2026/27

Cycle 1 Knowledge Navigator

Year 10

Name:

Form:

Morning Meeting Homework

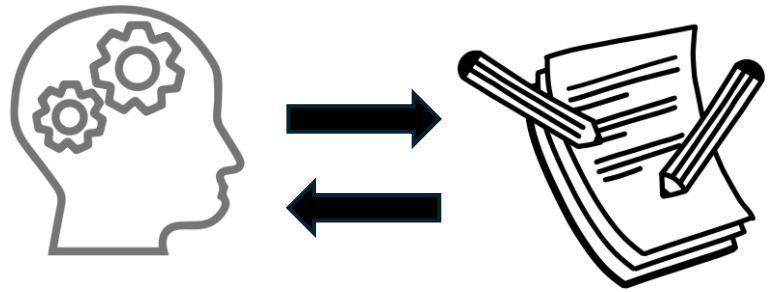
Purpose: to memorise and recall key facts from previous learning

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!



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100% Sheets	
14	Maths

1		Homework Schedule		CYCLE 1	Year 10

	Week 1		Week 2		Week 3		Week 4		Week 5	
Monday					7/9/26	French	14/9/26	French	21/9/26	French
Tuesday					8/9/26	Science: Page 4 Box 1&2	15/9/26	Science: Page 4 Box 1&3	22/9/26	Science: Page 4 Box 1&2
Wednesday			2/9/26	RE *Sparx Maths*	9/9/26	RE *Sparx Maths*	16/9/26	RE *Sparx Maths*	23/9/26	RE *Sparx Maths*
Thursday			3/9/26	English: Box 1	10/9/26	English: Box 2	17/9/26	English: Box 3	24/9/26	English: Box 4
Friday			4/9/26	Geography Box 1 / History Box A	11/9/26	Geography Box 2 / History Box B	18/9/26	Geography Box 3/ History Box C	25/9/26	Geography Box 4/ History Box D

	Week 6		Week 7		Week 8		Week 9		Week 10	
Monday	28/9/26	French	5/10/26	French	12/10/26	French	2/11/26	French	9/11/26	French
Tuesday	29/9/26	Science: Page 4 Box 7&4	6/10/26	Science: Page 4 Box 7&5	13/10/26	Science: 7&6	3/11/26	Science: Page 5 Box 2&3	10/11/26	Science: Page 5 Box 1&2
Wednesday	30/9/26	RE *Sparx Maths*	7/10/26	RE *Sparx Maths*	14/10/26	RE *Sparx Maths*	4/11/26	RE *Sparx Maths*	11/11/26	RE *Sparx Maths*
Thursday	1/10/26	English: Box 5	8/10/26	English: Box 6	15/10/26	English: Box 7	5/11/26	English: Box 8		
Friday	2/10/26	Geography Box 5/ History Box A&B	9/10/26	Geography Box 6/ History Box C&D	16/10/26	Geography Box 7/ History Box E	6/11/26	Geography Box 8/ History Box F		

	Week 11		Week 12		Week 13	
Monday	16/11/26	French	23/11/26	French	30/11/26	French
Tuesday	17/11/26	Science: Page 5 Box 4&5	24/11/26	Science: Page 5 Box 6&7	1/12/26	Science: Page 5 Box 8&9
Wednesday	18/11/26	RE *Sparx Maths*	25/11/26	RE *Sparx Maths*	2/12/26	RE *Sparx Maths*
Thursday	19/11/26	English: Box 9	26/11/26	English: Box 10	3/12/26	English: Box 11
Friday	20/11/26	Geography Box 10/ History Box G	27/11/26	Geography Box 11/ History Box H	4/12/26	Geography Box 12/ History Box E&F

DIXONS COTTINGLEY ACADEMY

Week 1		Week 2	
Relationships - Verbs		**Relationships – Family members and friends**	
se marier	to get married	mon père/ ma mère	my dad/mum
se séparer	to seperate	mon grand-père	my grand-father
s'entendre bien/mal	to get on well/ badly	mon cousin/ma cousine	my cousin
s'excuser	to forgive	mon oncle/ma tante	my uncle/auntie
se disputer	to argue	mon neveu/ma nièce	my niece
sourire	to smile	ma copine/mon copain	my friend
rire	to laugh	mon petit copain/ma petite copine	my boyfriend/girlfriend
connaître	to know	ma famille	my family
naître	to be born	mon beau père/ma belle mère	my step dad/mum
mourir	to die	mon ami/mon amie	my friend

Week 3		Week 4			
Physical Description		**Relationships - Adjectives**		**Improve Relationships**	
les cheveux/les yeux	hair/ eyes	gentil/ gentille	kind	encourager	to encourage
petit(e)/grand(e)	small / tall	méchant (e)	mean	améliorer	to improve
de taille moyenne	of average height	paresseux/ paresseuse	lazy	discuter	to discuss
fort	strong	timide/ bavard(e)	shy/chatty	parler	to talk
court	short	drôle/sympa	funny/kind	écouter	to listen
joli(e)/ moche	pretty / ugly	actif/ active	active	passer du temps	to spend time
belle/beau	beautiful / handsome	embêtant(e)	annoying	comprendre	to understand
jeune	young	fier/fière	proud	respecter	to respect
vieux/vieille	old	sérieux/ sérieuse	serious	promettre de	to promise to

Week 5	
Relationships – Past Tense Verbs with Être	
je me suis senti(e)	I felt
je me suis disputé(e)	I argued
je me suis entendu(e) bien/mal	I got on well/badly
je me suis excusé(e)	I forgave
je suis sorti(e)	I went out
je suis né(e)	I was born
il/elle est mort(e)	he/she died
il/elle s'est marié(e)	he/she got married
ils se sont separés	they separated

Week 6			
Romantic Relationships			
j'ai confiance en	I trust in	l'amour	love
je suis heureux/triste	I am happy/sad	vivre ensemble	to live together
je suis proche de	I am close to	rester célibataire	to stay single
je suis en couple	I am in a couple	avoir des enfants	to have kids
je suis permis de	I am allowed to	tromper	to cheat
je promets de	I promise to	exprimer	to express
je veux	I want to	être seul(e)	to be alone
je m'inquiète de	I am worried about	tomber amoreux(euse)	to fall in love
il/elle me fait rire	he/she makes me laugh	toute la vie	for life

