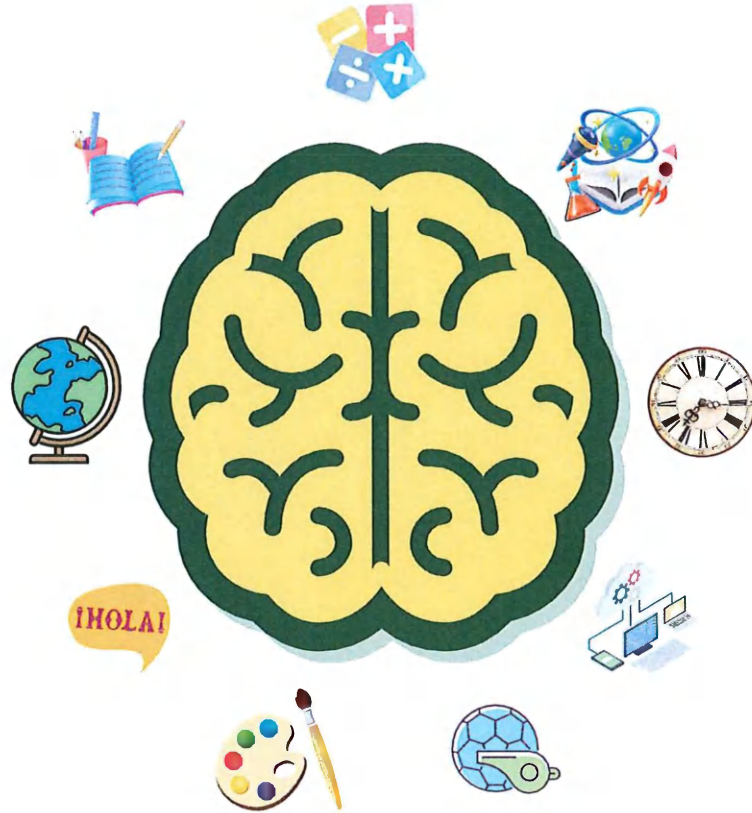




HOUSTONE
SCHOOL

YEAR 10 100% BOOK 3 SUMMER 2024



NAME: _____

TUTOR GROUP: _____

ASPIRATION ENDEAVOUR RESPECT

COMPUTER SCIENCE 1

Year 10 – Programming Fundamentals

Questions:	Answers:
1. What is the purpose of a variable in programming?	A variable in Python is used to store and manipulate data.
2. How are variables used to store data in Python?	You assign a values to them using the “=” assignment operator and perform operations on them.
3. Explain the role of indentation in Python programming, and why is it crucial for code readability?	Indentation in Python defines blocks of code. It is crucial for code readability and is used to signify the beginning and end of loops, functions, and conditional statements.
4. How does the 'if' statement work in Python, and why is it essential for implementing decision-making in programs?	The 'if' statement in Python allows conditional execution of code. It is essential for implementing decision-making, where code is executed based on a specified condition.
5. What is the purpose of a loop in programming, and how does the 'for' loop differ from the 'while' loop in Python?	A loop repeats a set of instructions. In Python, the 'for' loop is used for iterating over a sequence, while the 'while' loop continues iterating as long as a condition is true.
6. How are lists used in Python, and what advantages do they offer for storing multiple values?	Lists in Python store multiple values in a single variable. They are versatile and allow easy manipulation, iteration, and indexing of elements.
7. What is the purpose of a function in Python	A function is a block of reusable code in Python. It allows developers to organise and reuse specific tasks.
8. Explain the concept of a parameter in Python functions?	Parameters in Python functions are placeholders for values. They enable the passing of values to functions, allowing them to perform tasks with different inputs.
9. What is the purpose of the 'import' statement in Python?	The 'import' statement in Python allows the use of external modules and libraries. It brings functionality from external sources into the current program.
10. What is a while loop in Python?	A while loop in Python repeats a block of code as long as a specified condition is true.
11. What is the role of a translator in the context of programming languages?	A translator converts high-level programming code into machine code or an intermediate representation.

COMPUTER SCIENCE 2

Year 10 – Producing robust programs

Questions:	Answers:
1. What is meant by the term "robust program," and why is it essential in software development?	A robust program is one that can handle unexpected inputs or conditions without crashing. It is essential for ensuring the reliability and stability of software.
2. What is the importance of validation when taking user input in a program?	Validation ensures that user inputs meet specific criteria.
3. How can the use of constants enhance the robustness of a program?	Constants make code more readable and maintainable, and they allow for easy updates.
4. What is the role of comments in programming?	Comments provide explanations about the code's purpose and functionality. They make code more maintainable by aiding understanding, especially for developers who didn't write the code.
5. Why is testing an integral part of producing robust programs?	Testing helps identify and fix issues in a program.
6. What is the purpose of exception handling in programming?	Exception handling allows a program to gracefully handle errors. It prevents crashes by providing an alternative course of action when an error occurs.
7. What is the role of pseudocode in the development of robust programs?	Pseudocode is a high-level description of a program's logic written in plain English usually with no specific syntax.
8. Why is proper indentation important in programming?	Proper indentation in programming enhances code readability and structure by visually indicating the hierarchy of code blocks.
9. What are the potential consequences of incorrect indentation in a program?	Incorrect indentation can lead to syntax errors and impact the logical flow of a program.
10. Explain the role of robust validation in preventing common security vulnerabilities?	Robust validation helps prevent security vulnerabilities by ensuring that user inputs adhere to specific criteria.
11. What is meant by a syntax error?	Syntax errors occur when the code violates the programming language's rules.
12. What are logic errors in programming?	Logic errors are mistakes in the program's algorithm or logic, leading to unexpected behaviour. Unlike syntax errors, they don't cause the program to fail during compilation.
13. What is the purpose of testing in software development?	The purpose of testing is to identify and fix defects in a program.

‘Macbeth’ – Knowledge Organiser

Context	Key Things to Remember
<ul style="list-style-type: none"> ▪ King James I – Macbeth was written in 1606, early in the reign of James I, who succeeded to the English throne in 1603 after being King of Scotland. The play pays homage to the king’s Scottish lineage and hatred of witches. Additionally, the witches’ prophecy that Banquo will found a line of kings is a nod to James’ family’s claim to have descended from the historical Banquo. ▪ The Divine Right of Kings – the idea that kings got their power from God and not from their subject. James I was a believer in this, and the idea meant that any treasonous activity was a crime against God. Only a century earlier, England had suffered under the massive disorder of the Wars of the Roses, so many supported the idea to avoid civil unrest. ▪ Patriarchy – patriarchal societies are those in which men dominate, and inheritance passes through male heirs. ▪ Gender – Macbeth and Lady Macbeth switch between having masculine and feminine characteristics. In the play, gender is often linked to ambition and a willingness to do anything to achieve power. ▪ Women – Women were expected to follow social expectations with their behaviour towards men. They were meant to obey all men, be faithful and respectful, not be violent and be religious. They would have been regarded as a possession, first owned by the father, then given to and owned by the husband. Women were considered the delicate, ‘fairer’ sex and they should be quiet and reserved, always respecting the wishes and opinions of the males in their lives. Lady Macbeth subverts these expectations in the play to manipulate Macbeth in getting what she wants. ▪ Adam, Eve and the serpent – in the bible, Adam and Eve live peacefully in the Garden of Eden until Eve is tempted by the serpent and eats the forbidden fruit from the tree of knowledge. She convinces Adam to eat as well, and God curses them and banishes them to Earth. The serpent is frequently alluded to in Macbeth. ▪ Witchcraft – in Shakespeare’s time there was no scientific knowledge to explain natural disasters such as earthquakes, floods and droughts. One of the ways they accounted for the unexplained was the idea of witches. In Elizabethan England, hundreds of thousands of women were tortured and executed in Europe because they were accused of witchcraft. The King wrote a book on the subject entitled ‘Daemonologie’ and appealed to parliament to pass the following act in 1563 which was still a part of English law until 1951. At the time Shakespeare was writing, many people thought that witches were real, so the weird sisters would have seemed believable and frightening to an audience in the 1600s. ▪ The 5 Acts: Macbeth is a typical tragedy. The first part builds up the turning point (Duncan’s murder), and the second part deal with the consequences of this, which leads to the main character’s downfall. ▪ Tragic Conventions: Macbeth is one of Shakespeare’s Tragedies and follows specific conventions. The climax must end in a tremendous catastrophe involving the death of the main character; the character’s death is caused by their own flaw(s) (hamartia); the character has something the audience can identify with which outweighs their flaws so we care about them. ▪ The Real Macbeth: Macbeth is loosely based on true events in feudal Scotland in the 11th Century and would have been known to King James. King James inherited the throne through his ancestors Banquo and Fleance who appear in the play. 	<ul style="list-style-type: none"> ▪ The play was written in 1606 but was set in the 11th century (Medieval period). ▪ In the play, King Duncan was a benevolent king and loved by all. In real life he was a weak king. ▪ Banquo is intrigued by the prophecies and does have ambitious thoughts, but he does not choose to act on these thoughts. ▪ There are many similarities between Banquo and Macbeth. They are both soldiers, they are both very patriotic at the start of the play and they are both considered to be brave and noble. ▪ Shakespeare believed the human nature is prone to evil and that people are greedy. He illustrates this in the Macbeths’ desire to become King and Queen. This greed led them to resort to extreme measures such as regicide. In Macbeth’s case, his greed led him to kill others, too. ▪ Macbeth kills Macdonald, Duncan, Duncan’s guards and Young Siward himself. ▪ Macbeth orders the deaths of Lady Macduff, her family and household and Banquo. ▪ Macbeth is the only Shakespearean play set in Scotland. ▪ Macbeth’s castle is in Inverness. The Royal Palace is in Dunsinane. ▪ The Gunpowder Plot occurred in 1605, one year before the play was written.
Characters	
Macbeth	A loyal warrior who becomes duplicitous as he becomes obsessed with the witches’ prophecies of power.
Lady Macbeth	Macbeth’s wife who drives his ambition in the beginning but loses her control by the end.
Banquo	Macbeth’s close friend and ally who also receives prophecies.
Fleance	Banquo’s son who represents innocence and justice.
Duncan	King of Scotland at the beginning of the play - a strong, respected leader.
Malcolm	Duncan’s oldest son and next in line to the throne. Joins the English army to defeat Macbeth at the end of the play.
Donalbain	Duncan’s youngest son disappears (to Ireland) after Duncan’s murder.
Macduff	Macbeth’s antagonist: A brave warrior who is loyal to Duncan and is consistently suspicious of Macbeth.
Themes	
Ambition	The witches’ prophecies spur Macbeth and Lady Macbeth to fulfil their ambitions, but they never <i>make</i> them do anything.
Fate and Free Will	What made it all happen? Fate? The witches? Macbeth’s free will?
Good and Evil	Good and evil are shown through contrasts in the play. Evil is illustrated by the witches, Macbeth, Lady Macbeth, the assassins & traitors. Good is shown by Duncan, Malcolm, Banquo, Macduff, Lady Macduff.
The Supernatural	This is shown through the witches & LM calling upon the spirits.
Appearance and Reality	M and LM look innocent but are plotting behind people’s backs.
Light and Darkness	Light links to good, life and God. Darkness links to evil and foreboding.
Guilt	Guilt is shown through M (internal conflict) and LM’s blood imagery.
Gender	LM challenges and controls M. She subverts the gender stereotypes of the time.

