, housing
	No - Functionalists **-** status is achieved, society is based on meritocracy – equal chances to succeed Feminists – gender has more of an influence on life chances than class
Do we still have different classes in society?	**Yes** – Marxists – still a divide between the working and middle classes Life chances are still poorer for the working class, low social mobility Devine – there is still a separate working class
	No – Functionalists – meritocracy, more w/c going to university etc. Embourgeoisement – the w/c may be becoming more middle class Less people may be working class due to chances in occupation

Social stratification and gender

Policies to reduce inequality - Equal pay act (1970), Sex Discrimination Act (1975), Equality Act (2010)	
Does gender affect life chances?	**Yes -** Feminists – women have poorer life chances due to patriarchy Women less likely to be CEOs, to be paid a high wage, face a glass ceiling, pay gap still exists
	No - Functionalists – society is based on meritocracy Improvements for women – more likely to attend University, pay gap has decreased, women have a higher life expectancy
Reasons why	Glass ceiling/patriarchy in the workplace Gender socialisation – women may take expressive role/lower paid careers

Factors affecting life chances

Life chances	Life expectancy, income, wealth, employment, education, housing, health
Class	Education: W/C - poorer GCSE grades Income: W/C - earn less, minimum wage Housing: W/C - rented, poor quality Life expectancy: W/C – lower, poorer health
Gender)	Education: Girls outperform boys Employment: Women lower paid, less income/wealth, less likely to be in top jobs Life expectancy: Women live longer
Ethnicity	Employment: 20% of black Caribbean men unemployed Employment: 4% of CEOs are BAME Education: Poorer GCSEs among some BAME groups and less likely to go to University
Age	Youth – lower income, higher unemployed Older age – more at risk of poverty, ageism in the workplace, poorer access to health services

Other factors – Disability, Sexuality, Religion/beliefs

Social stratification and ethnicity

Policies to reduce inequality – Race relations act (1976), Equality act (2010)

Does ethnicity affect life chances?	**Yes** – 4% of CEOs are BAME, some groups have lower life expectancy, glass ceiling/lower paid jobs, poorer GCSE grades
	No – Laws/policies have reduced inequality, some BAME groups more likely to go to University, differences among groups

Social mobility

Yes	**No**
More w/c go to University, achievement is increasing, functionalists- achieved status / meritocracy, statistics may not be accurate	UK – one of lowest rates of mobility, top jobs more likely to be privately educated, only 35% think they have a fair chance, Marxists – inequality due to capitalism

GCSE Sociology Knowledge Organiser
Social stratification

Key studies

Davis and Moore (functionalist)
Society needs to place people into roles / social positions that need to be filled for society to operate smoothly. Some roles come with higher status (doctors, lawyers). People who fill the top roles are the most able, have the most drive/ambition and are the most competitive.

Marx (Marxist)
Class is an important division, the bourgeoisie have power/control over the proletariat who are exploited for profit. The working class and petty bourgeoisie didn't benefit from the growth of capitalism. Small business couldn't compete and had 'downward social mobility'. The working class are not aware of their exploitation.

Devine
Conducted interviews at a car factory in the 1980s. She found evidence of the working class still being separate and still had working class values. This goes against the idea of embourgeoisement.

Townsend
Conducted surveys on 2000 households about poverty, used relative poverty index and found the government underestimated poverty (6% vs. 22%). Concluded that poverty should be measured using a number of factors.

Murray (New Right)
There is a growing underclass in British society caused by overgenerous welfare benefits. Can be seen in three ways – welfare dependency, juvenile delinquency, loss of traditional values.

Weber
Believed class is important but is not just tied to income/wealth, status and power can affect someone's position in society too. He thought capitalism actually expanded the middle class and a revolution by the working class is possible. Distinguished between three types of power in society – charismatic, traditional and rational legal.

Walby (Feminist)
Men have more power in society due to patriarchy. This is shown in 6 ways – paidworl/employment, labour in the home, patriarchal culture, sexuality, male violence and the state. Public patriarchy is now more likely to exist than private patriarchy.

Poverty

Definitions of poverty

Absolute	Relative
Not being able to afford things you need to survive e.g. food/shelter Politicians prefer it (looks like less people are in poverty) and is a fixed definition, does not change between countries	Not being able to afford the general standard of living in society e.g. internet Sociologists prefer it (more accurate) and takes into account differences in standards of living between countries.