Week 7	
Marriage plans	
je viens de fêter	I have just celebrated
une grande fête	a big celebration
le mode de vie	the style of life
c'est moins cher	it is less expensive
c'est la tradition	it is the tradition
le marriage	marriage/wedding
le PACS	civil partnership
démodé/inutile	outdated/useless
traditionnel(le)	traditional

Week 8

Healthy Lifestyle Verbs

garder la forme	to keep in shape	faire de l'exercice	to exercise
grandir	to grow	éviter	to avoid
déjeuner	to have lunch	fumer	to smoke
se lever	to get up	s'inquieter	to be worried
se coucher	to go to bed	améliorer	to improve
cuisiner	to cook	prendre	to take
choisir	to choose	changer	to change
perdre	to lose	adapter	to adapt
essayer de	to try to	remplacer	to replace
empêcher	to prevent	dormir	to sleep

Week 9

Food		Drinks	
la nourriture	food	les boissons	drinks
j'ai faim	I'm hungry	j'ai soif	I'm thirsty
les fruits	fruits	de l'eau	some water
les légumes	vegetables	le café	coffee
le pain	bread	le thé	tea
le poisson	fish	le lait	milk
le poulet	chicken	le vin	wine
la viande	meat	le jus d'orange	orange juice
le fromage	cheese	le chocolat chaud	hot chocolate
le gâteau	cake	la limonade	lemonade

Week 10

Mealtimes		Adjectives	
le matin/ l'après-midi	the morning/afternoon	frais/fraiche	fresh
le soir/le nuit	the evening/ night	épicé/gras	spicy/fatty
un régime	a diet	salé/sucré	salty/sweet
le repas	the meal	dégoutant/ délicieux	disgusting/ delicious
la recette	the recipe	végétarien(ne)/ vegan (e)	vegetarian/ vegan
le plat	the dish	équilibré (e)	balanced
le petit - déjeuner	breakfast	sain(e)/ malsain (e)	healthy/ unhealthy
le goûter	snack	bon(ne) pour la santé	good for your health
le déjeuner	lunch	mauvais(e) pour la santé	bad for your health
le dîner	dinner	ça me fait vomir	it makes me vomit

Week 11

Parts of the Body

j'ai mal à/au...	I've hurt my...
la bouche	mouth
la jambe	leg
la main	hand
la tête	head
l'oreille	ear
le bras	arm
le dos	back
le pied	foot
le corps	body

Week 12

Complex Opinions		Past Imperfect	
je crois que	I believe that	je mangeais	I used to eat
je pense que	I think that	je buvais	I used to drink
je préfère	I prefer	je sortais	I used to go out
je trouve que	I find that	je dormais	I used to sleep
d'après moi	from my point of view	je faisais	I used to do
selon moi	according to me	je prenais	I used to take
à mon avis	in my opinion	je voulais	I used to want
il est necessaire que	it is necessary that	je pouvais	I used to be able to
il me semble que	it seems to me that	je devais	I used to have to
il n'est pas facile de	It is not easy to	j'avais/j'étais	I used to have/be

Week 13

Improve Your lifestyle

changer de style de vie	change lifestyle
réussir à eviter	to succeed in avoiding
contrôler les portions	to control portions
manger plus sainement	to eat more healthily
donner de la confiance	to give confidence
avoir plus d'énergie	to have more energy
se coucher plus tôt	to go to bed earlier
éviter de se lever tard	to avoid waking up late
être en bonne santé	to be in good health
améliorer la santé	to improve your health

1. Reactivity series

Don't write these out just revise the order

- **Metal**
- Potassium
- Sodium
- Lithium
- Calcium
- Magnesium
- Aluminium
- *Carbon*
- Zinc
- Iron
- Tin
- Lead
- *Hydrogen*
- Copper
- Silver
- Gold

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**

3. 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 can 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**.

4. 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.

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

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.

Potential difference (in volts) = current (in Amps) × resistance (in ohms) [V = I R]

5. Series and parallel circuits

For components connected in **series**:

- there is the same current through each component
- the total potential difference 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 routes.
- the total resistance of two resistors is less than the resistance of the smallest individual resistor.

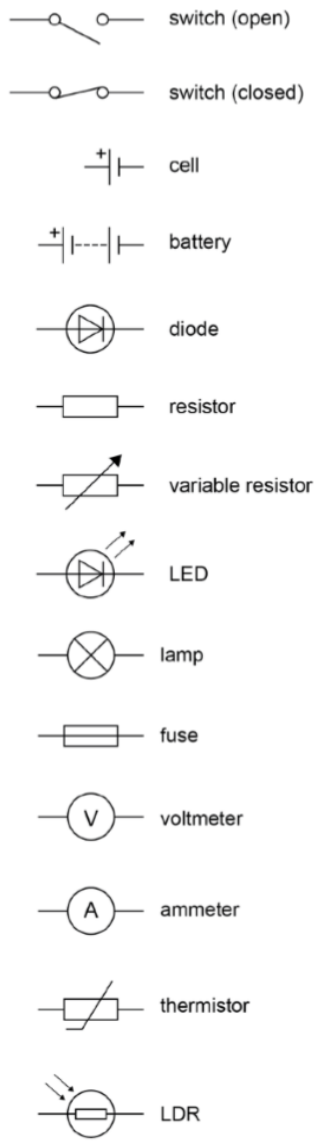
6. Domestic uses and safety

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

In a UK plug each wire is colour coded for easy identification: live wire – **brown**, neutral wire – **blue**, earth wire – **green** & yellow stripes. The earth wire is a safety wire to stop the appliance becoming live.

7. Circuit symbols

Don't write these out just revise the symbols and their names



1. Chemical measurements and conservation of mass

The **law of conservation** of mass states that no atoms are lost or made during a chemical reaction, so the mass of the products equals the mass of the reactants.

The **relative formula mass** (Mr) of a compound is the sum of the relative atomic masses of the atoms in the numbers shown in the formula.

Some reactions may appear to involve a change in mass, but this can usually be explained because a reactant or product is a gas, and its mass has not been considered.

2. Moles

Chemical amounts are measured in moles. The symbol for the unit mole is mol.
The mass of one mole of a substance in grams is numerically equal to its relative formula mass.
The number of atoms, molecules or ions in a mole of a given substance is the Avogadro constant. The value of the Avogadro constant is 6.02×10^{23} per mole.

