Year 8

Subject knowledge organiser

Name	
Year	
Tutor	

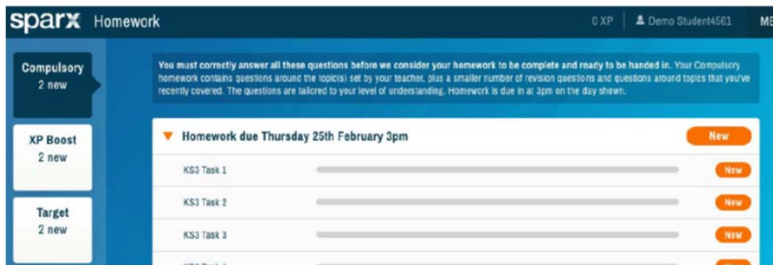# Index

Maths

Sparx Maths

What exactly is Sparx Maths Homework?

Sparx homework is tailored to you, and should be just at the right level of challenge, based on the topics that your teacher has set.

Homework contains 3 elements: Compulsory, XP Boost and Target.

All questions in the Compulsory section must be answered correctly for the homework to be marked as complete. You may watch the videos on how to answer the questions to support you to 100% complete the work.

Each task bar will show as green when fully complete. For the homework to be classed as complete, all task bars for that homework need to be fully green. The percentage of homework complete will show on the menu page:

XP Boost questions are at a similar level to Compulsory, and offer extra practice. Target questions have been designed to challenge you. You will receive a link to a video in your parent email each week, to help you offer them support and encouragement with their Target homework.

Get into good habits for completing homework

Try and set up a quiet work area to do your homework. If you don't have the space, consider setting aside routine 'quiet times' during the day, so you can concentrate, even if only for short periods of time.

Getting logged in to Sparx

Go to https://sparx.co.uk, click login in the top right corner, and select student login. Here you will be asked to start typing the name of their school before being prompted to select it from a dropdown list.
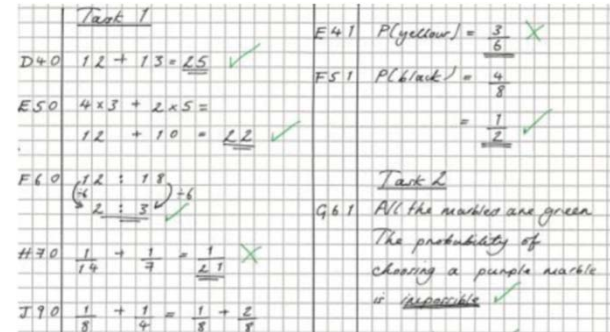

Click the large button that says log in to Sparx using Google, use your school google login and password.

Bookwork Checks.

We believe that a good standard of bookwork is very important in helping you to embed good practice, and to help you and your teachers to keep track of any misconceptions.

In Sparx, every question is accompanied by a 'bookwork code'.

You should write this down, and then write your workings and answer next to the code.

You will be asked for the answer you gave for a particular bookwork code, you need to give the exact answer you wrote down, even if it was wrong.

Here's an example of good bookwork; as you can see all workings and wrong answers have been recorded:

If you fail a bookwork check in Sparx, you will need to re-do the question, even if they originally gave the correct answer. This is to encourage you to record your workings.

The more bookwork checks you gets correct, the fewer they'll see. So, if you fail bookwork checks you will need to keep repeating question and then your homework will take you longer.

Timetables is part of your compulsory homework.

The times tables task is an additional task that is part of your compulsory homework.

The first time that this is in homework, there will be an initial diagnostic assessment that will ask a series of tables, until you get enough wrong that the system will stop and give you a club.

You will be placed into a club ranging from 10-100 club, which is an indication of which tables you are able to fluently and confidently answer in good time (under 6 seconds).

In order to complete the compulsory task, you will need to answer 50 questions correctly. The system will notify them when they have completed their compulsory amount, and they can continue to work on times tables after this.

Once you complete your initial assessment, you will be shown target tables that you need to practice. You will also see tasks that are available, which will ask you a variety of questions designed to teach and practise these targets, whilst also mixing in some short, engaging games. Once students practise enough, they will then be given a new assessment, where they have the opportunity to move up in their 100 club and generate new targets to practice.

How to use a knowledge organiser for homework

Knowledge organisers contain critical knowledge you must know.

Using your knowledge organiser will help you recap, revisit and revise what you have learnt in lessons in order to remember this knowledge for the long-term.

You will use your knowledge book for all of your homework except Maths.

Getting started

All work should be written in your subject knowledge organiser exercise book (pink)

In the instructions on Class Charts you will be asked to look at a specific section (e.g. A or D) or sections of your knowledge organiser.

Just like in lessons, you need start by writing the title (subject and section of knowledge organiser) and the date. Make sure you underline it too.

Once you have completed the above you need to follow start the look cover write correct process as outlined below:

Look > Cover > Write > Correct

| 1. Read a section of your knowledge organiser several times. | 2. Cover it so you can no longer see it. | 3. Write out what you've remembered. | 4. Check the knowledge organiser to see if you're right. | 5. Correct any mistakes in ideally in a different coloured pen. Repeat this process two more times - even if you got 100% correct. |

Why do we use a knowledge organiser?

Knowledge organisers contain critical knowledge you must know.

Why do we keep revisiting knowledge so often?

Know more: the more students know, the more they learn.

Remember more: the more (and better) we recap, the more we remember.

Succeed more: if we remember more, we succeed more in subjects and life.

Over a century of research has found what the mind struggles with in learning: distraction, overload and forgetting. A knowledge organiser can help us to reduce overloads as the material is chunked in to section but also by revisiting knowledge over time we reduce forgetting.

There are three main parts in how the mind learns.

There are three main struggles the mind has in learning.

Attention
What we focus on and what we ignore in our thinking, which is limited.

Distraction

Working Memory
Where knowledge is thought about in the mind: a limited bottleneck.

Overload

Long Term Memory
Where knowledge is stored in the mind: a large but crowded storehouse.

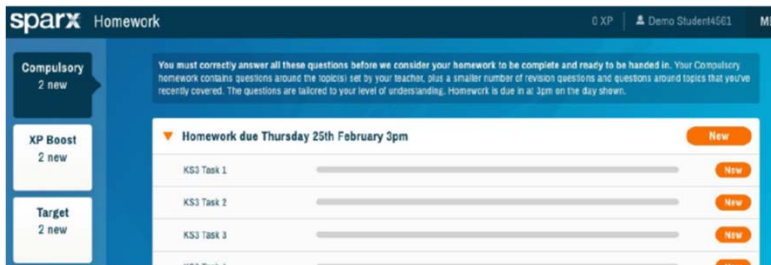Forgetting

Maths

Sparx Maths

What exactly is Sparx Maths Homework?

Sparx homework is tailored to you, and should be just at the right level of challenge, based on the topics that your teacher has set.

Homework contains 3 elements: Compulsory, XP Boost and Target.

All questions in the Compulsory section must be answered correctly for the homework to be marked as complete. You may watch the videos on how to answer the questions to support you to 100% complete the work.

Each task bar will show as green when fully complete. For the homework to be classed as complete, all task bars for that homework need to be fully green. The percentage of homework complete will show on the menu page:

XP Boost questions are at a similar level to Compulsory, and offer extra practice. Target questions have been designed to challenge you. You will receive a link to a video in your parent email each week, to help you offer them support and encouragement with their Target homework.

Get into good habits for completing homework

Try and set up a quiet work area to do your homework. If you don't have the space, consider setting aside routine 'quiet times' during the day, so you can concentrate, even if only for short periods of time.

