



Queen Elizabeth's *School*

Year 9 Knowledge Organiser Home Learning Booklet

"You have the power to
change the world."

Laura Coryton



Learning Cycle 2 2023-2024

Name:

Tutor Group:

Respect

We are considerate and we help each other. Treating everyone equally and understanding our differences **makes our world stronger.**

Reflection

We progress by giving careful consideration to what we do. Thinking about our actions in a positive way guides us as we **move forward.**

Resilience

We overcome difficulties and work on things to get better at them. Embracing challenges **helps us to learn.**



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How do I use the Knowledge Organiser booklet for independent home learning?

As a minimum expectation, **every** school day you should be studying from your Knowledge Organiser (KO) booklet for home learning. The timetable on Page 4 in this KO booklet tells you which subjects you should be studying and on which days (it doesn't matter if you have that subject on that day or not, you should follow the timetable).

How does Knowledge Organiser Independent Learning work?

The KO for each subject has the **foundation knowledge** that is required for that topic, for that specific part of the year. Your aim is to make sure that by the end of the topic, you are able to retain all of the knowledge from each subject's KO.

You will be **quizzed** in your **lessons** on knowledge from the KO to support the retention of knowledge over time.

If you are unsure as to how to use the KO booklet, please speak to your Tutor for further guidance.

Method

For every subject there are 12 tasks to complete in the cycle.

You complete these in the booklet in the spaces provide and the extra note pages but if you choose to complete anything on additional paper or in your exercise book, then make sure you bring it in to show your Tutor.

Presentation

You should take **pride** in how you present your work:

Spend at least 15 minutes on **each of the subjects** on your home learning timetable for that day.

Make sure that your work shows that you are trying hard and taking a pride in what you are learning.

Reading and PE logs

You should be reading for 15 minutes per day (including your SPARX Reader) and logging what you are reading.

Any PE activities you take part in also need to be logged – it's important to keep your body as active as your brain!



Home Learning Timetable

You are expected to study the subjects shown on your timetable each day. Use at least a page of your home learning exercise book to evidence your work. When you have completed your home learning for each subject, **you must ask a parent or carer to sign the page to show that they have seen it.** It is also good if you talk to your parents/carers about what you are learning. Your class teachers will also check and sign it off as complete.

Monday	Tuesday	Wednesday	Thursday	Friday
English	Headteacher's Page	Science	A: Computer Science B: PSHE	Art
Maths	History	Geography	MFL	Drama
RE	Maths	Music	Tech	Maths

PE log - try to complete 3 activities per week

Week	PE Activities				Signatures confirming completion of all work	
	1st activity	2nd activity	3rd activity	Any extras?	Parent	Tutor
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						



Year 9 Knowledge Organiser (KO) Home Learning Booklet

Reading Log Use this reading log to record the books you read and how long you have spent reading. You can include whole class reading in the mornings, and you should read for a minimum of 15 minutes more each day.

Week	Mon	Tues	Weds	Thur	Fri	Sat	Sun	Book(s) Read (Title and Author)	Total Time Reading	Parent Comment/ Signature



Laura Coryton is a British campaigner, feminist activist and author. She is the founder of **Stop Taxing Periods**, a campaign to abolish the Tampon Tax in the United Kingdom and make menstrual products exempt from VAT, and runs the Relationships and Sex Education (RSE) social enterprise Sex Ed Matters. Coryton published her first book '*Speak Up!*', a campaign guide for rebel girls, in 2019.

She was born on 28 May 1993 in Devon and attended Queen Elizabeth's School in Crediton. She graduated from Goldsmiths, University of London in 2015 and worked for the Labour Party before completing her MSt in Women's Studies at the University of Oxford, for which she gained a distinction. She is also an ambassador for The Eve Appeal, a British charity that raises awareness of and funds research into gynaecological cancers, and founded the Homeless Period Project, a campaign to support homeless women's access to menstrual products. She was named one of The Observer's and Nesta's 2016 New Radicals. In December 2016, the BBC included her in their list of Five women who aren't on Wikipedia but should be.

Coryton started the **Stop Taxing Periods** campaign in May 2014 while a student at Goldsmiths. The campaign was centred around an online petition on campaign hosting website Change.org. By early 2016 the petition had gained more than 320,000 signatures and global recognition. **Stop Taxing Periods** also used protests, demonstrations and viral social media.

In 2015 the campaign gained the support of the then Prime Minister, David Cameron, who said "I wish we could get rid of this... [but] there's a problem with getting rid of VAT on certain individual issues because of the way this tax is regulated and set in Europe." Change.org's UK director Brie Rogers cited Laura as a successful example of *clicktivism* and the influence of online political activism on national politics.

In March 2016 Parliament accepted a Tampon Tax amendment proposed by Paula Sherriff MP; the then Chancellor George Osborne pledged in his budget to make menstrual products exempt from sales tax. The amendment was set to be implemented by April 2018. Coryton launched periodwatch.org to countdown to 2018, when the amendment was expected to be enacted into law, and to hold the government to account. Tampon tax was abolished on 1st January 2021.

Laura co-founded 'Sex Ed Matters', a Relationship and Sex Education (RSE) social enterprise, in 2019. The organisation, which she runs with her twin sister Julia, is designed to help schools deliver the political aspects of the new RSE curriculum, including period education, consent and LGBT rights, through the means of workshops and resources.



Improving Your Vocabulary

Choose words from the vocabulary list below.

For each give the meaning and write a sentence using the key word.

For example: the sea and sky became very dramatic as the storm approached.

- highlighted • eventually • inspection • termination • displacement • arbitrary
- reinforced • denote • offset • exploitation • detected • abandon • random •
- revision • virtually • uniform • predominantly • thereby • implicit • tension •
- ambiguous • vehicle • clarity • conformity • contemporary • automatically •
 - accumulation • appendix • widespread • infrastructure • deviation •
- fluctuations • restore • guidelines • commodity • minimises • practitioners •
- radical • plus • visual • chart • appreciation • prospect • dramatic • contradiction •
 - currency • inevitably • complement • accompany •
- paragraph • induced • schedule • intensity • crucial • via • exhibit • bias •
 - manipulation • theme • nuclear •

'10 a day' CHOICES TOWARDS BALANCING OUR MENTAL HEALTH.

It is important that we all take care of our health, including our mental health. **The Ten a Day Choices** approach can really help us to think about this and reminds us what we can do each day to help balance our mental health.

Spend some time thinking about your week. Write notes about the things that you did to help balance your mental health.

How did that work out?

What are you going to focus on doing in the week to come?





Week 1: Look, Cover, Write, Check.



Week 2:

Read through the KO and answer the following:
How did Laura ensure her voice was heard?

Week 3: Word up



Week 4:

Read through the KO and answer the following:
Why is Laura’s work so important?

Week 5: Map your mind





Week 6:
Read through the KO and answer the following:
Write out five sentences using at least 5 of the words from the vocabulary list

Week 7: Test your mind



Week 8:
Read through the KO and answer the following:
Write out five sentences using at least 5 different words from the vocabulary list

Week 9: Flash cards
Make sure you bring these into school to show your tutor and teacher



Week 11:
Read through the KO and answer the following:
Write out five sentences using at least 5 different words from the vocabulary list

Week 12:
Which of the '10 a day' choices do you manage to do?

Week 10:
Read through the KO and your flash cards







Act 1	Act 2	Act 3
<p>In Act 1, Macbeth meets the three witches who prophesise him becoming Thane of Cawdor and then King. Macbeth is keen to become king. He tells his wife who encourages him to kill the king so he can become king himself.</p> <p><i>Macbeth's inner thoughts about the possibility of him killing the king to become king.</i> MACBETH: ...why do I yield to that suggestion Whose horrid image doth unfix my hair And make my seated heart knock at my ribs, Against the use of nature? <i>(Act One Scene Three)</i></p> <p><i>Lady Macbeth fears she is too soft-hearted to encourage Macbeth to murder King Duncan.</i> LADY MACBETH: Come, you spirits That tend on mortal thoughts, unsex me here, And fill me from the crown to the toe topful Of direst cruelty! <i>(Act One Scene Five)</i></p> <p><i>Macbeth is reluctant to kill the king (commit regicide).</i> MACBETH: I have no spur To prick the sides of my intent, but only Vaulting ambition, which o'erleaps itself And falls on th' other. <i>(Act One Scene Seven)</i></p>	<p>In Act 2, Macbeth murders Duncan in secret and begins to suffer guilt and anxiety because he murdered a king, a servant chosen by God. Some of Macbeth's friends are suspicious of him.</p> <p><i>Macbeth hears disembodied voices when he is in King Duncan's sleeping chamber.</i> MACBETH: Methought I heard a voice cry, "Sleep no more! Macbeth does murder sleep." <i>(Act Two Scene Two)</i></p> <p><i>Macbeth returns from murdering King Duncan.</i> MACBETH: Will all great Neptune's ocean wash this blood/Clean from my hand? <i>(Act Two Scene Two)</i></p> <p><i>Macduff discovers King Duncan's body.</i> MACDUFF: O horror, horror, horror! Most sacrilegious murder hath broke ope The Lord's anointed temple, and stole thence The life o' th' building! <i>(Act Two Scene Three)</i></p>	<p>Macbeth hires murderers to murder Banquo and his son as the witches' prophecy said that Banquo's sons would be kings and Macbeth doesn't want that. Banquo is murdered but his son escapes. Banquo's ghost appears to Macbeth during a feast to celebrate his coronation. He becomes terrified and the guests are unsettled and leave.</p> <p><i>Macbeth discovers that being king is not as attractive as he imagined it would be.</i> MACBETH: Oh, full of scorpions is my mind, dear wife! <i>(Act Three Scene Two)</i></p> <p><i>Lady Macbeth accuses her husband of behaving inappropriately at the banquet.</i> LADY MACBETH: What, quite unmanned in folly? Oh, these flaws and starts, Impostors to true fear, would well become A woman's story at a winter's fire, Authorized by her grandam. <i>(Act Three Scene Four)</i></p>



Act 4	Act 5	Context of <i>Macbeth</i>
<p>Macbeth goes to visit the witches to find out what is going to happen next. He orders Macduff's children and wife to be murdered as Macduff has fled to England to raise an army against Macbeth. Macduff meets with Edward, King of England to explain how terrible life is in Scotland under Macbeth's tyrannical rule. The scene opens with the witches stood around a cauldron brewing a powerful spell. Their leader Hecate is with them. They predict that Macbeth will arrive and as he does they say these words about him.</p> <p><i>SECOND WITCH:</i> By the pricking of my thumbs, Something wicked this way comes. Open, locks, Whoever knocks! <i>Enter MACBETH (Act Four Scene One)</i></p> <p><i>Macduff complains to Malcolm about Macbeth's tyrannical rule.</i> <i>MACDUFF:</i> Each new morn New widows howl, new orphans cry, new sorrows Strike heaven on the face... <i>(Act Four Scene Three)</i></p>	<p>Lady Macbeth becomes very ill and takes her own life. Macduff leads an army from England into Scotland to fight and kill Macbeth. Macbeth faces Macduff in a final showdown but is confident that he bears a 'a charmed life, which must not yield /To one of woman born.' Macduff was born by caesarean though so this prophecy doesn't apply to him. Macduff kills Macbeth and Malcolm is crowned king of Scotland.</p> <p><i>Lady Macbeth attempts to remove imaginary blood from her hands.</i> <i>LADY MACBETH:</i> Out, damned spot! <i>(Act Five Scene One)</i></p> <p><i>Macbeth is becoming disillusioned with his life.</i> <i>MACBETH:</i> My way of life is fallen into the sere, the yellow leaf (My life is withering like a yellow leaf) <i>(Act Five Scene Three)</i></p> <p><i>In the final scene of the play, the new Scottish king Malcolm celebrates the defeat of Macbeth and the death of his wife.</i> <i>MALCOLM:</i> this dead butcher and his fiendlike queen <i>(Act Five Scene Nine)</i></p>	<ul style="list-style-type: none"> The play was written in 1606. In 1605, the gunpowder plot was foiled. The gunpowder plot is the name given to the Catholic conspiracy led by Robert Catesby to blow up the Houses of Parliament. James I developed an obsession with witchcraft from an early age, blaming witches for the death of his mother, Mary Queen of Scots. Even in Shakespeare's day, people were extremely superstitious. During the Jacobean era people blamed unexplainable events such as the Bubonic Plague, unexplained deaths or unpleasant illnesses, on the work of witches and the devil. The Divine Right of Kings is the doctrine that kings derive their authority from God not their subjects, from which it follows that rebellion against the King is the worst of political crimes. Shakespeare's theatre company became 'The King's Men' when James I became king in 1603. Shakespeare and his players were paid and patronised by the king. Therefore, it was important that he wrote plays that James I approved of. The great chain of being is a hierarchical structure of all matter and life, thought by medieval Christianity to have been decreed by God. The chain begins with God and descends through angels, monarchs, humans, animals and plants to minerals.



<p>Week 1: Read through the KO and answer the following:</p> <p><i>“Why do I yield to that suggestion Whose horrid image doth unfix my hair And make my seated heart knock at my ribs, Against the use of nature? (Act One Scene Three)</i></p> <p>Is Macbeth afraid of killing the king (regicide)? Why?</p> <p>How does his reference to his hair and heart suggest that he is terrified when he begins to imagine murdering the king?</p>	<p>Week 2: Read through the KO and answer the following:</p> <p>LADY MACBETH: Come, you spirits</p> <p><i>That tend on mortal thoughts, unsex me here, And fill me from the crown to the toe topful Of direst cruelty! (Act One Scene Five)</i></p> <p>How do the use of the imperative verbs ‘come’ and ‘unsex’ create the impression that Lady Macbeth is a strong and controlling character?</p> <p>Is this typical of the way women were expected to act during the time that Shakespeare lived?</p>	<p>Week 3: Read through the KO and answer the following:</p> <p>MACBETH: Methought I heard a voice cry, “Sleep no more! Macbeth does murder sleep.” (Act Two Scene Two)</p> <p>How has Macbeth ‘murdered’ sleep?</p> <p>How has he ‘murdered’ the sleep of the people of Scotland?</p>
<p>Week 4: Read through the KO and answer the following:</p> <p><i>Macbeth returns from murdering King Duncan. MACBETH: Will all great Neptune’s ocean wash this blood/ Clean from my hand? (Act Two Scene Two)</i></p> <p>What might the blood on Macbeth’s hands represent?</p> <p>Who was Neptune?</p> <p>If Neptune will not wash the blood off of Macbeth’s hands, what does that suggest about the Gods’ feeling about him killing the king?</p>	<p>Week 5: Read through the KO and answer the following:</p> <p><i>Macduff discovers King Duncan’s body. MACDUFF: O horror, horror, horror! Most sacrilegious murder hath broke ope The Lord’s anointed temple, and stole thence The life o’ th’ building! (Act Two Scene Three)</i></p> <p>What does the repetition of the noun ‘horror’ suggest about Macduff’s state of mind?</p> <p>What is Duncan’s body compared to here?</p> <p>Why does this emphasise his holiness?</p> <p>How does Macduff’s reaction suggest he believes in the Divine Right of Kings?</p>	

[illegible]



Handwriting practice lines consisting of 20 horizontal lines.



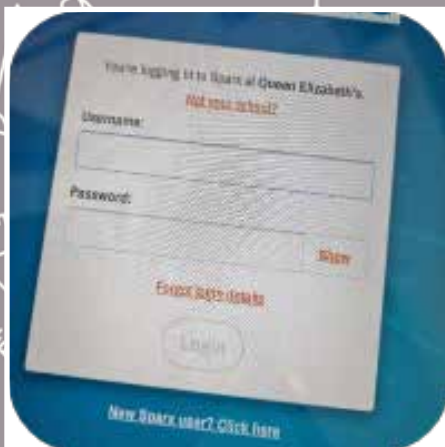


Your teacher will use Sparx Maths to...