3. Amounts of substances and limiting reactants

The masses of reactants and products can be calculated from balanced symbol equations.
Chemical equations can be interpreted in terms of moles. For example:

$$Mg + 2HCl \rightarrow MgCl_2 + H_2$$

shows that **one** mole of magnesium reacts with **two** moles of hydrochloric acid to produce **one** mole of magnesium chloride and **one** mole of hydrogen gas.

In a chemical reaction involving two reactants, it is common to use an excess of one of the reactants to ensure that all the other reactant is used. The reactant that is completely used up is called the limiting reactant because it limits the number of products.

4. Homeostasis

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

- **blood glucose concentration**,
- **body temperature**
- **water levels**.

5. Human endocrine system

The endocrine system is made 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**.

6. The human nervous system

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.

7. 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 when 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.

8. 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.

9. 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.

Section A – Women's Lives 33-39

Jobs:
- All female public service workers (doctors, teachers, civil servants) sacked.
- 1934, around 360,000 women had given up work.
- Numbers of women in university limited to 10% of male intake.

Marriage:
- 1000 mark loan given for marrying Aryan man.
- The more children they had, the less they paid back.
- Contraception banned.
- Loan abolished in 1937.

Children:
- Medals awarded for having lots of children gold for 8 children.
- Compulsory sterilisation for those with inherited disease or 'weaknesses' such as colour blindness.

Propaganda:
- Posters encouraged the idea of the perfect Aryan family.
- Women *encouraged* to wear traditional clothing, NOT to wear trousers or dye their hair OR smoke.
- Slimming *discouraged* – women had to be strong for childbirth.

Success of policies:
- Number of marriages increased slightly 1933-39
- birth rate increased 1933 (15 per thousand) to 1939 (20 per thousand)
- Divorce rate rose after 1938, 'duty year' introduced in 1939

When women were called back to work in 1943…
Only 1 million responded to the call

Section B – Workers Lives 33-39

Workers:

DAF:
- Replaced Trade Unions
- Strikes were banned.
- Wages went down and hours went up.
- Unemployment reduced by 96% in 1936.
- BUT Jews and women taken off register.

Public works:
- building autobahns and schools / hospitals
- provided **manual work** for many unemployed young men.

RAD:
- Compulsory **work camps** for 18-25 year olds
- Digging ditches and planting forests.
- Low wages; military style regime.

Military service:
- 1935 2 years compulsory military service for young men

Leisure time:
- **KdF** ('Strength Through Joy')– organised activities (hikes, theatre, sports) after work
- **SdA**: 'Beauty of Labour' aimed to make workplaces more attractive (canteens, toilets).
- Workers might have ***felt*** better off.

'Winterhilfswerk':
- charity drive in winter months 1933-1945 – aimed to ensure 'no-one shall be hungry or cold'
- BUT workers could be sacked/harassed by others for not donating

Section C – Young People Lives

Schools:
- School textbooks rewritten.
- Non-Nazi teachers sacked.
- Jewish teachers sacked.

Curriculum:
- History: WW1 loss the fault of Jews and Communists. Treaty of Versailles was Diktat.
- Geography: Lebensraum. German empire needed to expand.
- Maths: Maths problem had underlying anti-semitic and pro-Nazi messages.
- Science: Learnt about angles by plotting bomb trajectories.
- Race Studies: All students learned to identify the difference between Aryans and Jews.
- PE: Compulsory to create a fit Aryan race.

Youth groups
- Hitler Youth (HJ) for boys
- League of German Maidens (BDM) for girls.
- HJ activities: hiking, running, jumping, singing, competitive, violent games.
- BDM activities: physical fitness, housework and childcare skills.
- Groups collected money for Nazi charities (like Winterhilfswerk)
- BOTH groups promoted **obedience to Hitler**.
- *Membership* high but *attendance dropped* by late 1930s.
- Made compulsory 1939.

Section D – Jewish Lives 33-39

Undesirables
Anyone who didn't fit the **Nazi Aryan ideal**:
Jews, Gypsies, homosexuals, 'workshy', political opponents (e.g. Communists)
1. **Ubermenschen:** White, northern Europeans. The Aryan race. 'Super humans'
2. Untermenschen: Jews, Roma, Gypsies, Slavs. Non-Aryan. 'Sub-human'.

1933
- Nazi encouraged boycott of Jewish shops
- Jewish public officials (judges, lawyers and teachers) sacked

1935
- Nuremberg Laws:
- Jews could not be German citizens; Jews could not marry non-Jews

1938
- Jewish children banned from state schools; Jews not allowed to practice as doctors
- **Kristallnacht** – night of Nazi encouraged violence against Jews. 30,000 Jews arrested.

1939
- Jews not allowed to work as dentists, chemists or nurses. Curfew: to be indoors by 9pm.
- 6 million more Jews come under Nazi control as a result of invading Poland (1939) and Russia (41)
- **First use of yellow insignia**

Section E – Polish Occupation

Occupation:
- Poland invaded in September 1939, this was the official beginning of WW2
- Nazi leaders split the country into different regions, the largest region was called General Government

Removal of Polish Culture:
- Himmler planned to decide how to occupy countries in Eastern Europe, called the Eastern General Plan. It aimed to remove as many Slavic people replace them with Germans
- Native polish citizens were replaced with 500,000 'ethnic Germans'
- School and universities were closed
- 30,000 of most talented Polish people were arrested, many tortured and murdered
- 1.9 million non Jewish Citizens were murdered
- 1.5 million Poles were deported and worked in labour camps
- 3 million Jews had been murdered

Resistance
- The Polish Government which had escaped to London helped to establish the Delegatura, a secret state within Poland
- In August 1944, there was an uprising in Warsaw lasting two months.
- This resulted in the eventual destruction of Warsaw and its people

Section F – Netherlands

Occupation
- Begins in 10 May 1940
- Luftwaffe attack the port of Rotterdam, 800 people killed and 25,000 buildings were destroyed
- The Dutch government surrendered out of fear of similar loss of life in other cities

Experiences of Occupation
- Civil Servants were allowed to continue to work, although many resigned
- Dutch Education was not changed and the Dutch at first co-operated with Germans

