2024/25

Cycle 3 Knowledge Navigator

Year

Name:

Form:

Morning Meeting Homework

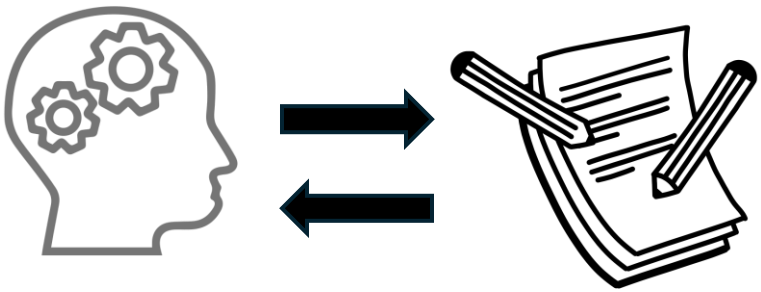
Purpose: to memorise and recall key facts from previous learning

100% Sheets

Purpose: to memorise and recall key facts for current learning

RCWC repeat!

Read the information and try to memorise it.
Cover up the information so you can't see it.
Write down as much as you can remember.
Check what you've written down against the information, and green pen what you've missed.
Repeat this to fill a minimum of 1 A4 side. The more you repeat this process, the more facts you will remember for your exams!



Contents

1	Homework Schedule
Morning Meeting Homework	
2	French
4	Science
7	History
9	Geography
11	English
13	RE

100% Sheets	
15	Maths

1		Homework Schedule	CYCLE 3	Year 10

	Week 1		Week 2		Week 3		Week 4		Week 5	
Monday	**31/3/25**	French	**21/4/25**		**28/4/25**	French	**5/5/25**		**12/5/25**	French
Tuesday	**1/4/25**	Science: P2 box 1 & 2	**22/4/25**	Science: P2 box 3 & 4	**29/4/25**	Science: C4 box 1 & 2	**6/5/25**	Science: C4 box 3 &4	**13/5/25**	Science: B5 box 1 & 2
Wednesday	**2/4/25**	RE – box 1	**23/4/25**	RE – box 2	**30/4/25**	RE – box 3	**7/5/25**	RE – box 4	**14/5/25**	RE – box 5
Thursday	**3/4/25**	*English: box A Maths - Sparx*	**24/4/25**	*English: box B Maths - Sparx*	**1/5/25**	*English: box C Maths - Sparx*	**8/5/25**	*English: box D Maths - Sparx*	**15/5/25**	*English: box E Maths - Sparx*
Friday	**4/4/25**	Geography History: box A	**25/4/25**	Geography History: box B	**2/5/25**	Geography History: box C	**9/5/25**	Geography History: box D	**16/5/25**	Geography History: box E

	Week 6		Week 7		Week 8		Week 9		Week 10	
Monday	**19/5/25**	French	**2/6/25**	French	**9/6/25**	French	**16/6/25**	French	**23/6/25**	French
Tuesday	**20/5/25**	Science: B5 box 3 & 4	**3/6/25**	Science: B5 box 5 & 6	**10/6/25**	Science: P2 box 1 & 2	**17/6/25**	Science: P2 box 3 & 4	**24/6/25**	Science: C4 box 1 & 2
Wednesday	**21/5/25**	RE – box 6	**4/6/25**	RE – box 7	**11/6/25**	RE – box 8	**18/6/25**	RE – box 9	**25/6/25**	RE – box 10
Thursday	**22/5/25**	*English: box F Maths - Sparx*	**5/6/25**	*English: box G Maths - Sparx*	**12/6/25**	*English: box A Maths - Sparx*	**19/6/25**	*English: box B Maths - Sparx*	**26/6/25**	*English: box C Maths - Sparx*
Friday	**23/5/25**	Geography History: box F	**6/6/25**	Geography History: box G	**13/6/25**	Geography History: box H	**20/6/25**	Geography History: box A	**27/6/25**	Geography History: box B

	Week 11		Week 12		Week 13	
Monday	**30/6/25**	French	**7/7/25**	French	**14/7/25**	French
Tuesday	**1/7/25**	Science: C4 box 3 & 4	**8/7/25**	Science: B5 box 1 & 2	**15/7/25**	Science: B5 box 3 & 4
Wednesday	**2/7/25**	RE – box 11	**9/7/25**	RE – box 12	**16/7/25**	RE – box 13
Thursday	**3/7/25**	*English: box D Maths - Sparx*	**10/7/25**	*English: box E Maths - Sparx*	**17/7/25**	*English: box F Maths - Sparx*
Friday	**4/7/25**	Geography History: box C	**11/7/25**	Geography History: box D	**18/7/25**	Geography History: box E

DIXONS COTTINGLEY ACADEMY

2 French	Education and Work	CYCLE 3	Year 10

Week 1		Week 2		Week 3		Week 4	
Verbs - Education		**Irregular verbs - Education**		**Subjects**		**School life**	
réviser	to revise	apprendre	to learn	l'anglais (m)	English	le collège	secondary school
comprendre	to understand	écrire	to write	l'allemand (m)	German	l'école primaire	primary school
étudier	to study	lire	to read	l'espagnol (m)	Dpanish	la bibliothèque	library
rentrer	to come in/ back to school	partir	to leave	le français (m)	French	le déjeuner	lunch
encourager	to encourage	faire	to do	la géographie (f)	Geography	leçon	lesson
corriger	to mark	aller	to go	l'histoire (f)	History	bâtiment	building
commencer	to start	être	to be	l'informatique (f)	ICT	les toilettes	toilets
regarder	to watch/look at	avoir	to have	les maths (m)	Maths	devoirs	homework
expliquer	to explain	traduire	to translate	les sciences (f)	Sciences	contrôle/examen	test/exam
jouer	to play	finir	to finish	la technologie (f)	DT	récréation	break(time)

Week 5		Week 6		Week 7		Week 8	
Teachers		**Time and Day**		**Education – Modal Verbs**		**Uniform - Equipment**	
professeur	teacher	journée	day	on doit	you must	un pantalon (m)	trousers
amusant/ennuyeux	fun/boring	temps	time	on peut	you can	une veste (f)	a jacket
gentil/strict	kind/strict	le matin/le soir	morning/evening	on ne peut pas	you cannot	une cravate (f)	a tie
intéressant/nul	interesting/rubbish	à midi/à minuit	at midday/at midnight	je veux	i want	une trousse	a pencil case
sympa/méchant	nice/mean	hier	yesterday	il faut	you must	des chaussures (f,pl)	shoes
drôle/travailleur	funny/hard-working	d'habitude	usually	il ne faut pas	you must not	un sac (m)	a bag
compréhensif	understanding	tous les jours	everyday	interdit	forbidden	un cahier/ un stylo	a workbook/pen

3 French	Media, Technology and Celebrity Culture	CYCLE 3	Year 10

Week 9				Week 10		Week 11	
Technology Verbs				Technology nouns		Technology adjectives	
jouer	to play	créer	to create	des recherches	some research	inquiétant	worrying
recevoir	to receive	surfer	to surf	des films	some films	cher	expensive
communiquer	to communicate	passer	to spend time	des réseaux sociaux	some social networks	dangereux	dangerous
produire	to produce	regarder	to watch	des achats en ligne	some purchases online	facile	easy
utiliser	to use	voler	to steal	la musique	music	disponible	abailable
télécharger	to download	allumer	to turn on	un écran tactile	a touch screen	moderne	modern
envoyer	to send	partager	to share	des jeux vidéos	some video games	rapide	quick
découvrir	to discover	parler	to speak	un portable	a mobile	sûr	safe
enregistrer	to save	harceler	to bully	une tablette	a tablet	numerique	digital
discuter	to discuss	toucher	to touch	un ordinateur	a computer	technique	technical

Week 12				Week 13			
Celebrity Culture Verbs				Celebrity Culture Nouns			
chanter	to sing	reconnaître	to recognise	un acteur	an actor	une célébrité	a celebrity
porter	to wear	célébrer	to celebrate	l'argent	money	la mode	fashion
exprimer	to express	coûter	to cost	un chanteur	a singer	une équipe	a team
raconter	to tell	diriger	to guide	un écrivain	a writer	un chanson	a song
suivre	to follow	respecter	to respect	un entretien	an interview	les paroles	lyrics
je suis* (suivre)	I follow	présenter	to present	un influenceur	an influencer	un spectacle	a show
annoncer	to announce	persuader de	to persuade	le prix	the price	une étoile	a star
inspirer	to inspire	entrer	to enter	une selfie	a selfie	la richesse	wealth
se rappeler	to remember	regarder	to watch	un auteur	an author	la voix	voice

4 SCIENCE	B5 – HOMEOSTASIS AND RESPONSE	CYCLE 3	Year 10

1. Homeostasis

Homeostasis is the regulation of the internal conditions of a cell or organism to maintain optimum conditions for function in response to internal and external changes.

