Learning Cycle 1

Year 8 Homework Booklet

"Knowledge is power. Information is liberating. Education is the premise of progress, in every society, in every family"

Nelson Mandela

THE KING ALFRED SCHOOL
An Academy

Name:

Tutor:

Belong Believe Be Proud

THE PRIORY LEARNING TRUST

Your Homework Booklet

Learning Cycle 1

This is your homework booklet, in your homework booklet you will find a knowledge organiser for each subject that you are going to study in learning cycle 1, these are a summary of the most important pieces of information that you need to know.

You will be expected to learn all this information and complete activities in your workbook.

Contents

THE PRIORY LEARNING TRUST

Learning Cycle 1

Your Homework Booklet

At TKASA, we place a great emphasis on the importance of reading in order to accelerate the development of your vocabulary and fluency in communication. Not only that, a good book will teach you more about the world around you and help you empathise with others. We recommend a minimum of 20 minutes of reading per day. Have a look at the reading list below for some inspiration

The Hunger Games
Suzanne Collins

Northern Lights
Philip Pullman

The Fault in Our Stars
John Green

The Lord of the Rings
J. R. R. Tolkien

Twilight
Stephenie Meyer

To Kill a Mocking Bird
Harper Lee

When Hitler Stole Pink Rabbit
Judith Kerr

Maggot Moon
Sally Gardner

Shug
Jenny Han

Jane Eyre
Charlotte Brontë

A Street Cat Named Bob
James Bowen

Stargirl
Jerry Spinelli

Roll of Thunder Hear My Cry
Mildred D. Taylor

Swallows and Amazons
Arthur Ransome

The Wheel of Surya
Jamila Gavin

The Earthsea Quartet
Ursula K. Le Guin

Never Say Die
Anthony Horowitz

Treasure Island
Robert Louis Stevenson

Fly-By-Night
Frances Hardinge

Mortal Engines
Philip Reeve

Geek Girl
Holly Smale

Flour Babies
Anne Fine

My Family and Other Animals
Gerald Durrell

Holes
Louis Sachar

Cirque Du Freak
Darren Shan

Cow Girl
G R Gemin

The Girl Who Drank the Moon
Kelly Barnhill

Learning Cycle 1

Knowledge Quiz

Your teacher will quiz you on your knowledge organiser 3 times each learning cycle to check how well you are doing your homework.
The 'Mark' box must be used to record your score from each quiz.

	Maths	English	Science	Geography
QUIZ 1	/	/	/	/
QUIZ 2	/	/	/	/
QUIZ 3	/	/	/	/

	History	MFL	Drama	Music	PE
QUIZ 1	/	/	/	/	/
QUIZ 2	/	/	/	/	/
QUIZ 3	/	/	/	/	/

	Art	DT	Comp	RS
QUIZ 1	/	/	/	/
QUIZ 2	/	/	/	/
QUIZ 3	/	/	/	/

Learning Cycle 1

How to use your knowledge organiser for homework

The Knowledge Organisers are designed to help you learn a wide range of knowledge which in turn will mean you are more prepared for your lessons as well as the new style GCSEs that you will sit in the future.

For homework you should use your knowledge organiser to complete one of our accepted strategies in your workbook you should either

- **Write**
- **Mind Map**
- **Transform**

Do not just copy into your workbook!

Here are some tips on how you can use your workbook

Your tutor will check your workbook each week

Learning Cycle 1

Look, cover Write, check, Correct

First
Look through and read the information on a section of your knowledge organiser

Then
Cover the section so you can no longer see the information

History

Cycle 1 in History will focus on: An introduction to studying history, a depth study enquiry called *why did William win the Battle of Hastings?* and a short enquiry into why the Church was so important in medieval times.