Getting logged in to Sparx

Go to https://sparx.co.uk, click login in the top right corner, and select student login. Here you will be asked to start typing the name of their school before being prompted to select it from a dropdown list.
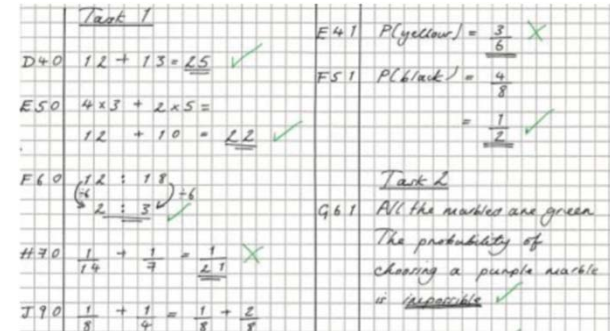

Click the large button that says log in to Sparx using Google, use your school google login and password.

Bookwork Checks.

We believe that a good standard of bookwork is very important in helping you to embed good practice, and to help you and your teachers to keep track of any misconceptions.

In Sparx, every question is accompanied by a 'bookwork code'.

You should write this down, and then write your workings and answer next to the code.

You will be asked for the answer you gave for a particular bookwork code, you need to give the exact answer you wrote down, even if it was wrong.

Here's an example of good bookwork; as you can see all workings and wrong answers have been recorded:

If you fail a bookwork check in Sparx, you will need to re-do the question, even if they originally gave the correct answer. This is to encourage you to record your workings.

The more bookwork checks you gets correct, the fewer they'll see. So, if you fail bookwork checks you will need to keep repeating question and then your homework will take you longer.

Timetables is part of your compulsory homework.

The times tables task is an additional task that is part of your compulsory homework.

The first time that this is in homework, there will be an initial diagnostic assessment that will ask a series of tables, until you get enough wrong that the system will stop and give you a club.

You will be placed into a club ranging from 10-100 club, which is an indication of which tables you are able to fluently and confidently answer in good time (under 6 seconds).

In order to complete the compulsory task, you will need to answer 50 questions correctly. The system will notify them when they have completed their compulsory amount, and they can continue to work on times tables after this.

Once you complete your initial assessment, you will be shown target tables that you need to practice. You will also see tasks that are available, which will ask you a variety of questions designed to teach and practise these targets, whilst also mixing in some short, engaging games. Once students practise enough, they will then be given a new assessment, where they have the opportunity to move up in their 100 club and generate new targets to practice.

How to use a knowledge organiser for homework

Knowledge organisers contain critical knowledge you must know.

Using your knowledge organiser will help you recap, revisit and revise what you have learnt in lessons in order to remember this knowledge for the long-term.

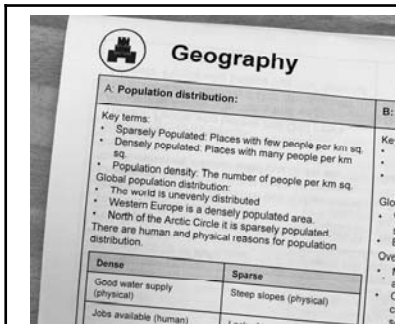You will use your knowledge book for all of your homework except Maths.

Getting started

All work should be written in your subject knowledge organiser exercise book (pink)
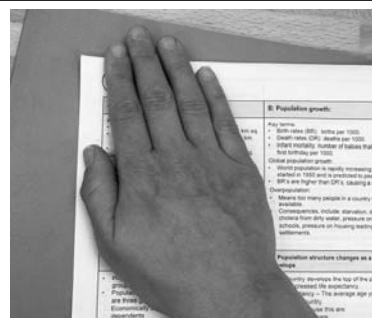
In the instructions on Class Charts you will be asked to look at a specific section (e.g. A or D) or sections of your knowledge organiser.

Just like in lessons, you need start by writing the title (subject and section of knowledge organiser) and the date. Make sure you underline it too.
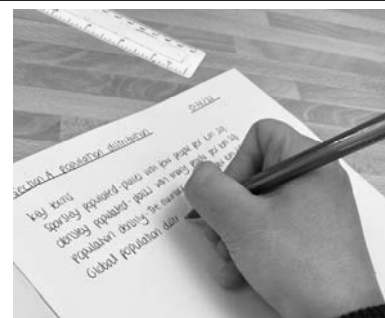
Once you have completed the above you need to follow start the look cover write correct process as outlined below:

Look 〉 Cover 〉 Write 〉 Correct

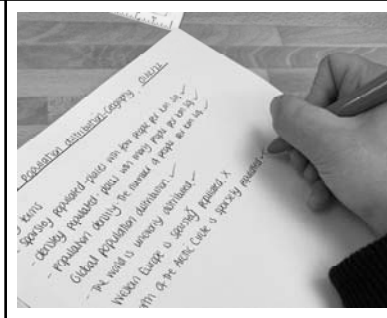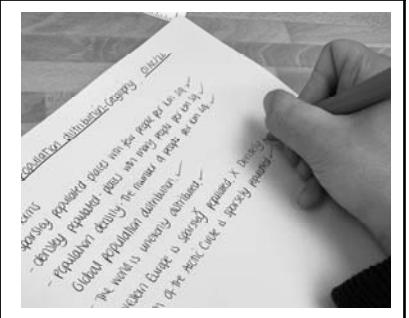|				
1. Read a section of your knowledge organiser several times.	2. Cover it so you can no longer see it.	3. Write out what you've remembered.	4. Check the knowledge organiser to see if you're right.	5. Correct any mistakes in ideally in a different coloured pen. Repeat this process two more times - even if you got 100% correct.

Why do we use a knowledge organiser?

Knowledge organisers contain critical knowledge you must know.

Why do we keep revisiting knowledge so often?

Know more: the more students know, the more they learn.

Remember more: the more (and better) we recap, the more we remember.

Succeed more: if we remember more, we succeed more in subjects and life.

Over a century of research has found what the mind struggles with in learning: distraction, overload and forgetting. A knowledge organiser can help us to reduce overloads as the material is chunked in to section but also by revisiting knowledge over time we reduce forgetting.

There are three main parts in how the mind learns.

There are three main struggles the mind has in learning.

Attention
What we focus on and what we ignore in our thinking, which is limited.

Distraction

Working Memory
Where knowledge is thought about in the mind: a limited bottleneck.

Overload

Long Term Memory
Where knowledge is stored in the mind: a large but crowded storehouse.