- Set you questions on the topics you are learning at school
- See how well you understand the maths topics given to you
- Decide what to teach you next to help you to make progress

What you will need to do:

- Log in to Sparx Maths from a computer or tablet at home
- Answer the questions your teacher has set you
- If you are stuck, use the videos to help you



How to log in to Sparx - new students

- Go to www.sparx.co.uk, click Log in and choose Student login.
- Start typing the name of your school in the **Select Your School** box. Click Continue.
- Click the **New Sparx User?** button at the bottom of the box.
- Fill in your **Name and Date of Birth** and click **Submit**.
- You will be asked to create a password.
- Click **Finish**.

Now you can log in with your Username and Password.

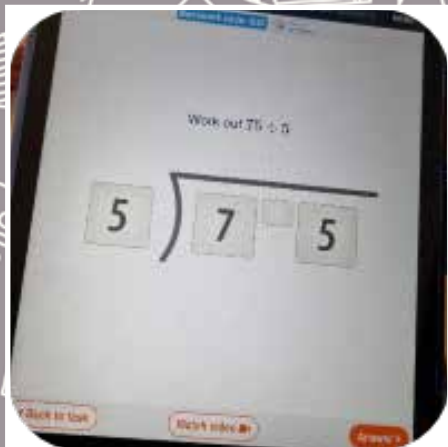


Answering your homework questions.

- Once logged in, you will see your Compulsory Homework.
- Click on the orange arrow and your homework tasks will appear.
- You need to complete these before the due date your teacher has set.

Answering your homework questions: Bookwork Checks

- Just like your teacher, Sparx will check whether you are writing down your answers.
- In a Bookwork Check you will have to input the answer that you wrote down for a particular Bookwork Code.
- If you fail the Bookwork Check, you will have to do the question again.



Example of a Sparx question

Can you see:

- The Bookwork Code?
- Where the help video is?
- Where to enter your answer to the question?

What does good Bookwork look like?

- Clear titles and workings alongside the correct Bookwork code in the margin.
- Remember, you must write down the Bookwork code and the answer you gave.
- Please do not cross out wrong answers!

Answering your homework questions.

- You will immediately see if you have got a question right as Sparx will mark it for you.
- If you get a question wrong you can try a similar question again, and use the videos to help you.
- Try to work independently and not rely on help as this could mean your homework gets harder!

What is XP?

- XP (Sparx Experience Points) are earned for completing questions in your homework.
- You also get twice as much XP for completing XP Boost and Target homework tasks.

Finally, remember that...

It is important that your answers are yours and yours alone. Sparx creates homework that is just right for you.

If someone else:

- Does your work for you
 - Tells you the answers
 - Helps you too much
- you will probably get homework that is too hard for you!



Lesson Sequence

1. Ecosystems
2. Core Practical - Quadrats and Transects
3. Abiotic Factors and Communities
4. Biotic Factors and Communities
5. Parasitism and Mutualism
6. Food Security


1. Ecosystems

Ecosystem	An area in which the interactions between all the living organisms and the all the physical factors forms a stable relationship needing no external input.
Habitat	A particular area within an ecosystem.
Community	All the organisms living in an ecosystem.
Interdependence	The way in which the organisms in an area depend on each other, for food, shelter, protection and so on.
Population	The members of one particular species within an ecosystem.
Abundance	The number of members of one species in an ecosystem.
Quadrat	A metal square used to help find the number of small organisms living in an area.
Random Sampling	Estimating the population of organisms in an area by randomly dropping a quadrat several times, finding the average number of organisms present and scaling up your answer.
Population Size Calculation	Population size = number of organisms in quadrat x (total area/quadrat area).

2. Core Practical - Quadrats and Transects (CP6)

Belt Transect	A way to study how the population of a species changes as you move through an area by counting the organisms in a quadrat at regular intervals.
CP6 - Key Question	How does the number of daises vary as you move away from the base of tree?
CP6 - Collecting Data	Place a quadrat so it is touching the base of a tree and record the number of daisies. Repeat, moving the quadrat 1m away each time until it is 10m away. Repeat with three different trees.
CP6 - Calculate Averages	Calculate the average number of daisies 1m away, 2m away, and so on.
CP6 - Results	The way in which the organisms in an area depend on each other, for food, shelter, protection and so on.

3. Abiotic Factors and Communities

Abiotic Factor	A non-living factor that influences what can live where.	
Important Abiotic Factors	Temperature, light intensity, rainfall, type of landscape, soil pH, soil nutrients, pollution.	
Pollutants	Substances produced by human activities that can poison some or all of the organisms living in an area.	

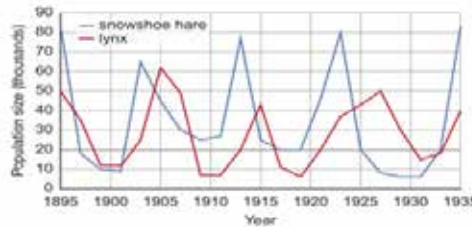


3. Abiotic Factors and Communities Continued

Adaptation to Abiotic Factors	Features of plants and animals that are suited to the abiotic factors where they live.
Changes to Abiotic Factors	If an abiotic factor changes - such as temperature increasing due to global warming - organisms may no longer be well adapted to where they live and may die out.

4. Biotic Factors and Communities

Biotic Factor	A living factor that influences what can live where.
Important Biotic Factors	The presence of food organisms, predators, competing organisms and disease.
Competition	Often two or more different organisms may compete for the same resource such as food, water or light.
Effects of Reducing Competition	Reduced competition when a species becomes extinct can lead to unpredictable effects on other species with some benefiting from reduced predation.



Predator-prey Cycles	As the number of prey animals increases, the number of predators increase. The predators over-predate the prey leading to a fall in prey numbers which causes the number of predators to go down as there is less food. The number of prey increases again because fewer are being eaten.
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5. Parasitism and Mutualism

Parasitism	A feeding relationship in which a parasite feeds off its host, causing harm to the host but (normally) not killing it.
Examples of Parasites	Fleas and leeches sucking blood, tapeworms living in animals' intestines, mistletoe burrowing its roots into tree branches.
Mutualism	Organisms that live together in a relationship where both benefit.
Examples of Mutualism	Cleaner fish that swim into sharks mouths to feed without being eaten. Algae that live inside coral polyps gaining shelter and providing food.



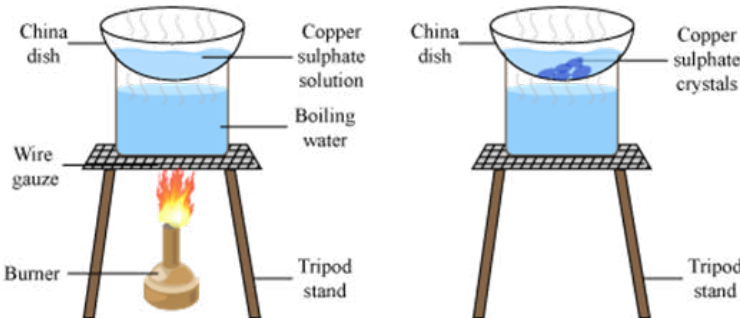
6. Food Security

Food Security	Having access to enough safe and healthy food at all times.
Yield	Amount of crop that is harvested.
Sustainability	Continue to produce food at the level without a negative effect on the future.
Climate Change	Caused by increase in carbon emissions from many human activities.
Biofuels	Plants grown for fuel to reduce reliance on fossil fuels.



C1 and 2: States of Matter and Separating Substances

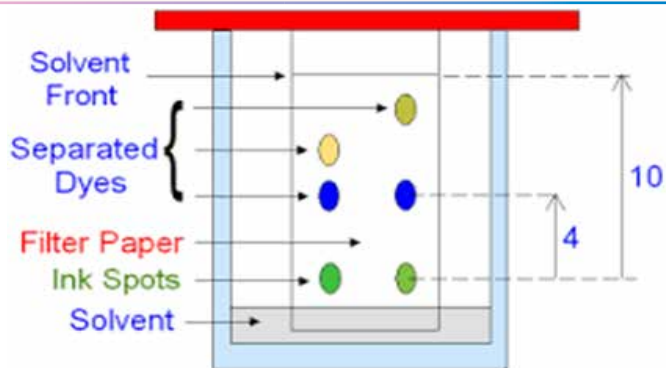
Chemistry Year 9 Learning Cycle 2

1. States of Matter		2. Mixtures			
Particle The tiny pieces that all matter is made from.		Element	A substance made from only one type of atom.		
Atom	The smallest independent particle. Everything is made of atoms.	Compound	A substance made from two or more different elements bonded together.		
Molecule	A particle made from two or more atoms bonded together.	Mixture	A substance made of two or more substances (elements or compounds) mixed but not bonded together.		
State of Matter	Whether a substance is solid, liquid or gas.	Melting Point of Mixtures	Mixtures do not melt at a fixed temperature but melt gradually over a range of temperatures.		
Particle Model	A theory that uses the idea of particles to explain the differences between solids, liquids and gases.	3. Filtration and Crystallisation			
Solid	Particle arrangement: Regular pattern, touching each other. Particle movement: Vibrating around a fixed point.	Dissolve	When a substance mixes with a liquid by breaking down into individual particles (atoms or molecules).	Solvent	A liquid that has dissolved a substance, for example water.
Liquid	Particle arrangement: Random, touching each other. Particle movement: Moving around.	Soluble	When a substance can be dissolved by a liquid.	Solute	A solid that has been dissolved, for example salt.
Gas	Particle arrangement: Random Particle movement: Moving quickly.	Insoluble	When a substance can't be dissolved by a liquid.	Crystallisation	A method of collecting the dissolved solid from a solution by heating it so that the solvent evaporates away.
State Changes	Solid to liquid = melting Liquid to solid = freezing Liquid to gas = evaporating or boiling Gas to liquid = condensation Solid to gas = sublimation Gas to solid = deposition	Filtration	A method of separating a mixture of a liquid and an insoluble solid by passing it through a filter paper.		
		Solution	A mixture of a solute dissolved in a solvent.		

4. Paper Chromatography

Paper Chromatography

A method of separating out mixtures of liquids to show what is in them, by letting them travel up a piece of chromatography paper.



Stationary Phase

The substance the solvent moves through - usually paper (Note: technically it is a thin layer of water from air that is bound to the paper molecules).

Mobile Phase

The solvent.

R_f (retardation factor)

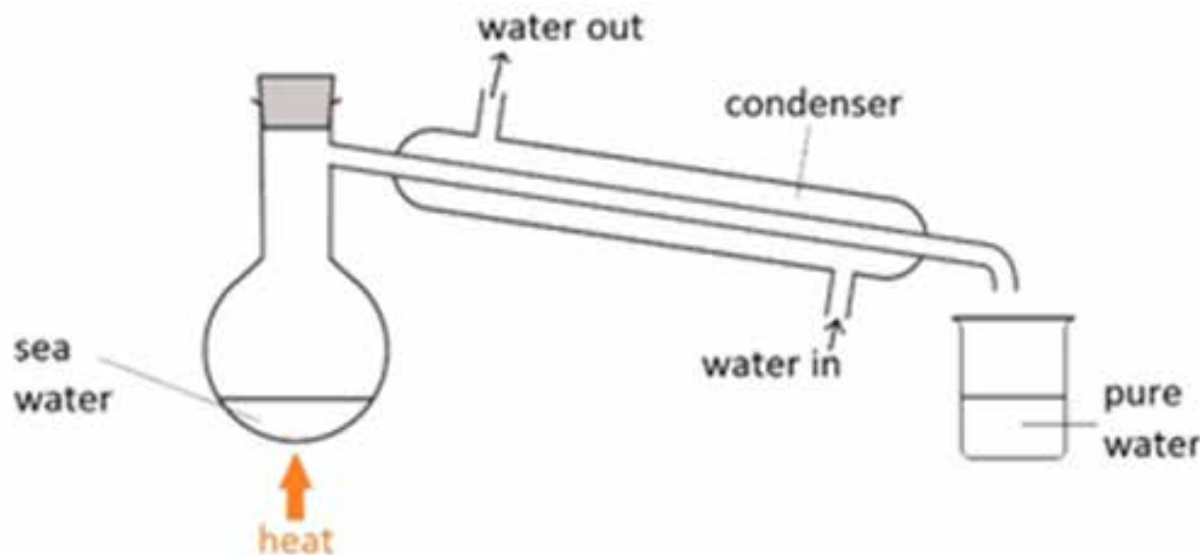
$R_f = \text{spot distance} / \text{solvent distance}$.

Uses of R_f

R_f enables you to identify a substance because for a given solvent and stationary phases, it is unique to each substance.

Uses of Chromatography

- To tell between pure and impure substances.
- To identify substances by comparison with known ones.
- To identify substances by calculating R_f .



5. Distillation

Distillation

A method used to collect pure liquid from a solution, such as getting pure water from seawater.

Condenser

A glass tube surrounded by a glass jacket containing cold tap water. Used to condense gases back to liquids.

Fractional Distillation

A type of distillation used to separate mixtures of two or more liquids.

How Fractional Distillation Works

The liquid with the lowest boiling point boils first and can be collected, then the next boils and so on.

6. Core Practical - Investigating Inks (CP7)

CP7 - Aim

To separate inks using distillation and chromatography.

7. Drinking Water

Potable Water

Water that is safe to drink.

Desalination

Producing pure water from seawater.

Purifying Seawater

The seawater is distilled: heating the water to produce water vapour and condensing it back to liquid. Uses lots of energy.



1. Structure of Atoms		2. Detailed Structure of Atoms	3. Isotopes
Particle The tiny pieces that all matter is made from.	Proton Mass = 1 Charge = +1 Location = nucleus	Atomic Number The bottom number on the periodic table, gives the number of protons and electrons.	Isotopes Atoms with the same number of protons but different number of neutrons.
Atom The smallest independent particle. Everything is made of atoms.	Neutron Mass = 1 Charge = 0 Location = nucleus	Atomic Mass The top number on the periodic table, gives the total protons and neutrons together.	Describing Isotopes Mass after the name (e.g. boron-10) or superscript mass before the symbol (¹⁰ B).
Subatomic Particles Smaller particles that atoms are made from.	Electron Mass = 1/1835 (negligible) Charge = -1 Location = shells orbiting nucleus	Number of Neutrons Atomic mass minus atomic number.	Relative Atomic Mass, A_r The weighted average of the masses of all of the isotopes of an element.
Dalton's Model of Atoms Tiny hard spheres - Can't be broken down - Can't be created or destroyed - Atoms of an element are identical - Different elements have different atoms	Nucleus Central part of an atom, 100,000 times smaller than the overall atom.	4. Mendeleev's Periodic Table	
5. The Modern Periodic Table		Dmitri Mendeleev Russian chemist, developed the periodic table.	Mendeleev's Periodic Table Ordered by increasing A _r , some elements switched according to their properties.
Noble Gases Gases that do not react: He, Ne, Ar, Kr.		Chemical Properties Includes reaction with acid and formula of oxide.	Physical Properties Includes melting point and density.
6. Electron Configuration		Second Shell Holds up to eight electrons.	Third Shell Holds up to eight electrons.
Shells Electrons orbit atoms in shells.	First Shells Holds up to two electrons.	Groups Columns in the periodic table, tell you the number of electrons in the outer shell.	Periods Rows in the periodic table, tell you the number of electron shells.