Key Words and Definitions	
Chronology	The order in which events happened
Primary Source	Something from the time being studied for example if you were studying The Battle of Hastings a shield from the Saxon shield Wall would be primary source
Interpretation	A view of the past created from primary sources e.g. a museum exhibition about the Battle of Hastings is an interpretation.
Cause	A reason why something happened
Consequence	A result of an event or change
Significance	A measure of how much impact an event, person or change has had.
Saxon	Most of the English people before 1066
Norman	People from Normandy, France e.g.William the Conqueror
Tactics	A planned action to help you achieve success
Cavalry	Soldiers on horseback
Infantry	Soldiers on foot
The Church	Christian organisation led by the Pope. England was a catholic country until the 16th century

Interpretations are versions of history. Authors, film makers, and museum designers are all producers of interpretations. There are different interpretations of the same event or person.

Topic 1 What is History?

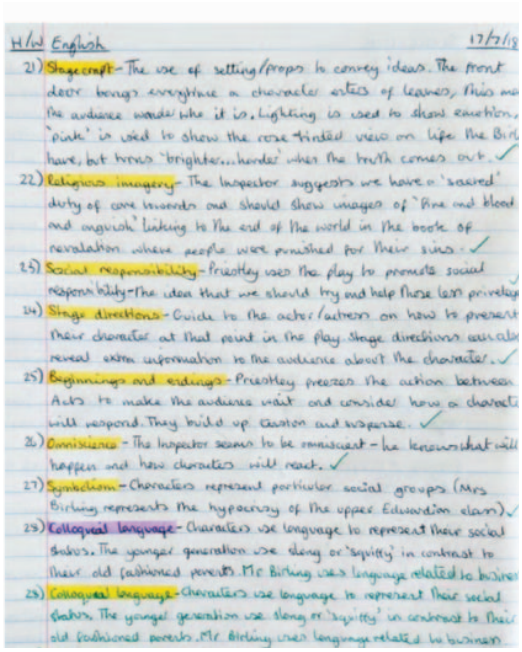
History is finding out about the past by using the evidence that has been left behind. It is also about asking questions and sorting out answers. In history we also look at how why interpretations are created

Here are the different **time periods** we use to divide up British History:

55BC	-	410AD	**Roman Britain**
410	-	1066	**Saxon and Viking Britain**
1066	-	1485	**Medieval Britain**
1485	-	1603	**Tudor Britain**
1603	-	1714	**Stuart Britain**
1714	-	1837	**Georgian Britain**
1837	-	1901	**Victorian Britain**
1901	-	1910	**Edwardian britain**

The five ways a historian can measure significance

1. Did the person or event **matter to the people at the time**?
2. Did the person or event **affect** a **large number** or a **small but important group** of people?
3. Did the person or event **cause change** and if so, **how great** was the change?
4. Was the change **long lasting or short term**?
5. Is the person or event **still seen as important** today?



Next
Try and write out the key definitions or facts that you need to know

Now
Uncover the section of your knowledge organiser and check how correct you were

Finally
Correct anything that you wrote down that was incorrect

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Learning Cycle 1

Look, cover Mind Map, check, Correct

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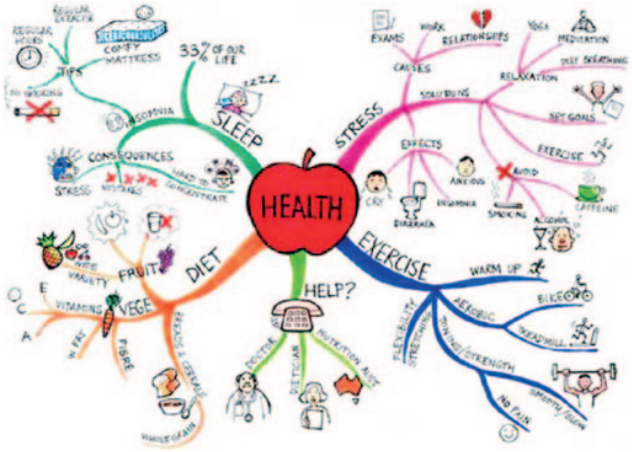