Forgetting

A: Grammar	B: Methods	C: Themes
Subject: the person or thing in a sentence that is doing something. E.g. ***Frankenstein** created the monster.* **Object**: the person or thing in a sentence that something is done to E.g. *Frankenstein created the **monster*** **Independent clause**: a group of words that contain a subject and a verb, that makes sense as a complete thought. E.g.***The Romantic poets often focused on nature.*** **Dependent clause**: a group of words that contains a subject and verb but does not express a complete thought. E.g. *The Romantic poets often focused on nature**, considering how powerful it could be.*** **Simple Sentence**: a sentence that has only one clause (containing a subject and a verb). E.g. *Hamlet decided to take revenge.* **Compound Sentence**: a sentence that has two independent clauses, joined by a conjunction like 'and' or 'but'. E.g. *Hamlet wants to prove Claudius's guilt, **and** he organises a play to prove that Claudius is guilty* **Complex Sentence**: a sentence that contains an independent clause and at least one dependent clause (often in the form of an extra piece of information). E.g. *Hamlet* **Sentence Mood**: the tone that is created within a sentence. **Declarative Mood**: this sentence mood is used to express a factual statement.E.g.*Frankenstein was afraid of his creation.* **Imperative Mood**: this sentence mood is used to express a commanding statement E.g.*Get thee to a nunnery!* **Interrogative Mood**: this sentence mood is used to express a questioning statement. E.g. *To be or not to be?*	**Stanza**: a verse in a poem. E.g. *The poem 'Composed Upon Westminster Bridge' is one stanza long.* **Personification**: giving something not human, human qualities. E.g. *"The river glideth at his own sweet will."* **Simile**: comparing something to something else using "like" or "as". E.g. *"That curled like a lamb's back"* **Metaphor**: saying something is something else. E.g. *"...locked up in coffins of black;"* **Imagery:** the use of language to create images in the reader's mind. E.g. *"like the night Of cloudless climes and starry skies;"* **Adjective**: a word that describes a noun. E.g. *"to show more <u>fair</u>: <u>Dull</u> would he be"* **Extended metaphor**: a metaphor that extends across the entire poem/text. E.g. *The Tyger in 'Tyger Tyger' is an extended metaphor for the Industrial Revolution.* **Repetition**: saying something more than once. E.g. *"Tyger Tyger"* **Semantic field**: a group of words connected by their meaning. E.g. *"opened", "free", "leaping", "laughing", "run"* **Lexical field**: a group of words connected by topic E.g. *"fire", "hammer", "chain", "furnace", "anvil"* **Alliteration**: consecutive words that begin with the same sound. E.g. *"burning bright"* **Rhyme**: words ending with the same sound pattern. *E.g. "fled", "head" and "skull" "dull"* **Epistolary**: when part of the narrative is told through letters/diary entries etc. E.g. *Letters from Captain Walton to his sister to communicate key events in the text.* **Foreshadowing**: giving clues that something will happen later. E.g. I*n Chapter Four of 'Frankenstein' there are clues that the creation of the monster will not go to plan.* **Gothic conventions**: components of the novel which enable it to fit into the genre of gothic fiction E.g. death, victims, gothic settings, omens, science used for evil. **Juxtaposition**: when two opposing ideas or things are in the same text. E.g. *The eloquent speech of the monster juxtaposes his heinous and violent behaviour.* **Symbol**: a person, colour, object, word etc. that represents something else. E.g. *The old man is a symbol of kindness and generosity.*	**Revolution**: a forcible overthrow of a government or social order, in favour of a new system E.g. *The French Revolution influenced the Romantic poets - they wrote hoping to improve the lives of the oppressed.* **Supernatural:** things that cannot be explained by science. E.g. *The Romantic poets used the idea of the supernatural to offer readers the chance to experience new worlds not possible in real life.* **Power**: a common theme running through so many literature texts including 'in Romantic poetry and 'Frankenstein'. E.g. *many Romantic poets explored the power of nature.* **Religion:** the belief in and worship of a superhuman controlling power, especially a personal God or gods. E.g. *In 'Tyger Tyger', Blake explores God's ability to create the meek and innocent lamb as well as the fierce and deadly tyger.* **Ambition**: ambition is a key theme in many literature texts. It is a strong desire to do or achieve something. E.g. *It was Frankenstein's ambition to reanimate life.* **Corruption:** dishonest behaviour by those in power. E.g. the exploitation of children as chimney sweeps written about by the Romantic poet, William Blake. **Vengeance**: punishment inflicted for an injury or wrong. E.g. *Frankenstein's creature sought vengeance for Frankenstein's betrayal.* **Solitude**: the state or situation of being alone. E.g. *Many of the Romantic poets explored the feeling of solitude in their poems.* **Nature:** the physical world collectively, including plants, animals, the landscape, and other features and products of the earth, as opposed to humans or human creations. E.g. *Nature was a common theme among the Romantic poets.* **Obsession:** the state of being obsessed with someone or something. E.g. *Frankenstein's obsession with creating life resulted in him isolating himself.* **Loneliness:** sadness because one has no friends or company. E.g. *Frankenstein's creature experienced loneliness and rejection.*

A: Photosynthesis and respiration

- Photosynthesis is a process that occurs in the leaves of a plant and needs both chlorophyll and light energy.
- During photosynthesis, the chlorophyll in leaves help convert carbon dioxide and water into the products oxygen and glucose.
- The product glucose acts as a vital source of food for the plant.

  Water + carbon dioxide → glucose + oxygen
- Respiration is a chemical reaction which occurs in all living cells, releasing energy from glucose.
- Aerobic respiration occurs with oxygen and releases more energy but more slowly.

  Glucose + oxygen → carbon dioxide + water
- Anaerobic respiration occurs without oxygen and releases less energy but more quickly.

  Glucose → lactic acid

B: Light and sound

- Light travels as transverse waves at 300,000 km/s
- Reflection is the rebounding of light waves from a surface like a mirror. The reflected ray is always at the same angle to the normal as the incident ray
- Refraction is the change in direction of a wave as it travels into a different density substance (eg air into glass)
- Sound travels by vibrations as a longitudinal wave.
- Sound waves travel at 343 m/s through the air and faster through liquids and solids. The waves transfer energy from the source of the sound to its surroundings.
- Ultrasound refers to sound waves that have too high a frequency for humans to hear. Different animals can hear different frequency ranges.

C: Chemical reactions

- Acids and alkalis react together in neutralisation reactions which produce salts and water. The pH scale shows how acidic a substance is.

  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
  acidic   neutral   alkaline

- A chemical reaction involves reactants forming new products. Signs of a chemical reaction includes fizzing, colour changes and temperature changes.
- Combustion is the chemical reaction of a fuel burning in oxygen.

  - Fuel + oxygen → carbon dioxide + water
- Changes of state (melting, freezing, evaporating and condensing) are physical changes as no new products are formed

D: Electrical circuits

- Metals and graphite conduct electricity. Insulators such as plastic and wood do not.
- Current is the rate of flow of charge. Current is measured in series with a component. It has the unit Amps.
- Voltage is a measure of the electrical energy per charge. A voltmeter is connected in parallel to measure the voltage in volts.
- Series circuits have components connected next to each other. The current is the same through all components.
- Parallel means components are on separate loops. The current is divided across loops.
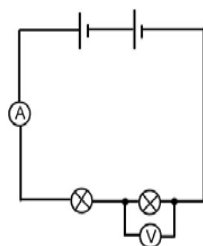
E: Inheritance

- DNA carries genetic information - the genetic code. It has all the instructions that a living organism needs to grow, reproduce and function.
- Inherited characteristics are determined by genes Human examples include natural eye, hair and skin colour and sex
- Environmental characteristics are affected by the surroundings an organism lives in, such as hair length, scars,
- Sexual reproduction involves two parents. The sex cells fuse to produce genetically unique offspring with characteristics inherited from both parents.
- Asexual reproduction happens in some plants and bacteria. The parent makes a clone that is genetically identical.
- Evolution is the gradual changes in organisms over long periods of time leading to new species.

F: Earth and atmosphere

- There are three types of rock found on Earth. These are igneous, metamorphic and sedimentary.
- Igneous rocks are formed when molten rock cools. They have crystals that are larger the slower the rock cools. The grains in sedimentary rock are arranged in layers. Metamorphic rocks are formed from other rocks which change due to heat or pressure.
- The three fossil fuels are coal, oil and natural gas. They are formed from the remains of living things that have been compressed for millions of years.
- Burning fossil fuels releases large amounts of carbon dioxide into the atmosphere which is a greenhouse gas. The greenhouse effect is the name given to the trapping of heat by gases in the atmosphere. Global warming is the increase in average global temperatures

Geography

A: Why are Rivers Important?