C3 and 4: Atoms and the Periodic Table

Chemistry Year 9 Learning Cycle 2

The Periodic Table of the Elements

Group																																													
I	II											III	IV	V	VI	VII	0																												
							1 H Hydrogen 1											4 He Helium 2																											
7 Li Lithium 3	9 Be Beryllium 4											11 B Boron 5	12 C Carbon 6	14 N Nitrogen 7	16 O Oxygen 8	19 F Fluorine 9	20 Ne Neon 10																												
23 Na Sodium 11	24 Mg Magnesium 12											27 Al Aluminium 13	28 Si Silicon 14	31 P Phosphorus 15	32 S Sulphur 16	35.5 Cl Chlorine 17	40 Ar Argon 18																												
39 K Potassium 19	40 Ca Calcium 20	45 Sc Scandium 21	48 Ti Titanium 22	51 V Vanadium 23	52 Cr Chromium 24	55 Mn Manganese 25	56 Fe Iron 26	59 Co Cobalt 27	59 Ni Nickel 28	64 Cu Copper 29	65 Zn Zinc 30	70 Ga Gallium 31	73 Ge Germanium 32	75 As Arsenic 33	79 Se Selenium 34	80 Br Bromine 35	84 Kr Krypton 36																												
85 Rb Rubidium 37	88 Sr Strontium 38	89 Y Yttrium 39	91 Zr Zirconium 40	93 Nb Niobium 41	96 Mo Molybdenum 42	96 Tc Technetium 43	101 Ru Ruthenium 44	103 Rh Rhodium 45	106 Pd Palladium 46	108 Ag Silver 47	112 Cd Cadmium 48	115 In Indium 49	119 Sn Tin 50	122 Sb Antimony 51	126 Te Tellurium 52	127 I Iodine 53	131 Xe Xenon 54																												
133 Cs Caesium 55	137 Ba Barium 56	139 La Lanthanum 57	178 Hf Hafnium 72	181 Ta Tantalum 73	184 W Tungsten 74	186 Re Rhenium 75	190 Os Osmium 76	192 Ir Iridium 77	195 Pt Platinum 78	197 Au Gold 79	201 Hg Mercury 80	204 Tl Thallium 81	207 Pb Lead 82	209 Bi Bismuth 83	210 Po Polonium 84	210 At Astatine 85	222 Rn Radon 86																												
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			<table><tr><td>140 Ce Cerium 58</td><td>141 Pr Praseodymium 59</td><td>144 Nd Neodymium 60</td><td>Pm Promethium 61</td><td>150 Sm Samarium 62</td><td>152 Eu Europium 63</td><td>157 Gd Gadolinium 64</td><td>159 Tb Terbium 65</td><td>162 Dy Dysprosium 66</td><td>165 Ho Holmium 67</td><td>167 Er Erbium 68</td><td>169 Tm Thulium 69</td><td>173 Yb Ytterbium 70</td><td>175 Lu Lutetium 71</td></tr><tr><td>232 Th Thorium 90</td><td>Pa Protactinium 91</td><td>238 U Uranium 92</td><td>Np Neptunium 93</td><td>Pu Plutonium 94</td><td>Am Americium 95</td><td>Cm Curium 96</td><td>Bk Berkelium 97</td><td>Cf Californium 98</td><td>Es Einsteinium 99</td><td>Fm Fermium 100</td><td>Md Mendeleyium 101</td><td>No Nobelium 102</td><td>Lr Lawrencium 103</td></tr></table>															140 Ce Cerium 58	141 Pr Praseodymium 59	144 Nd Neodymium 60	Pm Promethium 61	150 Sm Samarium 62	152 Eu Europium 63	157 Gd Gadolinium 64	159 Tb Terbium 65	162 Dy Dysprosium 66	165 Ho Holmium 67	167 Er Erbium 68	169 Tm Thulium 69	173 Yb Ytterbium 70	175 Lu Lutetium 71	232 Th Thorium 90	Pa Protactinium 91	238 U Uranium 92	Np Neptunium 93	Pu Plutonium 94	Am Americium 95	Cm Curium 96	Bk Berkelium 97	Cf Californium 98	Es Einsteinium 99	Fm Fermium 100	Md Mendeleyium 101	No Nobelium 102	Lr Lawrencium 103
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<div>Key<div><div>a</div><div>X</div><div>b</div></div><div>a = relative atomic mass X = atomic symbol a = proton (atomic) number</div></div>																																													

The volume of one mole of any gas is 24dm³ at room temperature and pressure (rtp)



P1: Motion

Physics Year 9 Learning Cycle 2

1. Vectors and Scalars

Magnitude

A scientific word for size.

Scalar Quantity

A quantity with magnitude (but no direction).

Vector Quantity

A quantity with magnitude and direction.

Vector Arrows

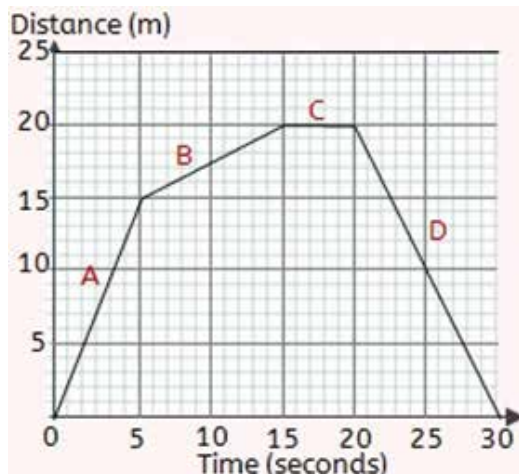
Vectors can be represented by arrows, with the length of the arrow representing the magnitude.

Displacement

The distance and direction travelled in a straight line.

Velocity

Your speed in a certain direction.



2. Speed

Units of Speed

Metres per second, m/s.

Speed - Word Equation

Speed = distance / time

Speed = m/s

Distance = m

Time = s

Speed - Symbol Equation

$v = x/t$

v = speed

x = distance

t = time

Instantaneous Speed

Speed at a particular point in time.

Average Speed

The average speed across the whole of a journey, calculate from $v = x/t$

3. Distance-Time Graphs

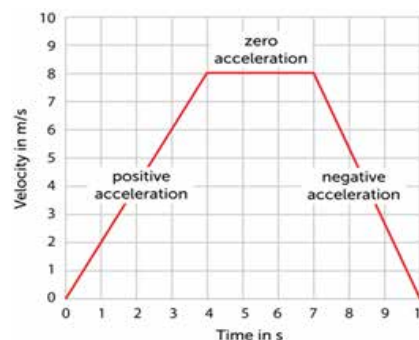
Distance-Time Graph

A graph describing how your distance from the start changes over the course of a journey. Time is on the x-axis and distance on the y-axis

Calculating Speed from a Distance-Time Graph

Speed = change in distance/change in time

Speed = change in y/change in x



4. Acceleration

Acceleration

Changing velocity.

Deceleration

Slowing down, negative acceleration.

You accelerate when...

- You change speed
- You change direction

Acceleration - Symbol Equation

$a = (v - u)/t$

Units of Acceleration

Metres per second squared, m/s².

Positive and Negative Acceleration

Positive acceleration = speeding up
Negative acceleration = slowing down

Acceleration - Word Equation

Acceleration = change in speed/time

Acceleration = m/s²

Change in speed = m/s

Time = s

Linking Acceleration and Velocity Travelled

Use the equation:

$x = (v^2 - u^2)/2a$

x = Velocity travelled a = acceleration

v = final speed u = initial speed

5. Velocity-time Graphs

Velocity-Time Graph

A graph showing how your velocity (speed) changes over time. Time is on the x-axis, velocity is on the y-axis.

Calculating Acceleration on a Velocity-Time Graph




Acceleration = change in velocity/change in time

Acceleration = change in y/change in x



Calculating Distance Travelled from a Velocity-Time Graph

Distance = Area Under the Graph.
Divide the graph into rectangles and triangles, find the area of each and add them together.



<p>Week 1: Look, Cover, Write, Check.</p> 	<p>Week 2: Read through the KO and answer the following:</p> <p>Physics: What is the law of conservation of energy?</p> <p>Name 3 energy stores.</p> <p>Chemistry: Who was Mendeleev?</p> <p>What are electron shells?</p> <p>Biology: What is parasitism?</p> <p>What is mutualism?</p>	<p>Week 3: Word up</p> 
<p>Week 4: Read through the KO and answer the following:</p> <p>Physics: Name 3 energy transfers</p> <p>What is wasted energy?</p> <p>Chemistry: What is an isotope?</p> <p>What is the atomic mass?</p> <p>Biology: Describe how fish farming affects ecosystems.</p> <p>What is eutrophication?</p>	<p>Week 5: Map your mind</p> 	



<p>Week 6: Read through the KO and answer the following:</p> <p>Physics: What does a Sankey diagram show?</p> <p>Name 3 non-renewable energy resources.</p> <p>Chemistry: What are the group 1 elements called?</p> <p>What are the group 7 elements called?</p> <p>Biology: List the names of the processes in the water cycle.</p> <p>Describe how we can conserve animal species.</p>	<p>Week 7: Test your mind</p> 	<p>Week 8: Read through the KO and answer the following:</p> <p>Physics: What is the equation for efficiency?</p> <p>What is a vector quantity?</p> <p>Chemistry: What does inert mean?</p> <p>What happens to the reactivity of group 7 elements as you go down the group?</p> <p>Biology: Name the processes in the carbon cycle which emit carbon dioxide into the atmosphere</p> <p>Name the processes in the carbon cycle which taken in carbon dioxide from the atmosphere.</p>
<p>Week 9: Flash cards</p> <p>Make sure you bring these into school to show your tutor and teacher</p> 	<p>Week 11:</p> <p>Key points from your assessments</p> <p>1.</p> <p>2.</p> <p>3.</p>	<p>Week 12:</p> <p>Following the assessment:</p> <p>www</p> <p>ebi</p>
<p>Week 10:</p> <p>Read through the KO and your flash cards ready for the assessment next week</p>		







War is declared

In the inter-war period Britain appeased Germany, allowing them to occupy the **Sudetenland**, to prevent another war. However, when Germany invaded Poland, Britain and France declared war on **3rd September 1939**.

Two main sides emerged to fight the war - the Allies and the Axis Powers.

Allies	Axis Powers
Britain (and its Empire), France, USA (from December 1941), Russia (USSR, from June 1941), Italy (from 1943), China, Australia, Brazil, Canada, Greece, Netherlands, New Zealand, Norway, Poland, South Africa and Yugoslavia	Germany, Italy (1939-43), Japan, Hungary, Romania and Bulgaria

The Allied Forces

As Britain had a large Empire, they engaged all their resources and people in the war effort. For example 2.5 million soldiers from India fought in the war.

Britain also relied on other allies during the war:

- 22nd June 1941 – Hitler invaded Russia during **Operation Barbarossa**. The attack was not successful, and Germany's troops stayed fighting until 1945.
- 7th December 1941 – Japan attacked the American naval base at **Pearl Harbour**. This led America to join the Allies. An estimated 16 million American troops were sent to Europe.

War time technology

The war led to lots of new technologies being developed on both sides of the war. Some of these included:

- V-2 rockets – took 5 minutes to get from Holland to London
- The STG44 – an assault rifle which allowed soldiers to carry more ammunition
- The Panzerfaust – a single-use, anti-tank weapon which could be carried by a soldier
- B-29 Superfortress - a bomber which was later used to drop the first atomic bombs

A major technological advancement was Alan Turing's Enigma machine. Turing was stationed at Bletchley Park, HQ of Britain's top codebreakers. He was a key player in building a machine which broke the German cipher-machine, decrypting their messages. This meant the Allies could avoid German U-boats which were attacking British supply lines.

Key Dates

1939 – Britain and France declared war on Germany

May 1940 – Germany takes control of Northern France

May 26th 1940 – Operation Dynamo begins (the British evacuation of Dunkirk)

22nd June 1941 – Operation Barbarossa begins (Germany's attempted invasion of the USSR)

7th December 1941 – Japan attacks Pearl Harbour

Key words

Tier 2 –

Intercept = To prevent something from getting to its intended destination

Conquer = Overcome or take control by military force

Tier 3 –

Infantry = foot soldiers




Evacuation = To remove someone or something from danger

Ammunition = objects that can be shot from a weapon, such as bullets or bombs





What was the Holocaust?	The end of the War	Why did America drop the Atomic Bombs?	Key Dates												
<p>What? Deliberate and planned extermination of certain groups across Europe</p> <p>Where? In Concentration and Extermination camps across Europe</p> <p>How? Gas chambers, firing squads (soldiers with guns), slave labour, starvation</p> <p>Victims? Jewish people, homosexuals, Roma people, black people, disabled people, people from Romania and Slavic countries</p> <p>Impact? Victims – 11 million people murdered – 6 million of these were Jews. Perpetrators – Nuremberg Trials to prosecute key leaders.</p>	<p>Operation Overload, or the D-Day landings began in 1944.</p> <p>What was their aim?</p> <ul style="list-style-type: none">To push the Nazis back to GermanyProvide relief for Russian troops <p>How did it work?</p> <ul style="list-style-type: none">Allied forces gathered on five beaches in Southern England326,547 troops were sailed and flown over to France within a weekParis was liberated from the Nazis in August 1944 <p>German surrender</p> <p>As the war progressed, Germany experienced a series of set-backs which led to their surrender. These included:</p> <ul style="list-style-type: none">Underestimating Russia’s strength during Operation BarbarossaThe American entry into the warItaly switching sides from the Axis powers to the AlliesA lack of resources to combat the Allies in Europe, Africa and the Pacific	<table><tr><td colspan="2">America dropped two Atomic Bombs on Japan on the 6th and 9th August 1945 to end the War.</td></tr><tr><th>Causes</th><th>Explanation</th></tr><tr><td>Revenge</td><td>For Pearl Harbour</td></tr><tr><td>End the war quickly</td><td>Believed Japanese soldiers would not surrender</td></tr><tr><td>Test the bomb</td><td>Wanted to test the bomb’s true impact</td></tr><tr><td>Intimidate Russia</td><td>Tensions with Russia were growing in 1945</td></tr></table>	America dropped two Atomic Bombs on Japan on the 6th and 9th August 1945 to end the War.		Causes	Explanation	Revenge	For Pearl Harbour	End the war quickly	Believed Japanese soldiers would not surrender	Test the bomb	Wanted to test the bomb’s true impact	Intimidate Russia	Tensions with Russia were growing in 1945	<p>1941 – Final Solution of the Holocaust begins</p> <p>6th June 1944 – Operation Overlord begins</p> <p>13th – 15th February 1945 – Dresden bombings</p> <p>7th May 1945 – Germany surrenders</p> <p>6th and 9th August 1945 – The Atomic Bombs are dropped</p> <p>Key Words</p> <p>Tier 2 –</p> <p>Perpetrator = someone who carries out an action</p> <p>Collaborator = someone who helps with an action</p> <p>Extermination = deliberate removal of something</p> <p>Tier 3 –</p> <p>Roma people = The largest ethnic group in Europe who have lived there for over 1000 years</p> <p>Atomic Bomb = A bomb that derives its destructive power from the rapid release of nuclear energy</p>
America dropped two Atomic Bombs on Japan on the 6th and 9th August 1945 to end the War.															
Causes	Explanation														
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<div>Week 1: Look, Cover, Write, Check.</div> <div></div>	<div>Week 2:</div> <div>Read through the KO and answer the following:</div> <div><div>1. Where did Britain allow Germany to invade?</div><div>2. What did Germany do which triggered the start of WW2?</div><div>3. What were the two alliances during WW2 called?</div><div>4. How many Indian soldiers fought for the British Empire?</div><div>5. How did Alan Turing help win the war?</div></div>	<div>Week 3: Word up</div> <div></div>
<div>Week 4: Read through the KO and answer the following:</div> <div><div>1. Which side of the war did Japan fight on?</div><div>2. When did France and Britain declare war on Germany?</div><div>3. Which part of France did Germany take control of?</div><div>4. What was Operation Barbarossa?</div><div>5. How many troops did America send to Europe?</div></div>	<div>Week 5: Map your mind</div> <div></div>	



<p>Week 6: Read through the KO and answer the following:</p> <ol style="list-style-type: none">1. What was the Holocaust?2. How many victims were murdered during the Holocaust?3. What were the aims of Operation Overlord?4. When did Operation Overlord begin?5. What was one cause of Germany's surrender?6. How many atomic bombs were dropped on Japan?	<p>Week 7: Test your mind</p> 	<p>Week 8: Read through the KO and answer the following:</p> <ol style="list-style-type: none">1. How was the Holocaust carried out?2. Who were the victims of the Holocaust?3. How many Jewish people were murdered during the Holocaust?4. How many troops landed in France?5. When was Paris liberated?6. When were the atomic bombs dropped?
<p>Week 9: Flash cards</p> <p>Make sure you bring these into school to show your tutor and teacher</p> 	<p>Week 11:</p> <p>Key points from your assessments</p> <ol style="list-style-type: none">1.2.3.	<p>Week 12:</p> <p>Following the assessment:</p> <p>www</p> <p>ebi</p>
<p>Week 10:</p> <p>Read through the KO and your flash cards ready for the assessment next week</p>		





Newly Emerging Economy (NEE) –

A country that has recently become more wealthy, due to increased industrialisation.