Next
Create a mind map that maps out everything from your knowledge organiser using keywords, colour and images

Now
Uncover the section of your knowledge organiser and check how correct you were

Finally
Correct anything that you wrote down that was incorrect

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Kings	Play	Chess	On	Fine	Glass	Sets
K	P	C	F	K	G	S
I	H	L	A	I	E	P
N	Y	A	M	N	N	E
G	L	S	I	G	U	C
D	U	S	L	D	S	I
O	M		Y	O		E
M				M		S

Next
Transform the information on the knowledge organiser into either a mnemonic or series of images

Now
Uncover the section of your knowledge organiser and check how correct you were

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Correct anything that you wrote down that was incorrect

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Learning Cycle 1

bedrock learning®

HOW BEDROCK WORKS

Bedrock Vocabulary is an online programme that teaches you the academic words you need to succeed at school and beyond, while encouraging reading, boosting literacy, and improving learning outcomes across the curriculum.

Bedrock is self-marking and adapts to your individual needs, making it easy for you to use independently.

Once per fortnight, you will have a Bedrock lesson in school.

Once per fortnight, complete at least one lesson at home as part of your English homework. Record the topic you completed and any test scores in your homework book.

My Bedrock timetable

My English library Bedrock lesson is on:

I will complete my Bedrock homework on:

1. To log in, go to https://app.bedrocklearning.org/ on any device.
2. Make sure the Student tab is selected.
3. Enter your username and password.
4. Click Learn!

Username:

Password:

Access Code:

Dear Parents,

You can also register for an account to monitor your child's progress.

Make your parent account

1. Go to https://app.bedrocklearning.org/
2. Click the Parent/teacher tab.
3. Click Parent sign up.
4. Enter your child's last name, access code, and your details. The access code is provided by your child's school, and allows you to link your account with your child's. Bedrock can't issue access codes - only your child's school.
5. You'll be sent an email containing your username. Click the link in the email.
6. Click the orange Show password button. Make sure you remember your username and password, as you'll need them each time you log in.

Log in

1. Go to https://app.bedrocklearning.org/
2. Click the Parent/teacher tab.
3. Enter your username and password and click Login.

Learning Cycle 1

Safeguarding

Speaking to people you trust - friends, family and teachers or support staff at school

Art therapy/ reading

Eating well

Exercising - doesn't have to be at the gym, a walk on the beach? After school club

Social media detox - or stay away from the ones that give you the most anxiety body image - instagram?

Listening to music

Watch your favourite film or tv programme

Self care pamper - facemask?

Spend time with your pets

Try a new hobby or skill?

Organise your time

Learning Cycle 1

Useful Numbers

Samaritans - To talk about anything that is upsetting you **116 123**

Mindline Somerset - **01823 276 892**

National Suicide Prevention Helpline UK - Offers a supportive listening service to anyone with thoughts of suicide. **0800 689 5652**

Text "**SHOUT**" to **85258** to contact the **Shout Crisis Text Line**

Mind provides confidential mental health information services **0300 123 3393**

The Mix provides judgement-free information and support to young people aged 13-25 on a range of issues **0808 808 4994**

FRANK (National Drugs Helpline) - National drugs helpline offering general advice and information. **0300 123 6600**

In Charley's Memory is a charity that offers one-to-one counselling for young people aged 11-25 in North Somerset and Somerset. **01278 557490**

Young Somerset is the largest youth work charity in Somerset and our mission is to put young people first. **01278 722100**

Safeguarding

Around the school there are posters with members of TKASA Safeguarding Team.

If you are worried about something or someone please contact one of the Safeguarding Team

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English

Year 8: Cycle one in English will focus on: reading and understanding the novel 'Trash'. You will focus on HOW the writer uses structure to convey the topics covered in 'Trash'.