Changing Experiences
- February 1941, the first Dutch Jews began to rounded up
- Dutch Communists began to go on strike, resulting in violent reaction from German authorities
- 1943 107,000 Dutch Jews were deported or sent to concentration camps
- 300,000 ex Dutch soldiers were transported to Germany to work in Labour Camps
- By 1944 all men between 16-60 had to report for forced labour across Germany

Resistance:
- June 1940, many Dutch wore carnations in support of the exiled royal family
- Dutch organised a resistance movement operating in secret, 300,000 people were in hiding
- Illegal printing presses were established

Section G – Total War

War Economy :
- Hitler declared a war economy in December 1939
- All industries would focus on producing products to support war
- Military budget rose dramatically
- By 1941 55% of German workforce were employed in war related industries
- Albert Speer was to be in charge of this and introduced 'Industrial self responsibility'
- 1940 10,200 aircraft produced by 1944 this had risen to 39,600
- 1940 1,600 tanks were produced by 1944 this had risen to 19,000

Impact of War :
- By Spring 1940 Germany experienced food shortages
- Rationing was introduced
- Jews were given fewer rations than Germans
- Germans would spend hours queuing for low quality foods
- Women - as the war progressed some were encouraged to return to work. From 1939 women under 25 were expected to complete 6 months Labour Service before entering full employment
- From 28 August 1940 RAF began bombing
- Children were voluntarily evacuated out of the towns and cities
- Older children were placed in camps run by the Hitler Youth

Section H – Holocaust

First Solution – Persecution and Emigration
- Nazi's would force Jews to leave the country
- Jews were beaten and humiliated, their property attacked
- The Nazi's created a Central Office for Jewish Emigration

Second Solution – Concentration in Ghettos
- Emigration would become harder to manage
- Jews were instead forced into ghettos, which were enclosed areas in cities where Jews could be isolated
- The Warsaw Ghetto had a 3 metre high wall, and held 445,000 people
- Disease and death were common amongst young and elderly

Final Solution – Mass Murder
- Einsatzgruppen - an elite German force carried out mass murders of Jewish communities
- They would round up men, women and children and take them to secluded wooded areas. The victims would be forced to dig a large pit, stand at the edge of it and then be shot.
- At Chelmo Jews were murdered by exhaust fumes in a van, allowing more to be killed at the same time
- 1941 Operation Reinhard allowed the building of exterminate camps
- By 1942, these were built in Belzec, Sobibor, Treblinka and later Austwitz

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 to humans and property. Hazards include tectonic hazards, tropical storms and forest fires.

What affects hazard risk?

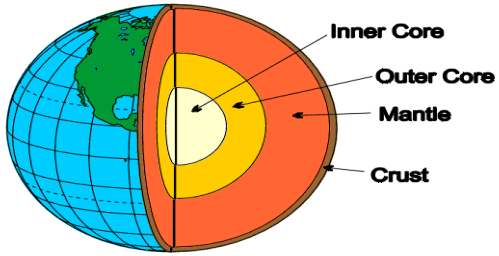
- ✓ Population growth
- ✓ Global climate change
- ✓ Deforestation
- ✓ Wealth - LICs are particularly at risk as they do not have the money to protect themselves

2

Structure of the Earth

<u>The earth has 4 layers</u>

- ✓ **The inner core**
- ✓ **The outer core**
- ✓ **The mantle**
- ✓ **The crust**



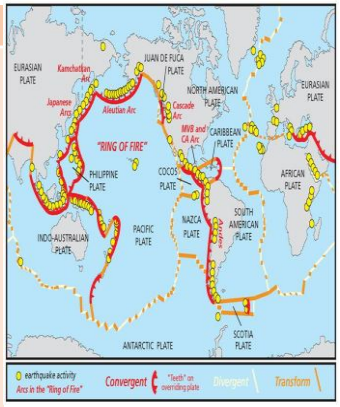
The crust is split into major fragments called **tectonic plates**. There are 2 types: **Oceanic** (thin and younger but dense) and **Continental** (old and thicker but less dense)

These plates move and where they meet you get tectonic activity (volcanoes and earthquakes).

3

Volcanoes and earthquakes

Volcanoes	Earthquakes
• **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	• **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	Secondary - Earthquakes
• Property and buildings destroyed • People injured or killed • Ports, roads, railways damaged • Pipes (water and gas) and electricity cables broken	• 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	**Secondary - Volcanoes**
• Property and farm land destroyed • People and animals killed or injured • Air travel halted due to volcanic ash • Water supplies contaminated	• 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, drink and shelter
- Recover bodies
- Extinguish fires

Long term

- Repair and rebuild properties and infrastructure
- Improve building regulations
- Restore utilities
- Resettle locals elsewhere
- Develop opportunities for economic recovery
- Install monitoring technology

6

Preparing for a tectonic hazard

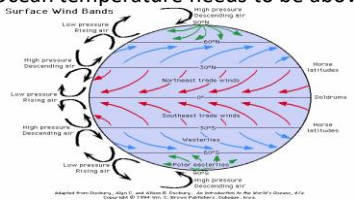
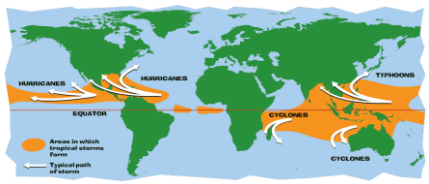
Monitoring – Seismometers measure earth movement. Volcanoes give off gases.

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.

Geography	Subject(s)	CYCLE 1	9

Quiz	Key Knowledge to learn
7	***An event example of the effects and responses - Nepal Earthquake (LIC)*** • It occurred in 2015 • Epicentre was Barkpak, 80KM (50 miles) northwest of the capital Kathmandu • 7.8 on the Richter scale • Destructive plate marign. Indo-Australian plate colliding with the Eurasian plate at a rate of 45mm a yaer **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 Low 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 rain 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	<u>Cumbria Floods, 2009</u> **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