Homeostasis maintains optimal conditions for enzyme to work.
In the human body, these include control of:

- blood glucose concentration
- body temperature
- water levels.

Automatic control systems may involve nervous or chemical responses.
All control systems include:

- cells called receptors, which detect stimuli
- coordination centres (such as the brain, spinal cord and pancreas) that receive and process information from receptors
- effectors, muscles or glands, which bring about responses which restore optimum levels.

2. The human nervous system

The nervous system allows humans to react to their surroundings and coordinate their behaviour.

In a typical response the information from receptors pass along neurones as electrical impulses to the central nervous system (CNS). The CNS is the brain and spinal cord. The CNS coordinates the response of effectors which may be muscles contracting or glands secreting hormones. The pathway is:

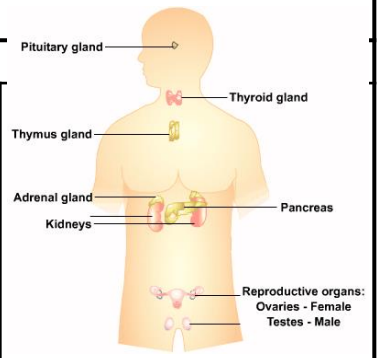
Stimulus → receptor → coordinator → effector → response

Reflex actions are automatic and rapid; they do not involve the conscious part of the brain. This makes the process faster and reduces the risk to the body. A reflex arc included the sensory neurone, synapse, relay neurone, motor neurone and effector.

3. Human endocrine system

The endocrine system is composed of glands which secrete chemicals called hormones directly into the bloodstream. The blood carries the hormone to a target organ where it produces an effect. Compared to the nervous system the effects are slower but act for longer.

The pituitary gland in the brain is a 'master gland' which secretes several hormones into the blood in response to body conditions. These hormones in turn act on other glands to stimulate other hormones to be released to bring about effects.



4. Blood glucose

Blood glucose concentration is monitored and controlled by the pancreas.
If the blood glucose levels are too high, the pancreas produces the hormone insulin that causes glucose to move from the blood into the cells. In liver and muscle cells excess glucose is converted to glycogen for storage.
Type 1 diabetes is a disorder in which the pancreas fails to produce sufficient insulin. It is characterised by uncontrolled high blood glucose levels and is normally treated with insulin injections.
In Type 2 diabetes the body cells no longer respond to insulin produced by the pancreas. A carbohydrate-controlled diet and an exercise regime are common treatments. Obesity is a risk factor for Type 2 diabetes.
If the blood glucose concentration is too low, the pancreas produces the hormone glucagon that causes glycogen to be converted into glucose and released into the blood.

5. Hormones in human reproduction

During puberty reproductive hormones cause secondary sex characteristics to develop.
Oestrogen is the main female reproductive hormone produced in the ovary. At puberty eggs begin to mature and one is released approx. every 28 days. This is ovulation.
Testosterone is the main male reproductive hormone produced by the testes and it stimulates sperm production.

Several hormones are involved in the menstrual cycle of a woman.

- Follicle stimulating hormone (FSH) causes maturation of an egg in the ovary.
- Luteinising hormone (LH) stimulates the release of the egg.
- Oestrogen and progesterone are involved in maintaining the uterus lining.

6. IVF treatment

IVF involves giving a mother FSH and LH to stimulate the maturation of several eggs.
The eggs are collected from the mother and fertilised by sperm from the father in the laboratory.
The fertilised eggs develop into embryos.
At the stage when they are tiny balls of cells, one or two embryos are inserted into the mother's uterus (womb).

7. Methods of contraception

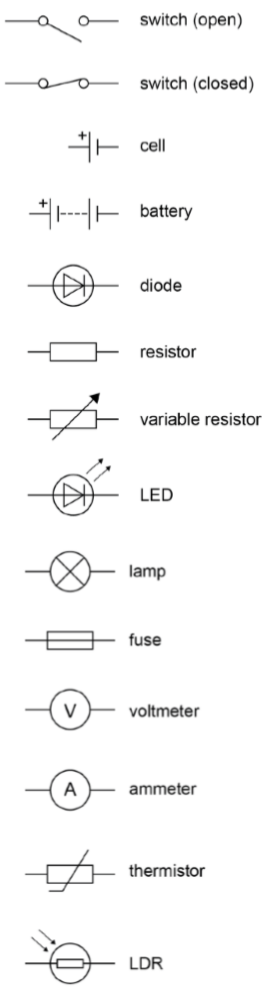
Fertility can be controlled by a variety of hormonal and non-hormonal methods of contraception. These include: oral contraceptive, injection, implant or skin patch, barrier methods such as condoms and diaphragms, intrauterine devices (IUD), spermicidal agents, abstaining and surgical methods of male and female sterilisation.

8. Negative feedback

Adrenaline is produced by the adrenal glands in times of fear or stress. It increases the heart rate and boosts the delivery of oxygen and glucose to the brain and muscles, preparing the body for 'flight or

5 SCIENCE	P2 - ELECTRICITY	CYCLE 3	Year 10

1. Circuit symbols



2. Current, potential difference and resistance

For electrical charge to flow through a closed circuit the circuit must include a source of potential difference.

Electric current is a flow of electrical charge. The size of the electric current is the rate of flow of electrical charge.

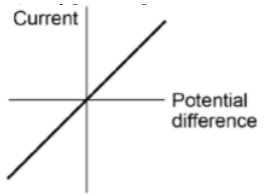
Charge flow (in coulombs) = current (in Amps) × time (in seconds) [Q = I t]

A current has the same value at any point in a single closed loop.

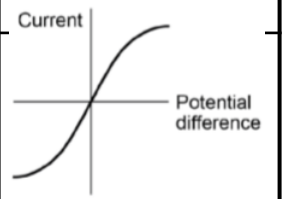
The current (I) through a component depends on both the resistance (R) of the component and the potential difference (V) across the component. The greater the resistance of the component the smaller the current for a given potential difference (pd) across the component.

pd (in volts) = current (in Amps) × resistance (in

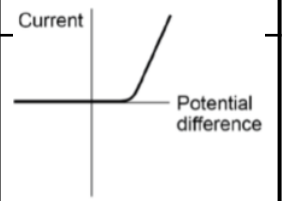
The current through an conductor (at a constant temperature) is directly proportional to the potential difference across the resistor. This means that the resistance remains constant as the current changes.



The resistance of components such as lamps, diodes, thermistors and LDRs is not constant; it changes with the current through the component. The resistance of a filament lamp increases as the temperature of the filament increases.



The current through a diode flows in one direction only. The diode has a very high resistance in the reverse direction.



The resistance of a thermistor decreases as the temperature increases.

The resistance of an LDR decreases as light intensity increases

3. Series and parallel circuits

There are two ways of joining electrical components, in series and in parallel.

For components connected in **series**:

- there is the same current through each component
- the total potential difference of the power supply is shared between the components
- the total resistance of two components is the sum of the resistance of each component.

R_{total} = R1 + R2 (in ohms, Ω)

For components connected in **parallel**:

- the potential difference across each component is the same
- the total current through the whole circuit is the sum of the currents through the separate components
- the total resistance of two resistors is less than the resistance of the smallest individual resistor.