Quiz One: Key words: STRUCTURE	
People (Perspective)	1st, 2nd, 3rd person narrator
Move (Move from inside to outside world)	Move from an inside setting to an outside setting vice versa
Very (Viewpoint)	Age, gender, status of narrator / character.
Fast (Focus/ Foreshadowing)	Focus moves from one thing to another. Foreshadowing – warning of a future event
Compared (Character/ contrast)	Introduction of a new character. Contrast – different to something else
To (Time shift)	Change of time – including flashback
Slow (Setting)	Where the story takes place
Zombies (Zooming in or out)	High focus on a particular aspect

Identifying a range of these structural techniques will help you to understand how the writer creates interest for the reader.

The mnemonic: People Move Very Fast Compared To Slow Zombies will help you to remember the key structural techniques.

Learn these structural techniques so that you can improve your writing.

English

Quiz 2: Learn the sentence starters for this important writing structure.

P Point	The writer uses language to create the effect that…
E Evidence	"Short QUOTATION."
T Technique	The powerful _____ is an example of this.
E Explain	This shows This also shows Another thing it shows
R Reflect	**Reflect:** The writer is trying to teach us that…

Quiz 3: vocabulary. Learn to spell and to use these words in a sentence

Adversity	Difficult or unpleasant situation
Corruption	Dishonest and deceitful
Arduous	Difficult
Connotations	Ideas or feelings the word makes you think of.
Resilient	Able to recover quickly from difficult situations

QUIZ 3 continued: Learn the steps to the super sentence and write your own example.

Step 1: 3 words or ideas.

Step 2: Add a colon :

Step 3: Explain your words

Step 4: Add a simile

Example super sentence.

Money, corruption, winning at any cost: these man made problems fester exponentially in a toxic atmosphere like a nuclear power plant ready to blow.

Maths

Cycle 1 in **Maths** will develop your knowledge and understanding of ratio and proportion, you will become confident in using ratio notation and be able to divide an amount in a given ratio. You will build on your knowledge of fractions from Year 7 and learn how to multiply and divide fractions. You will also look at plotting coordinates in all four quadrants and investigate the equation of a straight line. .

RATIO AND GRAPHS – Key words and definitions	
ratio	a ratio is the comparison of two values of the same kind
simplify	to reduce the numbers in the ratio to the smallest numbers possible
proportion	two ratios of equal value
share	divide into groups
quantity	how many or how much, a total
coordinates	coordinates are written as ordered pairs of numbers
axis	the labelled lines on a graph
quadrant	the four quarters of the coordinate plane
numerator	number above the line of a fraction, showing the number of parts of the whole
denominator	the bottom number in a fraction showing the number of parts the whole is divided into
improper fraction	the numerator is larger than or equal to the denominator

Topic 1

Simplify ratios and divide in a given ratio.

To reduce a ratio to its **simplest form**, you need to divide all numbers in the ratio by the same thing. It is in its simplest form when there is nothing left you can divide by.

EXAMPLE

Vicky has 15 red beads and Jonny has 10 red beads.
Write the number of Vicky's beads to Jonny's as ratio in its simplest form.

1. Write the numbers as a ratio **15 : 10**
2. Now simplify (÷ 5) **3 : 2**

EXAMPLE

Kim and Chris share £600 in the ratio 4:11.
How much does Chris get?

1) **ADD UP THE PARTS:**
The ratio 4:11 means there will be a total of 15 parts: 4 + 11 = 15 parts

2) **DIVIDE TO FIND ONE "PART":**
Just divide the total amount by the number of parts: £600 ÷ 15 = £40 (= 1 part)

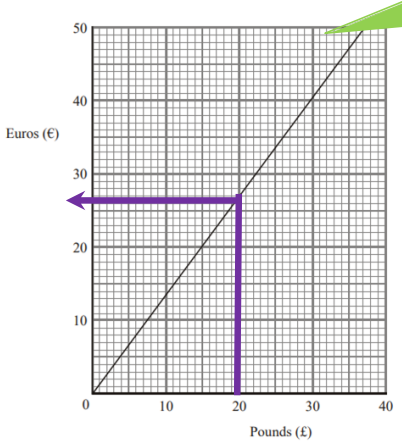
3) **MULTIPLY TO FIND THE AMOUNTS:**
We want to know Chris's share, which is 11 parts: 11 parts = 11 × £40 = £440

Maths

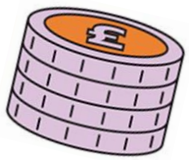
Topic 2:.