Plot	Key Quotations	Key Terminology	
<p>Act 1</p> <ul style="list-style-type: none"> The 3 witches gather to meet Macbeth and Banquo. Duncan hears the Thane of Cawdor has betrayed him. Macbeth is seen as a hero. Macbeth and Banquo hear the predictions. Duncan decides that Malcolm will be heir to the throne. Duncan plans to visit Macbeth. Lady Macbeth reads Macbeth's letter. <p>Act 2</p> <ul style="list-style-type: none"> Macbeth has doubts and sees a vision of a floating dagger. He follows through with Duncan's murder. LM has to finish the job by wiping blood on the drunk guards. Macduff discovers Duncan's body. The guards are the likely suspects. Macbeth kills the guards. Malcolm and Donalbain flee the castle because they are afraid. <p>Act 3</p> <ul style="list-style-type: none"> Banquo suspects Macbeth for the murder of King Duncan. Macbeth sends murderers to kill Banquo. Banquo is murdered but Fleance escapes. The ghost of Banquo is at the banquet. Macbeth rants and raves. LM tries to cover up the situation. Macduff didn't attend the banquet as he is suspicious of Macbeth. <p>Act 4</p> <ul style="list-style-type: none"> Macbeth visits the 3 witches and they show him more visions. He believes he can't be killed by any man. Macbeth sends murderers to Macduff's castle to kill his family. In England, Macduff begs Malcolm to return to the throne. Malcolm tests Macduff's loyalty then agrees to the war against Macbeth. <p>Act 5</p> <ul style="list-style-type: none"> LM has gone mad with guilt. She sleepwalks and tries to clean blood from her hands. She commits suicide. Many of Macbeth's supporters decide to help Malcolm. Macbeth isn't worried as he believes the prophecies. Macbeth confronts Macduff and learns that he was not born naturally but by caesarean section. Macbeth and Macduff fight and natural order is restored when Macbeth is killed and Malcolm is crowned king. 	<p>Act 1</p> <ul style="list-style-type: none"> "Fair is foul, and foul is fair" (1.1) Witches "For brave Macbeth – well he deserves that name" (1.2) The Captain "So foul and fair a day I have not seen" (1.3) Macbeth "Stars hide your fires, let not light see my black and deep desires" (1.4) Macbeth "Come you spirits...unsex me here and fill me from the crown to the toe top full of direst cruelty." (1.5) Lady Macbeth "Look like the innocent flower but be the serpent under it" (1.6) Lady Macbeth "When you durst do it, then you were a man" (1.7) Lady Macbeth "But screw your courage to the sticking place and we'll not fail." (1.7) Lady Macbeth <p>Act 2</p> <ul style="list-style-type: none"> "Is this a dagger I see before me, the handle towards my hand?" (2.1) Macbeth "Give me the daggers. The sleeping and the dead are but as pictures" (2.2) Lady Macbeth "Will all great Neptune's ocean wash this blood clean from my hand?" (2.2) Macbeth "A little water clears us of this deed" (2.2) Lady Macbeth "Wake Duncan with thy knocking, I would thou couldst." (2.2) Macbeth "Oh horror! Horror! Horror! Tongue nor heart cannot conceive, nor name thee" (2.3) Macduff "There's daggers in men's smiles" (2.3) Donalbain <p>Act 3</p> <ul style="list-style-type: none"> "Thou has it all now, King, Cawdor, Glamis, all, as the weird sisters promised, and I fear though play'st most foully for't." (3.1) Banquo "To be thus is nothing, but to be safely thus. Our fears in Banquo stick deep" (3.1) Macbeth "Of full of scorpions is my mind, dear wife" (3.2) Macbeth "Be innocent of the knowledge, dearest chuck, till thou applaud the deed" (3.2) Macbeth "Thou canst not say I did it; never shake they gory locks at me" (3.4) Macbeth "My lord is often thus, and hath been from his youth" (3.4) Lady Macbeth "I am in blood stepp'd so far, that, should I wade no more, returning were as tedious as go o'er" (3.4) Macbeth <p>Act 4</p> <ul style="list-style-type: none"> "Something wicked this way comes" (4.1) Witches "Speak, I charge you" (4.1) Macbeth "From this moment, the very firstlings of my heart shall be the firstling of my hand" (4.1) Macbeth "The castle of Macduff I will surprise; seize upon Fife." (4.1) Macbeth "Let grieve convert to anger. Blunt not the heart, enrage it" (4.3) Malcolm "Macbeth is ripe for shaking, and the powers above put on their instrument" (4.3) Malcolm <p>Act 5</p> <ul style="list-style-type: none"> "Out, damned spot! Out, I say!... Will these hands ne'er be clean?" (5.1) Lady Macbeth "All the perfumes of Arabia will not sweeten this little hand" (5.1) Lady Macbeth "My name's Macbeth" (5.7) Macbeth "Turn, hell-hound, turn...I have no words; my sword is my voice" (5.8) Macduff "I bear a charmed life which must not yield to one of woman born" (5.8) Macbeth "Macduff was from his mother's womb untimely ripp'd" (5.8) Macduff "I will to yield to kiss the ground before young Malcolm's feet" (5.8) Macbeth "Behold where stands the usurper's head" (5.9) Macduff "His fiend-like queen who, as 'tis thought, by self and violent hands took off her life" (5.9) Malcolm. 	<p>Antithesis</p> <p>Aside</p> <p>Dramatic Irony</p> <p>Iambic Pentameter</p> <p>Juxtaposition</p> <p>Monologue</p> <p>Motifs</p> <p>Paradox</p> <p>Semantic field</p> <p>Soliloquy</p>	<p>Opposite / Contrast</p> <p>A remark heard only by the audience.</p> <p>When the audience knows things that the characters don't.</p> <p>A line of verse, with 5 metrical feet, each with one unstressed syllable followed by one stressed syllable.</p> <p>Two things closely placed with contrasting effect.</p> <p>A long speech by one actor.</p> <p>A dominant / recurring idea.</p> <p>A person/thing with contradictory features or qualities.</p> <p>A group of words, which relate to a common theme or motif.</p> <p>Speaking one's thoughts aloud.</p>
		<p style="text-align: center;">Key Vocabulary</p> <p>Ambition</p> <p>Apparitions</p> <p>Betrayal</p> <p>Catholics</p> <p>Fatal Flaw</p> <p>Hallucination</p> <p>Invincible</p> <p>Jacobean</p> <p>Kinsman</p> <p>Masculinity</p> <p>Noble</p> <p>Protestant</p> <p>Regicide</p> <p>Remorseless</p> <p>Scepticism</p> <p>Thane</p> <p>Tragedy</p> <p>Traitor</p> <p>Treason</p> <p>Virtuous</p>	<p>Strong desire to achieve something.</p> <p>A ghost/ghost-like image of a person.</p> <p>Being disloyal.</p> <p>A person belonging to the Christian church.</p> <p>A defect / weakness in character.</p> <p>Apparent vision of something not present.</p> <p>Feeling too powerful to be defeated.</p> <p>Relating to the reign of King James I.</p> <p>A relative / blood relation.</p> <p>Qualities considered to be of a man.</p> <p>Belonging to aristocracy.</p> <p>A member of the Western Christian church.</p> <p>The action of killing a king.</p> <p>Without guilt or regret.</p> <p>Doubts the truth of things.</p> <p>A man with land granted by the king.</p> <p>A play with tragic events.</p> <p>A person who betrays someone.</p> <p>Betraying one's country.</p> <p>Having high moral standards.</p>

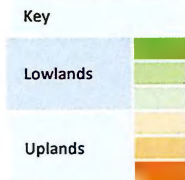
Relief of the UK

Relief of the UK can be divided into uplands and lowlands. Each have their own characteristics.

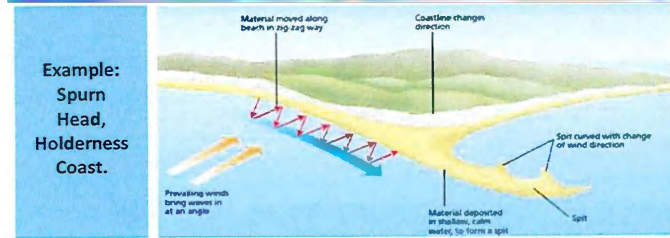


Areas +600m: Peaks and ridges cold, misty and snow common. i.e. Scotland

Areas -200m: Flat or rolling hills. Warmer weather. i.e. Fens



Formation of Coastal Spits - Deposition



- 1) Swash moves up the beach at the angle of the prevailing wind.
- 2) Backwash moves down the beach at 90° to coastline, due to gravity.
- 3) Zigzag movement (Longshore Drift) transports material along beach.
- 4) Deposition causes beach to extend, until reaching a river estuary.
- 5) Change in prevailing wind direction forms a hook.
- 6) Sheltered area behind spit encourages deposition, salt marsh forms.

Types of Erosion

The break down and transport of rocks – smooth, round and sorted.

Attrition	Rocks that bash together to become smooth/smaller.
Solution	A chemical reaction that dissolves rocks.
Abrasion	Rocks hurled at the base of a cliff to break pieces apart.
Hydraulic Action	Water enters cracks in the cliff, air compresses, causing the crack to expand.

Types of Transportation

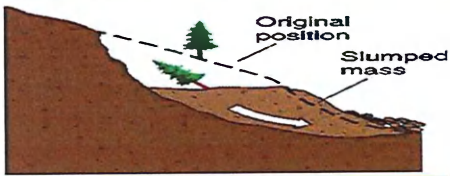
A natural process by which eroded material is carried/transported.

Solution	Minerals dissolve in water and are carried along.
Suspension	Sediment is carried along in the flow of the water.
Saltation	Pebbles that bounce along the sea/river bed.
Traction	Boulders that roll along a river/sea bed by the force of the flowing water.

Mass Movement

A large movement of soil and rock debris that moves down slopes in response to the pull of gravity in a vertical direction.