Who are the NEES?

MINT COUNTRIES

Mexico
Indonesia
Nigeria
Turkey

BRIC COUNTRIES

Brazil
Russia
India
China

What are the key features of a NEE?

PHYSICAL	HUMAN
They often have large coastlines.	They have a large youthful population – e.g., the median age in Indonesia is 28 years old.
They have significant amounts of raw materials- e.g., Brazil has the tropical rainforest.	Politically they are more stable than in the past.
They have a large landmass - e.g., Russia has the world's largest land mass.	They play a key role in world trade - e.g., China is the world's largest exporter.

Where are the emerging countries located?

MINT countries



Where are the emerging countries located?

BRIC countries



LICS: Low Income countries e.g: Chad.



HICS: High Income countries e.g: The UK.



Who are the NEES?

Why is INDONESIA so successful?

LOCATION: Indonesia is an **archipelagic** country located in Southeast Asia, lying between the Indian Ocean and the Pacific Ocean. It is located in a strategic location astride or along major sea lanes connecting East Asia, South Asia and Oceania. It is the 15th largest country in the World.

POPULATION: With more than **270 million people**, Indonesia is the world's fourth-most populous country. Java, the world's most populous island, is home to more than half of the country's population. Indonesia's population is relatively young. The **median age in Indonesia is 28**, which is the third youngest in East Asia.

What are the impacts of TNCS in Indonesia?

TNC: Trans National Corporation - Companies that operate in more than one country – e.g., Nike.
TNCs are GLOBAL companies that have their HEADQUARTERS in HICs and outsource their MANUFACTURING industries in LICs/NEEs.
The SOURCE country is where the headquarters for the TNC is located e.g., America.
The HOST country is where the TNC places its factories e.g., in Indonesia.



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Geography Year 9 Learning Cycle 2

Archipelagic means that it is an extensive group of islands.



ADVANTAGES OF TNCS:	DISADVANTAGES OF TNCS:
Nike employs 4,000 workers in one factory in Indonesia.	Working conditions are poor in cramped and hot factories. There are no strict health and safety regulations.
New improved infrastructure - roads and railways have been built.	PROFIT LEAKAGE - where profits are sent back to the Host country rather than Indonesia receiving the benefits.
Nike: 'Reuse a Shoe' programme - to encourage recycling of old shoes.	Nike exploits natural resources of oil to use in the rubber soles of their trainers.



Who are the NEES?

Why is MEXICO so successful?



LOCATION: Mexico is a country in North America. It has a coast on two sides; the Pacific Ocean on the west, and the Gulf of Mexico and Caribbean Sea in the east. Much of Mexico is covered by mountains, and the highest peaks are over 5,000 metres. The north of the country is dominated by deserts, and these regions receive so little rain that only a few specially adapted plants and animals can survive. In the centre lies its sprawling capital Mexico City.

POPULATION: With a population of about **126 million in 2019**, Mexico is the 10th most populated country in the world. It is the most populous Spanish-speaking country and the third-most populous in the Americas after the United States and Brazil.

TRADE: The **USCMA** trade agreement has been negotiated by the governments of The United States, Mexico and Canada. The US-Mexico-Canada Agreement (USMCA) preserves and strengthens the benefits of North American trade

Why is RUSSIA so successful?



LOCATION: Russia is the **World's** largest country by landmass. It extends across the **whole of northern Asia and the eastern third of Europe**, spanning 11 time zones and incorporating a great range of environments and landforms.

Russia is bordered by the Arctic Ocean and 14 other countries!!

Alaska used to belong to Russia until 1867 when they sold it to the USA for \$7.2 billion dollars. This sounds a lot, but due to the huge size of Alaska it works out at 2 cents per acre!

NATURAL RESOURCES: Russia is probably richer in natural resources than any other country in the world. It has abundant supplies of oil, natural gas, timber and valuable minerals, such as copper, diamonds, lead, zinc, bauxite, nickel, tin, mercury, gold and silver— most of which are located in Siberia and the Far East. The value of Russia's resources is huge and **oil and gas make up 70% of Russia's total exports.**



KEY TERMS:

MIGRATION: The movement of people from one place to another.

RURAL-URBAN MIGRATION: The movement of people from the countryside to urban areas.

PUSH FACTORS: Factors that attract people to an area.

PULL FACTORS: Factors that push people to leave where they live.

PUSH FACTORS FROM MEXICO: 	PULL FACTORS TO THE USA: 
Poor education prospects. Adult literacy rates are 55%.	Excellent education prospects. Adult literacy rates are 99%.
Poor medical facilities. There are 1800 patients for every doctor.	Much better medical facilities. There are 400 patients for every doctor.

Why is Sakha so important to Russia?

This region contains more than **40% of Russia's oil reserves** and considered a 'treasure trove' of other natural resources.

Yakutsk is the capital city of the Sakha Republic, Russia, located about 450 km (280 mi) south of the Arctic Circle.

Yakutsk is also the largest city located in continuous **PERMAFROST** (frozen soil). The mining industry and the climate crisis is causing the permafrost to melt. This is a problem because it could cause cities and transport networks to sink into the ground. Also vast reserves of methane and other greenhouse gases are locked in to the permafrost. As it melts, these are released into the atmosphere accelerating the climate crisis further.





Who are the NEES?

Why is CHINA so successful?

HUMAN FACTORS:



POPULATION: 1.37 billion. Roughly one in every five people in the World is Chinese!

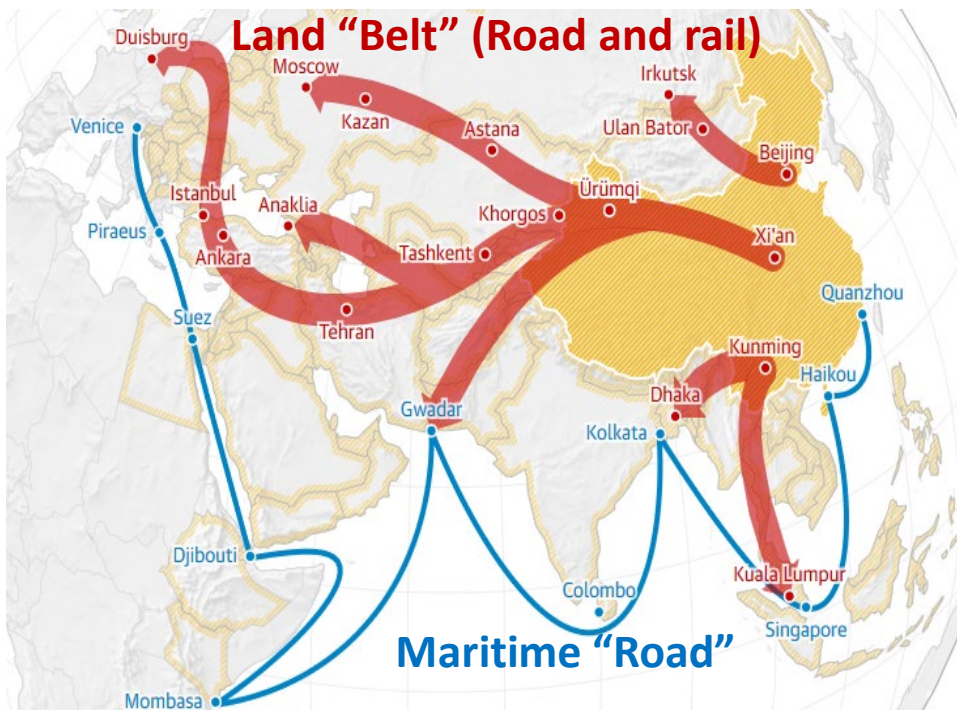
TRADE: China is the world's top exporter of goods and has a GNI of \$12 trillion US dollars.

PHYSICAL FACTORS:



LANDMASS: It is the fourth biggest country by area (After Russia, Canada and the USA).

GEOGRAPHICAL LOCATION: Proximity to consumer markets and trading partners. South Korea, Taiwan, Japan and Hong Kong are on major trade routes.



KEYTERMS:

POPULATION PYRAMID -

A graph to show how many males and females of different ages are in a population.

AGEING POPULATION -

The growth in the proportion of older people (usually 65 years and over) in the population.

CHINA'S BELT AND ROAD INITIATIVE -

A global plan to fund infrastructure developments, which will make the world more interconnected and interdependent.

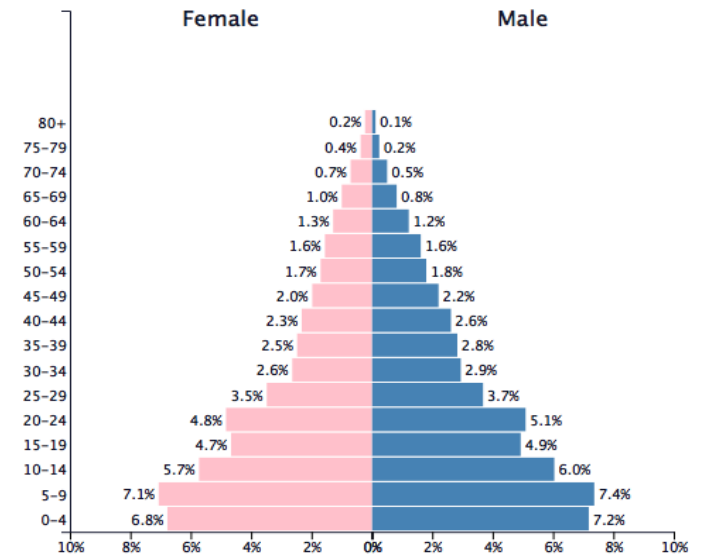
INFRASTRUCTURE - The facilities which support modern human life e.g., water supply, sewage airports, bridges, railways.

INTERDEPENDENCE -

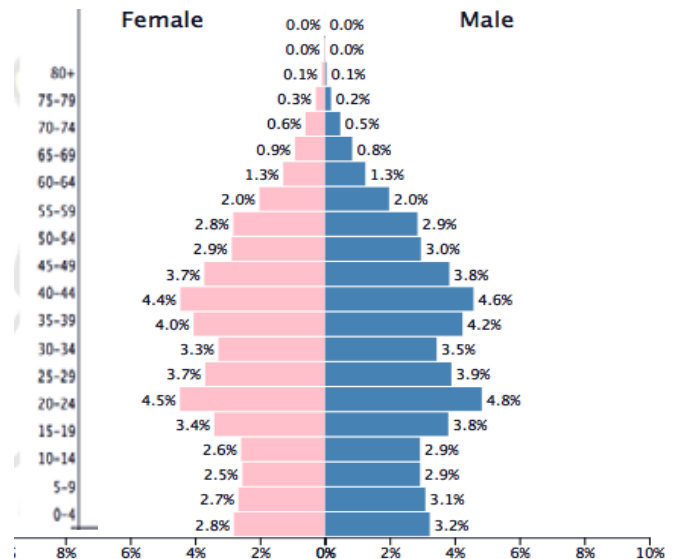
Between countries means that they are dependent on one another in some way. For example, many developing countries are dependent on developed countries e.g., Zambia relies on China for trade.

Geography Year 9 Learning Cycle 2




China's population structure (population pyramid) 1975





China's population structure (population pyramid) 2016





Week 1: Look, Cover, Write, Check. 	Week 2: Read through the KO and answer the following: <ol style="list-style-type: none">1. Define the term NEE.2. Describe the location of BRIC countries.3. What is the difference between a host and a source country?4. State a key feature of a NEE.5. Who are the MINT countries?6. Name an example of an LIC.	Week 3: Word up 
Week 4: Read through the KO and answer the following: <ol style="list-style-type: none">1. Define the term archipelagic.2. Describe the location of Indonesia.3. What is the “Belt and Road” initiative?4. Define rural-urban migration.5. Explain why people are migrating from Mexico to the USA.6. What are the disadvantages of Nike in Indonesia?	Week 5: Map your mind 	



<p>Week 6: Read through the KO and answer the following:</p> <ol style="list-style-type: none"> 1. Define the term profit leakage. 2. What does a population pyramid show? 3. Describe the difference in China's population structure between 1975 and 2016. 4. What is the USCMA? 5. Who are the BRIC countries? 6. Why is Sakha important to Russia? 	<p>Week 7: Test your mind</p> 	<p>Week 8: Read through the KO and answer the following:</p> <ol style="list-style-type: none"> 1. What is the difference between push and pull factors? Include an example of each. 2. Why is China successful? 3. Define the term interdependence. 4. Describe the location of MINT countries. 5. Explain why a country having a large coastline is important. 6. Why is an ageing population a challenge for China?
<p>Week 9: Flash cards</p> <p>Make sure you bring these into school to show your tutor and teacher</p> 	<p>Week 11:</p> <p>Keyword Spelling Test</p>	<p>Week 12:</p> <p>Following the assessment:</p> <p>www</p> <p>ebi</p>
<p>Week 10:</p> <p>Read through the KO and your flash cards ready for the assessment next week</p>		







KEY QUOTES

"Where a person is definitely going to die, and keeping them alive leads to more suffering, then termination of life is permitted." **(Dalai Lama)**

"God created life in his own image."
(Book of Genesis in the Old Testament)

"Thou shalt not kill."
(God's Ten Commandments - Exodus)

"I, your God, give life and I take it away."
(Book of Job in the Old Testament)

KEY WORDS

- **Embryo:** The fertilised egg divides to form a ball of cells called an embryo.
- **Embryonic Stem Cell Research:** Cells taken from embryos to help treat terminal illness.
- **Sanctity of Life:** Human life is sacred as it was created by God.
- **IVF (In Vitro Fertilisation):** The ovum is fertilised outside the woman's body in a petri dish or cell culture dish.
- **Surrogate:** A woman carries and gives birth to a baby for another person or couple.
- **AIH (Artificial Insemination by the Husband):** The man's sperm is placed directly into the uterus (womb) of his partner so that fertilisation of the ovum can be achieved.

ABORTION:

The central question is when does life begin? Biologically it is at birth but the Abortion Act 1967 bans abortion after 24 weeks of pregnancy. If abortion takes place after 24 weeks, it can be seen as murder. At any stage from conception the foetus is a potential life.