4. Domestic uses and safety

In the UK, mains electricity is an ac supply, has a frequency of 50 Hz and is about 230 V.

Most electrical appliances are connected to the mains using three-core cable. The insulation covering each wire is colour coded for easy identification: live wire – brown, neutral wire – blue, earth wire – green & yellow stripes. The live wire carries the alternating potential difference from the supply. The neutral wire completes the circuit. The earth wire is a safety wire to stop the appliance becoming live.

5. Energy transfers

power = potential difference × current [P = V I]

power = current^2 × resistance [P = I^{2}R]

The amount of energy an appliance transfers depends on how long the appliance is switched on for and the power of the appliance. Work is done when charge flows in a circuit. The amount of energy transferred by electrical work can be calculated using the equation:

energy transferred = power × time [E = P t] (or) **energy transferred = charge flow × potential difference [E = Q V]**

The National Grid is a system of cables and transformers linking power stations to consumers. Step-up transformers are used to increase the potential difference from the power station to the transmission cables then step-down transformers are used to decrease the potential difference for safer domestic use.

6. Static electricity

When certain insulating materials are rubbed against each other they become electrically charged. Negatively charged electrons are rubbed off one material and on to the other. The material that gains electrons becomes negatively charged. The material that loses electrons is left with an equal positive charge.

Two objects that carry the same type of charge repel. Two objects that carry different types of charge attract. Attraction and repulsion between two charged objects are examples of non-contact force.

A charged object creates an electric field around itself. The electric field is strongest close to the charged object. The further away from the charged object, the weaker the field. A second charged object placed in the field experiences a force. The force gets stronger as the distance between the objects decreases.

6 SCIENCE	C4 – CHEMICAL CHANGES	CYCLE 3	Year 10

1. Reactivity series

Metals react with oxygen to produce metal oxides. The reactions are oxidation reactions because the metals gain oxygen.

When metals react with other substances the metal atoms form positive ions.

Metals can be arranged as a reactivity series in order of how readily they react with other substances.

Some metals react with acids to produce salts and hydrogen.

A more reactive metal can displace a less reactive metal from a compound.

Unreactive metals such as gold are found in the Earth as the metal itself but most metals are found as compounds that require chemical reactions to extract the metal.

Metals less reactive than carbon can be extracted from their oxides by reduction with carbon.

Reduction involves the loss of oxygen.

Metal	Reactivity			
Potassium	React with water	React with acid	React with oxygen	Very reactive
Sodium				
Lithium				
Calcium				
Magnesium				
Aluminium				
Carbon				
Zinc				
Iron				
Tin				
Lead				
Hydrogen				
Copper				
Silver				
Gold				Very unreactive

2. Reactions of acids

Acids react with some metals to produce salts and hydrogen.

Acids are neutralised by alkalis (e.g. soluble metal hydroxides) and bases (e.g. insoluble metal hydroxides and metal oxides) to produce salts and water, and by metal carbonates to produce salts, water and carbon dioxide.

Acid + Alkali → Salt + Water **Sulphuric acid + Copper oxide → Copper sulphate + Water**

The particular salt produced in any reaction between an acid and a base or alkali depends on:

- the acid used (hydrochloric acid produces chlorides, nitric acid produces nitrates, sulphuric acid produces sulphates)
- the positive ions in the base, alkali or carbonate.

3. Acids and alkalis

Acids produce hydrogen ions (H^+) in aqueous solutions.

Aqueous solutions of alkalis contain hydroxide ions (OH^-).

The pH scale, from 0 to 14, is a measure of the acidity (0→6) or alkalinity (8→14) of a solution, and can be measured using universal indicator or a pH probe. A solution with pH 7 is neutral.

In neutralisation reactions between an acid and an alkali, H^+ react with OH^- to produce water (H_2O).

The volumes of acid and alkali solutions that react with each other can be measured by **titration** using a suitable indicator.

A strong acid (Hydrochloric, nitric, sulphuric acid) is completely ionised in aqueous solution. A weak acid (ethanoic, citric and carbonic acid) is only partially ionised in aqueous solution. The stronger an acid, the lower the pH. As the pH decreases by one unit, the hydrogen ion concentration of the solution increases by a factor of 10.

4. Electrolysis

When an ionic compound is melted or dissolved in water, the ions are free to move about within the liquid or solution. These liquids and solutions are able to conduct electricity and are called **electrolytes**.

Passing an electric current through electrolytes causes the ions to move to the **electrodes**. Positively charged ions move to the negative electrode (the **cathode**), and negatively charged ions move to the positive electrode (the **anode**). Ions are discharged at the electrodes producing elements. This process is called **electrolysis**.

When a simple ionic compound (e.g. lead bromide) is electrolysed in the molten state using inert electrodes, the metal (lead) is produced at the cathode and the non-metal (bromine) is produced at the anode.

5. Using electrolysis to extract metals

Metals can be extracted from molten compounds using electrolysis. Electrolysis is used if the metal is too reactive to be extracted by reduction with carbon or if the metal reacts with carbon. Large amounts of energy are used in the extraction process to melt the compounds and to produce the electrical current.

Aluminium is manufactured by the electrolysis of a molten mixture of aluminium oxide and cryolite using carbon as the positive electrode (anode).

6. Electrolysis of aqueous solutions and half equations

The ions discharged when an aqueous solution is electrolysed using inert electrodes depend on the relative reactivity of the elements involved.

At the negative electrode (cathode), hydrogen is produced if the metal is more reactive than hydrogen. The positively charged hydrogen ions are reduced by gaining an electron [$2H^+ + 2e^- \rightarrow H_2$].

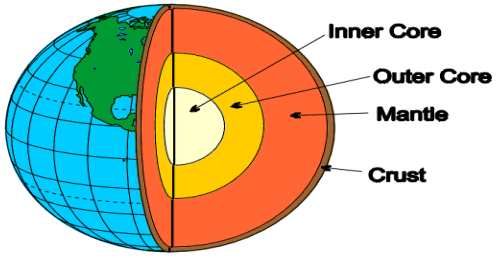
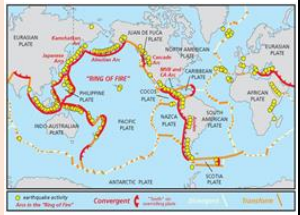
At the positive electrode (anode), oxygen is produced unless the solution contains halide ions when the halogen is produced. The hydroxide ions are oxidised and lose electrons. [$4OH^- \rightarrow O_2 + 2H_2O + 4e^-$].

This happens because in the aqueous solution water molecules break down producing hydrogen ions and hydroxide ions that are discharged.

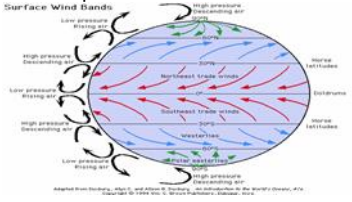
N.B. **OILRIG** – **O**xidation **i**s the **l**oss of electrons and **r**eduction **i**s the **g**ain of electrons.