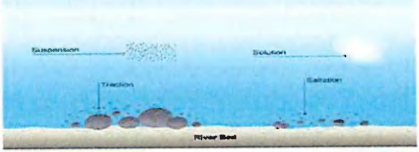
- 1 Rain saturates the permeable rock above the impermeable rock making it heavy.
- 2 Waves or a river will erode the base of the slope making it unstable.
- 3 Eventually the weight of the permeable rock above the impermeable rock weakens and collapses.
- 4 The debris at the base of the cliff is then removed and transported by waves or river.



Types of Weathering

Weathering is the breakdown of rocks where they are.

Carbonation	Breakdown of rock by changing its chemical composition.
Mechanical	Breakdown of rock without changing its chemical composition.



What is Deposition?

When the sea or river loses energy, it drops the sand, rock particles and pebbles it has been carrying. This is called deposition.

Formation of Bays and Headlands



Unit 1c Physical Landscapes in the UK

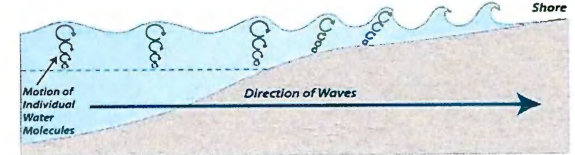


How do waves form?

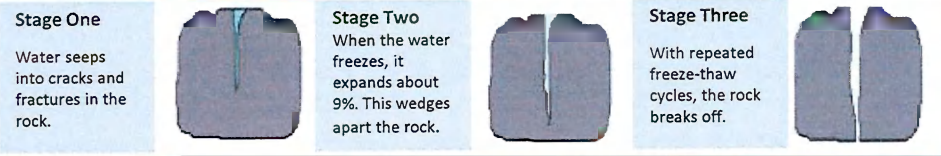
Waves are created by wind blowing over the surface of the sea. As the wind blows over the sea, friction is created - producing a swell in the water.

Why do waves break?

- 1 Waves start out at sea.
- 2 As waves approaches the shore, friction slows the base.
- 3 This causes the orbit to become elliptical.
- 4 Until the top of the wave breaks over.



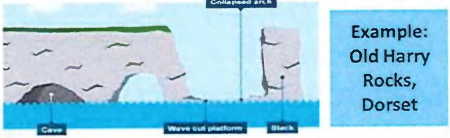
Mechanical Weathering Example: Freeze-thaw weathering



Size of waves **Types of Waves**

<ul style="list-style-type: none"> • Fetch how far the wave has travelled • Strength of the wind. • How long the wind has been blowing for. 	<p>Constructive Waves</p> <p>This wave has a swash that is stronger than the backwash. This therefore builds up the coast.</p>	<p>Destructive Waves</p> <p>This wave has a backwash that is stronger than the swash. This therefore erodes the coast.</p>
--	---	---

Formation of Coastal Stack



- Example: Old Harry Rocks, Dorset**
- 1) Hydraulic action widens cracks in the cliff face over time.
 - 2) Abrasion forms a wave cut notch between HT and LT.
 - 3) Further abrasion widens the wave cut notch to form a cave.
 - 4) Caves from both sides of the headland break through to form an arch.
 - 5) Weather above/erosion below –arch collapses leaving stack.
 - 6) Further weathering and erosion leaves a stump.

Coastal Defences

Hard Engineering Defences

Groynes	Wood barriers prevent longshore drift, so the beach can build up.	✓ Beach still accessible. ✗ No deposition further down coast = erodes faster.
Sea Walls	Concrete walls break up the energy of the wave. Has a lip to stop waves going over.	✓ Long life span ✓ Protects from flooding ✗ Curved shape encourages erosion of beach deposits.
Gabions or Rip Rap	Cages of rocks/boulders absorb the waves energy, protecting the cliff behind.	✓ Cheap ✓ Local material can be used to look less strange. ✗ Will need replacing.

Soft Engineering Defences

Beach Nourishment	Beaches built up with sand, so waves have to travel further before eroding cliffs.	✓ Cheap ✓ Beach for tourists. ✗ Storms = need replacing. ✗ Offshore dredging damages seabed.
Managed Retreat	Low value areas of the coast are left to flood & erode.	✓ Reduce flood risk ✓ Creates wildlife habitats. ✗ Compensation for land.

Case Study: Hunstanton Coast

Location and Background
 Located on the North-West coast of Norfolk. The town is a popular sea resort for tourists to visit all year round. In 2013, the town suffered damage from a storm surge. The Sea Life Centre was flooded and closed for a number of months.

Geomorphic Processes
 - Old Hunstanton is dominated by dunes that are formed when sand is trapped and built up behind objects.
 -Hunstanton Cliffs are made from three different bands of rock (sandstone, red chalk and white chalk).
 -Hunstanton Cliff are exposed to cliff retreat. This is when a wave-cut notch develops enough for the cliff face to become unstable and eventually collapses.
 -Longshore drift travels from Sheringham in the north to the Wash in the south.

Management
 -Hunstanton is protected by a number of groynes. These trap sand to build up the beach for better protection.
 -The town is also protected by large sea walls to prevent flooding and deflect the waves energy.
 -\$15 million has been spent on beach nourishment to add sediment to beach for increased protection against flooding.

Water Cycle Key Terms

Precipitation	Moisture falling from clouds as rain, snow or hail.
Interception	Vegetation prevent water reaching the ground.
Surface Runoff	Water flowing over surface of the land into rivers
Infiltration	Water absorbed into the soil from the ground.
Transpiration	Water lost through leaves of plants.

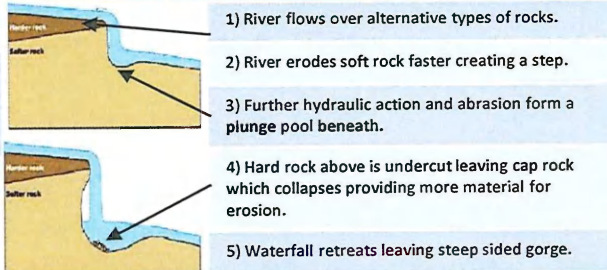
Physical and Human Causes of Flooding.

Physical: Prolong & heavy rainfall Long periods of rain causes soil to become saturated leading runoff.	Physical: Geology Impermeable rocks causes surface runoff to increase river discharge.
Physical: Relief Steep-sided valleys channels water to flow quickly into rivers causing greater discharge.	Human: Land Use Tarmac and concrete are impermeable. This prevents infiltration & causes surface runoff.

Upper Course of a River

Near the source, the river flows over steep gradient from the hill/mountains. This gives the river a lot of energy, so it will erode the riverbed vertically to form narrow valleys.

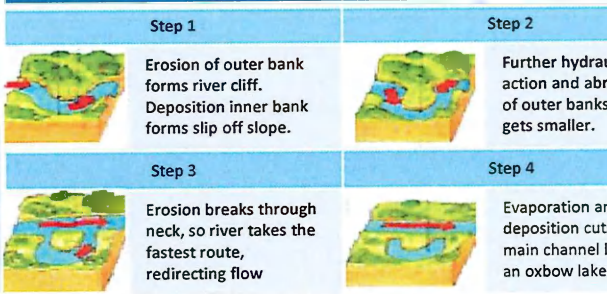
Formation of a Waterfall



Middle Course of a River

Here the gradient get gentler, so the water has less energy and moves more slowly. The river will begin to erode laterally making the river wider.

Formation of Ox-bow Lakes

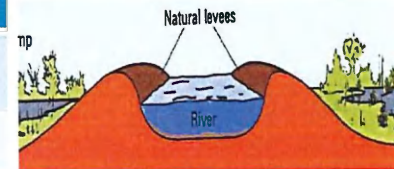


Lower Course of a River

Near the river's mouth, the river widens further and becomes flatter. Material transported is deposited.

Formation of Floodplains and levees

When a river floods, fine silt/alluvium is deposited on the valley floor. Closer to the river's banks, the heavier materials build up to form natural levees.



- ✓ Nutrient rich soil makes it ideal for farming.
- ✓ Flat land for building houses.

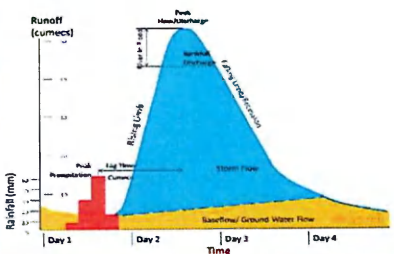
River Management Schemes

Soft Engineering	Hard Engineering
Afforestation – plant trees to soak up rainwater, reduces flood risk. Demountable Flood Barriers put in place when warning raised. Managed Flooding – naturally let areas flood, protect settlements.	Straightening Channel – increases velocity to remove flood water. Artificial Levees – heightens river so flood water is contained. Deepening or widening river to increase capacity for a flood.

Hydrographs and River Discharge

River discharge is the volume of water that flows in a river. Hydrographs who discharge at a certain point in a river changes over time in relation to rainfall

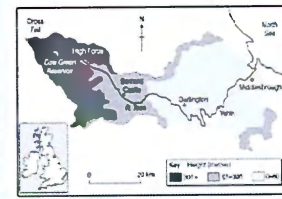
- Peak discharge** is the discharge in a period of time.
- Lag time** is the delay between peak rainfall and peak discharge.
- Rising limb** is the increase in river discharge.
- Falling limb** is the decrease in river discharge to normal level.



Case Study: The River Tees

Location and Background
 Located in the North of England and flows 137km from the Pennines to the North Sea at Red Car.

Geomorphic Processes
Upper – Features include V-Shaped valley, rapids and waterfalls. High Force waterfall drops 21m and is made from harder Whinstone and softer limestone rocks. Gradually a gorge has been formed.
Middle – Features include meanders and ox-bow lakes. The meander near Yarm encloses the town.
Lower – Greater lateral erosion creates features such as floodplains & levees. Mudflats at the river's estuary.



Management
 -Towns such as Yarm and Middleborough are economically and socially important due to houses and jobs that are located there.
 -Dams and reservoirs in the upper course, controls river's flow during high & low rainfall.
 - Better flood warning systems, more flood zoning and river dredging reduces flooding.