THE LAW IN THE UK: The law in the UK (excluding Northern Ireland) begins by stating that abortion is illegal, then gives exceptions. Abortion can be carried out only in a registered place before 24 weeks, if two registered doctors agree that at least one of the following is true:

- There is a danger to the woman's mental and/or physical health.
- The foetus will be born with physical and/or mental disabilities.
- The mental and/or physical health of existing children will be put at risk.

Breaking the law carries great penalties for all those involved.

WHAT IF THE WOMAN'S LIFE IS AT RISK?

Buddhism: The primary intention is the key - helping to save the woman's life is compassionate even if the foetus dies. Buddhists try to avoid dukkha (suffering).

Christianity: If the pregnancy threatens the woman's life it is justified. Where abortion is a secondary effect of a procedure to save a woman's life, it is morally acceptable and known as the doctrine of double effect.

ABORTION: THE DEBATE

Pro-life: disagree with abortion	Pro-choice: accept abortion
Pro-lifers support the foetus' right to life. The arguments are about the foetus rather than the woman.	This view defends a woman's right to choose what happens to her body. The arguments are about the woman rather than the foetus.
All life is sacred and must be protected.	Banning abortion does not stop it, rather it makes it unsafe. We need to protect women.
God has created life and as stewards, humans have to protect life.	Where the pregnancy is a result of rape or incest, it would be wrong to not allow an abortion.
Abortion is murder.	It is cruel to allow badly damaged foetuses to be born.
The foetus can't defend itself, so someone else has to do it.	If having a child is going to put a woman's life at risk, then she should have the right to an abortion.
If a foetus will be born with disabilities, we should not discriminate inside the womb.	The foetus should not be classed as a life in its own right until it could survive outside the womb.



Christian Attitudes to Transplant Surgery

Most Christians are **in favour**. Many Christians carry donor cards so that their organs can be used for others after their death. However, they would object to rich people or surgeons in the developed world paying for organs from the poor because:

Christians who believe in the **immortality of the soul**, believe that the **body is not needed after death** and therefore its organs can be used to help the living.

Christians who believe in **resurrection** believe St Paul's words that the body will be transformed and that the resurrection body will **not need the physical organs**.

Jesus told Christians that they should **love their neighbours** and treat others as they would wish to be treated by them - both of which justify transplants.

The Bible is full of statements about not exploiting the poor.

Caring for the Dying: Hospices are home for both children and adults dying of an incurable disease. They provide palliative care until death, or respite care. A basic ethos is when someone is dying, they cannot be cured, only cared for. If that care covers all aspects of their being, they will not wish for euthanasia. Hospices aim to: relieve physical symptoms of illness, relieve mental and emotional symptoms of dying, support the families of the patients after death - they suffer too, educate others about caring for the dying.

Christian Attitudes to Abortion and Euthanasia:




- Abortion is morally wrong, although some people accept it as a necessary evil. While death might mean going to heaven to be with God, it should not be hastened.
- Life should always be protected. Where the mother's life is at risk, most would accept procedures which save life even if they lead to the ending of the pregnancy.
- Few Christians support active euthanasia, regardless of what a person might themselves wish for. This is seen as killing, so it is wrong. However, in countries where euthanasia is legal some Christians see it as an act of love and compassion and a good use of the medical knowledge God has granted us.

Buddhist Attitudes to Abortion and Euthanasia:



- The first precept is not to take life, therefore generally speaking, abortion and euthanasia are wrong. However, intention is key, so at times it may be the case that an abortion or euthanasia is actually the right action.
- Existence is suffering: Karma and craving result in suffering. Compassion is a positive response. If we face death with anxiety, anger and upset, our next rebirth is negatively set, so a comfortable death, where the dying accept death is facilitated. Buddhism supports hospices, which helps people to face their death with calmness.

Arguments For the Right to Die	Arguments Against the Right to Die
It is the person's body, so they should have the right to decide. Surely it should be a human right? Only the person can really say when their life is not worth living. It is compassionate to put animals in pain to sleep, so we should allow the same compassion to humans to avoid agony and suffering.	Life does not belong to us, it belongs to God - euthanasia is playing God. To allow euthanasia would be to encourage it - people may force it on others for their own advantage, e.g. making an elderly relative feel a burden. People in their last days need care and love rather than being helped to die. Doctors take oaths to protect life, not to end it.



<div>Week 1: Look, Cover, Write, Check.</div> <div></div>	<div>Week 2:</div> <div>Read through the KO and answer the following:</div> <div><div>1. State a book of the Bible that is in the New Testament.</div><div>2. When was the Abortion Act passed?</div><div>3. What do you think is meant by the term 'necessary evil'?</div><div>4. Why do many Christians carry organ donor cards?</div><div>5. What is a surrogate?</div></div>	<div>Week 3: Word up</div> <div></div>
<div>Week 4: Read through the KO and answer the following:</div> <div><div>1. What do pro-lifers believe about abortion?</div><div>2. Why are Christians opposed to euthanasia?</div><div>3. What is the first Buddhist precept?</div><div>4. What does the word dukkha mean?</div><div>5. Who is a contemporary Buddhist figure of authority?</div></div>	<div>Week 5: Map your mind</div> <div></div>	



<p>Week 6: Read through the KO and answer the following:</p> <ol style="list-style-type: none"> 1. What is AIH? 2. Give two pro-choice arguments about abortion? 3. What is the sanctity of life? 4. What is one aim of a hospice and why might a Buddhist want to support them? 5. What is embryonic stem cell research? 	<p>Week 7: Test your mind</p> 	<p>Week 8: Read through the KO and answer the following:</p> <ol style="list-style-type: none"> 1. What is an embryo? 2. Give two arguments for euthanasia. 3. What is IVF? 4. Give two arguments against euthanasia. 5. Give two pro-life arguments on the topic of abortion.
<p>Week 9: Flash cards</p> <p>Make sure you bring these into school to show your tutor and teacher</p> 	<p>Week 11:</p> <p>Key points from your assessments</p> <ol style="list-style-type: none"> 1 2 3 	<p>Week 12:</p> <p>Following the assessment:</p> <p>www</p> <p>ebi</p>
<p>Week 10:</p> <p>Read through the KO and your flash cards ready for the assessment next week</p>		





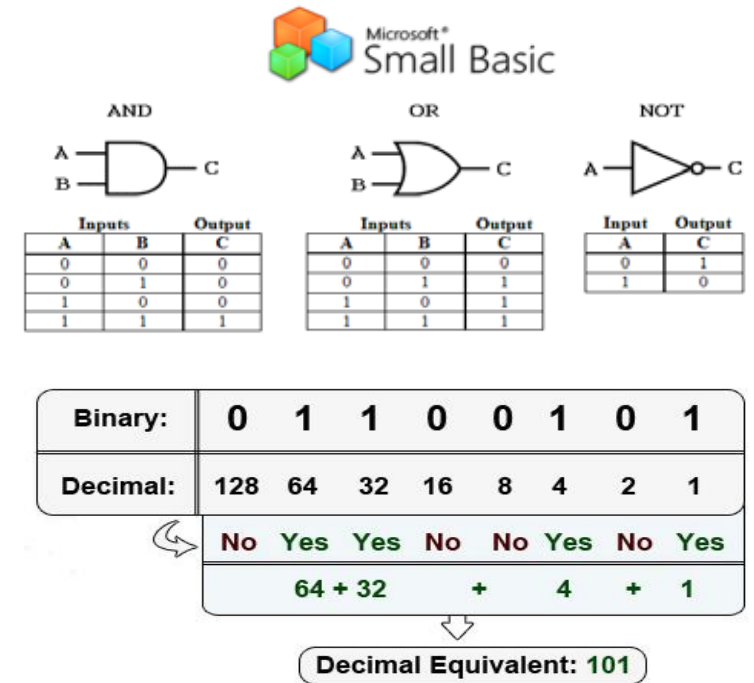
Handwriting practice lines consisting of 20 horizontal lines.



Y8 Computer Science Knowledge Organiser

Small Basic Commands

Output	<code>TextWindow.WriteLine("Hello")</code> <code>TextWindow.Write("Hello")</code>	Prints "Hello"; next output on next line. Prints "Hello"; next output immediately after.
Variables	<code>myName="Mr. Robbins"</code> <code>myAge=23</code> <code>countNo=countNo+1</code>	Equals sign means assign the string or value on the right to the variable named on the left.
Input	<code>yourName=TextWindow.Read()</code>	Allows user to input data and assigns it to the variable yourName . You cannot use user input unless you assign it to a variable in this way.
Selection	<code>If [condition1] Then</code> <code>[sequence of commands 1]</code> <code>Elseif [condition2] Then</code> <code>[sequence of commands 2]</code> <code>Else</code> <code>[sequence of commands 3]</code> <code>EndIf</code>	condition1 will be a comparison involving a variable, for example <code>x>2</code> . If condition1 is met (i.e. if x is greater than 2), then the program will run sequence of commands 1 . If not, then if condition2 is met the program will run the sequence of commands 2 . If neither condition is met, it will run sequence of commands 3 .
Iteration (indefinite)	<code>While [condition]</code> <code>[sequence of commands]</code> <code>EndWhile</code>	condition will be a comparison involving a variable, for example <code>x>2</code> . The condition is tested and then the sequence of commands is run. This is repeated for as long as the condition remains TRUE. If the condition is fixed as "True", the loop will continue forever.
Iteration (fixed)	<code>For i = 1 to 10</code> <code>[sequence of commands]</code> <code>EndFor</code>	A for loop runs a sequence of commands a fixed number of times (in this case 10). The loop variable i counts up from 1 to 10, and can be referred to within the sequence of commands to perform counting operations, etc.



Commenting code

It is important to write comments in code so that humans can understand what the code does.

A single quote is used to comment code:

'This code runs ten times'

What do symbols mean in SmallBasic?

- + means adding
- means subtracting
- * means multiplying
- / means dividing

Important algorithms

BubbleSort

<https://www.bbc.co.uk/bitesize/guides/z7kkw6f/revision/9>

MergeSort

<https://www.bbc.co.uk/bitesize/guides/z7kkw6f/revision/10>

LinearSearch

<https://www.bbc.co.uk/bitesize/guides/z7kkw6f/revision/7>

BinarySearch

<https://www.bbc.co.uk/bitesize/guides/z7kkw6f/revision/8>

Practice your skills by going to.....

Tutorials:

<https://smallbasic-publicwebsite.azurewebsites.net/tutorials>

You can also practise writing code at home by either using the online editor or downloading the Small Basic application (for free) from:

<https://smallbasic-publicwebsite.azurewebsites.net/>









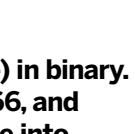



Knowledge Organiser - 15 mins

You can do your knowledge organiser work by learning key terms as for other subjects and also by writing programs based on the tutorials from the websites (see other box). You do not have to write out your programs – print screenshots and stick them in or save your projects to a file so your teacher/parent can view them.

DESIGN & TECHNOLOGY





<p>Week 1: Follow the tutorial called “Practice 4” (More Variables) at:</p>  <p>Use the online editor at: Write down or print off a copy of your code.</p> 	<p>Week 2: Follow the tutorial called “Practice 11” (Math) at:</p>  <p>Use the online editor at: Write down or print off a copy of your code.</p> 	<p>Week 3: Draw a mind map of all the key code words you have learnt so far in Small Basic.</p>  <p>Use the online editor at: Write down or print off a copy of your code.</p> 
<p>Week 4: Follow the tutorial called “Practice 14” (Turtle Graphics) at:</p>  <p>Use the online editor at: Write down or print off a copy of your code.</p> 	<p>Week 5:</p> <p>Write your full name (first name and surname) in binary. The ASCII code for the letter “A” is 65, “B” is 66, and so on. Use this to turn the letters of your name into numbers and then write each in binary.</p>  <p>Use the online editor at: Write down or print off a copy of your code.</p> 	<p>Week 6: Follow the tutorial called “Practice 2” (Graphics and Coordinates) at:</p>  <p>Use the online editor at: Write down or print off a copy of your code.</p> 







Gargoyles and Grotesques

Gargoyles and grotesques were a hallmark of the Gothic period of architecture, which grew popular in Western Europe from the 12th to the late 15th centuries, and which was carried over well into the 20th century during the age of Gothic Revival marked by fascination with the Middle Ages. You will find gargoyles and grotesques in countries such as France, Italy, Spain, Germany and the United Kingdom.



What is the difference between a gargoyle and a grotesque?

Basically, grotesques are decorative stone carvings on old buildings, usually the heads of strange and ugly creatures, whereas gargoyles are spouts in the form of grotesque human or animal figures projecting from a roof gutter to throw rainwater clear of a building. In addition to the practical function of projecting water away from a building, gargoyles were also intended to symbolise 'guardianship' of the building and to ward off evil spirits. Their open mouths were symbolic of them devouring giants.

RULES FOR WORKING IN CLAY

1. Always wear an apron. Clay can be messy.
2. Never throw clay. Be respectful of the materials and your working environment.
3. Only ever handle and work with your own piece of clay unless your teacher tells you differently.
4. At the end of each lesson it is your responsibility to look after your work. You will need to keep your work damp ready for your next lesson.

TOP TIPS FOR WORKING IN CLAY

Avoid getting air in your sculpture. It may crack and break in the kiln because air expands as it gets hotter.




If your work is solid then you will need to carefully hollow it out so it doesn't explode in the kiln. Use a hollowing out tool to scoop out the centre, a bit like peeling a potato.

Take care! Go slow. Your most successful work will be the work you have taken time and pride in making.





Key Terms	Definition
Gargoyle	A grotesque carved human or animal face or figure projecting from the gutter of a building, typically acting as a spout to carry water clear of a wall.
Grotesque	A very ugly or comically distorted figure or image and a style of decorative painting or sculpture consisting of the interweaving of human and animal forms with flowers and foliage.
Genre	A style or category of art, music, or literature.
Formal Elements of Art	The parts used to make a piece of artwork. The art elements are line, shape, space, form, tone, texture, pattern, colour and composition.
Imaginative Drawing	Working solely from your imagination and not worrying about what is 'right'.
Cartoon	A simple drawing showing the features of a person in a humorously exaggerated way or a film using animation techniques to photograph a sequence of drawings rather than real people or objects.
Clay	Clay is a kind of earth that is soft when it is wet and hard when it is dry. Clay is shaped and baked to make pots, sculptures, and bricks.
Slip	Slip is clay that has been made into a paste by adding water. Think of it as a clay glue.
Statue	A carved or cast figure of a person or animal, especially one that is life-size or larger.