1. Rivers form part of the water cycle, carrying surface run-off downstream along with nutrients and material.
2. Rivers can be important on different scales.

Tamar (**locally** important)	Ganges (**globally** important)
Socially – provides a space to exercise **Economically** – boosts tourism, providing many jobs. **Environmentally** – many habitats for wildlife (e.g. otters and seals)	**Socially** – fundamental to the Hindu religion **Economically** – The Ganges is essential for global trading routes. **Environmentally** – The Ganges river dolphin is only found here.

B: Erosion and Waterfall Formation

Hydraulic action: where the power of the water forces air to become trapped in the cracks in the rock and causes the rock to break apart.
Abrasion: where material in the water is smashed against the bed or cliffs wearing it away.

Water and rocks fall and erode the soft rock at the bottom.	Creating an undercut as the soft rock erodes faster.	The hard rock collapses and the waterfall retreats.	Continued erosion and retreat upstream creates a gorge.

C: Drainage Basins

Surface run-off	Movement of water above ground
Interception	Vegetation stopping water reaching the ground
Infiltration	Movement of water from the surface into the soil
Through-flow	Movement of water through the soil

Human change	Impact
Deforestation	Less interception from vegetation means water hits the ground faster; water then enters the river faster – increasing flooding.
Urban areas	Less water can infiltrate the soil, therefore, more surface run-off meaning more water in the river faster which increasing flooding.

D: Causes of Flooding

Case study: causes of flooding in Boscastle, UK (2004).

Human Causes	Natural Causes
- The town is built around the harbour and is in a particularly vulnerable spot - Farming in the valleys have resulted in woodland and hedgerow being cut down and removed. - The bridges over the river got blocked, creating a temporary dam that then gave way, worsening the effects	- Over 60mm of rainfall fell in just 2 hours - The ground was already saturated due to two weeks of above average rainfall - The drainage basin has steep slopes and impermeable rock - The flood event coincided with high tide

E: Effects of Flooding

Case study: effects of flooding in Boscastle, UK (2004).

Social	Economic	Environmental
- There was disruption to the village for many months as it was rebuilt. - The rescue operation involved many highly skilled emergency service personnel	- 50 cars were destroyed by the raging river. - 90% of economy of Boscastle was reliant on tourism.	- Debris, sewage and fuel from cars got into the sea causing coastal pollution. -Habitats were damaged on land.

F: Management

Following the flooding, £10 million was invested by the Environment Agency to reduce the impacts of future flooding events in Boscastle.

Replacing low bridges with wider bridges:
- Allows water to flow freely underneath the bridge and out to sea.
- New bridge won't act like a dam (as debris will freely pass underneath).

Tree management:
– Dead trees cleared to prevent blockages and damage to properties in future floods.
Planting new trees (afforestation):
- Trees planted up valley.
- Increasing interception and infiltration.
- Reduces surface run-off and reducing the future severity of flooding.

History

A: Key People during the Reformation

Martin Luther: A German monk who triggered the Reformation with his 95 Point Thesis.

Henry VIII: King 1509-47 who begun the English Reformation with his divorce.

Catherine of Aragon: Henry VIII's first wife who provided him with one daughter (Mary)

Anne Boleyn: Henry VIII's second wife, who was executed in 1536 for adultery after birthing him a daughter (Elizabeth).

Thomas Cromwell: Henry VIII's chief minister from 1532, a lawyer and a strong Protestant..

Edward VI: Henry VIII's only son and heir. King 1547-53. He was a stricter Protestant than his father.

Mary I: Henry's daughter by Catherine of Aragon. Queen 1553-58. She was a devout Catholic.

Elizabeth I, Henry's daughter by Anne Boleyn, Queen of England from 1558-1603. A protestant Queen who tried to find a 'Middle Way'.

B: Catholic Church V Protestant

Transubstantiation: A Catholic belief that the bread and wine taken during Mass actually transform into the physical body and blood of Christ.

Vestments: Garments worn by priests.

Heretic: Someone with religious views that disagree with official church teaching.

Reformation: A movement in the 16th century which led to a break with the Catholic church and the beginning of the Protestant church.

Protestant: A new form of Christianity emerging in the 16th century in protest against Catholicism.

Roman Catholic: A form of Christainity where the Pope is head of the Church

C:The Slave Trade

1492: The Spanish set up plantations in the West Indies

1600: The British, Dutch and French set up trade posts in Africa to sell slaves to the Spanish

1700's: The British dominated the transatlantic slave trade and had plantations in the West Indies and America

1807: The British Empire banned the trading of slaves

1833: Keeping slaves was banned in 1833. All slaves under the age of 6 were immediately free, the other slaves had to be part slave and part free for four years, but they had to be paid for thework that they did

William Wilberforce: British politician who campaigned for an end to slavery (died 3 days before slavery was banned in Britain in 1807)

Olaudah Equiano: A slave, captured at 11, worked in Barbados, eventually he bought his freedom and wrote a book to try to help end slavery.

Granville Sharp: A campaigner against slavery

D: Slave Trade/ Empire

Slavery: When a person has no rights and is owned by someone else

Middle Passage: The horrendous journey from Africa across to America and the West Indies

Plantation: The settlements where the slaves would work (cotton, tobacco plantations)

Abolition: To ban or put an end to something

Trade triangle: The 3 point journey between Britain, Africa and the America's

Colony: A country that is controlled by another power (part of an Empire / colonisation)

Imperialism: The desire to conquer another country and colonise

Empire: When one larger power colonises a smaller power.

E: The Industrial Revolution

Industrial Revolution: great changes to farming, transport and industry.

Urbanisation: The move of people from villages to towns

Public Health: living conditions, medical care etc

Cholera : water borne highly infectious disease

1769:James Watt develops the first steam engine

1804: The first locomotive railway journey took place

1800-1850:Population of England doubled from 9 million-18 million. By 1900: population was 42 million

1831: First Cholera epidemic in Britain

1851: The Great Exhibition: Queen Victoria celebrates the Industrial Revolution and Age of Empire

1865: Joseph Bazelgette designs London Sewers

1912- The industry of Great Britain reaches its peak, with the textile industry producing around 8 billion yards of cloth.

F: The Age of Empire

1600: East India Company created. At first it traded with India , then it started to set up outposts and settlements

1607: Settlement of Virginia. Network of colonies in the West Indies. Colonised Barbados in 1625

1700s: The British were the biggest slave traders in the World and benefitted from slave colonies

1763: Treaty of Paris- Britain gains huge colonies e.g Canada, Senegal, Florida

1770: Captain Cook claims New South Wales in Australia

1775: The British lose 13 American colonies in the War of Independence

1793-1815:Britain gains control of a number of colonies

1838: Britain takes control of India and East Indian Company is ended

1899-1902: British Empire extends over the rest of Australia

Religious Studies

A: Origins of Abrahamic Faith

Genesis: First book of the Jewish and Christian scriptures.
Adam and Eve: According to Genesis, they were the first human beings created by God.
Noah: The hero of the Biblical flood story.
The Flood: God's decision to return the Earth to it's pre-creation state of watery chaos, and then remake it.

B: Origins of Abrahamic Faith

Abraham (Ibrahim): A core prophet in Judaism, Christianity and Islam.
Covenant: Conditional promises made by humanity to God.
Sacrifice: An act of slaughtering an animal or person surrendering a possession as an offering to a deity.
Isaac: Abrahams son who went on to be the ancestor of the Jewish people.
Ishmael-Abrahams son who went on to be the ancestor of the Muslim people.
Mecca: Holy city for Muslims established by Ibrahim and Ishmael.
Moses: The Hebrew prophet who led the Israelites out of Egypt and delivered the Law during their years of wandering in the wilderness.