Reasons / explanations of poverty

Reasons	Poor health, divorce, old age, disability, unemployment, lack of education
The poor are responsible	**Culture of poverty** – Socialised within a subculture to accept poverty, see it as normal, unlikely to try and get themselves out of it. Leads to a cycle of deprivation – poverty being passed from one generation to the next.
	Cultural deprivation – May not have the correct norms and values to be motivated to get out of poverty, may seek immediate gratification (e.g. spending money rather than saving)
	Welfare dependency – Overgenerous welfare benefits could mean there's no incentive to work for less than you would receive. Can lead to the poverty trap.
Society is responsible	**Class inequality** – Marxists argue capitalism is responsible for poverty as the working class are not given opportunities to get out of poverty (low wages and zero hour contracts, low social mobility)
	Globalisation – Has led to a higher cost of living and low minimum wages, with less manufacturing jobs as these have moved abroad.

Are poverty statistics accurate?

Yes	No
Functionalists – official statistics are accurate	Marxists – statistics underestimate poverty so the working class believe society is fair and do not revolt Feminists – statistics underestimate female poverty due to lower wages, less opportunities etc. Townsend – governments underestimate poverty and should use relative measures

Is poverty still an issue in society?

Yes	No
Poverty rates are increasing for all age groups (1/5 people) Marxists – minimum wages and zero hour contracts still cause poverty Feminists – poverty is still an issue for women	Functionalists – government policies have aimed to reduce poverty Less people are in absolute poverty now

Power and authority

Formal power – power from the title/role someone has
Informal – power from respect/appreciation earnt

Forms of power / authority	Traditional – inherited (e.g. monarchy), based on established customs/traditions
	Charismatic – shown by a leader with persuasive/inspirational qualities
	Rational legal – shown by organisations through laws, rules and regulations
Who has power?	The ruling class have power over the working class (Marxist view)
	Men have power over women (in employment, the home, society, violence, the government) (feminist view)
	Heterosexuals – LGBT may have less power in politics/police etc.
	White individuals – BAME groups under-represented in politics
	Older people – younger may be excluded from politics (vote at 18)

Power of the state

Political system in the UK – democracy, first past the post system (MPs elected based on votes in constituency)
Other systems – dictatorships (one person in power), proportional representation

Can the public influence the state?	**Yes** – pluralist view, pressure groups, petitions, protests etc.
	No – conflict approach, Marxists, power of businesses rather than the public

The underclass

Does the underclass still exist?

Yes	No
Murray – underclass is in Britain, can be seen in welfare dependency, juvenile delinquency and a loss of values Members of the underclass were blamed for the London riots There are more lone-parent families in the underclass	Murray blames the victims for being welfare dependent but could be due to divorce etc. Marxists – the underclass are scapegoated to blame for society's problems Many people who are on benefits still aspire to have paid employment/better themselves

Spanish Personal Learning Checklists

Ciudades (Home, town, neighbourhood and region)	S	O	R	T
talk about different types of housing				
describe my house, its rooms and furniture				
talk about places in a town				
ask for and understand directions				
describe features of a region				
use se puede and se pueden				
plan what to do using the future tense				
understand the geography of Spain				
use si+present/future				
talk about problems in a town				
use the conditional				
use so..so much..so many.				
describe a visit in the past				
use different tenses together				
recognise and use idioms				
talk about shops				
use language for souvenir shopping				
shop for clothes and presents				
use demonstrative adjectives				
explain preferences				
USE YOUR VOCAB BOOKLET TO SORT YOUR LEARNING				

De Costumbre (Food and Eating out, Customs and Festivals)	S	O	R	T
describe mealtimes				
talk about daily routine				
understand reflexive verbs				
talk about typical foods				
use the passive				
use quantity expressions				
order in a restaurant				
use absolute superlatives -ísimo				
compare different festivals				
talk about a music festival				
use expressions followed by the infinitive				
describe a special day				
use reflexive verbs in the preterite tense				
USE YOUR VOCAB BOOKLET TO SORT YOUR LEARNING				

	S	O	R	T
Topic Area 1: Different factors which influence the risk and severity of injury				
Topic Area 2: Warm up and cool down routines				
Topic Area 3: Different types and causes of sports injuries				
Topic Area 4: Reducing risk, treatment and rehabilitation of sports injuries and medical conditions				
Topic Area 5: Causes, symptoms and treatment of medical conditions				