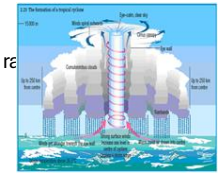
Section A – Key Words	Section B - Medieval Religion	Section C – Foundation of the Abbey	Section D – Early Development
Monk - a member of a religious community of men typically living under vows of poverty, chastity, and obedience. **Monastery -** The building where the community of monks lived Called an Abbey when it was a complex of (more than one) buildings **Abbot -** Head of a monastery All of the Abbots also sat in Parliament **Choir Monks -** Educated monks, ordained as priests, able to take church services. **Lay Brothers -** Illiterate monks, usually did manual labour around the abbey but also worked on abbey farms. **Reformation -** Changes made to the English Church by Henry VIII by the Act of Supremacy He made himself Head of the Church in England (replaced the Pope); Henry was still Catholic but this led to wider changes which eventually saw England become a Protestant country by 1558 **Dissolution 1536-41** Henry VIII's closure of all the monasteries and abbeys in England as part of his takeover of the English Church	• Everyone in Europe was Christian (Catholic); Church led by Pope who was powerful religious / political force throughout Europe • Pope was head of the Church in England (until 1536) • Trusted goodness of God to answer prayers but also 'mysterious' ways of God; feared power of Devil • Priests served a small areas called 'parish' • Each parish had a church, also many towns had beautiful cathedrals • Medieval people were really concerned about getting to heaven, the Church was for many the 'gatekeepers of heaven' informing people how to achieve salvation • The Church as well as sacraments was also a place to get information, education or charity • ***Many abbeys and monasteries where monks and nuns isolated themselves in service to God BUT they became increasingly powerful, influential and wealthy throughout medieval times.***	• 13 monks from St Mary's Abbey (Benedictine order) in York were unhappy with lax morals and disagreements between monks • Got support from Archbishop Thurstan of York who wrote to the Archbishop of Canterbury on their behalf • Given land and permission to set up a new monastic order (group) in a remote valley in North Yorkshire, near to the river Skell • Remote / wild / isolated environment suited the 13 monks' needs for a return to strict monastic values • Valley was some protection from wild conditions; surrounding lands provided materials for building (wood, later stone) • Water from River Skell and farmland around this new area made it possible to be self-sufficient • Applied to join the stricter Cistercian order of monks, accepted 1135	**1132 -** 13 monks granted land to set up new community **1135 -** First timber church built **1140s -** Fountains begins to set up 'daughter houses' – new abbeys linked to Fountains Water mill built to start to grind flour **1146 -** Abbey attacked and burnt after Abbot Murdac tries to intervene in who should be the next Archbishop of York. It is soon repaired. **1150s-1180s -** First stone church demolished replaced by a much larger one. Monks dormitory and cellarium are extended. Chapter house, sacristy, reredorter (toilets) and guest houses added. More gifts of land are given to FAB. Farms are set up with the land all over North and West Yorkshire. By 1170 there are: 60 choir monks and 200 lay brothers **1180-1205 -** New kitchen, warming house and lay brothers' infirmary are added **1200s -** FAB is now most powerful Cistercian Abbey in north. It owns about 15,000 sheep – crucial for England's profitable wool trade **Early 1200s -** Presbytery is completed and Chapel of Nine Altars added. Tiles added to floors in many parts of church 1216: King John asks for the return of various valuables.

Section E – Daily Lives	Section F - Typicality	Section G – Decline	Section H - Dissolution
The attitudes and values of the monks • Simplicity and poverty – monks owned no possessions • Obedience to God – monks had no leisure areas, they prayed, worshipped, studied, ate and slept • Chastity (no sexual relationships) – monks had no families, they lived communally in the monastery with little or no contact with the outside world • Cistercian monks would follow values of self denial and seclusion • There core value was salvation – to gain a forgiveness **Features showing daily life** • Choir monks and lay brothers both had staircases directly from dormitories down into to the church • Shared dormitories • Only one room with fires for warm for the monks • Separate refectories and dormitories for choir monks and lay brothers They would be expected to prayer seven times a day to a strict schedule	**Fountains Abbey is similar to other Cistercian abbeys** • Abbeys like Fountains and Jervaulx founded in isolated areas in North Yorkshire • They had same basic layout with large church, central cloister, refectory and guest house • Abbey churches were all painted in whitewash to keep the walls simple • Abbeys supported the local business community with guest houses • They all followed the rules of St Benedict • They followed a similar pattern of prayer and work **Differences to other Cistercian monasteries** • Fountains the biggest Cistercian monastery in UK with biggest cellarium in Europe • Only Fountains and Jervaulx had a chapel of nine altars • The Abbots of Fountains could sit in the House of Lords • The Chapter House was the largest in the country	**Decline 14th Century** • During the C14th and C15th Fountains Abbey faced many challenges which reduced its size and its power. In 1300 a disease killed many of Fountains' sheep. In 1314 the Scottish attacked the farms and occupied the Abbey. • The biggest problem was the Black Death which killed many monks. Fountains was forced to employ paid labourers to do the jobs lay brothers had done. By 1381 there were only 34 monks left at Fountains Abbey • The Abbey also experienced debt to Jewish money lenders **Recovery 15th Century** • By the beginning of the C15th Fountains had begun to recover and expand once again. By this time there were 52 choir monks. They began to rebuild the Abbey and became wealthy again. • In the early 1500s Abbot Huby spent some of this wealth building a huge tower named after himself. It seemed Fountains Abbey was a long way from its original purpose	**The Dissolution of the Monasteries** • Henry VIII broke away from the Catholic Church and set up the Church of England • He could also take their wealth, land and power • Official visitors sent to all monasteries to find evidence of corruption • In 1536 the Visitation Report gave evidence of the Abbot selling timber without permission • Larger monasteries like Fountains dissolved in 1539 • The King took valuable resources from the monasteries and sold off land • Fountains could no longer be used as a monastery • Some monks were given a small pension **Evidence of the Dissolution at Fountains** • Lead and beams from roof removed • Glass, marble and valuable objects taken and sold • After the Dissolution • Fountains Abbey was sold by the King • Bought by rich merchant, Stephen Proctor • Proctor builds Fountains Hall on the land using stone from the infirmary • The abbey is redundant, it is not used • Abbey estate is then inherited by

Quiz	Key Knowledge to learn
1	**What are Natural Hazards?** Natural hazards are physical events such as earthquakes and volcanoes that have the potential to do damage humans and property. Hazards include tectonic hazards, tropical storms and forest fires. **What affects hazard risk?** ✓ Population growth ✓ Global climate change ✓ Deforestation ✓ Wealth - LICs are particularly at risk as they do not have the money to protect themselves 
2	**Structure of the Earth** <u>The earth has 4 layers</u> ✓ **The inner core** ✓ **The outer core** ✓ **The mantle** ✓ **The crust**  The crust is split into major fragments called **tectonic plates**. There are 2 types: **Oceanic** (thin and younger but dense) and **Continental** (old and thicker but less dense) These plates move and where they meet you get tectonic activity (volcanoes and earthquakes).
3	**Volcanoes and earthquakes** **Volcanoes** • **Constructive** margins – Hot magma rises between the plates eg. Iceland. Forms Shield volcanoes • **Destructive** margins – an oceanic plate subducts under a continental plate. Friction causes oceanic plate to melt and pressure forces magma up to form composite volcanoes eg the Pacific Rim **Earthquakes** • **Constructive** margins – usually small earthquakes as plates pull apart. • **Destructive** margins – violent earthquakes as pressure builds and is then released • **Conservative** margins – plates slide past each other. They catch and then as pressure builds it is released eg San Andreas fault. . 

Quiz	Key Knowledge to learn
4	**Effects of Tectonic Hazards** Primary effects happen immediately. Secondary effects happen as a result of the primary effects and are therefore often slightly later. **Primary - Earthquakes** • Property and buildings destroyed • People injured or killed • Ports, roads, railways damaged • Pipes (water and gas) and electricity cables broken **Secondary - Earthquakes** • Business reduced as money spent repairing property • Blocked transport hinders emergency services • Broken gas pipes cause fire • Broken water pipes lead to a lack of fresh water **Primary - Volcanoes** • Property and farm land destroyed • People and animals killed or injured • Air travel halted due to volcanic ash • Water supplies contaminated **Secondary - Volcanoes** • Economy slows down. Emergency services struggle to arrive • Possible flooding if ice melts Tourism can increase as people come to watch • Ash breaks down leading to fertile farm land
5	**Responses to Tectonic Hazards** **Immediate (short term)** • **Issue warnings if possible** • **Rescue teams search for survivors** • **Treat injured** • **Provide food and shelter, food and drink** • **Recover bodies** • **Extinguish fires** **Long-term** • **Repair and re-build properties and infrastructure** • **Improve building regulations** • **Restore utilities** • **Resettle locals elsewhere** • **Develop opportunities for recovery of economy** • **Install monitoring technology**
6	**Preparing for a tectonic hazard** **Monitoring** – Seismometers measure earth movement. Volcanoes give off gases **Prediction** – by observing monitoring data, this can allow evacuation before an event **Protection** – Reinforced buildings and making building foundations that absorb movement. Automatic shut offs for gas and electricity **Planning** – Avoid building in at risk areas. Training for emergency services and planned evacuation routes and drills.