C: Origins of Abrahamic Faith

Day of Atonement: A religious practice described in Leviticus to remove the sins of the community.
Jesus: First-century Jewish teacher who Christians believe to be the Son of God.
Pharisees: An ancient Jewish group, distinguished by strict observance of the traditional and written law.
Crucifixion: An ancient form of execution in which a person was nailed or bound to a cross.
Salvation: Saving from sin and its consequences, believed by Christians to be brought about by faith in Jesus.

D: Philosophy of Religion

Philosophy is the study of the fundamental nature of knowledge, reality and existence
Omnipotent: classical belief that God is all-powerful
Omniscient: classical belief that God is all-knowing
Omnibenevolent classical belief that God is all-loving
Transcendent: God is outside the universe.
Theists: People who believe that God exists.
Agnostics: People who argue that we can never know with certainty if God exists or not.
Atheists: People who believe that God does not exist.

E: Philosophy of Religion

William Paley wrote an argument for the existence of God called the **Design Argument**. –complexity and purpose prove the existence of God.
David Hume argues the Design argument is flawed because the universe is nothing like a watch.
The cosmological argument is used by Thomas Aquinas to prove the existence of God- everything has a First Cause.

F: Philosophy of Religion

Bertrand Russell argued that the universe does not need to have a First Cause.
The Problem of evil: The argument that the existence of evil undermines belief in an omnipotent and omnibenevolent God
Theodicy: An argument which defends God against the problem of evil.
Religious Experience: An experience which has a religious meaning for the person who experienced it-examples conversion/prayer/mysticism.

French

A: En ville (In town)

un marché- a market
un supermarché - a supermarket
un musée - a museum
un hôpital - a hospital
un cinéma - a cinema
un restaurant - a restaurant
un café - a pub
un hôtel - a hotel
un hôtel de ville- a town hall
un aéroport - an airport
un magasin - a shop
un commissariat de police- a police station
une banque - a bank
une librairie- a book shop
une boulangerie- a bakery
une pâtisserie- a cake shop
une patinoire - an ice-skating rink
une église - a church
une gare - a train station
une bibliothèque- a library
une piscine- a pool
une poste - post office
une école - a school
heureusement - Fortunately
malheureusement - Unfortunately

B: Le temps (Weather)

Quel temps **fait-il** ? - What **is** the weather like?
la météo - the weather forecast
il fait beau - the weather **is** nice
il fait mauvais - the weather **is** bad
il fait chaud - **it's** hot
il fait froid- **it's** cold
il y a du vent- **it's** windy
il y a de l'orage - **it's** stormy
il y a du brouillard - **it's** foggy
il y a des nuages - **it's** cloudy
il y a du soleil - **it's** sunny
il pleut- **it's** raining
il neige - **it's** snowing
il y a une éclaircie - sunny spells
le ciel **est** dégagé - the sky **is** clear
le ciel **est** couvert - the sky **is** overcast
le temps **est** variable - the weather **is** changeable
les saisons- the seasons
le printemps- spring
l'été- summer
l'automne - autumn
l'hiver - winter

C: Ma ville (My town)

J'habite dans une ville qui **s'appelle** Launceston et qui **se trouve** dans le sud-ouest de l'Angleterre.
C'est une petite ville à la campagne, en Cornouailles. **Elle est** assez vieille et tranquille.
À mon avis, **il n'y a pas** beaucoup de choses à faire dans ma ville, ce qui **est** dommage.
Je **préfère** aller à Plymouth où il y a plus à faire.
On peut aller au centre commercial pour y faire les magasins ou manger dans un restaurant.
De plus, **il y a** un grand cinéma où **on peut** regarder de bons films.
Avant, dans ma ville, **il y avait** un centre sportif mais **il a** fermé.
Quand **j'étais** plus jeune, **j'habitais** à Londres mais **il y avait** trop de circulation et de bruit.
Le weekend dernier, **j'ai fait** du camping avec mes copains et **nous avons fait** des randonnées.
Le week-end prochain, s'**il fait** beau, **je vais aller** à la plage pour faire du surf.
J'adore aller au bord de la mer puisqu'**on peut** s'y faire bronzer et s'y détendre.
J'ai toujours **rêvé** d'habiter en France et si **j'étais** riche, **j'achèterais** une énorme maison à Bordeaux!

I live in a town which is called Launceston and which is found in the south-west of England.
It's a small town in the countryside, in Cornwall.
It is quite old and quiet.
In my opinion, there aren't many things to do in my town, which is a shame.
I prefer going to Pl. where there is more to do.
One/we can go to the shopping centre to go shopping there or eat in a restaurant.
Moreover, there is a big cinema where one/you can watch some good films.
Before, in my town, there was a sport centre but it has closed.
When I was younger, I used to live in London but there was too much traffic and noise.
Last weekend, I did (went) camping with my friends and we did (went) hiking.

Next weekend, if it's nice weather, I'm going to go to the beach to do surfing.
I love to go (going) to the seaside since one can sunbathe and relax there.
I have always dreamed of living in France and if I were rich, I would buy an enormous house in Bordeaux!

D: Mes vacances - (My Holidays)

D'habitude **je vais** en vacances à Nice en France avec ma famille.
Nous voyageons en voiture parce que **ce n'est pas** loin et **j'ai** peur de prendre l'avion.
Nous restons dans un hôtel cinq étoiles qui **se trouve** près de la plage.
Tous les jours, **on va** au bord de la mer et **nous mangeons** des glaces -trop bon!
Mais l'année dernière, **je suis allé(e)** en Italie avec mes copains du collège.
Nous avons voyagé en car, ce qui **était** affreux car le voyage **était** trop long!
Nous sommes restés dans un camping qui **n'était pas** très confortable mais sympa!
Nous avons fait du canoë-kayak dans un lac et **j'ai fait** de l'escalade à la montagne.
À l'avenir, **je voudrais** aller aux États-Unis pour visiter New-York, **ce serait** incroyable!
De plus, **j'ai** toujours **rêvé** d'aller en Australie et si **j'étais** riche, **je voyagerais** dans le monde entier.
En décembre, s'**il neige**, **je vais aller** en Suisse pour faire du ski, **ça va être** génial!

Usually **I go** on holiday to Nice in France with my family.
We travel by car because **it's** *not* far and **I have** fear (I'm scared) of taking the plane (flying).
We stay in a five star hotel which **is found** near to the beach.
Every day, **we go** to the seaside and **we eat** ice creams- so tasty!
But last year, **I went** to Italy with my friends from school.
We travelled by coach, which **was** awful given that the journey **was** too long.
We stayed in a campsite which **was**n't very comfortable but fun!
We did canoeing/kayaking in a lake and **I did** rock climbing in the mountains.
In the future, **I would like** to go to the USA to visit New York, **it would be** incredible!
Furthermore, **I've** always **dreamed** of going to Australia and if **I were** rich, **I would travel** the whole world.
In December, if **it snows**, **I'm going to go** to Switzerland to do(go) skiing, **it's going to be** great!