Week	Key Knowledge to learn
1 – PLOT	• Set in April 1912, Brumley UK. The Birling family and Gerald Croft are celebrating Sheila Birling's engagement to Gerald. Mr Birling lectures his son, and Gerald about the importance of every man looking out for himself if he wants to get on in life. Inspector Goole arrives and says that he is investigating the death of a young woman who committed suicide, Eva Smith. Mr Birling is shown a photograph of Eva, he remembers firing her in 1910 for organising a strike over workers pay. Sheila recalls also having Eva sacked about her manner when served by her in a department store. The Inspector reveals that Eva Smith changed her name to Daisy Renton. Gerald reveals to Sheila he had an affair with Daisy Renton. • **Act 2** Gerald explains that he had an affair with Eva, Sheila gives her engagement ring. The Inspector turns his attention to Mrs Birling, she confesses that she also had contact with Eva. Eva approached a charity chaired by Mrs Birling to ask for help. Eva was desperate and pregnant, but help was refused. She tells Eva that the baby's father should be made entirely responsible. and should be made an example of, she tells the Inspector to look for the father and hold him to account. • **Act 3** Eric is revealed as the father. He stole money from Mr Birling's office to provide money to Eva. The Inspector delivers his final speech. After he leaves, the family begin to suspect that he was not a genuine police inspector. A phone call to the Chief Constable confirms this. Mr Birling, Mrs Birling and Gerald congratulate themselves that it was all a hoax . This attitude upsets Sheila and Eric. The phone rings. Mr Birling announces to the family that a girl has just died on her way to the infirmary, a police inspector is coming to question them.
2 – CHARACTERS	**Arthur Birling** – A wealthy businessman and head of the Birling family. He's confident, self-important, and firmly capitalist, believing in individual success over social responsibility. **Sybil Birling** – Arthur's wife, cold and socially superior. She's involved in charity work but is judgmental and refuses to help Eva Smith when she most needs it. **Sheila Birling** – Their daughter, initially naive and self-absorbed, but she undergoes significant moral growth and accepts responsibility for her actions. **Eric Birling** – Their troubled son, awkward and secretive. He drinks heavily and is revealed to have played a major role in Eva's downfall, but he shows remorse. **Gerald Croft** – Sheila's fiancé, from an upper-class family. He had an affair with Eva (as Daisy Renton) but tries to justify his actions. He's charming but evasive. **Inspector Goole** – A mysterious figure who interrogates the family. He acts as Priestley's moral voice **Eva Smith / Daisy Renton** – The unseen victim whose life and death connect all the characters. She represents the struggles of the working class **Edna** – The Birlings' maid. Though a minor character, her presence reminds us of the class divide and the silent working class.
3 – STAGE CRAFT	1. **Dramatic irony -** the audience knows what the characters don't 2. **Stage directions -** Instructions for the actors; often revealing 3. **Setting -** Constant throughout but subtle changes e.g. lighting 4. **Tension -** Builds up throughout the play 5. **Cliff-hanger -** The ending allows the audience to make up their minds

Week	Key Knowledge to learn
4 – Key Quotations	• ***Birling's confidence*** – *'We're in for a time of steadily increasing prosperity'* • ***Birling on society -*** *'the way some of these cranks talk and write now, you'd think everybody has to look after everybody else'* • ***Sheila's recognition -*** *'but these girls aren't cheap labour – they're people'* • ***Sheila's regret -*** *'it's the only time I've ever done anything like that, and I'll never, never do it again to anybody'* • ***Sheila on the Inspector -*** *'we all started like that – so confident, so pleased with ourselves until he began asking us questions'* • ***Sheila on Eric*** *- 'he's been steadily drinking too much for the last two years'* • ***Inspector on guilt -*** *'I think you did something terribly wrong – and that you're going to spend the rest of your life regretting it'* • ***Mrs Birling defends herself -*** *'she was claiming elaborate fine feelings and scruples that were simply absurd in a girl in her position'* • ***Eric explains –*** *'I'm not very clear about it, but afterwards she told me she didn't want me to go in but that – well, I was in that state when a chap easily turns nasty – and I threatened to make a row'* • ***The Inspector says -*** *'but each of you helped to kill her. Remember that'* • ***Inspector's message*** *- 'there are millions and millions and millions of Eva Smiths and John Smiths still left with us, with their lives, their hopes and fears, their suffering, and chance of happiness, all intertwined with our lives, with what we think and say and do. We don't live alone.'* • ***Birling's confidence*** *- 'the famous younger generation who know it all'*
5 – CONTEXT AO3	**1912 -** Play is set here; just before WWI and sinking of the Titanic **1945 -** Priestley wrote the play then; start of the welfare state and ideals of social equality made real **Social responsibility Or socialism -** we must all look after each other **Capitalism** - Business should make money no matter the human cost; we are all responsible only for ourselves **Class** - Upper and lower social classes are segregated **Age** - Old vs young; new and old ideas counter posed **Attitudes to women -** Patriarchal leading to misogyny **Wealth, Power, Influence -** How should we use our wealth, power and influence? **Public versus Private** - What appears private is shown to have influence outside **Morality and Legality -** Priestley questions the morality of characters and audience
6 - DRAMATIC DEVICES	**Entrances and exits** **Interruptions:** Inspector interrupts Mr B's capitalist speech. **Dramatic irony**: audience knows more than the characters on stage do. **Proleptic irony**: events foreshadow what might happen later in the play, e.g. Mrs B = fool, unaware that Eric is father. **Pauses:** characters pause/ scene ends for dramatic effect, e.g. "The telephone rings sharply…" **Lighting:** "pink and intimate" "brighter and harder"

Week	Key Knowledge to learn
7 – Key Vocabulary	• **Altruistic** - Selfless concern for the well-being of others; unselfish.Towards the end of the play, Sheila displays an altruistic attitude • **Proletariat** - Working-Class people as a collective.Priestley highlights the struggles of the proletariat, represented by Eva Smith • **Bourgeoisie -** The upper or middle classes, the capitalist class who own most of society's wealth and means of production. • **Hierarchy** - An ordering of members of an organization or society according to wealth, status or power. • **Microcosm -** A community, place, or situation regarded as encapsulating the characteristics of something much larger. • **Oppression** -Prolonged cruel or unjust treatment or abuse of power or authority. • **Patriarchy** - A system of society or government in which men hold the power and women are largely excluded from it.
8 – Essay Vocabulary	• ***Criticise*** *- J. B. Priestley* ***criticises*** *the exploitative upper class in his play, through the use of the Birling family.* • ***Expose*** *- J. B Priestley uses the commanding presence of the Inspector to* ***expose*** *the upper classes.* • ***Furthermore*** *- Furthermore, it could also show the audience the lasting impact of the Inspector.* • ***Highlights*** *- Sheila returning the ring to Gerald* ***highlights*** *her increasing confidence.* • ***Implies*** *- The lighting becoming 'brighter and harder'* ***implies*** *an increase in intensity and focus.* • ***Significantly*** *-* ***Significantly,*** *Eric's role in her death is last to be revealed.*
9 – Social, Historical and Literary Allusions	**"the Titanic" -** The Titanic sailed from Southampton and sank in the early hours of 15th April 1912. Priestley clearly wants his audience to see his drama play out against a background of real historical events and he has also chosen a moment in time when Birling's comments appear particularly ironic. **"Nobody wants war"** - In reality, economic rivalry between the British Empire and the new German Empire was one of the many causes of WW1 **"Russia"** The irony here suggests that Russia will have progressed further than other European countries by the 1940s. **"Bernard Shaws and H. G. Wellses"** - Both writers were well-known and outspoken socialists