Quiz	Key Knowledge to learn
7	***An event example of the effects and responses - Nepal Earthquake (LIC)*** 2015 Epicentre was Barpak, 80 km (50 miles) northwest of the capital, Kathmandu. 7.8 on Richter scale. Destructive plate margin. Indo-Australian plate is colliding with the Eurasian plate at a rate of 45mm per year. **Primary Effects** – 9,000 people killed; 17,000 people injured, and 25 hospitals destroyed **Secondary Effects** – Earthquake triggered an avalanche killing tourists on Mount Everest; Rice seed stores in homes were destroyed; tourism industry affected I**mmediate Responses** – Red Cross provided 225,000 tents; Helicopters rescued people from mountainous regions; 500,000 people migrated from Kathmandu to seek shelter **Long term responses** – 7,000 schools were rebuilt; stricter building controls on new housing; Mountain Everest region reopened again for tourists.
8	***An event example of the effects and responses*** **- L'Aquila Earthquake (HIC)** L'Aquila Earthquake in Italy occurred on the 6th April 2009 and It reached 5.8 on the richter scale. The earthquake occurred on a destructive boundary between the African and Eurasian plate. **Primary Effects** – 300 people killed; 1,500 were injured; 67,500 were made homeless; 15,000 buildings collapsed **Secondary Effects** – A landslide and mudflow caused by a burst water pipe near the town of Pagenio; Students of L'Aquila University has decreased; Lack of housing for all residents meant house prices and rents increased I**mmediate Responses** – Hotels provided shelter for 10,000 people and 40,000 tents were given out; Italian Red Cross was searching for survivors; The Italian Post Office offered free mobile calls and raised donations **Long term responses** – Students were given free public transport and were exempt from university fees for three years; 6 scientists were found guilty of manslaughter as they had not predicted the earthquake
9	**Global Atmospheric Circulation and Distribution of tropical storms** At the equator, the sun's rays are most concentrated. This means it is hotter. This one fact causes global atmospheric circulation at different latitudes. High pressure = dry ow pressure = wet As the air heats it rises – causing low pressure. As it cools, it sinks, causing high pressure. Winds move from high pressure to low pressure. They curve because of the Coriolis effect (the turning of the Earth). **Tropical Storms** occur in low latitudes between 5 and 30 degrees north and south of the equator. Ocean temperature needs to be above 27 degrees. They happen between summer and autumn.  

Quiz	Key Knowledge to learn
10	**Sequence of a Tropical storm** 1. Air is heated above warm tropical oceans 2. Air rises under low pressure conditions 3. Strong winds form as rising air draws in more air and moisture causing torrential ra 4. Air spins due to Coriolis effect around a calm eye of the storm 5. Cold air sinks in the eye so it is clear and dry 6. Heat is given off as it cools powering the storm 7. On meeting land, it loses source of heat and moisture so loses power  **Preparing for a Tropical Storm** **Prediction** – Monitoring wind patterns allows path to be predicted. Use of satellites to monitor path to allow evacuation. **Planning** – Avoid building in high risk areas; Emergency drills; Evacuation routes **Protection** – Reinforced buildings and stilts to make safe from floodwater; Flood defences e.g. Levees and sea walls
11	**Typhoon Haiyan, Philippines, Category 5 storm, Winds reach 170 mph** **Primary Effects** – 6, 300 people killed; 600,000 people displaced; 40,000 homes destroyed; 30,000 fishing boats destroyed; 400mm rain caused severe flooding **Secondary Effects** – 14 million people affected; 6 million lost their income; landslides and blocked roads; power supply was cut off for a month in some areas; ferry and airport services were disrupted for weeks I**mmediate Responses** – Aid agencies sent water, food and shelter aid; US sent in helicopters and search and rescue teams; UK government sent shelter kits. **Long term responses** – The UN and countries such as the UK sent financial support; re-Buidling of major roads , bridges and airports; 'Cash for work' programme set up – people were paid to help clear roads etc; Oxfam sent replacement fishing boats.
12	**Extreme weather in the UK** **UK weather is getting more extreme due to climate change. Temperatures are more extreme, and rain is more frequent and intense leading to more flooding events. Since 1980, average temperature has increased by 1 degree and winter rainfall has increased.** **Rain** – can cause flooding damaging homes and businesses **Snow and ice** – causes injuries and disruption to schools and businesses. Destroys farm crops. **Hail** – causes damage to property and crops **Drought –** limited water supply. Can damage crops **Wind** – damage to property and damage to trees potentially leading to injury **Thunderstorms** – lightening can cause fires or even death **Heat waves** – causes breathing difficulties and can disrupt travel.
13	Cumbria Floods, 2009 **Social effects** ✓ Pc Bill Barker was killed when a bride in Workington collapsed. ✓ 1,500 homes were flooded. **Economic Effects** ✓ Many businesses had to close and did not open for months after, losing valuable income from Christmas tourism **Environmental Effects** ✓ Debris from the River Cocker and River Derwent destroyed 6 bridges ✓ Landslides were triggered ✓ Hundreds of trees torn down

	BOX A: Acts
One	As Macbeth and Banquo return home from battle, they meet three witches. The witches predict that Macbeth will king. Macbeth returns home and he and Lady Macbeth plot to kill Duncan.
Two	Macbeth kills Duncan and Lady Macbeth plants the dagger so the bodyguards look guilty. Duncan's sons Malcolm and Donalbain, fearing their lives to be in danger flee Scotland.
Three	Macbeth hires murderers to kill Banquo and Fleance (B's son). Banquo's ghost haunts Macbeth at a banquet and Macbeth's thanes begin to turn against him.
Four	The witches show Macbeth three apparitions which make Macbeth think that his future as king is secure. Macbeth has Macduff's wife and children murdered.
Five	Lady Macbeth kills herself due to her guilt. Macbeth still thinks himself indestructible but the witches apparitions start to come true as Macduff's army approaches. Macduff kills him and decapitates him.

BOX D: Key Quotations
Lady Macbeth: "unsex me here, And fill me from the crown to the toe top-full Of direst cruelty (Act 1, scene 5)
Macbeth: "Bloody instructions which, being taught, return To plague th'inventor." "I have no spur To prick the sides of my intent, but only Vaulting ambition" (Act 1, scene 7)
Macbeth: "Will all great Neptune's ocean wash this blood Clean from my hand?"(Act 2, scene 2)
Lady Macbeth: "Yet who would have thought the old man to have had so much blood in him?" (Act 5, scene 1)
Macbeth: "Life's but a walking shadow, a poor player That struts and frets his hour upon the stage, And then is heard no more…Signifying nothing. " (Act 5, scene 5)
Three witches: "Fair is foul, and foul is fair." (Act I, Scene I)
Lady Macbeth: "Yet do I fear thy nature; It is too full o' the milk of human kindness." (Act I, Scene V)
Lady Macbeth: "Look like the innocent flower, but be the serpent under't." (Act I, Scene V)

	BOX B: Character
Macbeth	ambitious, treacherous, powerful, led to wicked thoughts and deeds. He murders Kind Duncan and takes the throne of Scotland for himself.
Lady Macbeth	'cold', deeply ambitious woman who lusts for power and position. Some critics belief it is the grief of loosing her child that is her driving force in the play.
Duncan	an old, gracious, pious and gentle man. He serves as a foil to Macbeth because he was a benevolent king.
Macduff	Scottish nobleman hostile to Macbeth's kingship from the start. He, unlike Macbeth, is never duplicitous and serves as a foil to Macbeth.
Banquo	Macbeths best friend: brave, noble general whose children, according to the witches' prophecy, will inherit the Scottish throne.
Three Witches	"black and midnight hags" who plot mischief against Macbeth using charms, spells, and prophecies. Some critics believe they are the 'puppet masters' of the play who drive Macbeth's actions.
Malcolm	son of Duncan, whose restoration to the throne signals Scotland's return to order following Macbeth's reign of terror
Lady Macduff	Wife of Macduff. She and her home serve as contrasts to Lady Macbeth and their hellish world especially as she is a loving mother

BOX C: Context

Jacobean England:
- During the reign of James VI of Scotland (1567–1625), who also inherited the crown of England in 1603 as James I.