Multiplicative Change

Conversion Graphs help you to convert one unit of measure into another, for example you can convert units of currency using the graph below.



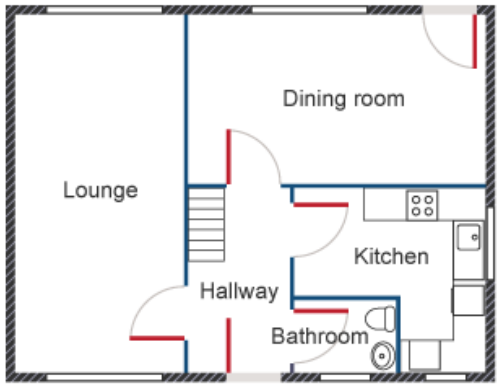
To convert £20 into Euros you would draw a straight line up from £20 to meet the line and across the number of euros.
£20 ≈ €27



You can use **direct proportion** to find products which are best value for money, this is particularly helpful when looking at the offers in a shop.

Maps also use scales so that they are able to show a large area on a piece of paper.

The scale on this map shows 2cm = 200m.

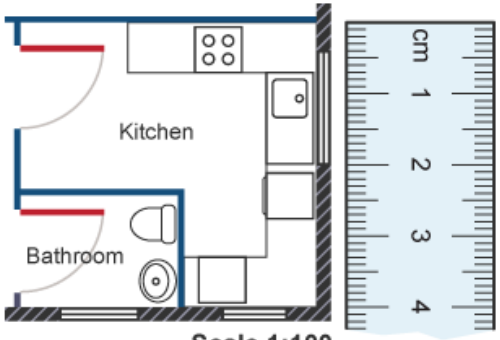


Scale 1:100

Floor plans for house designs are drawn on a smaller scale, this is so that the designer can check that each room will fit together in the space that they have.

The scale used on this plan means that every 1 cm on the page is 100 cm (or 1 m) in real life.

When you are converting using a scale drawing , you can measure the part of the picture on your scale drawing, for example, the kitchen here is 4 cm, the scale is 1cm = 100cm, therefore the length of the real kitchen would be 4 x 100 = 400 cm (or 4m) long.



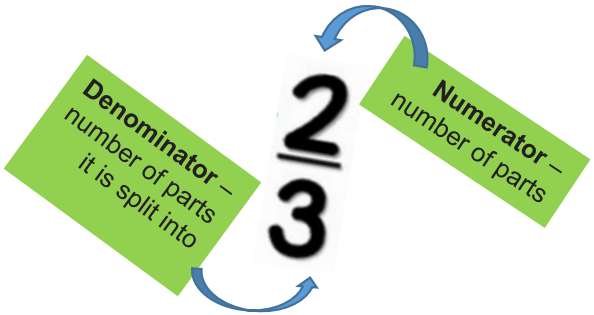
Scale 1:100

Maths

Topic 3

Multiply and dividing fractions

Parts of the fraction:



You need to be able to convert between **improper fractions** and **mixed number fractions**, to do this, you need to:

1. Divide the **numerator** by the **denominator**
2. Write down the whole number result
3. Use the remainder as the new numerator over the denominator.

Multiplying Fractions:

$$\frac{3}{5} \times \frac{4}{7} = \frac{3 \times 4}{5 \times 7} = \frac{12}{35}$$

To multiply fractions you need to multiply the numerators and then multiply the denominators.