Reformation knowledge organiser

	Question	Answer
1	Why was the Church so powerful?	It was incredibly wealthy, everyone believed in God, and bishops were often influential ministers
2	What was a tithe?	A payment to the Church of 10% of someone's earnings
3	What was an indulgence?	Where people paid for the forgiveness of sins or for less time in purgatory
4	Who were the Lollards?	The Lollards were an early group who criticised the Church, arguing priests were not important aspects of religion
5	What was Humanism?	A movement that focused on studying ancient and classical texts. Humanists studied the Bible in its earliest forms.
6	Who started to criticise the Catholic Church in the 1520s?	European reformers such as Martin Luther and Huldrych Zwingli
7	What were Luther's criticisms of the Church?	He thought salvation came from faith alone, the Bible was the only religious authority, the Bible should be written in English, and that the Church should not be wealthy
8	How did Tyndale fund the publication of a Bible in English?	He received donations from wealthy London drapers
9	What institutions became hotbeds of ideas for Church reform?	The University of Oxford, The University of Cambridge and the Inns of Court
10	What was anticlericalism?	Hostility towards priests and other members of the clergy
11	What was pluralism?	Holding multiple church offices at once
12	Why is it difficult to tell how far ideas about Church reform affected ordinary people?	Because many would not have even been aware of the idea, and those who were would have feared being punished for heresy
13	Why did Henry want to divorce Catherine of Aragon?	He wanted a son, and fell in love with Anne Boleyn
14	Who blocked Henry's plan to divorce Catherine?	Pope Clement VII
15	Why did Henry accuse the priests of praemunire?	He claimed that they were appealing to a foreign power (i.e. the Pope) instead of him
16	What was the Act of Supremacy?	An act of Parliament confirming Henry's status as head of the Church of England
17	Why did the court oppose Henry in the 1530s?	Some nobles, such as Reginald Pole, sympathised with Catherine of Aragon. Most of those who opposed Henry, however, were executed
18	Why did the monasteries oppose Henry in the 1530s?	Monasteries opposed Henry because they were predominantly Catholic. The story of Elizabeth Barton inspired further opposition.
19	What was the oath of allegiance?	An oath of allegiance to Henry VIII as the Head of the Church
20	What was Valor Ecclesiasticus?	A survey of the wealth of the Church organised by Cromwell
21	What were the Visitations?	A survey of the spiritual health of the Church organised by Cromwell (he sent commissioners to uncover corruption)
22	Which monasteries did Henry VIII close first?	He first closed the smallest monasteries with an income of less than £200
23	How did Cromwell persuade the larger monasteries to 'voluntarily' dissolve?	He offered a generous pension to monks in monasteries that did dissolve, and accused the leaders of monasteries that would not dissolve of treason
24	How did Cromwell close the friaries?	He introduced strict rules that were impossible to follow. Those who could not reach the standards were fined.

25	What impact did the dissolution have on ordinary people?	Many people did not like the dissolution because monks could no longer pray for them or offer them charity
26	What impact did the dissolution have on the gentry?	Many gentry supported the dissolution as they were able to buy church lands for low prices, making them extremely wealthy
27	What were the Ten Articles?	The first official doctrine of the Church of England, it attacked purgatory but approved the cult of saints and religious images
28	What was the Lincolnshire Rising?	A rising of 40,000 men in northern England against the suppression of the monasteries
29	What was the Pilgrimage of Grace?	A protest led by Robert Aske in response to the dissolution of monasteries and unemployment
30	What were the Pontefract Articles?	A list of concerns drawn up by the leaders of the Pilgrimage of Grace to give to Henry VIII
31	What impact did the Pilgrimage of Grace have on monasticism?	The way Henry brutally crushed the protest put many people off of defending the monasteries, meaning they all eventually closed
32	Why did reforms to the Church slow down in the 1530s?	Anne Boleyn's fall from grace meant that Henry was no longer under the influence of the Protestant Boleyns
33	How did Henry's Church change in the 1540s?	It turned back towards Catholicism, reintroducing transubstantiation, confession and private masses
34	What was the Chantry Act of 1547?	An act that closed private chantries across England
35	What were the Royal Proclamations of 1548?	An act that ordered the removal of altars, sculptures and images from churches
36	What was the Book of Common Prayer?	A prayer book written by Thomas Cranmer that contained common prayers to be used in church services
37	How did Henry and Edward enforce their reforms to the Church?	They used a combination of propaganda and fear to ensure that their reforms were followed
38	What was iconoclasm?	The destruction of religious images
39	Why were members of the clergy cross-examined in the 1540s?	To check that their beliefs were in line with the reforms
40	What impact did Edward's reforms have on the Church?	Chantries were closed, images destroyed, saints were increasingly ignored
41	What caused the Prayer Book Rebellion?	People disliked the new Church services and wanted to return to Henry's practices
42	Which religious changes mattered most to ordinary people?	Those that affected their lives directly, such as changes to services or their local church
43	Why was preaching so important during the Reformation?	Preaching changed people's views more effectively than government propaganda
44	What was absenteeism?	People not attending church on Sundays
45	Why did the dissolution of the chantries impact ordinary people?	Chantries played an important role in contributing to the poor in local communities

Kenilworth knowledge organiser

Time	Owner(s)	Summary
1100s	De Clintons	<p>Kenilworth built in the 1120s by Geoffrey De Clinton, treasurer to Henry I. Henry wants someone loyal to counter influence of the Earl of Warwick.</p> <p>Castle was both a place to live and a military stronghold. Main features were Great Tower (a stone keep with walls 4.3m thick) and the mere (a large lake created using a dam).</p> <p>When Geoffrey II died, the crown took control of the castle because of its strategic importance. (Henry II had just faced rebellion of barons led by his wife and son.)</p>
1200s	John, Henry III Simon de Montfort	<p>John commissioned many defensive improvements as he was paranoid about being attacked by his barons .</p> <p>John built curtain wall and Mortimer's tower, a twin-turreted gatehouse. He also raised the dam to increase the size of the mere.</p> <p>Henry III gave the castle to Simon de Montfort who strengthened the castle (e.g. equipping it with trebuchets) before rebelling.</p> <p>After de Montfort was killed, Kenilworth was the place where his supporters made their last stand against Henry III. The king laid siege to the castle in 1266. He eventually reclaimed it, but only after a six-month siege, the longest in medieval history. The duration of the siege indicates how important Henry considered the castle, and how effective it was as a military stronghold.</p>
1300s	House of Lancaster	<p>After the rebels surrendered, the castle was given to Henry III's youngest son, the duke of Lancaster. It would remain in Lancastrian hands for more than two centuries.</p> <p>As England became more peaceful, the Lancastrians focussed more on developments to make Kenilworth more comfortable and impressive. Thomas, Earl of Lancaster, added over 500 acres to the chase, built a new chapel, and likely commissioned the Water Tower to provide more accommodation.</p>
Late 1300s	John of Gaunt	<p>John of Gaunt transformed Kenilworth into a great palace by spending a fortune on new developments. (Much of the money came from an inheritance from his wife's father.) He built a new great hall with magnificent tapestries, glass windows and a large kitchen, as well as several towers. Most of his developments were intended to convey his status and wealth.</p>

1400s	Lancastrians and the Tudors	<p>Henry V used castle as an administrative centre, partly because it was conveniently located near the middle of the country. He used the Great Tower to store documents and ordered the building of the Pleasance in the Marsh, a place for relaxation away from the main castle.</p> <p>Under Henry VIII 'King Henry's lodgings' were added to the inner court in timber to provide extra royal accommodation.</p>
1500s	Dudleys (Earl of Leicester)	<p>John Dudley commissioned the building of stables and widened the tiltyard for jousting.</p> <p>Elizabeth gave the castle to Robert Dudley, the Earl of Leicester, in 1563. He developed Kenilworth extensively to gain favour from Elizabeth. Most notably, he built a new gatehouse and Leicester's building (a four-storey structure for Elizabeth to stay in when visiting). Most of his developments were designed to impress – they have large glass windows - and to make Kenilworth a more comfortable residence.</p>
1600s	Stuarts then Parliament	<p>The castle returned to royal ownership when Leicester died without an heir. It was abandoned by royalists at the start of the English Civil War and was occupied by Parliament. After the war, parliamentarians ordered the castle to be slighted as it was a symbol of royal power, and because they were worried about it being used as a military stronghold in a possible future royalist uprising.</p> <p>The castle's ruins were given to the colonel who had been asked to carry out the slighting – Joseph Hawkesworth. He used the gatehouse as a home and divided up Kenilworth's grounds among his men, to be used as farmland.</p>
1660 onwards	Farm	<p>The castle's ruins were reclaimed by the crown – Charles II gave them to his wife, Henrietta Maria – but the castle continues to be used as a farm.</p>
1860s onwards	Tourist attraction	<p>The castle begins to be used as a tourist attraction. In 1958 it was given to Kenilworth town council.</p>

GCSE PE Knowledge Organiser - PHYSICAL TRAINING - PART 1

Key terms and definitions

1. Health	A state of complete emotional, physical and social well-being and not merely the absence of disease and infirmity	10. Reaction time	is the time it takes to respond to a stimulus
2. Fitness	The ability to meet the demands of the environment	11. Speed	The amount of time it takes to perform a particular action or cover a particular distance
3. Exercise	A form of physical activity done to maintain or improve health and/or physical fitness, it is not competitive sport	12. Muscular Strength	The amount of force a muscle can exert against a resistance'
4. Performance	Performance means how well a task is completed	13. Agility	the ability to change the position of the body quickly while maintaining control of the movement
5. SMART Targets	Specific, measurable, achievable, realistic, time-bound	14. Co-ordination	the ability to use two or more body parts together
6. Cardiovascular fitness	The ability to exercise the entire body for long periods of time without tiring	15. Power	the ability to do strength performances quickly. In order to have power, you must have strength and speed together – power = strength x speed
7. Muscular endurance	The ability to use voluntary muscles many times without getting tired	16. Body composition	The relative ratio of fat mass to fat-free mass in the body
8. Flexibility	The range of movement possible at a joint	17. PARQ	Physical Activity Readiness Questionnaire
9. Balance	The ability to retain the body's centre of mass above the base of support'		

SECTION 1 - FITNESS, HEALTH, EXERCISE AND PERFORMANCE

18 Regular exercise plays an important role in increasing health, fitness and performance.
 -If you take part in regular exercise, you can increase your fitness
 -If your fitness improves, your performance can improve.

```

    graph TD
      Health[Health] --> Exercise[Exercise]
      Exercise --> Fitness[Fitness]
      Fitness --> Performance[Performance]
      Performance --> Health
    
```

SECTION 2 - THRESHOLDS OF TRAINING

19	Anaerobic training zone	80-90% of your max heart rate (MHR)
20	Aerobic training zone	60-80% of your max heart rate (MHR)
21	Karvonen Formula	calculate 60-80% of your MHR. 80% is the upper threshold of your aerobic target zone, 60% is the lower threshold of your aerobic target zone.
22	Max Heart Rate (MHR)	220 - your age