Daemonologie:
- written by King James I about magic, sorcery and witchcraft.
- In writing the book King James was heavily influenced by his personal involvement in the North Berwick witch trials from 1590.
- Shakespeare attributed many quotes and rituals found in the book directly to the weird sisters.

Witchcraft:
- the period of witch trials in were a widespread moral panic suggesting that malevolent Satanic witches were operating as an organized threat to Christendom during the 15th to 18th centuries.
- Those accused of witchcraft were portrayed as being worshippers of the Devil. Many people were subsequently accused of being witches, and were put on trial for the crime.

Banquo:
- Shakespeare borrowed the character of Banquo from Holinshed's Chronicles, a history of Britain published in 1587. In Chronicles Banquo is an accomplice to Macbeth in the murder of the king.
- Shakespeare may have changed this aspect of his character to please King James, who was thought at the time to be a descendant of the real Banquo.
- Critics often interpret Banquo's role in the play as being a foil to Macbeth, resisting evil where Macbeth embraces it. Sometimes, however, his motives are unclear, and some critics question his purity. He does nothing to accuse Macbeth of murdering the king, even though he has reason to believe Macbeth is responsible.

BOX E: Dramatic/Stylistic Devices

Soliloquy	One character speaking to audience; M uses to make audience complicit
Dramatic irony	Audience knows more than characters; audience knows D will die
Hamartia	Tragic flaw; M's could be easily influenced/ambition
Hubris	Pride; M could be said to have this or Lady M
Catharsis	Purgation of pity and fear; happens at the end
Anagnorisis	Recognition or the tragedy to come
Peripeteia	Sudden reversal of fortune
Rhyme	Used by the witches to create chant-like, supernatural atmosphere
pauses	When a character stops speaking for dramatic effect
asides	More then one character is on stage but the character who is speaking speaks directly to the audience and the convention is that only the audience hears this not the characters on stage

BOX G: Key Vocabulary

Besieged	Surrounded by armed forces aiming capture or to force surrender (Macbeth at the end)
Mercurial	Subject to sudden and unpredictable changes of mood or mind (Macbeth during his descent towards the end of the play)
Malevolent	Intending to do evil to others (Macbeth becomes increasingly malevolent as the play progresses)
Machiavellian	Cunning, scheming and manipulative. Particularly in order to gain power (Macbeth becomes Machiavellian)
Duplicitous	Deliberately been deceitful or misleading, particularly for own gain.
Equivocate	Using ambiguous/unclear language to hide the truth or deliberately mislead (The Witches are equivocators)
Regicide	The act of killing a king (Particularly seen as unholy – see: The Great Chain of Being)
Valour	Great courage in facing danger, especially in battle
Heinous	Utterly wicked or evil (Macbeth ordering the death of Lady Macduff and her son is a heinous act)
Beguile	To attract in a deceitful way (The Witches)
Maternal/ Paternal	Maternal: Typical of a caring mother(There is a distinct absence of a maternal instinct in Lady Macbeth) Paternal: Typical of a caring father (The paternal instinct in Banquo is a stark contrast to Macbeth)

BOX F: Motifs

Nature	'Against the use of nature' (1.3); 'Tis unnatural,/ Even like the deed that's done' (3.4); 'And his gash'd stabs looked like a breach in nature' (3.1); 'Boundless intemperance/ In nature is a tyranny' (4.3)
Light and dark	'Stars, hid your fires; Let not light see my black and deep desires' (1.4); 'that darkness does the face of earth entomb,/When living light should kiss it?' (4.2); 'Come, seeling night,/ Scarf up the tender eye of pitiful day' (3.2)
Children	'Your children shall be kings' (1.3); 'And pity, like a naked new-born babe,' (1.7); 'I have given suck, and know / How tender 'tis to love the babe that milks me' (1.7); 'He has no children. All my pretty ones?' (4.3)
Blood	'Make thick my blood' (1.5); 'And on thy blood and dungeon gouts of blood…/It is the bloody business which informs thus to mine eyes' (2.1); 'Will all great Neptune's ocean wash this blood clean from my hand?' (2.1); 'Here's the smell of blood still.' (5.1)
Sleep	'Nature seems dead, and wicked dreams abuse / The curtain'd sleep' (2.1); 'There's one did laugh in's sleep, and one cried 'Murder!'' (2.2); 'Macbeth does murder sleep' (2.2); 'A great perturbation in nature, to receive at once the benefit of sleep and do the effects of watching!' (5.1)
Dreams	'Art thou not, fatal vision, sensible / To feeling as to sight? (2.1); 'Hence, horrible shadow! Unreal mockery, hence!' (3.4); 'Wash your hands; put on your nightgown; look not so pale! I tell you yet again, Banquo's buried.' (5.1); 'My wife and children's ghosts will haunt me still' (5.7)

13 Religious Studies	Muslim Practices	CYCLE 3	Year 10

Week	Key Knowledge to learn
1. – Five Pillars of Islam	The five pillars of Sunni Islam are: 1.Shahadah – The Declaration of Faith. 2. Salah – Prayer 3. Zakah – Charity (2.5%) 4. Sawm – Fasting 5. Hajj – Pilgrimage • They are the founding principles of the religion. • Muhammad set up the practice of the 5 pillars. • The Pillars keep Allah at the centre of a believer's life throughout each day. • They all involve a test which Muslims must pass either each day (Salah) or yearly (Sawm and Zakah) and once in a lifetime (Hajj). • A person who follows the 5 Pillars will hopefully return to Allah in Paradise as His servant.
2.Ten Obligatory Acts	The ten Obligatory Acts of Shi'a Islam are: • 1 = Prayer – Salah • 2 = Fasting – Sawm • 3 = Pilgrimage – Hajj • 4 = Charity – Zakah • 5 = Struggle – Jihad • 6 = Amir Bin Maroof – encouraging people to do what is good • 7 = Nahi Anil Munkar – discouraging people from doing what is wrong • 8 = Khums – giving to charity and religious leaders (20% of profits) • 9 = Tawalla – showing love for God and those who follow him • 10 = Tabarra – not associating with the enemies of God Code which binds Shias together. Imams gave the rule to follow them – authority of imamate
3.Eid-Ul -Adha	• Remembers Prophet Ibrahim obeying Allah's order to sacrifice his son, Ishmael. • Shaytan tempted Ibrahim to disobey Allah but Ibrahim threw stones to make him leave (also remembered by the stone throwing on Hajj) • He tried to slit Ishmael's throat but when he looked down, it was a ram which had been killed and Ishmael was safe. • Ibrahim had passed the test of obedience to Allah's will.. To celebrate • A lamb is sacrificed and the meat split between the family who paid for the lamb, their friends, relatives and neighbours, and the poor. Many families in the UK pay money to charity instead of having a lamb sacrificed. • Sunnah of Eid: Sunnah = practices of the Prophet, which Muslims follow as he is the perfect example. For Eid they complete fajr prayer and then dress up in new clothes. They attend congregational prayer at mosque and hear a sermon on Ibrahim, commitment to obeying Allah, the poor, and the responsibilities of