If you need to multiply a fraction by an integer, you will need to turn the integer into a fraction, see the worked example below:

$$5 \times \frac{3}{4} = \frac{5}{1} \times \frac{3}{4} = \frac{15}{4} = 3\frac{3}{4}$$

5 turns into $\frac{5}{1}$

Don't forget you may need to convert your fraction into a mixed number.

Dividing Fractions:

$$\frac{2}{3} \div \frac{1}{4}$$

Step 1: Turn the second fraction upside down, this is now the reciprocal

$$\frac{2}{3} \times \frac{4}{1}$$

Step 2: Multiply the first fraction by the reciprocal of the first

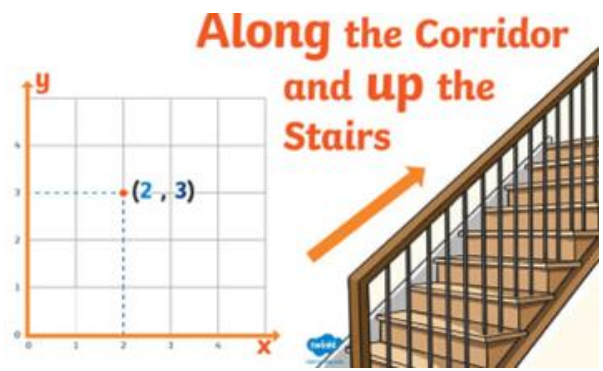
$$\frac{2}{3} \times \frac{4}{1} = \frac{8}{3}$$

Step 3: Simplify the fraction (if needed)

$$\frac{8}{3} = 2\frac{2}{3}$$

Topic 4

Plot coordinates in all four quadrants.



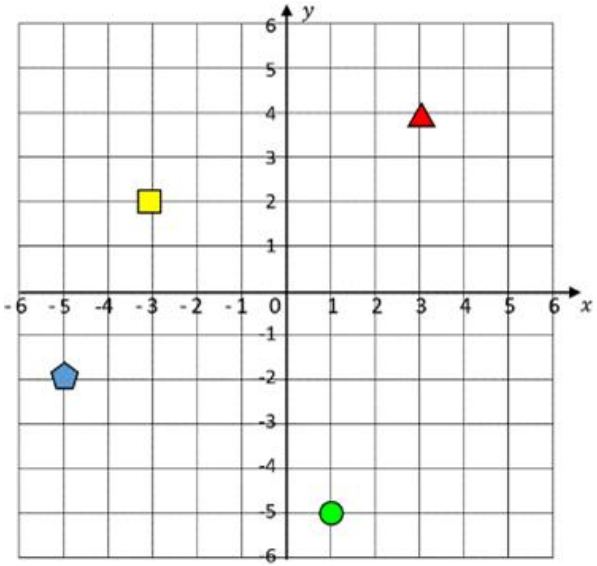
In the diagram opposite, each shape has a coordinate pair which tells you where it is located.

The red triangle has coordinates (3, 4)

The yellow square has coordinates (-3, 2)

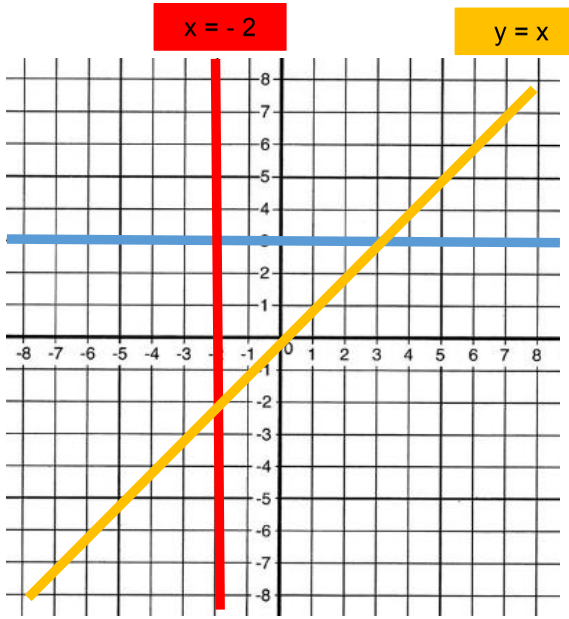
The blue pentagon has coordinates (-5, -2)

The green circle has coordinates (1. -5)



Topic 5

Recognise lines in the form y = kx.