SECTION 3 - FITNESS TESTS

23	Fitness tests	are used to assess fitness levels in order to develop an appropriate exercise programme	29	Power test	Vertical jump
24	Cardiovascular fitness tests	(a) Cooper run/swim test (b) Harvard step test	30	Muscular Endurance test	Press up / sit up test - Complete as many press ups / sit ups as you can in 1 minute.
25	Muscular strength test	Hand Grip Dynamometer - Keep our arm beside and at a right angle to your body and squeeze the handle as hard as you can.			
26	Flexibility test	Sit and reach - Use a sit and reach box			
27	Agility test	Illinois Agility Run - Complete course as fast as possible			
28	Speed test	30m sprint test - Measure and mark out 30m in a straight line. On 'GO', run as fast as you can and record the time taken			

GCSE PE Knowledge Organiser - PHYSICAL TRAINING - PART 1

Key terms and definitions

1. Health	A state of complete emotional, physical and social well-being and not merely the absence of disease and infirmity	10. Reaction time	is the time it takes to respond to a stimulus
2. Fitness	The ability to meet the demands of the environment	11. Speed	The amount of time it takes to perform a particular action or cover a particular distance
3. Exercise	A form of physical activity done to maintain or improve health and/or physical fitness, it is not competitive sport	12. Muscular Strength	The amount of force a muscle can exert against a resistance'
4. Performance	Performance means how well a task is completed	13. Agility	the ability to change the position of the body quickly while maintaining control of the movement
5. SMART Targets	Specific, measurable, achievable, realistic, time-bound	14. Co-ordination	the ability to use two or more body parts together
6. Cardiovascular fitness	The ability to exercise the entire body for long periods of time without tiring	15. Power	the ability to do strength performances quickly. In order to have power, you must have strength and speed together – power = strength x speed
7. Muscular endurance	The ability to use voluntary muscles many times without getting tired	16. Body composition	The relative ratio of fat mass to fat-free mass in the body
8. Flexibility	The range of movement possible at a joint	17. PARQ	Physical Activity Readiness Questionnaire
9. Balance	The ability to retain the body's centre of mass above the base of support'		

SECTION 1 - FITNESS, HEALTH, EXERCISE AND PERFORMANCE

18 Regular exercise plays an important role in increasing health, fitness and performance.
 -If you take part in regular exercise, you can increase your fitness
 -If your fitness improves, your performance can improve.

```

    graph TD
      Health[Health] --> Exercise[Exercise]
      Exercise --> Fitness[Fitness]
      Fitness --> Performance[Performance]
      Performance --> Health
    
```

SECTION 2 - THRESHOLDS OF TRAINING

19	Anaerobic training zone	80-90% of your max heart rate (MHR)
20	Aerobic training zone	60-80% of your max heart rate (MHR)
21	Karvonen Formula	calculate 60-80% of your MHR. 80% is the upper threshold of your aerobic target zone, 60% is the lower threshold of your aerobic target zone.
22	Max Heart Rate (MHR)	220 - your age

SECTION 3 - FITNESS TESTS

23	Fitness tests	are used to assess fitness levels in order to develop an appropriate exercise programme	29	Power test	Vertical jump
24	Cardiovascular fitness tests	(a) Cooper run/swim test (b) Harvard step test	30	Muscular Endurance test	Press up / sit up test - Complete as many press ups / sit ups as you can in 1 minute.
25	Muscular strength test	Hand Grip Dynamometer - Keep our arm beside and at a right angle to your body and squeeze the handle as hard as you can.			
26	Flexibility test	Sit and reach - Use a sit and reach box			
27	Agility test	Illinois Agility Run - Complete course as fast as possible			
28	Speed test	30m sprint test - Measure and mark out 30m in a straight line. On 'GO', run as fast as you can and record the time taken			


GCSE PE Knowledge Organiser - PHYSICAL TRAINING - PART 2

SECTION 4 - METHODS OF TRAINING		SECTION 5 - PRINCIPLES OF TRAINING	
1	Methods of training You should be able to select the most appropriate training method based on - fitness level, sport requirements and available facilities	8	F FITT = Frequency, Intensity, time, type
2	Continuous training Each session must over 20 mins with no breaks Improves cardiovascular fitness and muscular endurance	9	I Individual needs
3	Fartlek training A form of continuous training with variation in pace and terrain Improves cardiovascular fitness and muscular endurance Important for games players	10	R Reversibility
4	Interval training Made up of sets of high intensity work (e.g. sprint), followed by rest or low intensity work, followed by high intensity work Associated with powerful explosive activities Major form of training for sprinters and swimmers	11	S Specificity
5	Plyometric training High intensity, short duration, breaks between sets and maximal effort Includes activities such as bounding and jumping Important for power activities such as hurdles, volleyball & basketball	12	T Thresholds of training
6	Weight training Form of interval training using weights and involves 'reps' and 'sets'. The weights are lifted a certain amount of times (reps) with a break before starting another set. Improves power, strength and muscular endurance	13	O Overtraining
7	Circuit training Circuits have a number of stations (between 6-12), each can be adapted to work on a different fitness component or skill Can be adapted for variety of sports performers	14	P Progressive overload

SECTION 6 - PERFORMANCE ENHANCING DRUGS

15	Anabolic steroids Allow athletes to train harder and for longer, so increasing power and strength	PED	Athlete who would use it	Side effect
16	Beta Blockers Work by blocking the effects of adrenaline, so helping to slow down the heart rate. This means they have a calming effect on an athlete.	Anabolic steroids	Strength and power athletes	Liver damage, testicular atrophy, mood swings, increased aggression
17	Diuretics Increase the rate of urination, so increasing the amount of fluid the body loses. They have the ability to mask or hide other PED's making them harder to detect. Diuretics also achieve quick weight loss (due to fluid loss).	Beta blockers	Precision events - archery, gymnastics	Lower blood pressure, sleep disturbance
18	Narcotic Analgesics Act on the brain and spinal cord to dampen the effect of painful stimuli, thus masking pain. This increases a performer's pain threshold and can mask injuries so the performer can continue to compete.	Diuretics	Weight category - boxers, jockeys	Dehydration, nausea, heart/kidney failure
19	Peptide hormones There are two peptide hormones. EPO (Erythropoietin) and Human Growth Hormone (HGH). EPO increases red blood cell production and therefore increases oxygen delivery to working muscles. HGH increases muscle mass and therefore strength it also helps to burn more fat when exercising	Peptide hormones	HGH - Any activity where an increase in strength would be helpful. EPO - Any event which is long distance or requires high levels of CV fitness	EPO: blood clots, increased risk of heart attacks HGH: Arthritis, Heart failure, diabetes
20	Stimulants Increases brain activity, making an athlete feel more awake and alert, and as if they have more energy. It can also increase levels of aggression, reduces tiredness and increases heart rate	Narcotic Analgesics	Contact sports - boxing, rugby	Nausea/vomiting, anxiety/depression, Kidney/liver damage, addiction
21	Blood doping Is a process where performers have additional blood added to their blood stream	Stimulants	Aggression - boxing, rugby, ice hockey	Insomnia, aggression, anxiety

SECTION 7 - RISK AND INJURY

22	Injury prevention 1) Complete a PARQ 2) Allow recovery time 3) Warm up 4) Use the correct clothing 5) Apply the rules of the game 6) Use correct equipment 7) Check facilities and weather	Injury	Description	Symptom
23	Fractures Correct term for a broken bone 1) Simple - Bone doesn't break the skin 2) Compound - Bone causes the skin to break 3) Greenstick - Bone bends on one side and breaks on the other 4) Stress - Overuse, forms a small crack in the bone	Concussion	is a mild head/brain injury. It is caused by a blow to the head shaking the brain inside the skull	Confusion, dizziness, unconsciousness, nausea.
		Dislocation	a bone at a joint comes out of place	Pain, Misshapen joint, Swelling
		Injuries at joints and soft tissue	Torn cartilage Torn cartilage is an injury at a joint where small tears appear in the cartilage.	Pain, Swelling and stiffness.
		Soft tissue injuries	Sprain Injury at a joint where some of the fibres of the ligament are torn.	Pain, bruising and swelling.
			Abrasion minor injuries to the skins such as grazes or cuts	
			strains are a stretch or tear in the muscle. Sometimes this is known as a pulled muscle	
	Tennis elbow Is a joint injury where the tendons get inflamed. Can occur due to poor technique or overuse			
	Golfers elbow Is a joint injury where the tendons get inflamed. Can occur due to poor technique or overuse			

Religion, philosophy, and ethics in the modern world

Sources of wisdom and authority

Violence and conflict	
1) Joel 3:9–11	"Proclaim this among the nations: Prepare for war!"
2) Joshua 8:1	"Do not be afraid; do not be discouraged. Take the whole army with you, and go up and attack."
3) Matthew 5:43–44	"But I tell you, love your enemies and pray for those who persecute you."
4) Psalm 18:37–39	"I pursued my enemies and overtook them; I did not turn back till they were destroyed."
5) Micah 4:3	"He will judge between many peoples and will settle disputes for strong nations far and wide."
6) Matthew 5:9	"Blessed are the peacemakers, for they will be called children of God."
7) Thomas Aquinas	"He who achieves power by violence does not truly become lord or master."
Peace and peace-making	
8) Quaker declaration 1660	"We utterly deny all outward wars and strife and fightings with outward weapons, for any end, or under any pretence whatsoever."
9) Matthew 5:38–42	"If anyone slaps you on the right cheek, turn to them the other cheek also."
10) Matthew 5:43–44	"But I tell you, love your enemies and pray for those who persecute you."
11) Gandhi	"The greatest power in the world is that of the Soul. Peace is its highest expression."
12) Martin Luther King	"We will not build a peaceful world by following a negative path. It is not enough to say "We must not wage war." It is necessary to love peace and sacrifice for it."
13) Desmond Tutu	"There can be no future unless there is peace. There can be no peace unless there is reconciliation."
14) CCND	"Though it may be necessary at times to defend our people, war is a sickness that must be cured. War is a time out of balance."
Forgiveness and reconciliation	
15) Matthew 9:9	"As Jesus went on from there, he saw a man named Matthew sitting at the tax collector's booth. "Follow me," he told him".
16) Matthew 6:12	"And forgive us our debts, as we also have forgiven our debtors."
17) Matthew 6:14	"For if you forgive other people when they sin against you, your heavenly Father will also forgive you."
18) Matthew 18:35	"This is how my heavenly Father will treat each of you unless you forgive your brother or sister from your heart."
19) Psalm 11:7	For the LORD is righteous, he loves justice; the upright will see his face.
20) Amos 5:2	Fallen is Virgin Israel, never to rise again, deserted in her own land, with no one to lift her up."
21) Truth and Reconciliation Commission of South Africa	"Only the truth can put the past to rest."