<div>Week 1: Look, Cover, Write, Check.</div> <div></div>	<div>Week 2:</div> <div>Read through the KO. Please make sure that you answer the following questions using full sentences and your own words.</div> <div><div>1. Using your own words, can you describe the difference between a gargoyle and a grotesque?</div><div>2. Which period of architecture are gargoyles and grotesques attributed to?</div><div>3. Can you name here countries in which you might find examples of gargoyles and grotesques?</div></div>	<div>Week 3: Word up</div> <div></div>
<div>Week 4: Read through the KO and answer the following:</div> <div>We have rules when we work in clay so that our work is cared and looked after. Please make a clear note this week of the four rules for working in clay.</div>	<div>Week 5: Map your mind</div> <div></div>	



<p>Week 6: Read through the KO and answer the following:</p> <ol style="list-style-type: none">1. What are the formal elements of Art?2. What are the ingredients that you need to make slip? And how do you use it?3. What is the difference between drawing from observation and drawing from imagination?	<p>Week 7: Test your mind</p> 	<p>Week 8: Read through the KO and answer the following:</p> <ol style="list-style-type: none">1. Why is air a problem in clay that is going to be fired? What might the outcome be for a piece of Artwork that is fired full of air?2. What technique do we use to reduce the amount of air that might be in our Artwork?3. What is the name of the clay oven used to bake your work?
<p>Week 9: Flash cards</p> <p>Make sure you bring these into school to show your tutor and teacher</p> 	<p>Week 11: Keyword Spelling Test</p>	<p>Week 12:</p> <p>Following the assessment:</p> <p>www</p> <p>ebi</p>
<p>Week 10:</p> <p>Read through the KO and your flash cards ready for the assessment next week</p>		







Ce que je fais (part 2)

French Year 9 Learning Cycle 2

Week	French	English
1	Vous devez réserver une table pour votre petit-déjeuner dans notre restaurant	You must book a table for your breakfast in our restaurant.
2	Il y avait longtemps une guerre au Sénégal mais aujourd'hui c'est un pays en paix.	There was a war for a long time in Senegal but now it is a peaceful country.
3	J'ai faim et soif. On prend le petit-déjeuner à quelle heure?	I am hungry and thirsty. What time are we having breakfast?
4	Je n'ai jamais visité la France le quatorze juillet quand on célèbre la Révolution française.	I never visited France on the 14 of July when we celebrate the French Revolution.
5	Je suis allé en Écosse pour visiter la ville d'Edimbourg et je suis resté quatre jours.	I went to Scotland in order to visit the city of Edinburgh and I stayed four days.
7	Nous sommes tombés au parc où nous avons joué au rugby, donc nous sommes allés à l'hôpital après.	We fell in the park where we played football, therefore we went to the hospital afterwards.
8	Je pense demander à ton professeur: « est-ce que je ressemble à mes parents? »	We fell in the park where we played football, therefore we went to the hospital afterwards.
9	Selon toi, la fréquence de crime à Paris est plus haute que dans les autres régions de France?	According to you, crime frequency is higher in Paris than in other regions of France?
10	À l'école maternelle, on dormait toujours le midi parce qu'on travaillait beaucoup.	In pre-school, we were always sleeping at midday because we were working a lot.

Each week you will need to practise and learn your Sentence of the Week as well as your Vocabulary of the Week. For your Vocabulary of the Week also pay attention to which type of words they are:

Verbs are in **VIOLET**

Feminine nouns are in **PINK**

Masculine nouns are in **BLUE**

Adjectives are in **AMBER**



Ce que je fais

French Year 9 Learning Cycle 2

Week 1		Week 2		Week 3		Week 4		Week 5	
commander	<i>to order, ordering</i>	il y a	<i>there is/are</i>	la faim	<i>hunger</i>	apporter	<i>to bring, bringing</i>	entrer	<i>to enter, entering</i>
réserver	<i>to book, booking</i>	il y avait	<i>there was/were</i>	la soif	<i>thirst</i>				
le choix	<i>choice</i>	ils/elles ont	<i>they have</i>	la peur	<i>fright</i>	fait	<i>did/done</i>	retourner	<i>to return, returning</i>
le restaurant	<i>restaurant</i>	croire	<i>to know, knowing</i>	l'heure	<i>hour, o'clock, time of the day</i>	pris	<i>taken</i>	monter (à)	<i>to climb, climbing (up)</i>
le service	<i>service</i>					l'étranger	<i>foreigner, abroad</i>		
la nuit	<i>night</i>	connaître	<i>to believe, believing</i>	la raison	<i>reason, right</i>	le travail	<i>work</i>	tomber	<i>to fall, falling</i>
l'addition	<i>bill</i>			le midi	<i>midday</i>	le bâtiment	<i>building</i>	l'après-midi	<i>afternoon</i>
la réception	<i>reception</i>	gérer	<i>to manage, managing (sth)</i>	le minuit	<i>midnight</i>	l'argent	<i>money</i>	le pied	<i>foot</i>
la carte	<i>card, menu</i>			la mal	<i>evil, bad, wrong,</i>	le pain	<i>bread</i>	le corps	<i>body</i>
la table	<i>table</i>	gagner	<i>to win, winning</i>	le tort	<i>wrong</i>	la politique	<i>politics</i>	le doigt	<i>finger</i>
leur	<i>their (sing)</i>	le voyage	<i>trip, journey</i>	quarante	<i>forty</i>	la règle	<i>rule</i>	le dos	<i>back</i>
leurs	<i>their (pl)</i>	le pays	<i>country</i>	cinquante	<i>fifty</i>	l'année	<i>year</i>	le médicament	<i>medicine, drug</i>
votre	<i>your (sing)</i>	la guerre	<i>war</i>	soixante	<i>sixty</i>	haut	<i>high</i>	le soir	<i>evening</i>
vos	<i>your (pl)</i>	l'équipe	<i>team</i>	donc	<i>so, therefore</i>	chaque	<i>each</i>	la santé	<i>health</i>
		la langue	<i>language</i>	chaud	<i>hot</i>	pendant	<i>during</i>	la situation	<i>situation</i>
		dehors	<i>outside</i>	froid	<i>cold</i>	hier	<i>yesterday</i>	l'attente	<i>wait</i>
		ne...jamais	<i>never</i>			toujours	<i>always</i>	l'urgence	<i>emergency</i>
		beaucoup	<i>a lot</i>			contre	<i>against</i>	faible	<i>weak</i>
								seulement	<i>only</i>
								trop	<i>too</i>
Week 6		Week 7		Week 8		Week 9		Week 10	
Vocaroo speaking task for Mid-Cycle Assessment		blessar	<i>to hurt, hurting</i>	ressembler à	<i>to resemble, resembling</i>	approcher	<i>to approach, approaching</i>	corriger	<i>to correct, correcting</i>
		jeter	<i>to throw, throwing</i>	réussir à	<i>to succeed, succeeding in</i>	téléphoner (à)	<i>to telephone (to)</i>	durer	<i>to last, lasting</i>
		laisser	<i>to leave, leaving</i>	répondre à	<i>to reply, replying to</i>	voler (à)	<i>to steal (from)</i>	poser	<i>to ask, asking (a question)</i>
		partager	<i>to share, sharing</i>			le criminel	<i>criminal (m)</i>		
		chercher	<i>to look, looking for</i>	dépendre de	<i>to depend, depending on</i>	le crime	<i>crime</i>	la compétence	<i>skill, competence</i>
		donner	<i>to give, giving</i>	décrire	<i>to describe, describing</i>	le vol	<i>theft</i>	la connaissance	<i>knowledge</i>
		l'évènement	<i>event</i>			la criminelle	<i>criminal (f)</i>	le contrôle	<i>test</i>
		l'amour	<i>love</i>	emprunter à	<i>to borrow, borrowing from</i>	la fréquence	<i>frequency</i>	le système	<i>system</i>
		le prix	<i>price</i>			la sécurité	<i>safety</i>	primaire	<i>primary</i>
		le sens	<i>sense, meaning</i>	l'hiver	<i>winter</i>	la responsabilité	<i>responsibility</i>	deuxième	<i>second</i>
		l'envie	<i>desire</i>	l'été	<i>summer</i>	proche	<i>near, close</i>	troisième	<i>third</i>
		la mer	<i>sea</i>	la promenade	<i>walk</i>	après	<i>after, afterwards</i>	quatrième	<i>fourth</i>
		tellement	<i>so much, so many</i>	envie de	<i>to want, feel like</i>	avant	<i>before</i>	cinquième	<i>fifth</i>
				peur de	<i>afraid of</i>	besoin de	<i>need of</i>	sixième	<i>sixth</i>
						selon	<i>according to</i>	longtemps	<i>a long time, a long while</i>
						moi	<i>me, myself</i>		
						toi	<i>you, yourself</i>		



Week 1: Look, Cover, Write, Check this week's vocabulary. There will be a 'Do Now' activity each week related to the vocabulary you learn the week before. https://www.youtube.com/watch?v=LLZvCymL4rU	Week 2: Look, Cover, Write, Check this week's vocabulary	Week 3: Look, Cover, Write, Check this week's vocabulary
Week 4: Look, Cover, Write, Check this week's vocabulary	Week 5: Look, Cover, Write, Check this week's vocabulary	Week 6: Record yourself doing your speaking assessment on https://vocaroo.com/ You can create bullet points for your speaking here:



Week 7: Look, Cover, Write, Check this week’s vocabulary

Week 8: Look, Cover, Write, Check this week’s vocabulary

Week 9: Look, Cover, Write, Check this week’s vocabulary

Week 10: Look, Cover, Write, Check this week’s vocabulary

Week 11: Flash cards of your vocabulary
<https://youtu.be/scZVLCB1aX0>
Make sure you bring these into school to show your tutor and teacher.

Week 12: Following the assessment:

www -

ebi -



Handwriting practice lines consisting of 20 horizontal black lines.



Handwriting practice lines consisting of 20 horizontal black lines.



Puppetry

Using Gyre & Gimble's approach you will create a physical puppet and bring it to life in groups to create a character.

Drama Year 9 Learning Cycle 2

A. Fundamentals of Puppetry

1. Breath
2. Focus
3. Weight

Bringing the puppet to life requires a group of puppeteers to invest in the puppet and the fundamentals that bring it to life. The puppeteer responsible for the head is in charge of creating the audible sound of the puppet's breath and also the physical movement that simulates breath. The puppet must breathe before it can look anywhere or move.

The puppeteers work together and their eyes are always on the puppet. (Focus)

The puppeteers must carefully consider how much weight to give to each movement so that it appears to act within the natural forces of gravity.



B. What is a Puppet?:

Puppetry is a **form of theatre or performance that involves the manipulation of puppets** – inanimate objects, often resembling some type of human or animal figure, that are animated or manipulated by a human called a puppeteer.

Creating a puppet:



Have a go yourself!



C. Key Considerations:

Audience appeal is the relationship between the puppet and the audience.

If the puppet does not have audience appeal, the audience will not be able to invest in it during a performance. Audience appeal is closely related to defining character: if the audience can engage with the puppet's character, it is easier to create belief in the puppet and appeal for the audience. How the other performers on stage interact with the puppet will also help to create appeal for the audience.

How does the audience understand the puppet?

Puppets create a relationship between the actor and the audience: the audience can use the actions of the puppeteer and the other actors to understand the puppet. For example, if the puppeteer looks sad, and the other actors behave as if the puppet is sad, the audience will understand that the puppet is playing a sad character

Examples of Puppetry in Performance:

- Fox puppet in Theatre Alibi's:
- The Crowstarver7



Amelie in Theatre Alibi's: Falling – learn how the professionals devise a puppetry sequence and how it develops:

- WarHorse:





Devising: Verbatim Theatre

Drama Year 9 Learning Cycle 2

In Drama, **DEVISING** is the process of creating a piece of drama for performance using your creative ideas, based on a stimulus

A. Key Terms

Devising	Devising is a group collaboration in response to a stimulus leading to the creation of an original performance.
Stimulus	A stimulus is a starting point or trigger to generate ideas. Usually, actors work from the stimulus of a script which is a blueprint for making a play. However, when actors are creating a brand-new piece of drama with no existing script there are many stimuli they can use to inspire their ideas. Some examples of the different starting points or stimuli for creating original work include photographs, poetry, props/artefacts, music, historical/real life events or just about anything that inspires you.
Non-naturalistic	Non-naturalism is a broad term for all performance styles that are not dependent on the life-like representation of everyday life
Dramatic Intention	The message you wish to communicate or audience response you desire to evoke, through your performance.

B. Bertolt Brecht

German playwright, Bertolt Brecht's ideas are very influential. He wanted to make the audience think and used a range of devices to remind them that they were watching theatre and not real life.

He believed that while the audience believed in the action onstage and became emotionally involved, they lost the ability to think and to judge. He wanted his audiences to remain objective and distant from emotional involvement so that they could make considered and rational judgements about any social comment or issues in his work. To do this he used a range of theatrical devices or techniques so that the audience were reminded throughout that they were watching theatre; a presentation of life, **not** real life itself. His kind of theatre was called **Epic theatre**.

Gestus, a Brechtian technique, is a clear character gesture or movement used by the actor that captures a moment or attitude rather than delving into emotion. So, every gesture was important.

For more information:



C. Verbatim Theatre

Verbatim theatre is theatre made from real people's words. A form of documentary theatre, it allows theatre makers to explore events and themes through the words of people at the heart of them, and was hugely influential in the revival of political theatre at the beginning of the 21st Century.

Verbatim theatre is usually created from the transcription of interviews with people who are connected to a common event or subject. The interviews are then edited into a performance text. Often, actors are involved in conducting this research and feeding it back to the writer, director or company making the piece.




Take a look at this for more information:






Our Stimulus:





<p>Week 1: Look, Cover, Write, Check</p> <p>This week's vocabulary. There will be a 'Do Now' activity each week related to the vocabulary you learn the week before.</p> <p>From Puppetry Section A – Fundamentals of Puppetry.</p> <p>Use the look, cover, write, check method to learn the key terms</p>	<p>Week 2: Read through the KO and answer the following in full sentences: Taken from Puppetry Section A: Fundamentals of Puppetry.</p> <ul style="list-style-type: none"> • Why is it important to think about breath when working as a puppeteer? • How does a puppeteer make a puppet appear to breathe? • What is meant by the term focus in puppetry? • How might a puppeteer create a sense of weight when puppeteering? 	<p>Week 3: Watch the short film</p>  <p>Describe the process used in the film to bring in animate objects to life. Use these key terms and explain each one:</p> <ul style="list-style-type: none"> • Examine • Experiment • Breath • Focus • Weight • Body Language
<p>Week 4: Watch the short film</p> <p>Try to build your own puppet.</p> <p>Create a flow chart of the process you went through to create the puppet.</p> 	<p>Week 5: Mindmap</p> <p>Create a mind map using the information in Puppetry Section C: Key Considerations. You are focusing on the key ideas you need to remember when:</p> <p>A) Creating audience appeal B) Building a relationship with the audience</p> 	<p>Week 6: Watch one of the video clips at the bottom of section C in the Puppetry KO. Answer these questions in full sentences:</p> <ul style="list-style-type: none"> • Which performance did you watch? • Describe the puppet that you saw • Using your knowledge of the key skills used by puppeteers, explain how the puppet was brought to life. • How successful do you think the puppetry in this performance was? Try to provide an example from the performance to support your statement.



<p>Week 7: Look, Cover, Write, Check this week's vocabulary. There will be a 'Do Now' activity each week related to the vocabulary you learn the week before.</p> <p>From Devising: Verbatim Theatre Section A: Key Terms</p>	<p>Week 8: Read through the KO and answer the following in full sentences:</p> <p>Taken from Devising: Verbatim Theatre Section A: Key Terms</p> <ul style="list-style-type: none"> • What is meant by the term devising? • What is a stimulus? • How many different types of stimulus are there? • What is meant by the term Non-naturalism? • What is a dramatic intention? 	<p>Week 9: Read through the KO and answer the following in full sentences:</p> <p>Taken from Devising: Verbatim Theatre Section B: Bertolt Brecht</p> <ul style="list-style-type: none"> • Who was Bertolt Brecht? • What was his aim? • Why did he want the audience to remain objective and distant from emotional involvement? • What was his style of theatre called? • Define the term 'Gestus'.
<p>Week 10: Mindmap</p> <p>Use the link at the bottom of section B: Bertolt Brecht to create a mindmap which shows all the different techniques Brecht used in his style of theatre (Page 4 – 7)</p>  	<p>Week 11: Read through the KO and answer the following in full sentences:</p> <p>Taken from Devising: Verbatim Theatre Section C: Verbatim Theatre</p> <ul style="list-style-type: none"> • What is verbatim theatre? • When did it become popular? • What is used to create verbatim theatre? <p>Watch the clip to find out more about this style of theatre.</p> 	<p>Week 11/12:</p> <p>Following the assessment:</p> <p>www</p> <p>ebi</p>





Rock 'n' Roll combines elements of Rhythm and Blues and Country and Western Music and emerged in the mid-1950's.