Sports Science Knowledge Organiser

R180 TA1 Different factors which influence the risk and severity of injury

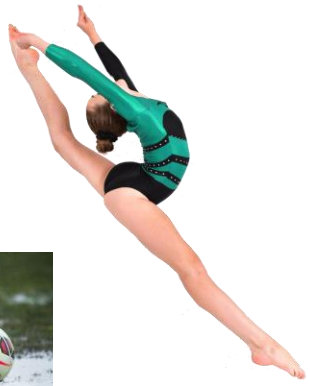
Extrinsic Factors

Type of sporting activity
- The nature of the sport can influence the type of injury.
- Contact sports such as rugby risk of abrasions
- Non contact sport such as gymnastics risk of sprains/dislocations.
- Combat sports such as boxing risk of concussion.

Coaching/instructing/leading
- Knowledge of techniques/ rules/ regulations.
- Experience of the coach/instructor/leader
- Quality of communication by the coach/instructor/leader
- Suitable supervision by the coach/instructor/leader
- Ethical standards/behaviour management

Environment
- Weather/temperature conditions- E.g. hot weather can lead to dehydration/heat exhaustion
- Playing surface (natural and artificial) and surrounding area E.g holes in the ground
- Human interaction
- Spectators E.g. verbally abusing players.
- Other performers/participants E.g acting aggressively in the game
- Officials- E.g not being trained correctly

Equipment:
- Protective equipment E.g. helmet and goggles in skiing.
- Performance equipment E.g. hockey stick
- Clothing E.g ski jackets to stop hypothermia
- Footwear E.g studs on rugby boots



Intrinsic Factors

- **Gender** Men tend to be stronger than women. Women tend to be more flexible than men so can move their joints through a wider range of movements.
- **Age** Age can affect how much and the type of exercise you do. Generally older people are not as strong as younger people and are more at risk of suffering injuries.
- **Experience** In experienced performer would have less practice of skill/rules/tactics and may react slower increasing risk of injury.
- **Weight** Being overweight can place extra stress on the joints and body. Being underweight can cause the bones to be more fragile.
- **Fitness levels** Lack of fitness due to lack of training means more at risk to a number of injuries as tired and tight muscles caused by fatigue causes incorrect standing or sitting position causing injury.
- **Technique/ability** Poor technique can result in injury.
- **Medical conditions** If not managed correctly can cause the performer to feel unwell.
- **Sleep/Tiredness** Insufficient/lack of sleep before exercise can cause fatigue & increase the chance of injury. Can cause poor decisions to be made; resulting in dangerous play or poor reaction times.
- **Nutrition/hydration** A balanced diet and the right nutrients in the body allow enough energy to take part in sport and to allow the body to recover properly. Poor nutrition can lead to: Dehydration and muscle fatigue/loss of concentration.
- **Previous/recurring injures** If a player has a history of injuries or recurring injuries fitness may be lost, muscles and tendons will become weaker causing flexibility and strength to be lost.

R180 TA1 Different factors which influence the risk and severity of injury

Psychological factors

Motivation- Having the drive to succeed E.g. A footballer being over motivated and performing a dangerous tackle/rugby player being undermotivated and pulling out of a tackle.
Arousal Is the level of excitement of a performer. E.g A gymnast with high arousal could cause them to land awkwardly off s vault routine.
Anxiety/stress- Negative emotional state feeling worried. E.g. A dancer with high levels of stress my slip during the performance and fall.
Confidence- Self belief in themselves to succeed. E.g a batter in cricket who doesn't have confidence may get hit by the ball.
Aggression (Direct/channelled) Channelled aggression involves playing within the rules whereas direct aggression is the intention to harm others.E.g a boxer jabbing the opposition in the body in a fair fight. E.g. a rugby player deliberately punching a player in the scrum.

Reasons for aggression

Level of performance E.g basketballer pushing over a player making many mistakes.
Retaliation E.g In football fouling a player that fouled them earlier in the game
Pressures to win (performer/coach/spectators) E.g. A golfer throwing their club down due to missing a shot.
Decisions of officials E.g. A hockey player hitting the ball away due to disagreeing with referees decision.
Performance enhancing drugs E.g A weightlifter using steroids having side effects such as mood swings and aggression.

Mental strategies

Mental rehearsal E.g A cricket player rehearsing their pull shot to better technique.
Imagery E.g. A goalkeeper imagining players taking a penalty against them.
Selective attention E.g. A kicker in rugby blocking out the crowd and focusing on the kick.