B17 – Adaptation

1. What is a population?	Total number of organisms of the same species that live in a specific geographical area.
2. What is a community?	Groups of two or more populations of different species living in a specific geographical area.
3. What is an ecosystem?	The interaction of a community of living organisms with the non-living parts of their environment.
4. What is competition?	Contest between organisms within a community for resources.
5. What is interdependence?	When species in a community depend on others for resources and shelter.
6. What do animals often compete for?	Food, mates, territory.
7. What do plants often compete for?	Light, space, water and mineral ions.
8. What is an abiotic factor?	Non-living factor that can affect a community.
9. List the abiotic factors that can affect a community.	<ul style="list-style-type: none"> • Carbon dioxide levels for plants • Light intensity • Moisture levels • Oxygen levels for animals that live in the water • Soil pH and mineral content • Temperature • Wind intensity and direction.
10. What is a biotic factor?	Living factors that can affect a community.
11. List the biotic factors that can affect a community.	<ul style="list-style-type: none"> • Availability of food • New predators • New pathogens • Competition between species
12. What is a stable community?	When all species and environmental factors are in balance, so population sizes remain fairly constant.
13. How do adaptations help an organism?	Enable the organism to survive in the conditions in which it lives.
14. What are the three types of adaptations?	Structural, behavioural, functional.
15. What is an extremophile?	An organism that lives in a very extreme environment.
16. What makes an environment extreme?	<ul style="list-style-type: none"> • Very high or low temperatures • Extreme pressures • High salt concentrations. • Highly acidic or alkaline conditions. • Lack of oxygen or water.

B18 – Humans and the ecosystem

1. What is a producer?	Organism that makes its own food, usually by photosynthesis.
2. What is a food chain?	Representation of the feeding relationships within a community.
3. What is a consumer?	Organism that eat other organisms for food.
4. What is a herbivore?	Organism that only eats producers (plants/algae).
5. What is a predator?	Organism that kills and eats other organisms.
6. What is a prey organism?	Organism that is killed and eaten by another organism.
7. What is an apex predator?	Carnivore with no predators.
8. What is the carbon cycle?	Process that returns carbon dioxide from organisms to the atmosphere as carbon dioxide, which can then be used by plants.
9. What is the water cycle?	Process that provides fresh water for plants and animals on land before draining into seas and rivers.
10. What is biodiversity?	The variety of all the different species of organisms on Earth, or within an ecosystem.
11. What is the advantage of high biodiversity?	Ensures stability of ecosystems by reducing the dependence of one species on another.
12. How are humans trying to maintain biodiversity?	<ul style="list-style-type: none"> • Breeding programs • Protection of rare habitats • Reintroduction of hedgerows • Reduction of deforestation and carbon dioxide emissions • Recycling resources
13. What are more resources being used, and more waste produced by humans?	Rapid growth in human population and increase in the standard of living.
14. How are humans reducing the land available for other organisms?	Building, quarrying, farming, and dumping waste.
15. What are the negative impacts of the destruction of peat bogs?	<ul style="list-style-type: none"> • Reduces amount of available habitat, causing decrease in biodiversity. • Burning or decay of peat releases carbon dioxide into the atmosphere.
16. Why have humans carried out large-scale deforestation in tropical areas?	<ul style="list-style-type: none"> • To provide land for cattle and rice fields. • To grow crops for biofuels.
17. What gases are increasing in atmospheric levels and contributing to global warming?	Carbon dioxide and methane.

C6 – Reactions of acids

1. In terms of pH, what is an acid	A solution with a pH of less than 7
2. In terms of pH, what is a neutral solution?	A solution with a pH of 7
3. In terms of H ⁺ ions, what is an acid?	A substance that releases H ⁺ ions when dissolved in water
4. What are the names and formulae of the three main acids?	Hydrochloric acid, HCl Sulfuric acid, H ₂ SO ₄ Nitric acid, HNO ₃
5. How do you measure the pH of a substance?	Universal indicator or pH probe
6. What is a strong acid?	An acid where the molecules completely ionise in water
7. What is a weak acid?	An acid where the molecules partially ionise in water
8. What is a salt?	A compound formed when a metal ion takes the place of a hydrogen ion in an acid
9. Which type of salts do hydrochloric acid, sulfuric acid and nitric acid form?	Chlorides, sulfates and nitrates, respectively
10. What are the products of a reaction between a metal and an acid?	Salt + hydrogen
11. What are the products of a reaction between a metal hydroxide and an acid?	Salt + water
12. What are the products of a reaction between a metal carbonate and an acid?	Salt + water + carbon dioxide
13. What is a base?	A substance that reacts with acids in neutralisation reactions
14. What is an alkali?	A substance that dissolves in water to form a solution above pH 7
15. What is a neutralisation reaction?	A reaction between an acid and a base to produce water
16. What is the ionic equation for a reaction between an acid and an alkali?	$H^+ (aq) + OH^- (aq) \rightarrow H_2O (l)$
17. How can you obtain a solid salt from a solution?	Crystallisation
18. When an acid reacts with a metal, which species is oxidised?	The metal
19. When an acid reacts with a metal, which species is reduced?	Hydrogen

C7 – Electrolysis

1. What is electrolysis?	The process of using electricity to extract elements from a compound
2. What is the name of the positive electrode?	Anode
3. What is the name of the negative electrode?	Cathode
4. What is an electrolyte?	A liquid or solution that contains ions and so can conduct electricity
5. Where are metals formed?	Cathode
6. Where are non-metals formed?	Anode
7. How can ionic substances be electrolysed?	By melting or dissolving them, and then passing a direct current through them
8. Why can solid ionic substances not be electrolysed?	They do not conduct electricity, or the ions cannot move
9. In the electrolysis of solutions, when is the metal not produced at the cathode?	When the metal is more reactive than hydrogen
10. In the electrolysis of a metal halide solution, what is produced at the anode?	Halogen gas
11. In the electrolysis of a metal sulfate solution, what is produced at the anode?	Oxygen
12. What is the half equation for the ionisation of water?	$\text{H}_2\text{O} (\text{l}) \rightarrow \text{H}^+ (\text{aq}) + \text{OH}^- (\text{aq})$
13. What metals are extracted from ionic compounds by using electrolysis?	Metals that are more reactive than carbon
14. In the electrolysis of aluminium oxide, why is the aluminium oxide mixed with molten cryolite?	To lower the melting point
15. In the electrolysis of aluminium oxide, what are the anodes made of?	Graphite
16. In the electrolysis of aluminium oxide, why do the anodes need to be replaced?	They react with the oxygen being formed

C8 – Energy Changes

1. What is an exothermic energy transfer?	Energy transfer to the surroundings
2. What is an endothermic energy transfer?	Energy transfer from the surroundings
3. What is a reaction profile?	A diagram showing how the energy changes in a reaction
4. What is activation energy?	The minimum amount of energy required before a collision will result in a reaction
5. What is a bond energy?	The energy required to break a bond or the energy released when a bond is formed
6. In terms of bond breaking and making, what is an exothermic reaction?	Less energy is required to break the old bonds than is released when making the new bonds
7. In terms of bond breaking and making, what is an endothermic reaction?	More energy is required to break the old bonds than is released when making the new bonds

P7- Radioactivity

1. What is radioactive decay?	Random emission of radiation from the nucleus of an atom
2. What are the three types of nuclear radiation?	Alpha, Beta and gamma
3. What is gamma (γ) radiation?	Electromagnetic radiation from the nucleus
4. Which type of nuclear radiation is most ionising?	Alpha
5. What is the range in air of alpha, beta and gamma radiation?	Alpha - A few cm Beta - 1 m Gamma - Unlimited
6. What materials can stop alpha, beta and gamma radiation?	Sheet of paper, thin aluminium sheet, and thick lead/concrete, respectively
7. What type of radiation causes both the mass and charge of the nucleus to decrease?	Alpha
8. Which type of radiation does not cause the mass to change, but does cause the charge of the nucleus to increase?	Beta
9. Which type of nuclear radiation does not cause a change in the structure of the nucleus when it is emitted?	Gamma
10. What are the equation symbols for alpha and beta particles?	${}^4_2\alpha$ and ${}^0_{-1}\beta$
11. What is radioactive activity?	The rate at which a source of unstable nuclei decays
12. What unit is used to measure the activity of a radioactive source?	Becquerel (Bq)
13. What is meant by count rate?	Number of decays recorded each second (by a detector, e.g., Geiger-Miller tube)
14. What is meant by the half-life of a radioactive source?	The time taken for half the unstable nuclei to decay, or the time taken for the count rate to halve
15. What is irradiation?	Exposing an object to nuclear radiation
16. What is radioactive contamination?	Unwanted presence of substances containing radioactive atoms on or in other materials

Vocabulary 13 – FAMILY

01 Mi padre	01 My father	21 Tu familia	21 Your family
02 Mi madre	02 My mother	22 Tus hermanos	22 Your siblings
03 Mis padres	03 My parents	23 Su familia	23 His/Her/Their family
04 Mi hermano	04 My brother	24 Sus hermanos	24 His/Her/Their siblings
05 Mi hermana	05 My sister	25 Nuestro hermano	25 Our brother
06 Mis hermanos	06 My siblings	26 Nuestra hermana	26 Our sister
07 Mi abuelo	07 My grandfather	27 Nuestros hermanos	27 Our brothers
08 Mi abuela	08 My grandmother	28 Nuestras hermanas	28 Our sisters
09 Mis abuelos	09 My grandparents	29 Vuestro hermano	29 Your brother
10 Mi tío	10 My uncle	30 Vuestra hermana	30 Your sister
11 Mi tía	11 My aunt	31 Vuestros hermanos	31 Your brothers
12 Mi primo	12 My cousin (male)	32 Vuestras hermanas	32 Your sisters
13 Mi prima	13 My cousin (female)	33 ¿Quieres jugar?	33 Do you (sg.) want to play?
14 Mi sobrino	14 My nephew	34 ¿Queréis jugar?	34 Do you (pl.) want to play?
15 Mi sobrina	15 My niece	35 Sí, quiero jugar al tenis	35 Yes, I want to play tennis
16 Mi hijo	16 My son	36 Sí, queremos jugar al tenis	36 Yes, we want to play tennis
17 Mi hija	17 My daughter	37 ¿Puedes salir a las tres?	37 Can you (sg.) leave at 3?
18 Mi nieto	18 My grandson	38 ¿Podéis salir a las tres?	38 Can you (pl.) leave at 3?
19 Mi nieta	19 My granddaughter	39 Sí, puedo salir a las tres	39 Yes, I can leave at 3
20 Mi familia	20 My family	40 Sí, podemos salir a las tres	40 Yes, we can leave at 3