Rock 'n' Roll helped establish the typical pop music instrumental combination of Lead and Rhythm Guitars, Bass Guitar and Drum Kit.

Repetition is an important feature of Rock 'n' Roll meaning untrained composers and performers could quickly and easily learn music and then improvise over the basic structure.



<u>Lyrics</u>		<u>Tempo and Metre</u>	<u>Harmony and Tonality</u>	<u>Melody</u>	<u>Dynamics</u>
Simple, repetitive and easily memorable – teenage concerns: love, relationships, cars, school life and holidays.		Fast (<i>Allegro</i>) – ideal for dancing. 165-185 bpm. 4/4 Time Signature.	Major tonality using mainly simple and repetitive Primary Chords – I, IV & V with slow Harmonic Rhythm often in the 12-Bar Blues Structure: I, I, I, I, IV, IV, I, I, V, IV, I, I. Close Harmonies used in the vocals.	Often uses ‘blue notes’ (flattened 3 rd , 5 th and 7 th against a major chord). “Catchy” Melodies have a narrow vocal range. Vocal and guitar melodies use repeated phrases, riffs and hooks.	Consistent loud volume – <i>Forte (f)</i> often louder in the choruses – <i>Fortissimo (ff)</i> achieved through amplification.
<u>Rhythm</u>		<u>Texture</u>	<u>Articulation</u>	<u>Accompaniment</u>	<u>Form and Structure</u>
Backbeat (accenting 2 nd and 4 th beats of the bar on the snare drum). Often features a Walking Bass Line. Syncopation, Swung Rhythms and Boogie-Woogie rhythms also used.		Homophonic (Melody & Accompaniment) Texture – a solo singer accompanied by instruments. Some textural variety within songs e.g. instruments ‘dropping out’.	Harsh, brash and raw sound possessing energy and drive. Accents on the 2 nd and 4 th beats of the bar provide the Backbeat.	Sometimes Call and Response between solo voice and accompaniment (band or backing singers). Lead singers and/or instrumental solos backed by band.	Verse-Chorus Form with a short Introduction (often instrumental but sometimes vocal), solo verses, chorus, instrumental section (improvised solos or shuwaddy section featuring Scat singing) ending with a Coda/Outro.
<u>Vocal Performance and Technique</u>		<u>Technology</u>		<u>Venue</u>	<u>Artists, Bands and Performers</u>
Mainly male lead singers using high-pitch vocals and Falsetto giving an untrained or shouty tone/timbre with screeches, jeers and cheers. Portamentos and Scat Singing often used.		Amplifiers for Electric Guitars used for the first time. Basic effects such as Reverb and Echo. Clean guitar sounds (not overdriven). Double-track lead and backing vocals for richer sounds. “Raw” sound of recordings.		Dance Halls, Clubs (live), Concert Halls, Juke Boxes, Coffee Bars, Radio and to buy on Record/Vinyl.	Little Richard, Elvis Presley, The Beatles, Bill Haley & The Comets, The Beach Boys, Johnny Cash, Chuck Berry, Buddy Holly, Chubby Checker, The Doors.

Instrumentation – Typical Instruments, Timbres and Sonorities

Early Rock 'n' Roll – lead vocalist accompanied by a small group of acoustic instruments – piano, drum kit, saxophone, trumpet, harmonica, trombone and double bass. The Electric Guitar soon became an essential part of Rock 'n' Roll and Backing Singers/Vocalists were frequently used in Rock 'n' Roll songs.



By the 1960's, Rock 'n' Roll evolved into a new style of music, known simply as Rock Music. There are many sub-genres of Rock Music:

Hard Rock – loud and aggressive, distorted electric guitars, solo guitar sections, use of power chords

Heavy Metal – harder, louder and more distorted than Hard Rock with longer guitar solos

Glam Rock – theatrical and glitzy, catchy hooks, spangly suits and make up

Progressive Rock – experimental and complicated structures, long instrumentals with effects and mythological lyrics

Punk Rock – harsh and angry, loud and fast, anarchy and rebellion as themes






Lyrics	Tempo and Metre	Harmony and Tonality	Melody	Dynamics
Wider subject matter than the simpler lyrics of Rock 'n' Roll with themes such as: politics, philosophy, religion and literature with darker, powerful and more serious lyrics. Powerful anthemic choruses designed to be sung loudly by the audience.	Moderate to Medium Fast (<i>Allegro Moderato</i>) 110-120 bpm. 4/4 Time Signature. Strong steady "Rock Beat".	Early Rock uses mainly Primary Chords (I, IV & V) but later Rock uses Auxiliary Chords, Chromatic Chords, Added Sixth Chords, First and Second Inversion Chords and Altered Note Chords. Power Chords (chords which don't contain the 3 rd e.g. C5) are a key feature of Rock Music and Modulations (in the Bridge section) became more common.	Performed by the lead singer with lyrical vocal phrases featuring repeated patterns. The lead Electric Guitar plays Strong Guitar Riffs based on short sections of the main melody.	Due to heavy amplification, Rock Music is designed to be performed very loudly – <i>Fortissimo (ff)</i> .
Rhythm	Texture	Articulation	Accompaniment	Form and Structure
Strong and Driving Rhythms. Incessant Drumming Patterns. Use of a heavy Bass Drum and continuation of use of Backbeat (emphasising the 2 nd and 4 th beats of the bar on the Snare Drum).	Homophonic (Melody and Accompaniment) Texture although thick Polyphonic Textures are often used when singers, guitars and drums play different rhythms at the same time.	Effects added to guitars: Distortion, Echo, Reverb, Overdrive, Delay, Wah-wah and Feedback (the noise made when a mic or guitar are too close to a speaker).	Lead singer accompanied by band that provide the accompanying rhythm, bass line and chords, although there are opportunities for virtuosic instrumental solos.	Verse-Chorus Form. Long Intros. Modulation in the Bridge (extended instrumental solo improvisation). Memorable Chorus. Rock Songs often of longer duration – some 7-8 minutes.
Vocal Performance and Technique	Technology	Venue	Artists, Bands and Performers	
Mainly male vocal lead-singer singing with a growly, raspy and husky-style of singing using very high pitch screams singing with Vibrato but not Falsetto.	Amplification technology developed – louder volumes. New sounds and effects: Distortion, Wah-wah, Delay, Overdrive. Multi-track recording created increasingly complex textures.	Louder amplification = increasingly larger audiences in stadiums, sports arenas and pop festivals. Performances feature special effects – light shows and pyrotechnics.	Led Zeppelin, The Who (Hard Rock) Black Sabbath, Iron Maiden (Heavy Metal) David Bowie, Queen, KISS (Glam Rock) Yes, Pink Floyd (Progressive Rock) Sex Pistols, Blondie (Punk Rock)	

Instrumentation – Typical Instruments, Timbres and Sonorities



The basis of a Rock Band is a Lead Singer, Drum Kit and Trio of Guitars: Lead Electric Guitar, Rhythm Guitar and Bass Guitar. The sound of Rock Music centres upon the Electric Guitar. Sometimes a Piano, Hammond Organ, Electric Keyboard/Synthesiser or Strings may be added or other (often strange!) timbres and effects!





<p>Week 1: Look, Cover, Write, Check.</p> 	<p>Week 2:</p> <p>Read through the KO and answer the following:</p> <ol style="list-style-type: none">1. Name two of the main rock n roll artists of the 50s:2. What is it called when the 2nd and 4th beats of the bar are emphasised?3. Name one brass instrument that featured in early rock n roll:4. What does the term forte mean?5. What is the ideal tempo for rock n roll music?	<p>Week 3: Word up</p> 
<p>Week 4: Read through the KO and answer the following:</p> <ol style="list-style-type: none">1. What type of bass line was common in rock n roll?2. What term is used to describe the flattened 3rd, 5th and 7th of a melody?3. What term describes the words of a song?4. What type of technology was used for the first time in the 1950s?5. What is the name of the group of singers who provide accompaniment for the main singer?	<p>Week 5: Map your mind.</p> 	



<p>Week 6: Read through the KO and answer the following:</p> <ol style="list-style-type: none">1. Rock music is played at which dynamic?2. Name three rock bands/artists from the 70s/80s:3. Name two different guitar effects (FX) common in the 70s/80s:4. Which type of rock music featured spangly suits and makeup?5. Which type of rock music has anarchy and rebellion at its heart?	<p>Week 7: Test your mind</p> 	<p>Week 8: Read through the KO and answer the following:</p> <ol style="list-style-type: none">1. Which type of rock music was the most experimental?2. What is the name of the noise made, when a mic or guitar are too close to a speaker?3. Name one hard rock band/artist:4. Name one progressive rock band/artist:5. Name one glam rock band/artist:
<p>Week 9: Flash cards</p> <p>Make sure you bring these into school to show your tutor and teacher</p> 	<p>Week 11:</p> <p>Key points from your assessments</p> <p>1</p> <p>2</p> <p>3</p>	<p>Week 12:</p> <p>Following the assessment:</p> <p>www</p> <p>ebi</p>
<p>Week 10:</p> <p>Read through the KO and your flash cards ready for the assessment next week</p>		



Handwriting practice lines consisting of 20 horizontal lines.



Handwriting practice lines consisting of 20 horizontal black lines.



Keywords		Extruded	Pasta is forced through a die to achieve a special pasta shape e.g. spaghetti, macaroni.
Gelatinisation	When flour is mixed with a liquid and heated the mixture will thicken, this is called gelatinisation . The starch grains swell and split open. It forms a gel when cooled.	Primary Processing	A conversion of raw materials into food commodities e.g. milling of wheat grain in to flour.
Starch	Starch is simply a long chain of sugar molecules all joined together – a bit like a bead necklace where each sugar molecule is a bead. When you put a starchy food in your mouth, it is broken down by an enzyme in your saliva called salivary amylase .	Secondary Processing	Converting primary processed foods into other food products, e.g. flour into biscuits.
Coagulate	Where eggs form a solid state due to heat being applied. The physical reaction is where the white goes from being transparent to opaque at 60 degrees. Coagulation is irreversible.	Fortification	The adding of vitamins and minerals to food to make them healthier. Some foods have to be fortified by law.
Caramelisation	When sucrose (sugar) is heated above its melting point it undergoes a physical change to produce caramel. This happens more readily without water; however syrups will caramelize with rapid heating.	Macronutrients	A class of chemical compounds which humans consume in the largest quantities.
Function	How an ingredient works in relation to the end product. One example is how flour builds bulk in bread or pastry.	Micronutrients	Nutrients required in small quantities to facilitate a range of physiological functions.
Fibre (NSP)	A complex carbohydrate that is not digested in the small intestine. Can be in soluble and insoluble form.	Energy	The strength the body needs to function and sustain physical and mental activity.
Balanced Diet	A diet which provides all the necessary nutrients in the correct amount to meet the body's needs.	Water Soluble Vitamins	Vitamins B and C that dissolve in water.
Basic Metabolic Rate (BMR)	The number of kilojoules the body uses to stay alive each day.	Fat Soluble Vitamins	Vitamins A, D, E, K that dissolve in fat.



Gelatinisation

Starch granules do not dissolve in liquid.

The liquid must be heated so the particles will swell up.

At 60°C the liquid is absorbed by starch. The particles swell up to 5x their size.

At 80°C the particles burst, releasing starch molecules.

These trap water so the liquid thickens. We call this gelatinisation.

Gelatinisation is complete at 100°C when all the particles have burst.

When the gel cools it becomes solid.

The functions of eggs in cooking:

- ❖ Binding ingredients together
- ❖ Coating foods to protect them during frying
- ❖ Thickening liquids
- ❖ Enriching dishes
- ❖ To aerate/trap air
- ❖ To glaze
- ❖ To garnish
- ❖ Used as the main protein source in a dish

The Milling of Wheat

Clean – This stage removes everything that isn't wheat with water and magnets.

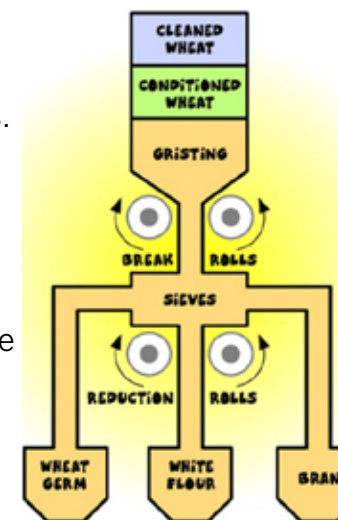
Conditioning – Soaking the wheat in water softens the bran (outer coat). This makes it easier to break down into the different types of flour later on.

Gristing – This stage mixes in other wheats to make the correct blend for the flour.

Break rolls – The break rolls break down the wheat to remove the bran and end up with white flour.

Sieves – Sieves remove anything other than white flour.

Reduction rolls – Reducing the grain size to make a fine white flour.

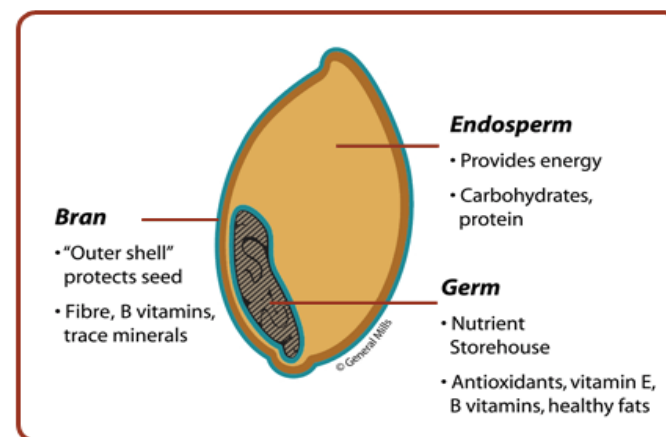


Fortification

Foods are fortified to improve and enhance their nutritional content. Some foods are fortified with additional nutrients by law to improve the health of the nation.

Fortified Food	Nutrients
White flour	Calcium
Margarine	Iron and Vit B complex
Breakfast cereals	Vitamins A and D

The Structure of the Wheat grain





Week 1: Look, Cover, Write, Check.



Week 2: Read through the KO and answer the following:

Explain in detail the process of gelatinisation.

Week 3: Word up





Week 4: Read through the KO and answer the following:

Give examples of the use of eggs in cooking. What is coagulation?

Week 5: Map your mind.