R180 TA2 Warm up and cool down routines

Key components of a warm up

Pulse Raiser
Exercises that slowly increase heart rate and body temperature. E.g. A X country runner jogging for 5 minutes before a race.

Static Stretching
Placing the body into a position where the muscle or group of muscles is put under tension. E.g A hockey player doing lateral lunges

Mobility
Exercises that take the joints through their full range of movement (ROM). E.g. A swimmer carrying out arm rotations

Skill Rehearsal
Rehearsing common movement patterns and skills which will be used in the activity E.g. dribbling drills for football.

Physiological benefits of a warm up

Pulse raising
Increase in heart rate the delivery of oxygen to working muscles is increased.
Increase in body temperature which releases adrenaline and increases the blood flow

Mobility and Dynamic stretching
Increase in the speed of muscle contraction which improves reaction time
Increase in flexibility of muscles and joints to allow for bigger range of movement.
Increase in pliability of ligaments and tendons

Skill rehearsal
Practising the techniques that will be used by performer.

Psychological benefits of a warm up

Heighten or control arousal levels 'get in the zone' and forget about any worries you had before event. E.g. A F1 driver being alert at other drivers turning into their path.

Improve concentration/focus visualising certain parts of your performance. E.g 100m sprinters visualising themselves running the race from the start position.

Increase motivation Try to achieve an optimum arousal. E.g A rugby player fully committed to tackle

Mental rehearsal involves visualising the aspect of the activity E.g a skier rehearsing the difficult part of course in their head.

R180 TA2 Warm up and cool down routines

Key components of a cool down	Physiological benefits of a cool down	How a coach reduces risk of injury during a warm up and cool down
Pulse lowering light exercises E.g. jog to walk **Maintenance stretches** returns muscle back to pre exercise state and helps maintain ROM E.g quadricep stretch **Static stretches** holding a stationary position for 15-30 seconds E.g. lunges **Proprioceptive Neuromuscular Facilitation (PNF)** stretches that have some resistance E.g Hamstring stretch with a partner holding limb	• Gradually lowers heart rate • Gradually reduces breathing rate • Gradually lowers temperature • Circulates blood & oxygen around the body • Helps prevent blood pooling • Removes waste products such as lactic acid • Reduces risk of Delayed Onset of Muscle Soreness (DOMS)	**Communication-** by planning an effective and suitable warm up and explaining the correct way to use equipment. E.g. Coach demonstrating the correct way to lunge. **Supervision** organise the group to reduce risk of collisions and ensure exercises are carried out safely. E.g. Coach ensuring that they are always facing the group and have split them up accordingly. **Ethical standards and behaviour** ensure performers are not using any PEDs and behaviour is in line with the rules. E.g. Coach not acting aggressively so the players don't copy. **Safety checks** monitor safety of players throughout and check equipment and playing surface before. E.g. Coach checking there are no divots in the pitch before starting the session.

R180 TA3 Different types and causes of sports injuries

Individual variables	Risk of injury occurring
Age	The older you get the bones weaken causing fractures to become more likely. Contusions and abrasions are also more likely due to losing coordination as you get older
Nutrition	Lack of calcium in the body can cause bones to be more prone to fractures Being underweight can cause more of a risk of fractures. Being overweight can cause to much pressure on the joints and cause a stress fracture or be more prone to dislocation.
Previous injuries	With any injury the area that was injured is more prone to reinjury of any acute/ chronic injury.

R180 TA3 Different types and causes of sports injuries

Acute Sports injuries- Soft tissue

Injuries affect the soft tissue parts of the body (muscles, tendons, ligaments)

Sprain A torn ligament from a fall. E.g a gymnast landing awkwardly and rolling their ankle. Treatment: PRICE

Strain Often known as a pulled muscle resulted from overstretching or tearing a muscle/tendon. E.g a goalkeeper overstretching their hamstring saving a goal.Treatment: PRICE

Acute Sports injuries- Skin damage

Injuries from coming into contact with an object/person.