Week	Key Knowledge to learn
10 – WRITER'S MESSAGES	• Priestley criticises society's division upon class lines through his representation of the Inspector who spearheads a message of responsible, empathetic, socialist change, whereby the young will build a new world which leaves behind the exploitative, cruel, capitalist system which Priestley so clearly despises. • Priestley criticises the selfishness of the rich by pointing out how their lack of social responsibility is exploiting the poor. • Priestley's anger at the exploitation of the poor results in his criticism of the selfish, capitalist rich who do not appreciate the damage they are causing to the most vulnerable members of society. • The final point to emphasise is that it doesn't matter who the original 'Inspector' was – he's there as a vehicle to help convey the plot and to represent the writer's socialist ideas. It's about the ideas he represents.
11 - THEMES	**Social Responsibility** *Definition:* The idea that individuals must care for others in society. *Example:* The Inspector says, *"We are members of one body. We are responsible for each other,"* **Class Divide** *Definition:* The separation and inequality between social classes. *Example:* Mr. Birling dismisses Eva's request for a pay rise, showing how the upper class exploits the working class. **Generational Conflict** *Definition:* The differing attitudes between the older and younger generations. *Example:* Sheila and Eric accept responsibility, while Mr. and Mrs. Birling refuse to change their views **Power and Influence** *Definition:* How people use their status to control or affect others. *Example:* Mrs. Birling uses her position in the charity to deny Eva help, believing she's morally superior.
12 - MOTIFS	**"Calls" and Telephone Calls** These represent interruptions and revelations. **Alcohol** Drinking is linked to irresponsibility and moral weakness. **Impertinence and Rudeness** The Birlings often accuse the Inspector of being rude or improper, but this highlights their obsession with social status rather than truth or justice. **The Engagement Ring** This symbolizes the illusion of unity and love.
13 - GENRE	• **Morality Play -** Teaches the characters and audience a lesson • **Well- made play** A central misunderstanding clear to the audience but unknown to the characters. A pattern of increasingly intense action and • **Detective fiction -** A detective character works through leads and clues to find the answers o Typical settings include big country houses with wealthy characters • **Time Play -** The movement of time is the most important part of the play. The audience experience time alongside the

Week	Key Knowledge to learn
1 – Christian beliefs: Nature of God	Omnipotent – this means that God is all powerful. Nothing is impossible for God. The creation story shows the power of God as does the story of Noah's flood in the Old Testament where God flooded the earth for 40 days. Some Christians see the stories as literal truth and others see them as metaphors. Omnibenevolent means all loving, so God is the source of all goodness and love in the world. *"God so loved the world that He have His only son." John 3:16.* *The Parable of the Prodigal Son* also shows the love of God. A spoiled son was welcomed home by his Father even though he doesn't deserve it. Just means fair. God provides fair justice for all. Christians believe that God does not discriminate. *The 10 commandments* are rules given by God to Moses to ensure that people lived a good and fair life. The *Parable of the Sheep and Goats* teaches that all people will be judged on how they have lived their life. These beliefs influence Christians by: -encouraging them to look after the world as stewards because their all powerful God has created it. -Praying for the sick because they believe a loving and powerful God might provide a cure. -Treating others as they want to be treated with love following the example of God.
2 – Christian Beliefs: The Trinity	Christianity is monotheistic meaning that they only worship one God. God's nature is explained through the mystery of the Trinity and its three persons. The first person of the Trinity is God the Father who is the creator and sustainer of the Universe. The second person of the Trinity is God the Son. He is the loving nature of God. The son was ever present but became man in the form of Jesus through the incarnation. The third person is the Holy Spirit which is the presence of the God in the world. It gives them a source of strength in their lives. During Jesus' baptism a voice from Heaven said, *"You are my beloved Son"*. At the same time the Holy Spirit descended as a dove. All three persons of the Trinity were present at this time. During baptism Christians are baptised *"in the name of the Father and of the Son and of the Holy Spirit."*
3 - Christian beliefs: Creation	God created the universe in six days and rested on the seventh. God took great care over creating the universe and all life on earth. God created humans *"in his image"* to have dominion over the rest of his creatures. The first humans were Adam and Eve according to the *Book of Genesis.* God gave humans dominion over the earth. This means that they were in control of it. Christian's should act as God's stewards. This means that they must care for and protect the earth. Christians will care for the environment e.g. by giving to green charities or using low emission vehicles.Christians will reflect on the beauty and wonder of nature as a reflection of God's almighty power. Christians see humankind as a reflection of God so will care about every life and issues like human rights. Quote 1 Omnipotence: *'Great is our Lord and mighty in power.' (Psalm 147:5)* Quote 2 "*God created the world from nothing in seven days."* (Genesis) Quote 3 Benevolence: *'For God so loved the world that he gave his only Son, so that whoever believes in Him shall not die, but shall have eternal life.' (John 3:16)*