A: En la ciudad (In town)	B: El tiempo (Weather)	C: Mi pueblo (My town)	
un mercado - a market un supermercado - a supermarket un museo - a museum un cine - a cinema un hotel - a hotel un ayuntamiento - a town hall un banco - a bank un puerto - a port un aeropuerto - an airport una tienda - a shop una zapatería - a shoe shop una librería - a book shop una panadería - a bakery una bolera - a bowling alley una iglesia - a church una estación de trenes - a train station una biblioteca - a library una piscina - a swimming pool una peluquería - a hairdresser's una oficina de correos - a post office una comisaría - a police station Afortunadamente - Fortunately Por suerte - Luckily Desafortunadamente - Unfortunately Por desgracia - Unfortunately	¿Qué tiempo hace? - what's the weather like? El pronóstico del tiempo - the weather forecast **hace** buen tiempo - the weather **is** nice **hace** mal tiempo - the weather **is** bad **hace** calor - **it's** hot **hace** frío - **it's** cold **hace** fresco - **it's** cool / fresh **hace** sol- **it's** sunny **hace** viento - **it's** windy **llueve** - **it's** raining **nieva** - **it's** snowing **hay** niebla - **it's** foggy **hay** tormentas - **it's** stormy **hay** nubes - **it's** cloudy el cielo **está** despejado - the sky **is** clear el cielo **está** cubierto - the sky **is** overcast el tiempo **es** variable - the weather **is** changeable las estaciones - the seasons la primavera - spring el verano - summer el otoño - autumn el invierno - winter	Vivo en un pueblo que se llama Launceston y que está en el suroeste de Inglaterra. Es una ciudad pequeña en el campo en Cornualles. Es bastante viejo y tranquilo. En mi opinión, no hay mucho que hacer en mi pueblo, ¡lo que es una lástima! Prefiero ir a Plymouth donde hay más que hacer. Se puede ir al centro comercial para ir de compras o comer en un restaurante. Además, hay un gran cine donde se pueden ver buenas películas. Antes, en mi pueblo, había un polideportivo pero se ha cerrado. Cuando era más joven, vivía en Londres pero había demasiada contaminación y ruido. El fin de semana pasado, fui de camping con mis amigos e hicimos senderismo. El fin de semana próximo, si hace buen tiempo, voy a ir a la playa para practicar el surf. Me encanta ir a la costa ya que se puede tomar el sol y relajarse. Siempre he soñado vivir en Francia y si yo fuera rico/a, compraría una casa enorme en Málaga.	I live in a town which is called Launceston and which is found in the south-west of England. It's a small town in the countryside, in Cornwall. It is quite old and quiet. In my opinion, there aren't many things to do in my town, which is a shame! I prefer going to Plymouth where there is more to do. One/we can go to the shopping centre to go shopping there or eat in a restaurant. Moreover, there is a big cinema where one/you can watch some good films. Before, in my town, there was a sport centre but it has closed. When I was younger, I used to live in London but there was too much pollution and noise. Last weekend, I did (went) camping with my friends and we did (went) hiking. Next weekend, if it's nice weather, I'm going to go to the beach to do surfing. I love to go (going) to the seaside since one (you) can sunbathe and relax there. I have always dreamed of living in France and if I were rich, I would buy an enormous house in Málaga.

D: Mis vacaciones (My holidays)	
Generalmente **voy** de vacaciones a París en Francia con mi familia. **Viajamos** en coche porque *no* **está** lejos y **tengo** miedo de volar **Nos alojamos** en un hotel de cinco estrellas que **está** cerca de la playa. Todos los días **vamos** a la costa y **comemos** helados, ¡qué rico ! Pero el año pasado **fui** a Italia con mis compañeros de clase. **Viajamos** en autocar, que **fue** un rollo dado que el viaje **fue** demasiado largo. ¡**Nos alojamos** en un camping que **fue** muy incómodo pero divertido! **Hicimos** piragüismo en un lago e **hice** escalada en las montañas. ¡En el futuro, **me gustaría** ir a Los EEUU para visitar el Gran Cañón, **sería** increíble! Además, siempre **he soñado** con ir a Australia y si **fuera** rico, **viajaría** por el mundo. En diciembre, si **nieva**, **voy a ir** a Suiza para esquiar ¡**va a ser** genial!	Usually **I go** on holiday to Paris in France with my family. **We travel** by car because **it's** *not* far and **I have** fear (I'm scared) of flying (to fly). **We stay** in a five star hotel which is (is- location) near to the beach. Every day **we go** to the seaside and **we eat** ice creams, so tasty! But last year, **I went** to Italy with my friends from school. **We travelled** by coach, which **was** boring given that the journey **was** too long. **We stayed** in a campsite which **was** very uncomfortable but fun! **We did** canoeing/kayaking in a lake and **I did** rock climbing in the mountains. In the future **I would like** to go to the USA to visit the Grand Canyon, it would be incredible! Furthermore, **I've** always **dreamed** of going to Australia and if **I were** rich, **I would travel** the world. In December, if **it snows**, **I'm going to go** to Switzerland to do (go) skiing, **it's going to be** great!

A: The components of an effective warm up and the muscular and skeletal system	B: Components of fitness that underpin performance	C: The benefits physical activity and sport can have on health and wellbeing (SEMH)
What is a pulse raiser? Activities that gradually increase in intensity to increase the heart rate. Examples: Jogging. **What is mobilisation?** Activities that take the joints through their range of movement starting with small movements and making these bigger as the warm-up progresses. Examples: Arm Circles **What is the stretch phase?** Activities to stretch the main muscles that will be used in the physical activity. Examples: Dynamic - Walking lunges. Static deltoid stretch. **What are the Major Muscles?** deltoids, biceps, triceps, erectors spinae,abdominals,obliques, hip flexors, gluteus maximus, quadriceps, hamstrings, gastrocnemius	**What is power?** The product of speed and strength to allow for explosive movements in sport. An example of this is when a basketball player jumping up for a rebound. **What is speed?** Distance divided by time to reduce time taken to move the body or a body part in an event or game. An example of this is when a athlete performs in the 100m sprint. **What is Aerobic Endurance?** The ability of the cardiorespiratory system to supply oxygen and nutrients to the muscles to sustain low to medium intensity work to delay**.**	**What are the physical benefits?** Improve fitness, body composition, sleep, helps prevent illness, symptoms of long-term health conditions. **What are the social benefits?** Meet new people, make friends, develop leadership and team working skills, decrease loneliness. **What are mental health benefits?** Improve work life balance, decrease risk of depression, improve mood, increase self-confidence and self-esteem. A healthy active lifestyle is essential for physical, mental health and wellbeing. You should be physically active for around 60 minutes a day.
C: The effects of long term fitness training on the cardiovascular system	**E: Training method used to develop and improve cardiovascular fitness**	**F: Anaerobic and aerobic respiration in sports performance**
What is Cardiac hypertrophy? Hypertrophy means an increase in size, so muscle hypertrophy means the muscles get bigger.Cardiac hypertrophy is where the ventricle wall gets larger or thickens as a result of exercise. **What is the benefit of a decrease in Resting Heart Rate (RHR)?** The increased size of the heart means it takes less beats in a minute to supply the body with enough oxygen at rest, therefore reducing the performers resting heart rate. **Why does cardiac output increase?** As more blood is pumped from the heart per beat (Increased stroke volume). Cardiac output will also therefore increase during high or maximal levels of exercise.	**Continuous training –** steady pace and moderate intensity for a minimum period of 30 minutes **Fartlek training –** the intensity of training is varied by running at different speeds and/or over different terrain **Interval training –** work period followed by a rest or recovery period. For aerobic endurance decrease the number/length of rest periods and decrease work intensity (compared to speed training) **Circuit training –** use of a number of stations/exercises completed in succession with minimal rest periods in between to develop aerobic endurance.	The **aerobic respiratory** system is responsible for producing the majority of our energy while our bodies are at rest or taking part in low-intensity exercise for long periods of time such as marathon running or long-distance cycling. **Glucose + oxygen → energy + water + carbon dioxide** The **anaerobic respiratory** system supplies energy very quickly for sports such as vaulting in gymnastics or throwing a javelin where the activity only lasts a few seconds. Glucose → energy + lactic acid