Abrasions/grazes- top layer of skin scraped off. E.g. A 100m sprinter falling on the track and grazing knee. Treatment: Sterile dressing/plaster

Cuts/lacerations -opening in the skin caused by sharp object.E.g Lacrosse player being hit by a stick and cutting their arm. Treatment: Sterile dressing/plaster

Contusions (bruise) - discolouration of the skin caused by a bump E.g A footballer getting studded in the thigh causing a bruise. Treatment: Ice

Blisters-small pockets of fluid that form under the skin. E.g A runners shoes being too small and rubbing causing blisters. Treatment: padded plaster

Acute Injuries- Hard tissue

Fractures (open-through skin) E.g a jockey falling from the horse and fracturing their leg. Treatment: X-ray/surgery/splints/casts

Fractures (closed-under skin) E.g a rugby player being tackled badly and fracturing their radius/ulna. Treatment: X-ray/surgery/splints/casts

Dislocations -injury that occurs at the joint. E.g A basketball player changing direction and dislocating their patella. Treatment: Xray/put back in by doctor

Acute Injuries- Hard tissue (Head injuries)

Head injuries may result from direct or indirect impact which can cause nausea, memory loss, headaches, dizziness.

Concussion- where the brain has been shaken inside the cranium. E.g a boxer getting punched in the head by their opponent. Treatment: Rest, Ice/medical attention if symptoms worsen or persist

Possible link with dementia and Alzheimers

The FA research found footballers 3.5 times more likely to die from dementia. Develops with every year they play.

Other contact sports such as boxing, ice hockey and rugby have increased risk of dementia and Alzheimer's disease.

Individual variables	Risk of injury occurring
Age	The older you get the bones weaken causing fractures to become more likely. Contusions and abrasions are also more likely due to losing coordination as you get older
Nutrition	Lack of calcium in the body can cause bones to be more prone to fractures Being underweight can cause more of a risk of fractures. Being overweight can cause to much pressure on the joints and cause a stress fracture or be more prone to dislocation.
Previous injuries	With any injury the area that was injured is more prone to reinjury of any acute/ chronic injury.
Aggression	A player whom is intending to harm another player could cause any acute injury,
Selective attention	A player that is tired or not focused due to lack of arousal/motivation is more at risk of acute injuries.

R180 TA3 Different types and causes of sports injuries

Extrinsic factors	Risk of injury occurring
Type of activity	**Acute injuries** Cuts/lacerations-getting hit with a stick in ice hockey Contusions-getting punched in the ribs in boxing Concussion- colliding heads in rugby **Chronic injuries** Shin splints-marathon runners
Coaching	**Acute injuries** Fractures- encouraging 2 footed tackles in football **Chronic injuries** Epicondylitis- serving incorrectly in tennis
Environment	**Acute injuries** Grazes/abrasions- falling over on the astro in hockey. **Chronic injuries** Shin splints-basketballers jumping for shots repetitively
Equipment	**Acute injuries** Fractures- from not wearing shin pads in football **Chronic injuries** Tendonitis- from not wearing taping or support during weight lifting.

Ways of reducing risk of acute injuries

- Warm up properly before the sporting activity
- Ensure joins,muscles,ligaments are strong and build up exercise gradually
- Maintain a healthy weight
- Develop components of fitness such as balance and coordination
- Wear appropriate footwear and clothing
- Wear appropriate protective equipment for the sporting activity

Ways of reducing risk of chronic Injuries

- Avoid overtraining
- Develop good sporting techniques
- Avoid training on hard/uneven surfaces
- Wear appropriate footwear and clothing
- Avoid returning to exercise too soon after a previous injury
- Build up training overtime

R180 TA3 Different types and causes of sports injuries

Chronic Injuries

Tendonitis (achilles,rotator cuff, patellar) occurs when the boy repeats the same sporting action E.g a swimmer using it for front crawl/butterfly over and over. Treatment: PRICE/Physio

Epicondylitis (overuse of the tendon in elbow cause by repeating same action. Treatment: PRICE/Physio

Lateral epicondylitis- E.g Serving in tennis (Tennis elbow)

Medial epicondylitis- E.g Swinging clubs in golf (Golfer's elbow)

Shin splints pain and tenderness in tibia due to overuse. E.g a long distance runner running lots. Treatment: PRICE

Stress fractures tiny crack in the boe from repeated stress. E.g A marathon runner overtraining. Treatment: PRICE/Physio

PRICE Therapy

PROTECTION -Protect the injured body part to reduce risk of further damage. E.g Putting a rugby player in a sling if they have injured their arm.