Week	Key Knowledge to learn
4 – Christian beliefs: Incarnation	God became man in the form of Jesus. This is celebrated at the festival of Christmas. Jesus was fully human AND fully God. *"He was begotten not made" Creed.* Jesus came to free humans from sin and death, this is called atonement. Jesus came to show people how to live according to God's laws. The incarnation shows that God loves humanity that he was prepared to become one of us and share our suffering. *"He came from heaven and by the Holy Spirit was made incarnate of the Virgin Mary." Creed.* The incarnation gives them hope that they can overcome temptation and sin and achieve salvation. The incarnation means they will obey God's law/believe in Jesus/be active in the Church community, to gain eternal life opened up by Jesus' incarnation. Quote 1 *"Jesus is inseparably true God and true man."* (Catechism of the Roman Catholic Church). Quote 2 *"The Word became flesh and lived amongst us." (John 1:14).* Quote 3 *'If anyone acknowledges that Jesus is Son of God, God lives in him and he in God." (1 John 4:15)*
5 – Jesus as Son of God	**Miracles** A miracle is an extraordinary event that is not explainable by scientific law and is therefore attributed to God. Christians believe that Jesus (God incarnate) performed many miracles in his lifetime. Examples of Jesus' miracles recorded in the Bible include: 1. The Calming of the Storm 2. The healing of the Paralysed Man 3. The raising of Lazarus For Christians, miracles are a sign that God exists because the miraculous event does not seem to be explainable by scientific law. For Christians, miracles are a sign of what God is like e.g. all-powerful, caring, all loving and all-knowing. They might give Christians reassurance that God will be there to help them when they need it. It teaches Christians how they should act in difficult situations e.g. to help others that are ill. **Parables** Jesus' teachings and parables can be found in the New Testament of the Bible in the gospels of Matthew, Mark, Luke and John. A parable is a simple story used to tell a moral, spiritual or religious lesson. Examples of Jesus parables are: 1. The Good Samaritan 2. The Rich Fool 3. The Sheep and the Goats.
6 - Christian Beliefs: Crucifixion	Jesus died on a Friday. Christians call this day Good Friday. Crucifixion was a painful death. He was condemned to death by the Roman Governor Pontius Pilate. One of Jesus own disciples called Judas betrayed him. Jesus died asking God the Father to forgive his killers. Christians believe that Jesus died to atone for the sins of humanity. Atone means to put right. It was a painful death used for political prisoners as well as criminals. Jesus was crucified beside two common criminals. Christians will be forgiving of others as Jesus forgave his persecutors/killers. The crucifixion show's Jesus unconditional love for humankind as he was willing to suffer to save us from sin. It encourages Christians to risk suffering to stand up for what they believe is right. Quote 1 *"Truly I tell you today you will be with me in Paradise." Jesus to criminal crucified beside him. (Luke 23:42).* Quote 2 *"Father forgive them, for they know not what they do." Jesus on the cross, speaking about his killers (Luke 23:34)*

Week	Key Knowledge to learn
7 – Christian beliefs: Resurrection	Resurrection means rising from the dead. Jesus rose from the dead three days after death on the cross. Christians call this day Easter Sunday and it is one of the most important days of the Christian calendar. Jesus was seen alive by many hundreds of witnesses according to the Bible. The first to see the risen Jesus were the women who came to visit his tomb according to the Bible. Mary Magdalene was the first. (Mark 16). Christians believe that Jesus then appeared to his disciples who he told must spread the word of God as he had commanded them too. *"Go into the world and spread the Good News." (Mark 16).* One disciple called Thomas did not believe in the resurrection until he had seen him with his own eyes. Two more disciples met the risen Jesus on the road to Emmaus. The Resurrection proves to them that Jesus was God's son, so gives authority to his teaching and example. Quote 1 *"See my hands and my feet, that it is I myself. Touch me, and see. For a spirit does not have flesh and bones as you see that I have." (Luke 24:39)*
8 – Christian Beliefs: Ascension	Christians believe that after he rose from the dead Jesus later ascended (went up into) heaven. Some believe that this was a physical ascent and others claim that it is symbolic to show that Jesus' time on earth was over. It is significant because it marks the time when Jesus left earth in a physical way but the Holy Spirit was left behind to lead and guide Christians today. Ascension Day celebrates Jesus' ascension to heaven after he was resurrected on Easter Day. Quote 1: *"Then Jesus said to the apostles: 'Go forth to every part of the world, and proclaim the good news to the whole creation. Those who believe it and receive baptism will find salvation" Mark 16.* Quote 2:*"So after talking with them the Lord Jesus was taken up into heaven, and he took his seat at the right hand of God." Mark 16*
9 - Christian beliefs: Original Sin	A sin is an action that goes against the teachings and will of God. Christians believe that failure to believe in God is the biggest sin. Christians believe that breaking God's law or Jesus teachings are sins.Christians believe that all people are born and remain sinners. Christians believe that sin separates humans from God. Christians believe that the story of Adam and Eve tells them about Original Sin. Original Sin is a Christian belief of that states that sin has existed since the fall of the first man. In the book of Genesis, Adam and Even are said to have disobeyed God by eating from the Tree of Knowledge of Good and Evil. (Genesis 3) This sin was the original sin which broke the relationship between God and humans. God sent Adam and Eve from the Garden of Eden after their first sin and said that they would now die and return to dust.

Week	Key Knowledge to learn
10 – Atonement	Jesus sacrificed himself to atone for our sins. Jesus sacrificed himself by dying on the cross as a human. Christians believe that Jesus paid the price for human sin and allowed the relationship between God and humanity to be healed. Some Protestant Christians believe that humans atone for their sins through proclaiming a belief in Jesus as God and Saviour. Roman Catholic Christians believe that atonement must come through active participation in the Sacraments. Roman Catholics believe that there are seven sacraments. The Church of England believes that there are two sacraments; Baptism and Eucharist. Quote 1: *"My grace is all you need." Jesus (2 Corinthians 12)*
11 - Salvation	Salvation is being saved from the consequences of our sin, ie death. Salvation is given by God's grace because Jesus sacrificed himself for us by dying on the cross. Salvation can be achieved through following God's law, relying on God's grace, or living according to the Holy Spirit within us. Christians will pray for salvation and eternal life and show gratitude through worship / following God's law. Christians know that we all have the spirit of God in us so have the ability to live as He wants and go to heaven. Source 1: *Parable of the Prodigal Son.* Source 2 "*For if you forgive other people when they sin against you, your heavenly Father will also forgive you." (Matthew 6:14)* Source 3 *"For all have sinned and fall short of the glory of God." (Romans 3:23)* Source 4 *"This is my blood of the covenant, which is poured out for many for the forgiveness of sins." (Matthew 26:28)*
12 - Judgement	Everyone will be judged after death / resurrection. Judgement Day decides if you go to heaven or hell. Judgement is based on how you lived your life and followed Jesus' teachings/God's laws. Christians believe that one of the natures of God is that he shows mercy and will therefore forgive. Christians will try to follow Jesus' teachings and God's laws so that they go to heaven on Judgment Day. They believe that Jesus death atoned for their sins. *"Love God and Love your Neighbour" (Matthew 22)* Christians will worship God to make sure he knows they love him and respect him and so will go to heaven. Only those that worship him and accept Jesus' salvation are assured a place in Heaven. Christians know that God's grace and mercy will mean their sins can be forgiven and they can go to heaven. *The Parable of the Sheep and Goats* (Matthew 25) explain that Christians will be judged based on their actions on earth. *The Nicene Creed says that "Jesus will come again to judge the living and the dead."*
13 - Heaven & Hell	Those who have achieved salvation will go to heaven for eternity. Heaven is God's kingdom, reward for passing God's judgement – close to God. Heaven is a place of peace and love, with no conflict or pain or suffering. Heaven inspires Christians to follow God's law and repent of their sins. Heaven gives them hope of justice in the afterlife for suffering in this life. Some believe Heaven is a physical place, others a spiritual state of being with God. Hell is a place of suffering where unrepentant sinners go after judgement. Suffering is through being separated from God and physical torment e.g. burning. Hell is ruled by the devil and his angels. Purgatory is the a Catholic belief. A place where souls go to wait before they can get to Heaven. Hell Quote: *'A place of a fiery furnace, with weeping and gnashing of teeth" (Matthew 13:50).* Heaven Quote *'My Kingdom is not of this world….' (John 18:36). "There are many places in my Fathers house and I have prepared a place for you." (John 14)*