Vocabulary 14 – DESCRIPTIONS

01 ¿Cómo es?	01 What is he/she like?	21 Lleva gafas	21 He/She wears glasses
02 Tiene los ojos azules	02 He/She has blue eyes	22 Tiene pecas	22 He/She has freckles
03 Tiene los ojos verdes	03 He/She has green eyes	23 Tiene barba	23 He/She has a beard
04 Tiene los ojos marrones	04 He/She has brown eyes	24 Tiene bigote	24 He/She has a moustache
05 Tiene los ojos grises	05 He/She has grey eyes	25 ¿Cómo es de carácter?	25 What is he/she like as a person?
06 Tiene el pelo moreno	06 He/She has dark hair	26 Como persona, es	26 As a person, he/she is
07 Tiene el pelo castaño	07 He/She has brown hair	27 optimista	27 optimistic
08 Tiene el pelo rubio	08 He/She has blond hair	28 pesimista	28 pessimistic
09 Tiene el pelo corto	09 He/She has short hair	29 trabajador(a)	29 hard-working
10 Tiene el pelo largo	10 He/She has long hair	30 hablador(a)	30 chatty
11 Tiene el pelo rizado	11 He/She has curly hair	31 perezoso/a	31 lazy
12 Tiene el pelo liso	12 He/She has straight hair	32 tímido/a	32 shy
13 Tiene el pelo ondulado	13 He/She has wavy hair	33 divertido/a	33 fun
14 Es pelirrojo/a	14 He/She is red-haired	34 serio/a	34 serious
15 Es calvo/a	15 He/She is bald	35 gracioso/a	35 funny
16 Es alto/a	16 He/She is tall	36 generoso/a	36 generous
17 Es bajo/a	17 He/She is short	37 fiel	37 loyal
18 Es delgado/a	18 He/She is slim	38 Tiene el pelo muy largo	38 He/She has very long hair
19 Es gordo/a	19 He/She is fat	39 Tiene el pelo bastante largo	39 He/She has quite long hair
20 No es ni gordo/a ni delgado/a	20 He/She is neither fat nor thin	40 Tiene poco pelo	40 H/S has not very much hair

Vocabulary 15 – PHONE & ACTIVITIES

01 ¿Qué aplicaciones usas?	01 What apps do you use?	21 cómodo	21 handy, convenient
02 Uso mi móvil para	02 I use my phone to	22 peligroso	22 dangerous
03 Uso WhatsApp para	03 I use WhatsApp to	23 práctico	23 practical
04 subir y ver vídeos	04 upload and watch videos	24 fácil de usar	24 easy to use
05 compartir fotos	05 share photos	25 popular	25 popular
06 pasar el tiempo	06 pass the time	26 gratis	26 free
07 organizar las salidas	07 organise to go out	27 adictivo	27 addictive
08 contactar con mi familia	08 contact my family	28 una pérdida de tiempo	28 a waste of time
09 descargar música	09 download music	29 divertido	29 fun
10 aprender idiomas	10 learn languages	30 rápido	30 quick
11 controlar mi actividad física	11 monitor my physical activity	31 útil	31 useful
12 publicar mensajes	12 post messages	32 caro	32 expensive
13 chatear	13 chat online	33 Estoy enganchado a	33 I am hooked on
14 ¿Por qué?	14 Why?	34 Lo bueno es que es	34 The good thing is that it is
15 ¿Para qué?	15 What for?	35 Lo malo es que es	35 The bad thing is that it is
16 Porque es	16 Because it is	36 Mi hermano usa Twitter	36 My brother uses Twitter
17 Porque no es	17 Because it is not	37 Mis amigos usan Twitter	37 My friends use Twitter
18 Ya que es	18 Since it is	38 Mi amiga y yo lo usamos	38 My friend and I use it
19 mi red social preferida	19 my favourite social network	39 Mis amigos la usan	39 My friends use it
20 la mejor aplicación	20 the best app	40 Mis amigos las usan	40 My friends use them

Vocabulary 16 – PRESENT CONTINUOUS

01 ¿Qué estás haciendo?	01 What are you doing?	21 ¿Quieres salir conmigo?	21 Do you want to go out with me?
02 Estoy tocando la guitarra	02 I am playing the guitar	22 No puedo porque...	22 I can't because...
03 Estoy hablando por teléfono	03 I am talking on the phone	23 está lloviendo	23 it is raining
04 Estoy jugando con mi móvil	04 I am playing on my phone	24 tengo que visitar a mi abuela	24 I have to visit my grandm.
05 Estoy comiendo pizza	05 I am eating pizza	25 tengo que cuidar de mi hermano	25 I have to look after my brother
06 Estoy tomando el sol	06 I am sunbathing	26 quiero subir mis fotos	26 I want to upload my photos
07 Estoy esperando al taxi	07 I am waiting for the taxi	27 quiero quedarme en casa	27 I want to stay at home
08 Estoy viendo una peli	08 I am watching a film	28 quiero dar una vuelta	28 I want to go for a wander
09 Estoy leyendo	09 I am reading	29 ¿A qué hora quedamos?	29 What time shall we meet?
10 Estoy durmiendo	10 I am sleeping	30 ¿Dónde quedamos?	30 Where shall we meet?
11 Estoy escribiendo	11 I am writing	31 Quedamos en la Plaza Mayor	31 We meet in the main square
12 Estoy pensando en salir	12 I am thinking on going out	32 Quedamos debajo de	32 We meet underneath
13 Estoy actualizando mi perfil	13 I am updating my profile	33 Quedamos detrás de	33 We meet behind
14 Estoy editando mis fotos	14 I am editing my photos	34 Quedamos delante de	34 We meet in front of
15 Estoy escuchando música	15 I am listening to music	35 Quedamos enfrente de	35 We meet opposite
16 Estoy esperando a David	16 I am waiting for David	36 Quedamos al lado de	36 We meet next to
17 ¿Qué está haciendo él?	17 What is he doing?	37 Quedamos a las dos	37 We meet at 14.00
18 Está haciendo footing	18 He is jogging	38 Quedamos a las dos y media	38 We meet at 14.30
19 ¿Qué están haciendo ellas?	19 What are they doing?	39 Quedamos a las dos y cuarto	39 We meet at 14.15
20 Están repasando	20 They are revising	40 ¡Qué pena!	40 What a shame!

Vocabulary 17 – READING

01 ¿Qué te gusta leer?	01 What do you like to read?	21 ¿Qué es mejor?	21 What is better?
02 Los tebeos / Los cómics	02 comics	22 ¿e-books o libros de papel?	22 e-books or paper books?
03 Los periódicos	03 newspapers	23 Los e-books cuestan menos	23 E-books cost less
04 Las revistas	04 magazines	24 que los libros tradicionales	24 than traditional books
05 Las novelas de ciencia ficción	05 science fiction novels	25 son más transportables	25 are more portable
06 Las novelas de amor	06 romantic novels	26 son más ecológicos	26 are more ecological
07 Las historias de vampiros	07 vampire stories	27 cansan la vista	27 tire your eyes
08 Las biografías	08 biographies	28 usan batería	28 use battery
09 Las poesías	09 poems	29 Las páginas no tienen números	29 The pages don't have numbers
10 ¿Con qué frecuencia lees?	10 How often do you read?	30 una ventaja	30 an advantage
11 Cada día / Todos los días	11 Every day	31 una desventaja	31 a disadvantage
12 A menudo	12 Often	32 Leer en formato digital	32 Reading in digital format
13 De vez en cuando	13 From time to time	33 protege el planeta	33 protects the planet
14 Una vez a la semana	14 Once a week	34 es más barato	34 is cheaper
15 Dos veces al mes	15 Twice a month	35 depende de la energía eléctrica	35 depends on electricity
16 Una vez al año	16 Once a year	36 fastidia	36 is annoying
17 Nunca	17 Never	37 Prefiero tocar las páginas	37 I prefer to touch the pages
18 Soy un ratón de biblioteca	18 I am a bookworm	38 Me gusta leer horas y horas	38 I like to read for h. and h.
19 Soy un fan del manga	19 I am a manga fan	39 Por un lado	39 On one side
20 Generalmente	20 Generally	40 por otro lado	40 on the other side

Vocabulary 18 – RELATIONSHIPS

01 ¿Te llevas bien con...	01 Do you get on well...	21 ¿Cómo conociste a tu amigo?	21 How did you meet your friend?
02 tu familia y tus amigos?	02 with your family and friends?	22 ¿Cómo lo conociste?	22 How did you meet him?
03 Me llevo bien con	03 I get on well with	23 Conocí a mi mejor amiga	23 I met my best friend
04 No me llevo bien con	04 I don't get on well with	24 hace cuatro años	24 four years ago
05 Me divierto con	05 I have a good time with	25 La conocí hace cuatro años	25 I met her four years ago
06 Me peleo con	06 I argue with	26 Tenemos mucho en común	26 We have a lot in common
07 porque me apoya	07 because she/he supports me	27 Nos conocimos	27 We met each other
08 porque me acepta como soy	08 b. s/h accepts me as I am	28 Nos hicimos amigos	28 We became friends
09 porque nunca me critica	09 b. s/h never criticises me	29 Nos hicimos novios	29 We started going out
10 Un buen amigo es...	10 A good friend is	30 Convivimos	30 We lived together
11 alguien que...	11 someone who	31 Nos casamos	31 We got married
12 te ayuda	12 helps you	32 Es el amor de mi vida	32 He/She is the love of my life
13 te apoya	13 supports you	33 Nos gustan las mismas cosas	33 We like the same things
14 te conoce bien	14 knows you well	34 Nos encantan las películas	34 We love films
15 te acepta	15 accepts you	35 Quiero casarme	35 I want to get married
16 te hace reír	16 makes you laugh	36 matrimonio	36 marriage
17 te dice la verdad	17 tells you the truth	37 tu pareja	37 your partner
18 te da consejos	18 gives you advice	38 compromiso	38 commitment
19 nunca te juzga	19 never judges you	39 estabilidad	39 stability
20 nunca te critica	20 never criticises you	40 una boda	40 a wedding