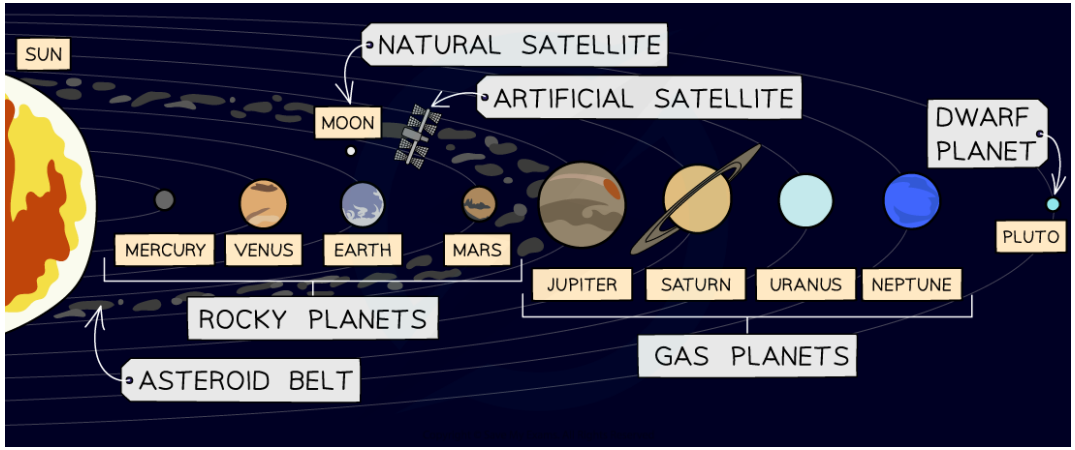
REST- Immobilising the injury and resting the injury for the first 2-3 days. Then reintroduce movement gradually. E.g. A netball player using crutches to avoid putting weight on their injured knee.

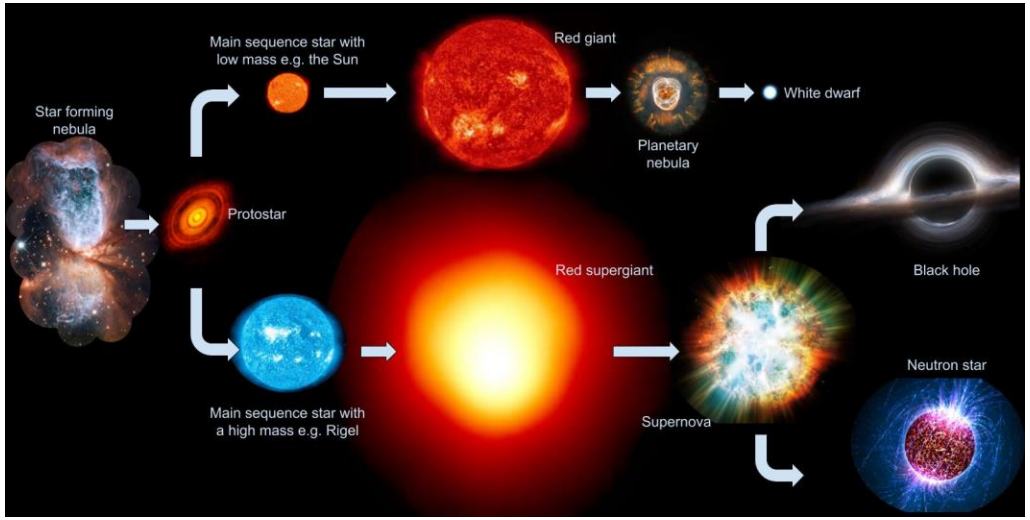
ICE- Apply an ice the painful area for 15-20 minutes. repeat every 2-3 hours. Don't apply directly to the skin as it can damage it.

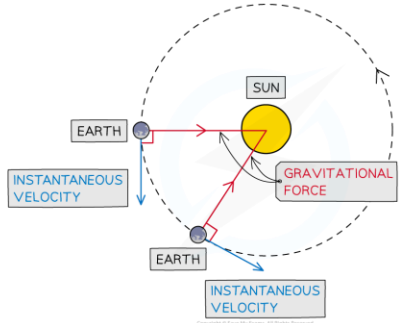
COMPRESS -Apply pressure to the injured area with to help limit the swelling. E.g. a hockey player using a compression bandage on their injured ankle.