Properties of shapes

A polygon is a 'many sided shape' with at least three straight sides. A circle is not a polygon as it has no straight sides. Polygons include triangles (3 sides), quadrilaterals (4 sides), pentagons (5 sides), hexagons (6 sides), heptagons (7 sides), octagons (8 sides), nonagons (9 sides), decagons (10 sides), hendecagons (11 sides), dodecagons (12 sides) and so on.

In a regular polygon every side is equal and all interior angles are equal.

A triangle has 3 sides. An equilateral triangle is a regular triangle. In an equilateral triangle all the angles are 60° and all the sides are equal length. In an isosceles triangle the base angles are equal. An isosceles triangle has 2 sides of equal length. In a scalene triangle no angles and no sides are equal in length.

A quadrilateral is a four sided shape. The main types of quadrilateral are square, rectangle, rhombus, parallelogram, kite and trapezium. A square is a regular quadrilateral. A square has four equal sides and four angles of 90°. A rectangle has two pairs of equal sides and four angles of 90°. A rhombus has four equal sides and the opposite angles are equal. A parallelogram has two pairs of equal sides and opposite angles are equal. A kite has two pairs of equal sides and one set of equal angles. There are no parallel sides. A trapezium has one set of parallel sides. In a regular trapezium there are two sets of equal angles.

Symbols

= means equal to
≠ means not equal to
≡ means identical to
≤ means less than or equal to
< means less than
≥ means more than or equal to
> means more than
$\sqrt{\square}$ means square root

Drawing facts

Diagrams and graphs should always be drawn with a pencil and ruler. NOT TO SCALE means the diagram has not been drawn accurately and so you can't make assumptions about lengths and angles. A protractor is used to measure angles. A compass is used to construct arcs and circles.

Measure	Use ruler or protractor to determine the dimensions or angle from a diagram.
Plot	Mark points on a graph (X's) accurately from the data and graph provided. Draw a line of best fit. Label axes and add a scale if these are not given in the question.
Show that	Prove the statement given in the question is right. May require a calculation.
Sketch	Produce a freehand drawing and label key features e.g. sketch a graph: Draw rough axis and axis labels and line of best fit.

Command word	Definition
Add/Label	Show information or name something on a graph, diagram or table.
Calculate	Work out an answer using numbers from the question. Show working out (e.g. equation and substitution) and units.
Comment on	Review data/information and say what you think it shows.
Compare	Look for the similarities <u>or</u> differences of two (or more) things. Use more, less, similar etc and –er words e.g. slower, longer
Complete	Add missing information to a table/diagram.
Describe	Describe a process, object or method. Ideas need to be linked in a logical order but do not need to explain.
Determine	Show how the answer can be reached mathematically.
Draw	Produce a diagram either using a ruler or using freehand. Use a pencil.
Estimate	Find an approximate number from a table or graph. May need to use a calculation or the line of best fit.
Justify	Give evidence to support an answer.
Give/State / Name/ Write	Recall a piece of information such as a keyword or equation.
Give a reason/ reasons	Say why something happens.
Identify	Select key information from a given question/ diagram/situation.

PYTHAGORAS' THEOREM

Pythagoras's Theorem	A relationship between the **3 sides** on a **right angled triangle**
Pythagoras' Theorem	$a^2 + b^2 = c^2$
Pythagoras's Theorem in 3D	$\sqrt{x^2 + y^2 + z^2}$

TRIGONOMETRIC RATIOS

Sin, Cos, Tan	Use with **right angled triangles.** Ratios between **2 lengths and an angle.**
Hypotenuse	The **longest** side on a right angled triangle. It is always **opposite the right angle.**
Opposite side	This side depends on the angle you are using (θ) It is the angle **opposite** θ
Adjacent side	This side depends on the angle you are using (θ) It is the angle **next to** θ

EXACT TRIG VALUES

	0°	30°	45°	60°	90°
sin	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1
cos	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0
tan	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	----

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.

FURTHER EQUATIONS VOCABULARY

Subject *of an equation*	A **single** unknown or variable that everything else is **equal** to.
Solution *of an equation*	A **value** we can put in place of a variable that makes the equation **true.**
Simultaneous	Occurring at the **same time.**
Elimination	To **remove** or **get rid** of something.

EXPRESSIONS, EQUATIONS, IDENTITIES AND FORMULA

Expression	A set of **terms** combined using the 2 operations +, -, x or ÷. There is **no "=" sign**. *e.g. 4x-3, 5a - 3xy + 17*	
Equation	Where two expressions are **equal** in value – there is always an **"=" sign**. *e.g. 4b = 18.*	
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. *e.g. b + b = 2b*	
Function	A special type of equation where each input has a **single output.**	
	Input – A variable you **choose**. Output – A variable that is **calculated.**	