Vocabulary 19 – HOBBIES

01 Mis ratos libres	01 My free time	21 Suelo descansar	21 I tend to rest
02 Tengo muchos pasatiempos	02 I have lots of hobbies	22 Suelo escuchar música	22 I tend to listen to music
03 A la hora de comer	03 At lunchtime	23 Suelo escuchar la radio	23 I tend to listen to the radio
04 Cuando tengo tiempo	04 When I have time	24 Suelo hacer deporte	24 I tend to do sport
05 Después del insti	05 After school	25 Suelo ir al cine	25 I tend to go to the cinema
06 Los fines de semana	06 At weekends	26 Suelo leer libros	26 I tend to read books
07 Los lunes	07 On Mondays	27 Suelo leer revistas	27 I tend to read magazines
08 Por la mañana	08 In the morning	28 Suelo salir con amigos	28 I tend to go out with friends
09 Por la tarde	09 In the afternoon	29 Suelo usar el ordenador	29 I tend to use the computer
10 Por la noche	10 At night	30 Suelo ver la tele	30 I tend to watch TV
11 cocino	11 I cook	31 La paga	31 Pocket money
12 juego al fútbolín	12 I play table football	32 Recibo veinte euros al mes	32 I receive 20 euros a month
13 monto en bici	13 I ride my bike	33 dinero de vez en cuando	33 money from time to time
14 monto en monopatín	14 I ride my skateboard	34 dinero para mi cumpleaños	34 money for my birthday
15 toco la trompeta	15 I play the trumpet	35 Gasto mi paga en...	35 I spend pocket money on
16 voy al polideportivo	16 I go to the sports centre	36 Compró...	36 I buy
17 voy al centro comercial	17 I go to the shopping centre	27 caramelos	37 sweets
18 voy a la pista de hielo	18 I go to the ice rink	28 revistas y videojuegos	38 magazines and videogames
19 voy a la bolera	19 I go to the bowling alley	29 ropa y maquillaje	39 clothes and make up
20 voy de compras	20 I go shopping	30 Me ayuda a relajarme	40 It helps me to relax

Vocabulary 20 – SPORT

01 Antes era...	01 Before I used to be...	21 atletismo	21 athletics
02 Ahora soy...	02 Now I am...	22 ciclismo	22 cycling
03 muy deportista	03 very sporty	23 equitación	23 horseriding
04 miembro de un equipo	04 a member of a team	24 escalada	24 climbing
05 aficionado del Barcelona	05 a fan of Barcelona	25 gimnasia	25 gymnastics
06 un fanático del fútbol	06 a football fanatic	26 judo	26 judo
07 Juego al...	07 I play...	27 kárate	27 karate
08 Jugué al...	08 I played...	28 natación	28 swimming
09 Jugaba al...	09 I used to play...	29 patinaje sobre hielo	29 ice skating
10 baloncesto	10 basketball	30 piragüismo	30 canoeing
11 balonmano	11 handball	31 Ya no juego	31 I no longer play
12 críquet	12 cricket	32 Entreno	32 I train
13 fútbol	13 football	33 La temporada pasada	33 Last season
14 hockey	14 hockey	34 jugué un partido	34 I played a match
15 ping-pong	15 table tennis	35 marqué un gol	35 I scored a goal
16 tenis	16 tennis	36 gané el campeonato	36 I won the championship
17 voleibol	17 volleyball	37 Mi jugador favorito es	37 My favourite player is
18 Hago...	18 I do...	38 Lo mejor fue cuando	38 The best thing was when
19 Hice...	19 I did...	39 batió el récord	39 he/she beat the record
20 Hacía...	20 I used to do...	40 marcó tres goles	40 he/she scored three goals

Vocabulary 21 – ENTERTAINMENT

01 Me gusta el pop	01 I like pop	21 una comedia	21 a comedy
02 Me gusta el rap	02 I like rap	22 una serie policiaca	22 a crime series
03 Me gusta el rock	03 I like rock	23 Me gustan las comedias	23 I like comedies
04 la música clásica	04 classical music	24 Me gustan las noticias	24 I like the news
05 la música electrónica	05 electronic music	25 una película de amor	25 a love film
06 Toco el teclado	06 I play the keyboard	26 una película de terror	26 a horror film
07 Toco el piano	07 I play the piano	27 una película de acción	27 an action film
08 Toco la batería	08 I play the drums	28 una película de aventuras	28 an adventure film
09 Toco la flauta	09 I play the flute	29 una película de animación	29 an animated film
10 Mi cantante favorito es	10 My favourite singer is	30 una película de ciencia ficción	30 a sci-fi film
11 Fui a un concierto	11 I went to a concert	31 una película de fantasía	31 a fantasy film
12 Canté y bailé	12 I sang and danced	32 una película extranjera	32 a foreign film
13 Compré una camiseta de la gira	13 I bought a tour t-shirt	33 americano/a	33 American
14 Veo la tele dos horas al día	14 I watch TV two h. a day	34 británico/a	34 British
15 Mi programa favorito es	15 My favourite programme is	35 italiano/a	35 Italian
16 un concurso	16 a game show	36 alemán / alemana	36 German
17 un programa de deportes	17 a sports programme	37 español(a)	37 Spanish
18 un reality	18 a reality TV show	38 francés / francesa	38 French
19 un documental	19 a documentary	39 irlandés / irlandesa	39 Irish
20 una telenovela	20 a soap opera	40 inglés / inglesa	40 English

Vocabulary 22 – TRENDING TOPICS

01 He compartido	01 I have shared	21 el nuevo álbum de Rosa	21 the new Rosa's album
02 He comprado	02 I have bought	22 el nuevo libro de David	22 the new David's book
03 He descargado	03 I have downloaded	23 la nueva canción de Juan	23 the new Juan's song
04 He gastado	04 I have spent	24 la nueva película de Ana	24 the new Ana's film
05 He jugado	05 I have played (sports)	25 ¿Qué música has escuchado?	25 What music have you listened?
06 He hecho	06 I have done	26 ¿Qué libro has leído?	26 What book have you read?
07 He leído	07 I have read	27 Cuenta la historia de...	27 I tells the story of...
08 He perdido	08 I have lost	28 Combina el drama con la acción	28 It combines drama with action
09 He subido	09 I have uploaded	29 El final es...	29 The ending is...
10 He visto	10 I have seen / watched	30 La banda sonora es...	30 The soundtrack is...
11 He escuchado	11 I have listened	31 Los actores son...	31 The actors are...
12 He hablado	12 I have spoken / talked	32 Los gráficos son...	32 The graphics are...
13 He visitado	13 I have visited	33 Los efectos especiales son...	33 The special effects are...
14 He comido	14 I have eaten	34 Los personajes son...	34 The characters are...
15 He bebido	15 I have drunk	35 Las animaciones son...	35 The animations are...
16 He estudiado	16 I have studied	36 Las canciones son...	36 The songs are...
17 He tocado	17 I have played (instruments)	37 decepcionantes	37 disappointing
18 He llevado	18 I have worn	38 irritantes	38 irritating
19 He sido	19 I have been	39 originales	39 original
20 He tenido	20 I have had	40 feliz y triste	40 happy and sad

Vocabulary 23 – CINEMA

01 ¿En el cine o en casa?	01 At the cinema or at home?	21 ¿Tienes ganas de ir...	21 Do you fancy going...
02 Prefiero	02 I prefer	22 ...a un festival de música?	22 ...to a music festival?
03 ir al cine porque	03 going to the cinema because	23 ...a un espectáculo?	23 ...to a show?
04 ver las pelis en casa porque	04 watching films at home because	24 ...al cine?	24 ...to the cinema?
05 el ambiente es mejor	05 the atmosphere is better	25 ...al teatro?	25 ...to the theatre?
06 la imagen es mejor	06 the picture is better	26 ...al circo?	26 ...to the circus?
07 en la gran pantalla	07 on the big screen	27 esta tarde	27 this afternoon / evening
08 los asientos no son cómodos	08 the seats aren't comfortable	28 esta noche	28 tonight
09 los otros espectadores	09 the other spectators	29 mañana	29 tomorrow
10 me molestan	10 (they) annoy me	30 el viernes	30 on Friday
11 las entradas son caras	11 the tickets are expensive	31 el fin de semana	31 on the weekend
12 las palomitas están ricas	12 the popcorn is tasty	32 ¿Qué ponen?	32 What's on?
13 hay demasiadas personas	13 there are too many people	33 ¿A qué hora empieza?	33 What time does it start?
14 me encanta ver los tráilers	14 I love watching the trailers	34 ¿A qué hora termina?	34 What time does it finish?
15 Estoy de acuerdo	15 I agree	35 Empieza a las...	35 It starts at...
16 No estoy de acuerdo	16 I don't agree	36 Termina a las...	36 It finishes at...
17 Es una película de...	17 It's a film by...	37 Dos entradas, por favor	37 Two tickets, please
18 Es una obra de...	18 It's a play by...	38 para la sesión de las ocho	38 for the 8pm showing
19 ¿Cuánto cuesta?	19 How much does it cost?	39 No quedan entradas	39 There are no tickets left
20 Son veinte euros	20 It's 20 euros	40 ¿Hay descuento para estudiantes?	40 Is there a discount for students?

Vocabulary 24 – ROLE MODELS

01 Mi modelo a seguir es...	01 My role model is...	21 No es egoísta	21 He/She is not selfish
02 Admiro a...	02 I admire...	22 Ha batido muchos récords	22 S/He has beaten lots of records
03 ...porque ayuda a...	03 ...because he/she helps...	23 Ha ganado muchos premios	23 S/He has won lots of prizes
04 ...organizaciones benéficas	04 ...charities	24 Ha hablado abiertamente	24 S/He has spoken openly
05 ...porque lucha por	05 ...because he/she fights for	25 Ha hecho varias películas	25 S/He has made several films
06 ...porque lucha contra	06 ...because he/she fights against	26 Ha recaudado más de...	26 S/He has raised more than...
07 ...la pobreza	07 ...poverty	27 Ha sufrido varias enfermedades	27 S/He has suffered several illnesses
08 ...los derechos humanos	08 ...human rights	28 Ha superado sus problemas	28 S/He has overcome his/her problems
09 Tiene mucho talento	09 She/He is very talented	29 Ha tenido mucho éxito	29 S/He has had lots of success
10 Tiene mucho éxito	10 She/He is very successful	30 Ha marcado muchos goles	30 S/He has scored lots of goals
11 Tiene mucha determinación	11 S/He has a lot of determination	31 Ha vendido muchos libros	31 S/He has sold lots of books
12 Trabaja en defensa de los animales	12 S/He works in defence of animals	32 Ha ganado el Premio Nobel	32 S/He has won a Nobel Prize
13 Usa su fama para ayudar	13 S/He uses his/her fame to help	33 Lucha contra el racismo	33 S/He fights against racism
14 Es ambicioso/a	14 He/She is ambitious	34 Lucha contra la homofobia	34 S/He fights against homophobia
15 Es famoso/a	15 He/She is famous	35 Siempre sonrío	35 S/He always smiles
16 Es fuerte	16 He/She is strong	36 Solo piensa en los demás	36 S/He only thinks of other people
17 Es generoso/a	17 He/She is generous	37 Vivía en Pakistán	37 S/He used to live in Pakistan
18 Es optimista	18 He/She is optimistic	38 Se casaron	38 They got married
19 Es rico/a	19 He/She is rich	39 Se quedó viuda	39 She became a widow
20 Es valiente	20 He/She is brave	40 Su vida no ha sido fácil	40 His/Her life has not been easy