<p>Week 6: Read through the KO and answer the following:</p> <p>How is wheat turned into flour?</p> <p>Explain the steps of the milling process.</p>	<p>Week 7: Test your mind</p> 	<p>Week 8: Read through the KO and answer the following:</p> <p>Using an example, explain caramelisation.</p>
<p>Week 9: Flash cards</p> <p>Make sure you bring these into school to show your tutor and teacher</p> 	<p>Week 11: Keyword Spelling Test</p> <p>Coagulation</p> <p>Caramelisation</p> <p>Gelatinisation</p> <p>Micronutrients</p> <p>Macronutrients</p> <p>Primary</p> <p>Secondary</p> <p>Soluble</p> <p>Metabolic</p> <p>Vitamins</p>	<p>Week 12:</p> <p>Following the assessment:</p> <p>www</p> <p>ebi</p>
<p>Week 10:</p> <p>Read through the KO and your flash cards ready for the assessment next week</p>		







Keywords		Serif	A slight projection finishing off a stroke of a letter in certain typefaces, e.g., TIMES NEW ROMAN	Paper Sizes and Weights	
Vector Graphic	Vector graphics are graphical representations of mathematical objects such as lines, curves, polygons (controlled by nodes).	Polyline	The Polyline tool is used to draw shapes. To form a shape, you click to add a point and then, releasing the mouse, pull the handle in the desired direction and click to add the next point.	A5 = 148 x 210 mm	Paper is measured in GSM (Grams Per Square Metre).
		Fountain Fill	A <i>fountain fill</i> is a smooth progression of two or more colours that adds depth to an object.	A4 = 210 x 297mm	A3 = 297 x 420mm
CAD	CAD refers to the use of computer software in the design of things such as cars, buildings, machines, etc. CAD is an abbreviation for 'computer aided design'.	Bitmap Graphic	A bitmap is a digital image composed of a matrix of dots measured in dpi (dots per inch). When viewed at 100%, each dot corresponds to an individual pixel on a display. In a standard bitmap image, each dot can be assigned a different colour. The standard resolution for an internet bitmap image is 96 dpi.	Research and 5Ws	
				Who is the target market?	
				Why is this needed?	
				Where will it be seen/used?	
				What must go in it?	
				When will it be used?	
				How is it manufactured?	
CNC	Computer Numerical Control. This means a computer converts the design produced by Computer Aided Design software (CAD), into numbers.	Manufacturing	Is the production of products for use or sale using labour and machines, tools, chemical and biological processing, or formulation, and is the essence of secondary industry.	Colour Categories and Terminology	
		CAM	Computer-aided manufacturing (CAM) is an application technology that uses computer software (CAD) and machinery to facilitate and automate manufacturing processes.	RGB (Colour Fusion)	
				CMYK (Colour Separation)	
Net	Flat plan of 3D item.	Iterative	Relating to repeating a process to continuously improve an outcome. Explore – Create – Evaluate.	PMS (Pantone Matching System)	
				Designers	
Sans-Serif	A style of type without serifs, e.g., Arial	Evaluation	Using the design brief and specifications you test your product to see if it is FIT-FOR-PURPOSE.	Robert Sabuda - Matthew Reinhart - Charles and Ray Eames - Philippe Starck - Margaret Calvert - James Dyson	



Seven Principles of Design

Designers each have their own idea of the basic principles of design, but these can generally be categorised into the following topics:

- **Balance**
- **Proximity**
- **Alignment**
- **Emphasis/Hierarchy of importance**
- **Repetition/Consistency (Includes Typeface, Colour and Size)**
- **Contrast**
- **White Space**

Production Methods

There are five main types of production system used in manufacturing. Each one is suitable for a different scale of production.

- **One-off production** is when **only one** of the product is made.
- **Batch production** is when a **set quantity** is made.
- **Mass production** is when a **very large number** of the product is made, usually on a production line.
- **Continuous-flow production** is when **many thousands** of products are made.
- **Just in time production** is when a company **only buys enough stock to cover its immediate needs**.

The History of Type

It is thought that the typographical principle, that is the creation of a complete text by reusing identical characters was realised as long ago as 1850 BC in Greece.

The Phaitos Disc

A disc fired from clay that has hieroglyphic like symbols stamped into it. It was discovered in 1908 and has been the subject of great debate since.



Modern Movable Type

At the same time as the mechanical printing press, movable type was invented in mid - 15th century Europe by the German goldsmith Johannes Gutenberg.

Serif

conservative and highly legible.

Scripts

hand written.

Sans-Serif

casual and legible.

novelty

immediate tone setting and hard to read.



Week 1: Look, Cover, Write, Check.



Week 2: Read through the KO and answer the following:
What are the seven design principles?

Week 3: Word up





Week 4: Read through the KO and answer the following:
Explain 'one off production' give an example of a product that would be produced in this method of production.

Week 5: Map your mind.










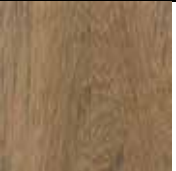

<p>Week 6: Read through the KO and answer the following:</p> <p>Explain 'batch production' give an example of a product that would be produced with this method of production.</p>	<p>Week 7: Test your mind</p> 	<p>Week 8: Read through the KO and answer the following:</p> <p>Explain 'mass production' give an example of a product that would be produced in this method of production.</p>
<p>Week 9: Flash cards</p> <p>Make sure you bring these into school to show your tutor and teacher</p> 	<p>Week 11: Keyword Spelling Test</p> <p>Evaluation</p> <p>San-serif</p> <p>Iterative</p> <p>Proximity</p> <p>Alignment</p> <p>Consistency</p> <p>Typeface</p> <p>Hierarchy</p>	<p>Week 12:</p> <p>Following the assessment:</p> <p>www</p> <p>ebi</p>
<p>Week 10:</p> <p>Read through the KO and your flash cards ready for the assessment next week</p>		







Technology/Resistant Materials Year 9 Learning Cycle 2

Name	Image	Use
Tri Square		A tri square is a woodworking tool used for marking and measuring a square piece of wood. The square refers to the tool's primary use of measuring the accuracy of a right angle (90 degree angle); to try a surface is to check its straightness or correspondence to an adjoining surface.
Vice		A vice holds material in place while cutting, and sanding takes place
Marking Gauge		A marking gauge is sometimes known as a scratch gauge. It is used in woodworking and metalworking to mark out lines for cutting or other operations. The purpose of the gauge is to scribe a line parallel to a reference edge or surface.
MDF		MDF – MDF or Medium Density Fibreboard is an engineered wood product made by breaking down hardwood or softwood residuals into wood fibres, combining it with wax and a resin binder, and forming it into panels by applying high temperature and pressure. Large-scale production of MDF began in the 1980s, in both North America and Europe.
Softwood Pine		Pine (Softwood) wood is a frequently used material for fine and economic construction projects alike. The properties of pine make it a popular choice because of its easy cultivation and widespread availability. Pine wood is used in the construction of furniture, cabinetry, window frames, panelling, floors and roofing. When Pine wood is grown, it can be cultivated on plantations to promote certain qualities in the wood like higher resin content.
Hardwood Teak		Teak - Teak wood is a dense, close-grained type of hardwood that is sourced from the Tectona grandis tree, native to south and Southeast Asia. Teak is originally golden in colour and has a smooth grain and texture. It's high in natural oils and rubber, meaning it's strong, durable, and virtually impervious to extreme weather conditions and rotting, even if left untreated.
Coping Saw		A coping saw is a type of bow saw used to cut intricate external shapes and interior cut-outs in woodworking or carpentry. It is widely used to cut mouldings to create coped rather than mitre joints.


Vacuum Forming Process

Vacuum forming is a simplified version of thermoforming, where a sheet of plastic is heated to a **forming** temperature, stretched onto a single-surface mould, and forced against the mould by a **vacuum**. This process can be used to **form** plastic into permanent objects such as turnpike signs and protective covers.


Keywords

		Butt joint	A butt joint is the most simplest of joints and although simple and easy to construct, is not very strong due to the lack of surface area.
Tongue and Groove	Tongue and groove is a method of fitting similar objects together, edge to edge, used mainly with wood, in flooring, parquetry, panelling, and similar constructions.	Steel rule	Metal ruler with measurements on both sides showing Centimetres and Millimetres. The metal rule has a flat edge where the measurements begin at 0
Deciduous	Term/category used for Hardwood trees	Mitre Joint	A Mitred butt joint is a butt joint but instead of the joints being at right angles, the joints are at 45-degree angles.
Coniferous	Term/category used for Softwood trees.	Wastage	Part of the material that is shaded, this indicates it is to be removed.
Tenon Saw	A saw used for cutting straight lines in wood.	Mortise and Tenon	Mortise and tenon joints are strong and stable joints.
Finger Joints	Type of joint where opposite material is cut from two pieces of wood. These then slot together.	Pins	Small steel devices that are sharpened at one end and have a flattened or rounded head.
Pin Hammer	Small hammer used for hammering pins into material.	Dovetail	Dovetail joints are finger-like joints between two pieces of wood enable a tight, strong, and long-lasting fit.
G-Clamp	A G shaped clamp used to hold products in place while they adhere or	Grit paper	Or Silicone Carbide Paper. It is an abrasive paper that removes material to improve aesthetic qualities. Grit paper is available in different sizes, the smaller the number, the rougher the paper. The higher the number the smoother the paper.

PVA – Poly-Vinyl Acetate

	Poly-Vinyl Acetate, sometimes known as wood glue, is a water-based adhesive. It is from the polymer or plastic family. It is mainly used on porous materials such as wood, paper, textiles, and some building stone such as sandstone. It is odourless, non-toxic and white in colour, although it does dry colourless.
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JIGS

	A jig acts as a template that shows the user where to drill. It is used for accuracy in the manufacturing of products as the placement of drill holes can be replicated on duplicate products. An example of where a jig is used is on kitchen cupboards. It can be used to ensure the handles are in the same place on all doors.
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Week 1: Look, Cover, Write, Check.



Week 2: Read through the KO and answer the following:
What is a Jig, why are they needed in some processes or the production of certain products?

Week 3: Word up





Week 4: Read through the KO and answer the following:
Explain why a mitre joint could be stronger than a simple butt joint?

Week 5: Map your mind.





<p>Week 6: Read through the KO and answer the following:</p> <p>What is PVA?</p> <p>What would PVA be used for?</p> <p>What materials can you use PVA with?</p>	<p>Week 7: Test your mind</p> 	<p>Week 8: Read through the KO and answer the following:</p> <p>What are the differences between hardwood and softwood?</p>
<p>Week 9: Flash cards</p> <p>Make sure you bring these into school to show your tutor and teacher</p> 	<p>Week 11: Keyword Spelling Test</p> <p>Mitre</p> <p>Mortise</p> <p>Dovetail</p> <p>Coniferous</p> <p>Deciduous</p> <p>Acetate</p> <p>Vinyl</p> <p>Template</p> <p>Carbide</p> <p>Silicone</p> <p>Cultivated</p>	<p>Week 12:</p> <p>Following the assessment:</p> <p>www</p> <p>ebi</p>
<p>Week 10:</p> <p>Read through the KO and your flash cards ready for the assessment next week</p>		







CHARACTERISTICS and FUNCTIONS of THREE TYPES of MUSCLE

Cardiac - Non-fatiguing.

Involuntary - Heart (only).

Voluntary Fatiguing - Biceps, Triceps, Quadriceps, etc.

TYPES of SKELETAL MUSCLE CONTRACTION

Isometric - No change in muscle length. Static holds, e.g. iron cross.

Isotonic - Muscle changes length. E.g. bicep curl.

Concentric - Muscle shortens.

Eccentric - Muscle lengthens. Slowing and braking movements.

ANTAGONISTIC PAIRS

Muscles cannot push so are 'paired' with others that pull in the opposite direction.

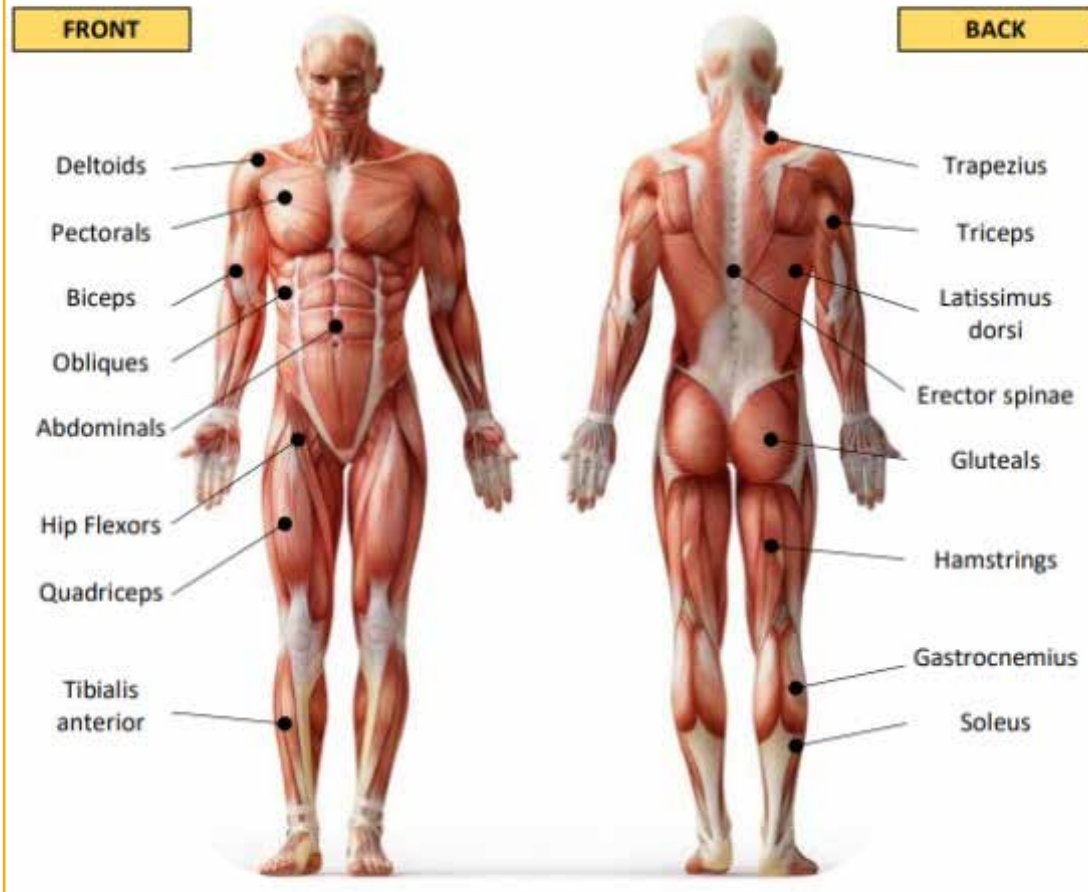
Agonist: muscle that contracts to produce movement (also called prime mover).

Antagonist: muscle that relaxes (if contracted would make opposite joint movement).

Synergist: muscle that assists the agonist (in force production).

Fixator: muscle that assists the agonist (by stabilising the muscle's origin).

MAJOR SKELETAL MUSCLES



Muscles

CHARACTERISTICS and FUNCTIONS of THREE TYPES OF MUSCLE

Muscle Characteristics Example Cardiac Non-fatiguing, involuntary Heart (only) Skeletal Fatiguing, voluntary Biceps, Triceps, Soleus, etc. Smooth Involuntary, slow contraction Internal organs, blood vessels.



The Careers Challenge

Personal Development Year 9 Learning Cycle 2



The Careers Challenge

Log into your Careerpilot account
www.careerpilot.org

Careerpilot

Use the website to research THREE different jobs you would like to know about.

Job title	Job 1:	Job 2:	Job 3:
Average salary			
Working hours			
Day to day tasks			
Qualifications needed			
Routes into this job			

- Do the Job Quiz on Careerpilot, create a skills profile, watch a careers video, plan your qualifications and more!
- Talk to people about the jobs they do- family, teachers, sports coaches....

Signposting and Support



If you are worried, have questions, or concerns, about anything at all then we are here to help. Talk to your Tutor, your Head of Year, a trusted adult or a health professional outside of school.

You can report a safeguarding or behaviour concern on the school website at anytime.

Childline
www.childline.org.uk

NHS
www.nhs.uk

NHS Live Well
www.nhs.uk/live-well

British Board of Film Classification
www.cbbfc.co.uk

Talk to Frank
www.talktofrank.com/get-help

Young Minds
www.youngminds.org.uk

Mind
www.mind.org.uk

Careerpilot
www.careerpilot.org

How many can you tick off?

I was kind to someone

I helped at home

I was a good friend

I am took on a challenge

I watched a great film

I made someone laugh

I did some exercise

I had an early night

“ Why fit in when you were born to stand out ”
Dr Seuss