Art

A: Key words

Texture: Artists use texture in their work or they can suggest how something feels using techniques that imply texture.
Media: The material used to create the art work.
Composition: The way an object, or person is placed or positioned within the art work. How the elements of the work are put together.
**Technique**: The way the tools and media are used to create the art work.
Proportion- Refers to the relationship of certain elements to the whole and to each other

B: Perspective

Horizon line: It is the actual height of the viewer's eyes when looking at an object, interior scene, or an exterior scene.
Vanishing point :A vanishing point is a key element in many works of art. In a linear perspective drawing it is what allows us to create drawings, paintings, and photographs that have a three-dimensional look.
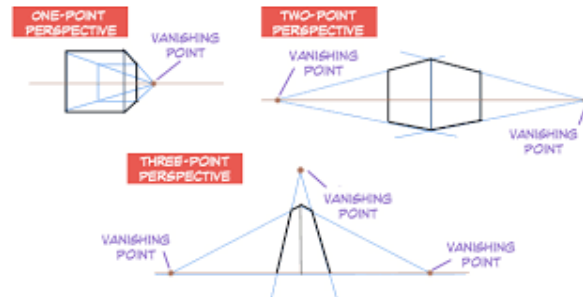

C: Proportion of a face

The eyes are halfway between the top of the head and the chin. The bottom of the nose is halfway between the eyes and the chin. The mouth is one third of the distance between the nose and the chin. The distance between the eyes is equal to the width of one eye.
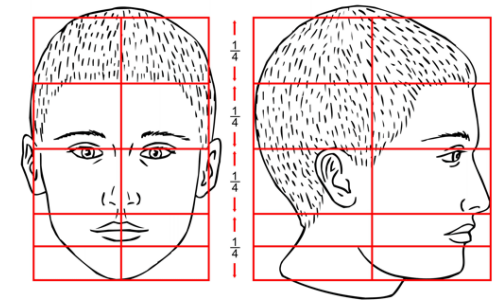
D: Negative Space

Negative space, in art, is the empty space around and between the subject(s) of an image. Negative space may be most evident when the space around a subject, not the subject itself, forms an interesting or artistically relevant shape, and such space occasionally is used to artistic effect as the "real" subject of an image.
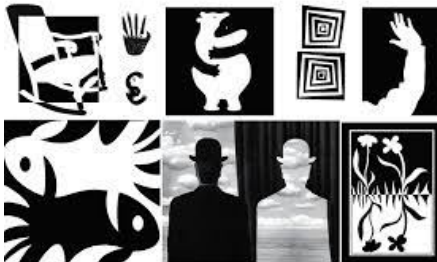
E: Rousseau

Henri Rousseau was a French post-impressionist painter in the Naïve or Primitive manner.

Tiger in a Tropical storm 1891
The Sleeping Gypsy 1897

Art movements- Naive, Post-impressionism, Primitivism.

F: African Masks

African masks can symbolize unseen, supernatural forces which are beneficial to communities. Parallel, zigzag, cruciform, curved and spiral lines, representing scarification marks. Masks can be grouped into three main forms: face masks, helmet masks, and headdresses.

Drama

A: Melodrama

Melodrama-is characterised by stereotypical characters, exaggerated emotions and conflict.
Melodrama contains four stock characters;
Hero: The hero is moral, manly, brave, courageous and handsome. He believes in justice and fights against evil and injustice. He also saves the heroine from danger and defeats the villain.
Heroine: The heroine is beautiful, kind, gentle and innocent. She is in love with the hero. She is often in some distress or danger and needs to be saved (Damsel in distress). At the end of the story, she has her happily ever after with the hero.
Villain: The villain is the main enemy of the hero. He is evil, powerful, dishonest, vengeful, corrupt and rich. He hates the hero. In most melodramas, the villain tries to kidnap or marry the heroine.
Sidekick helps the villain, but he often gets in the way of the villain. He or she is rather idiotic and stupid and provides comic relief.
Stereotype- A widely held but fixed and oversimplified image or idea of a particular type of person or thing.
Exaggeration- Something that is 'larger than life'
Genre-A category or type of theatre such as romance, horror etc.

B: The Mansion

Soundscaping- Using voice and body to create the sound of an environment.
Role play-the act of imitating the character and behaviour of someone who is different from yourself,
Stimuli- a starting point or trigger to generate ideas.e.g photo, painting, music,poem
Narrative- a technique whereby one or more performers speak directly to the audience to tell a story, give information or comment on the action of the scene or the motivations of characters.
Storytelling-the vivid description of ideas, beliefs, personal experiences, and life- lessons through stories or narratives that evoke powerful emotions and insights.
Devising- a group collaboration in response to a stimulus leading to the creation of an original performance.
Performing- entertaining an audience by doing something such as singing, dancing, or acting.
Responding- respond to dramatic works as an audience member
Evaluating-to make a judgement from the evidence available, and a personal judgement about what was seen.

C: Macbeth

Tragedy - A branch of drama that usually depicts the downfall and the reversal of fortune of a good person; suffering usually awaits many of the characters, especially the tragic hero.
Foreshadowing - A device in which an author suggests certain plot developments that might come later in the play.
Imagery - Use of language which is visually descriptive or symbolic.
Irony - The use of words where the meaning is contrary to what is expected to actually occur.
Dramatic monologue - A passage of speech in which one person is speaking to an audience or "thinking out loud".
Fate - The development of events outside an individuals' control, it is sometimes said to be determined by a supernatural power.
Patriarchy - A system of society whereby men have ultimate authority which they use to oppress women who are largely excluded from the male dominated society.

D: Dramatic techniques

Still Image-Participants create an image using their bodies – with no movement to portray meaning
Thought tracking-when a character steps out of a scene to address the. audience about how they're feeling.
Hot seating-An actor sits in the hot-seat and is questioned in role to deepen understanding of character
Greek Chorus-A company of actors who comment (by speaking or singing in unison) on the action in a play.
Narration- the act of telling a story or giving account of something
Soundscaping- Using voice and body to create the sound of an environment.
Flashback-helps to flesh out a dramatic moment or create the beginnings of a story.
Physical theatre-A movement based style of theatre, using our bodies to create narrative and create mood and atmosphere.

Music

A: Film music- context

Purpose and impact of music in films:
Music in Film sets the mood, supports the story telling Genre: Horror, Fantasy, Westerns

Composers: John Williams, Hans Zimmer, Danny Elfman, Debbie Wiseman, Delia Derbyshire, Segun Akinola

B: Terminology

Melody	Tune
Structure	The order of the sections in a piece of music
Texture	The layers of sound
Tonality	The key of a piece of music or individual chord i.e. minor
Tempo	Speed of the music

C: Vocabulary

Cues- the part of the music that require music

Synching/synch point- A precise moment where the timing of the music needs to fit with the action

Underscore- when the music is played at the same time as the action or dialogue.

Diagetic- music that is part of the action that the characters can hear.

**Non-diagetic-** music that is not part of the action the characters cannot hear.

Leitmotif- a short melody that is associated with a character or idea.