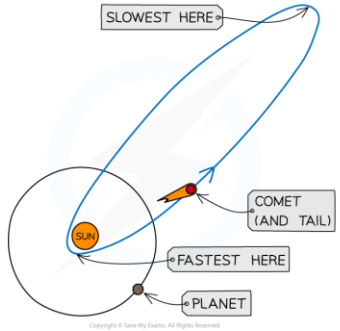
ELEVATE- Elevate the injury by resting it above the level of your heart and keep it supported. E.g A runner that has injured their ankle raising it up on a pillow while led down.

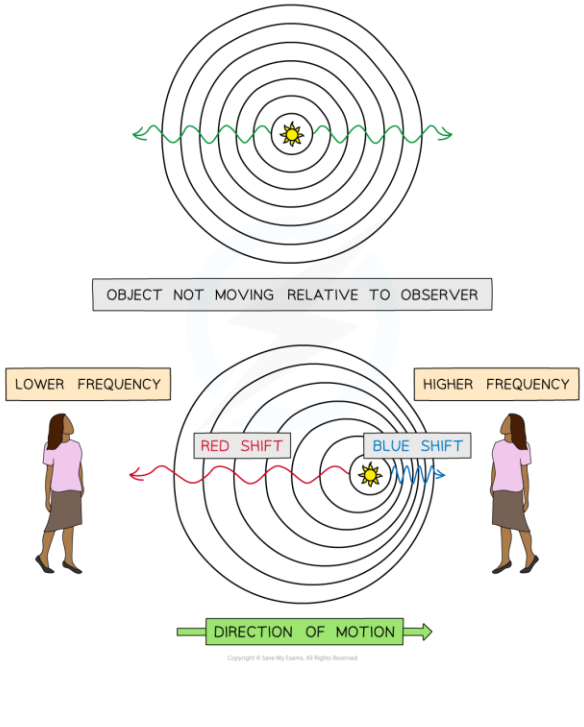
Triple Only

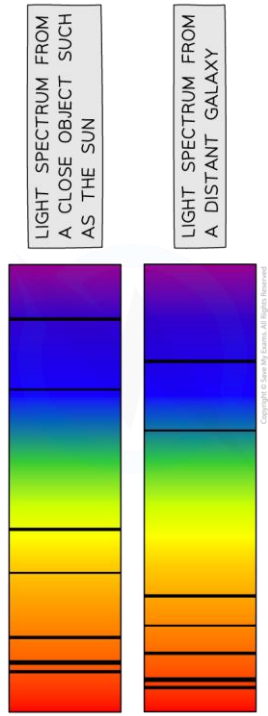

SUN
NATURAL SATELLITE
ARTIFICIAL SATELLITE
MOON
DWARF PLANET
PLUTO
MERCURY
VENUS
EARTH
MARS
JUPITER
SATURN
URANUS
NEPTUNE
ROCKY PLANETS
GAS PLANETS
ASTEROID BELT

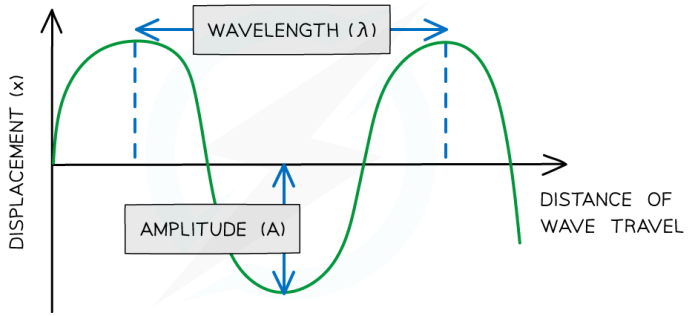

Main sequence star with low mass e.g. the Sun
Red giant
Star forming nebula
White dwarf
Planetary nebula
Protostar
Red supergiant
Black hole
Neutron star
Main sequence star with a high mass e.g. Rigel
Supernova


SUN
EARTH
INSTANTANEOUS VELOCITY
GRAVITATIONAL FORCE
EARTH
INSTANTANEOUS VELOCITY


SLOWEST HERE
COMET (AND TAIL)
SUN
FASTEST HERE
PLANET


OBJECT NOT MOVING RELATIVE TO OBSERVER
LOWER FREQUENCY
HIGHER FREQUENCY
RED SHIFT
BLUE SHIFT
DIRECTION OF MOTION


LIGHT SPECTRUM FROM A CLOSE OBJECT SUCH AS THE SUN
LIGHT SPECTRUM FROM A DISTANT GALAXY



WAVE SPEED = FREQUENCY × WAVELENGTH

$$v = f \times \lambda$$