Week	Key Knowledge to learn
4. FESTIVAL: Ashura	• This is celebrated by Sunni and Shia Muslims on the tenth of the month of Muharram, but for different reasons. Ashura means "tenth". • **Sunni**: remembers Prophet Musa fasting on this day to remember the saving of the Israelites from the Pharaoh in Egypt. • **Shia**: Remembers the death of Hussein, the grandson of the Prophet, who was killed at the battle of Karbala on this date in 680CE. Yazid was unjust and kept slaves so Hussein had refused to be led by him, and was imprisoned in Karbala and killed. • **Sunni**: Many see it as a Day of Atonement, when sins are forgiven if repented. Many fast on the 8th-10th of Muharram. • **Shia**: this is festival of sincere sorrow and sadness. Many wear black as a sign of grief. Mosques are covered in black cloth. After prayers in the afternoon, poems about the tragedy of Hussein are read. • Shias learn from Ashura that Hussein, and the actions of the Imams, should never be forgotten. This shows that all of them should stand up for justice to make society better and fight the unjust. A Shia's love for Allah is shown through their love for the Imams he has chosen to lead them.
5.Eid-ul-Fitr	• This is the celebration of the end of the month-long Ramadan fast. • Special prayers are said but Sunni and Shia Muslims perform them slightly differently • Now Muslims have fasted they know how hard life is for the poor, so Zakah is due to be paid on this day. • This festival is a time to reflect on the past year and how to be better next year. It enables Muslims to improve their chance of entering Jannah by becoming a more observant Muslim and a better member of the ummah. • Ramadan and Eid-ul-Fitr are a chance every year to remember the path of Allah and make sure they come back if they have strayed from it. • Muslims have a day off work or school and go to the mosque, reflect on the year and enjoy visiting friends and relatives for celebratory meals now that they are no longer fasting. • It is a huge social occasion and strengthens the Ummah.
6. Declaration of Faith	• The Shahadah is "There is no God but Allah and Muhammad is the Prophet of Allah." • This phrase is important to Muslims as it expresses the core beliefs of Islam. • The Shahadah is considered to provide the foundation for the other four pillars. • Shi'a Muslims ad an extra phrase to the Shahadah: "and Ali is the friend of God." This shows their belief that Ali. Muhammad's cousin and son in law, was the true successor to the Prophet. • To become a Muslim a person only has to sincerely recite the Shahadah in front of Muslim witnesses. • The Shahadah is recited many times during a Muslim's life. If they are born into a Muslim family, it is the first thing that they hear. If possible, it is also the last thing they say before they die.

Week	Key Knowledge to learn
7. Salah: Prayer	• To observe the duty of salah, Sunni Muslims pray five times a day and Shi'a Muslims pray three times a day. • Shi'a Muslims combine midday and afternoon prayer and sunset and night prayers, so they say the same prayers but only three times a day • Sunni Muslims prayer times are called; Fajr (before sunrise), Zuhr (after midday), Asr (afternoon), Maghrib (just after sunset), Isha (night). • Before prayer all Muslims perform ritual washing called Wudu. This is to make themselves spiritually clean and focus fully on Allah. • When praying all Muslims face the direction of Makkah. This means that all Muslims are focusing on one place associated with God when they pray. • Shi'a Muslims believe in only using natural materials when praying so they will place a clay tablet or a piece of wood on the spot where their forehead will rest.
8. Prayer	• Muslim prayers are made up of a number of rak'ah: set sequences of actions and recitations. • God commanded Muslims to pray, so it is important for Muslims to observe this pillar of Islam. • Prayer is also important as it unites Muslims and brings them closer to God. • The Jummah Prayer is a special communal prayer that is held at midday on Friday. • Men are expected to attend a mosque for this prayer and women may do so if they wish. • Muslims still perform wudu before Jummah Prayer and Mosques have special rooms set aside for this. Prayer is important to Muslims because: 1. Muslims have been commanded to pray by God. 2. It helps a Muslim become closer to God 3. It motivates them to do God's will. 4. It unites Muslims around the world as they all pray in the same way.
9. Sawm: Fasting	• Ramadan is the most important month in the Islamic Calendar. • It is during this month that the angel Jibril started to reveal the Qur'an to Muhamad. • Muslims focus on their faith during this month by fasting, giving to charity and trying to please God. • Fasting means not eating or drinking during daylight hours. • The command to fast was revealed to Muhammad and can be found in the Qur'an. "It was in the month of Ramadan that the Qur'an was revealed as guidance for mankind… So any of you who sees in the month should fast." 2:185 • Food, drink, smoking and sex are forbidden during daylight hours. The fast is broken at sunset when an evening meal is shared with family and friends with prayer and reading from the Qur'an. • Children, the ill and those who are pregnant are excused from the fast. • The fast is important because it shows obedience and dedication to God and inspires Muslims to help those in poverty who don't have enough to eat or drink. • The Night of Power is the night when Jibril first started to recite the Qur'an to Muhammad. • Muslims might try to stay awake throughout the Night of Power, praying and studying the Qur'an. Observing the Night of Power is thought to give Muslims the

Week	Key Knowledge to learn
10 .Zakah and Khums: Charity	• Zakah requires Muslims to give 2.5% of their savings to charity every year. • In addition to giving Zakah. Shi'a Muslims also give Khums. This is 20% of their savings, half of which goes to charity and half to religious leaders. • Giving to charity is mentioned a number of times in the Qur'an; for example "Whatever you give should be for parents, close relatives, orphans, the needy and travellers. God is well aware of whatever good you do." 2:215. • Only Muslims with savings greater than a certain amount (known as the nisab) are required to give Zakah. • Zakah can be donated directly to a charity such as Islamic relief but it can also be collected by a mosque, which will distribute the money among those in need. • Zakah is important because it fulfils a duty to God. • It helps to strengthen the Muslim community by supporting the poor and weak. • It is a type of purification that helps Muslims become closer to God.
11. Hajj: Pilgrimage	• Hajj is an annual pilgrimage that starts and ends in the city of Makkah (Mecca) in Saudi Arabia. • Every Muslim is expected to take part in Hajj at least once in their life. • Hajj remembers the actions of the Prophet Ibrahim and his family who rebuilt the Ka'aba. • The Ka'aba is the cube shaped building in the centre of the Grand Mosque and is the holiest place in Islam. • The Qur'an says that "Pilgrimage to the House is a duty owed to God by people who are able to undertake it." 3:97. • Hajj is significant for Muslims because it: 1. Fulfils a religious obligation as it is a pillar of Islam and Muslims are told of its significance when reading the Qur'an. 2. Pilgrimage brings a person closer to God as they do not have to deal with the world around them and instead concentrate on their faith. 3. Hajj is emphasises the unity of the Muslim Ummah and shows that all Muslims are the same no mater their race or wealth.
12. Hajj: Pilgrimage	• Hajj takes place over five days, during which time pilgrims travel from Makkah to Mina, Arafat, Muzdalifah and back to Makkah. • The actions that are performed on Hajj remember the events in the lives of the Prophet Ibrahim and his family. • Before Hajj begins, pilgrims must enter a state of purity called Ihram which involves ritual washing and wearing white. • Everyone wearing the same clothes signifies unity and equality. • Hajj pilgrimage starts in Makkah at the Gran Mosque as pilgrims walk round the Ka'aba seven times. • Muslims will then walk seven times between the hills of Safa and Marwah, remembering Hajira's search for water and the miracle of the appearance of the well of Zaman. • Pilgrims will then travel to Arafat where Muhammad preached his last sermon. Praying a whole afternoon under the hot sun shows their devotion to God. • Pilgrims also throw pebbles at three stone wall called the Jamarat. These walls represent the devil.
13. Jihad	• Jihad refers to the struggle against evil. It requires all Muslims to strive to improve themselves and the society they live in, in a way that pleases God. • Greater Jihad is the inward, personal struggle to live according to the teachings of Islam. • Lesser Jihad is the outward, collective struggle to defend Islam from threat. • Greater Jihad is considered to be more important than lesser Jihad. • Greater Jihad might involve; observing the five pillars, studying the Qur'an, avoiding temptations like drugs and alcohol, avoiding negative traits like greed and jealousy and helping and caring for those in need. • Lesser comes from the earliest days of Islam when Muslims needed to fight for the freedom to practice their faith. • Fighting for religious cause is sometimes caused a Holy War. But lesser Jihad or holy war can only be used and a last resort when the faith is under severe attack. Islam teaches that lesser Jihad/holy war can never be used to justify a terrorist attack.