D: Instrumentation in Film Music

Woodwind	Sounds of nature
Brass	War, military
Harp	Love
Glockenspiel	Magic, supernatural
Timpani/drums	Conflict
Strings	Expressing emotion
Tremolo strings	Tension
Electronic timbres	Futuristic, outer space

E: Music theory- Chords

Interval: distance between notes i.e tone/major second, semitone
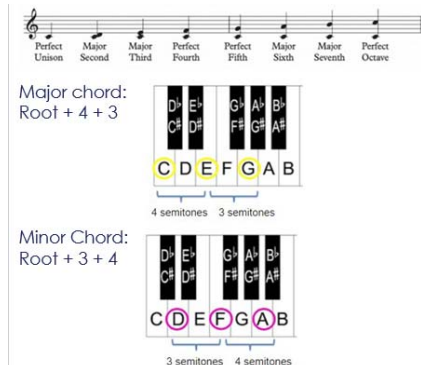
Primary chords: I IV V
Secondary chords: II, III, VI
In any major key primary chords and major secondary chords are minor

F: Terminology and impact

Tempo
Fast- Excitement/action
Slow- Thoughtful
Melody
Ascending- Moving up/hope
Descending- Moving down/despair
Chromatic- Tension
Harmony
Major- Optimism
Minor- Seriousness/sadness
Rhythm and metre
Strong pulse- with purpose
Irregular rhythm- Unpredictable and exciting
Dynamics
Loud- Powerful/large/surprising
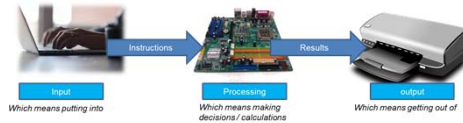Soft- Weak/small/ gentle
Crescendo- Getting nearer
Diminuendo- Moving further away

Computer Science

A: Computer Hardware

A computer is generally considered to be a programmable machine, often electronic, which takes in data, processes it and then outputs the result. There are actually a lot of devices that can be considered computers (or at least to contain a computer). A washing machine can be programmed, has buttons to input data, a CPU to process the instructions and motors/values which produce different outputs. By definition it is therefore a computer.

Input — Which means putting into
Instructions — Processing — Which means making decisions / calculations — Results
output — Which means getting out of

B- Computational knowledge and understanding - Binary

What is binary?
Binary is a 8-bit number systems consisting of 1's and 0's which allows the computer to communicate with hardware.

What you need to know?
Use 8-bit binary to convert to and from binary using the following method to support.

128	64	32	16	8	4	2	1

C: Logic Gates

Logic gates consist of AND, OR and Not. All allowing the CPU to process commands based on the input of either 1 or 0.

Not Gate	Or Gate	And Gate

A	Q
1	0
0	1

A	B	Q
1	1	1
1	0	1
0	1	1
0	0	0

A	B	Q
1	1	1
1	0	0
0	1	0
0	0	0

D: Networks- Lans and Wans

What is a LAN? - A LAN is a Local Area Network. It is a connected set of computers and other devices. Each device is called a node (e.g. computer, printer, etc.). A LAN is installed on one site, over a small geographical area and the network equipment will be owned by the organisation.

What is a WAN? - A Wide Area Network (WAN) covers a large geographical area – may even be worldwide. Some of the devices in this network may be provided by telecom companies, such as phone lines and satellites.

The Internet - The biggest WAN in the world is 'The internet'. It is a massive network of networks. A ginormous collection of connected computers.

E: Programming concepts

Within programming there are several key concepts you will encounter. These are:

Algorithm	A process of set rules to be followed in order
Boolean	An expression used in computer programming that can result in either true or false
Code	Program instructions
Loop	Repeats a specific sequence of programmed instruction
Operators	Symbols used to represent actions (< > =)
Variable	A value which can be changed

F: Web Design

What is the World Wide Web?
The internet is a global network of computers. The World Wide Web is the part of the internet that can be accessed through websites. Websites consist of webpages which allow you to see information. Websites are accessed using a web browser. A browser is a program designed to display the information held on a website. Every website has an address at which it can be found, a bit like a house address.
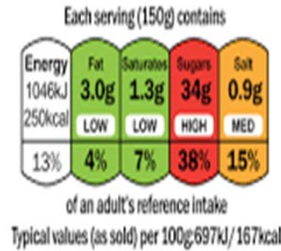
Considering your audience
Define your audience clearly - For example, young or old! What is the purpose of your website? - To entertain or to inform? How will this affect your design?

Design and Technology

A: Food and Nutrition	B: Textiles: Pencil case and storage

A: Food and Nutrition

Nutritional Values & Traffic Light Labelling
All food products are sold with the percentage of nutritional values
contained in the product - displayed on the front of the packaging. KJ, Protein, Carbohydrates (Sugar/Starch), Fat (Saturates) Fibre & Sodium (Salt

Each serving (150g) contains
Energy 1046kJ 250kcal | Fat 3.0g LOW | Saturates 1.3g LOW | Sugars 34g HIGH | Salt 0.9g MED
13% | 4% | 7% | 38% | 15%
of an adult's reference intake
Typical values (as sold) per 100g:697kJ/ 167kcal

FATTOM is an acronym used to describe the conditions necessary for bacterial growth: **Food, acidity, time, temperature, oxygen, and moisture**.
Foods provide a perfect environment for bacterial growth, due to their provision of nutrients, energy, and other components needed by the bacteria. Bacteria- Multiplies between 40-140 degrees & starts to die above 140 degrees.

B: Textiles: Pencil case and storage

Biomimicry.
Biomimetic design is where nature inspires a designer to design a product. Sometimes a designer will look at the way nature has solved a problem through evolution and they will apply it to a design problem.

Fabric Construction: **Knitted**- Wool **Woven**- Silk **Bonded**- Neoprene
ACCESSFM
Aesthetics- What it looks like.
Client- Who you are making it for.
Cost/Construction- How it is made.
Ergonomics- Design for comfort and usability.
Sustainability- How it helps the environment.
Size- Dimensions of the product.
Function- How it works.
Material- What its made from.

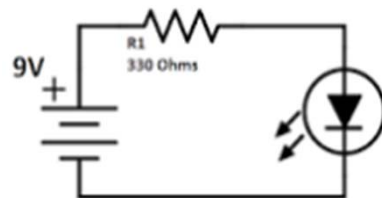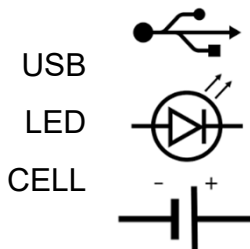| C: Product Design: Light Box	D: Product Design: Metal work

C: Product Design: Light Box

Manufactured boards
Blockboard - This is built up with a core of softwood strips bonded together with adhesive and covered with a sheet of plywood. Thicker.
Hardboard - This is made from wood fibres that have been pulped and glued together. Weaker.
Plywood - This is made from layers of timber with each grain layer being at right angles to each other and bonded together by resin and pressure.

Electronic Symbols

USB

LED

CELL

9V R1 330 Ohms

D: Product Design: Metal work

Ferrous metals - Metals that contain iron.

Mild steel, Iron, Stainless Steel, Carbon Steel, Cast Iron.

Non-ferrous metals - Metals that do not contain iron

Copper, Brass, Silver, Lead, Aluminium.

Metal joining methods.

Nut & Bolt, MIG (Metal Inert Gas) welding, Rivet, Spot welding, Brazing.

Metal Coating Methods.

Powder Coating- Paint is applied & then baked to achieve a harder wearing coat.

Painting- Metals are painted with polymer based paints that stop them from rusting and increase their aesthetic appeal.

Dip Coat – Metal products are dipped into a polymer to add grip or texture.

26 55.845
Fe
Iron