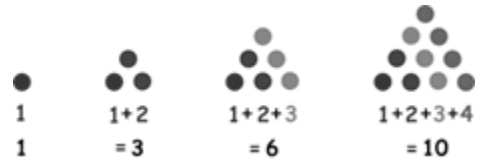
BOX 1: Types of number and sequences

VOCABULARY	
Sequence	A **pattern** of terms/numbers which follow a **rule**
Term	Each **value in a sequence** is called a term.
Position	The place it is **located.** *e.g. In the sequence: 3, 5, 7, 9 the term '5' has a position of **2** (as it is the **2nd term**).*

Links to: LINEAR GRAPHS	
y = mx + c	The general equation of a linear graph, where **m** is the **gradient** and **c** is the **y-intercept.**

RULES	
Term-to-term rule	A rule which allows you to find the **next term** in a sequence if you know the **previous term.**
Position-to-term rule *(n^{th} Term)*	A rule which allows you to calculate the term that is in the **nth position** of the sequence.
Generate	To **produce** or **create**

POSITION TO TERM ALGEBRAIC RULES	
Linear Sequences	$x_n = \boldsymbol{an + b}$
Quadratic Sequences	$x_n = \boldsymbol{an^2 + bn + c}$
Geometric Sequence	$x_n = \boldsymbol{ar^{n-1}}$
Triangular Numbers	$x_n = \dfrac{\boldsymbol{n(n+1)}}{\boldsymbol{2}}$

TYPES OF SEQUENCES	
Linear Sequences	A sequence where the **difference between terms** increases or decreases by the **same** amount each time. Also known as a **Arithmetic** Sequence. *Algebraically:* $x_n = \boldsymbol{an + b}$
Common Difference	The amount we **add** each time in a linear sequence
Quadratic Sequences	A sequence of numbers with an **n^2** in the position to term rule. The **second difference** between consecutive terms is constant. Algebraically: $x_n = \boldsymbol{an^2 + bn + c}$ Method: The first term is always **a + b + c** The first difference is always **3a + b** The second difference is always **2a**
Geometric Sequences	A sequence of numbers where each term is found by **multiplying** the previous one by a number called the common ratio, r. Algebraically: $x_n = \boldsymbol{ar^{n-1}}$
Common Ratio (r)	The amount we **multiply** by each time in a geometric sequence
Fibonacci Sequences	A sequence where the next number is found by **adding up the previous two terms.** The Fibonacci sequence: 1,1,2,3,5,8,13 …
Triangular Number	A number that can make a **triangular dot pattern.** Algebraically: $x_n = \dfrac{\boldsymbol{n(n+1)}}{\boldsymbol{2}}$
	

BOX 2: Manipulating Expressions

EXPRESSIONS, EQUATIONS, IDENTITIES AND FORMULA		
Expression	A set of **terms** combined using the 2 operations +, -, x or ÷. There is **no "=" sign**.	
Equation	Where two expressions are **equal** in value – there is always an **"=" sign.**	
Inequality	Where two expressions are **not equal** in value.	
	Strict	< **less** than > **greater** than
	Non-strict	≤ **less** than or **equal** to ≥ **greater** than or **equal** to
Formula	A special type of equation, used to **find the value** of a specific thing. *e.g.* $F = ma^2$	
Identity	An equation that is **true for all** of its variables.	
Function	A special type of equation where each input has a **single output.**	
	Input – A variable you **choose**. Output – A variable that is **calculated.**	

ALGEBRAIC SHORTHAND: EXAMPLES	
b	**1 x *b***
$3b$	**3 x *b***
b^3	***b* x *b* x *b***
$3b^3$	**3 x *b* x *b* x *b***
$(3b)^3$	**(3 x *b*) x (3 x *b*) x (3 x *b*)**
$\frac{a}{b}$	***a* ÷ *b***

INSTRUCTIONS: GENERAL	
Evaluate	In maths, this means **find the value of**
Form	To **write** or **produce**.
Substitute	**Replacing letters with corresponding numbers** to calculate the **numerical value**
Expand	**Multiply** terms inside a bracket by those outside the bracket
Simplify	To reduce to its **simplest form**
Factorise	Finding the **factors** of an expression. The reverse of **expand**, it is when we write an expression using **brackets**

Links to: SETS	
Set	A **collection of items** with one of each member

Links to: FACTORS	
Factor	A quantity which **divides equally** into a number. *E.g. factors of 8 are* ***1, 2, 4 and 8.***
Factorising a general quadratic	*E.g. Quadratic:* $x^2 + bx + c$ *Factorised form:* ***(x + ?)(x + ?)***
Difference of two squares	*E.g.* $a^2 - b^2$ *Factorised form:* ***(a – b)(a + b)***

SIMPLIFYING ALGEBRA	
Collect like terms	You can **add** or **subtract** like terms.
Simplifying algebraic fractions	**Factorise** the numerator and denominator and **cancel** common factors

HIGHER ONLY: ALGEBRAIC FRACTIONS	
Adding and subtracting algebraic fractions	You can **add** or **subtract** like terms.
Multiplying and dividing algebraic fractions	**Factorise** the numerator and denominator and **cancel** common factors
Key Tips	**Simplifying**: Always simplify the fractions at every step if possible. **Factoring**: Use factoring to find common factors or simplify the expression when necessary. **LCM for Addition/Subtraction**: For adding or subtracting fractions, always find the least common denominator. **Cross-cancelling**: In multiplication and division, cancel common factors between the numerator and denominator before performing the operation.

BOX 3: Changing the subject and Functions

INSTRUCTIONS: EQUATIONS	
Solve	**Find the value** of an unknown or variable. We use **inverse** operations and the **balance** method.
Iterate	**Repeatedly** carry out a process. When solving using iteration, it gives an **approximate solution.**
Rearrange	**Changing the subject** of a formula. Sometimes called **transposing.** We use **inverse** operations and the **balance** method, like when we solve an equation.
Inverse	The **opposite.**
Balance *an equation*	Do the **same** to **both sides of the "="** We use this to **solve** an equation or **rearrange** an equation.

Links to: FUNCTIONS	
Function	A special type of equation where each input has a **single output.**
	Input – A variable you **choose.** Output – A variable that is **calculated.**
Function Notation	$f(x)$ x is the input value $f(x)$ is the output value.
Inverse Function	Written: **$f^{-1}(x)$** A function that performs the **opposite process** of the original function.
Composite Function	Written: for example, **fg(x)** A **combination** of two or more functions to create a new function. fg(x) means 'do **g** first, then **f**' gf(x) means 'do **f** first, then **g**'
Quadratic Inequalities	**To solve quadratic inequalities by factorising:** 1. Make one side of the inequality be zero. 2. Factorise or use the quadratic formula to find x (like quadratic equations) 3. Draw rough sketch and see where the values are true for inequality 4. Write inequalities for the intervals that were true.

BOX 4: Testing Conjectures

INSTRUCTIONS: CONJECTURES	
Conjectures	A conjecture is a **mathematical statement that is believed to be true** based on observations, patterns, or reasoning but **has not yet been proven or disproven.**
Always, sometimes, never true	Words used to describe if a statement is true or false. Statement that are sometimes true needs examples to show both when it is true and when it is false.
Show that	Formal demonstrations that a statement is true or not.
Counterexample	A counterexample is **a specific example** for which a given **statement is false.**

Links to: PROOF – Algebraic		
Prove	To show something is **always true**. In maths, you must use **algebra** to prove.	
Even number	A multiple of **2**	Can be represented by **2n**
Odd number	**Not** a multiple of **2**	Can be represented by **2n+1**, or **2n-1**
Consecutive Integers	**Integers** that follow each other in **order**.	Can be represented by **n, n+1, n+2…**
Multiple	The result of **multiplying** a number by an integer. *E.g. The 3rd multiple of 7 is **21**.*	To show that an expression is a multiple of a number, you need to show that you can **factor** out that number.
Sum	Using **addition** to find the **total** of two or more numbers.	
Product	The answer when you **multiply.**	