When you are asked to draw the graph for an **equation**, it is best to start with a table of values to give yourself some **coordinates** to plot.

Equation of a straight line:

$$y = mx + c$$

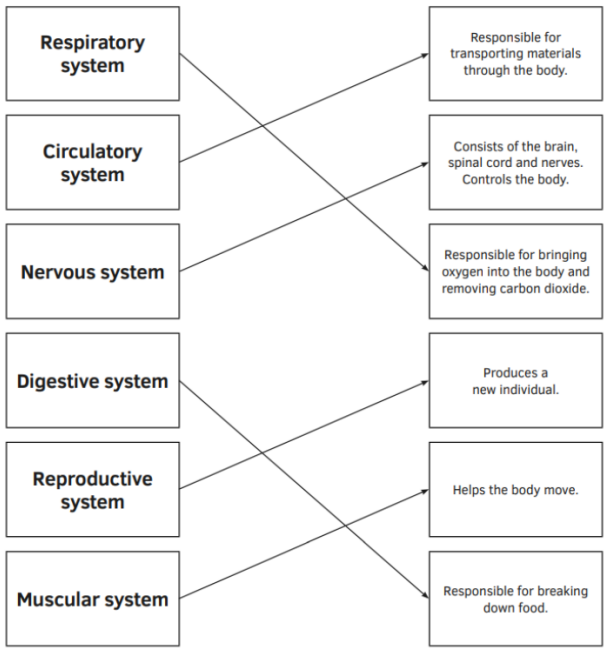
Gradient – how steep it is

Intercept – where is crosses the y axis

Science

Learning cycle 1 in Science will focus on exploring Tissues and Organs (Biology) and Chemical Changes (Chemistry).

Cell- the building blocks of life.
Tissue- A group of similar cells working together
Organ- A group of similar tissues working together
Organ system- Two or more organs working together



Animals

What animals need	Why animals need it	What animal cells do with it
Air	As a source of oxygen.	Animal cells use oxygen for respiration to provide energy for life processes.
Water	To store and transport dissolved substances.	Animal cells are filled up with it.
Food	For nutrition and respiration.	Animal cells use it to get energy, and to make new cells and materials.

Plants

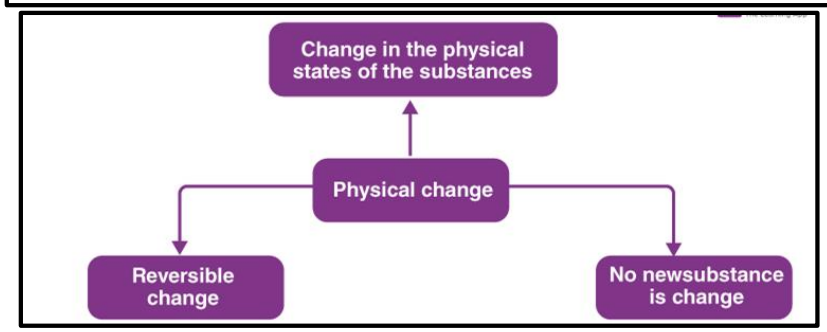
What plants need	Why plants need it	What plant cells do with it
Air	As a source of carbon dioxide.	Plant cells use it in a chemical reaction to make food.
	As a source of oxygen.	Plant cells use it for respiration to provide energy for life processes.
Water	To store and transport dissolved substances.	Plant cells are filled up with it.
	For nutrition.	Plant cells use it in a chemical reaction to make food.
Light	Plants need to absorb energy.	The energy is used for a chemical reaction in cells that makes food.
Nutrients from soil	For nutrition and growth.	Plant cells use nutrients to make new cells and materials for growth.

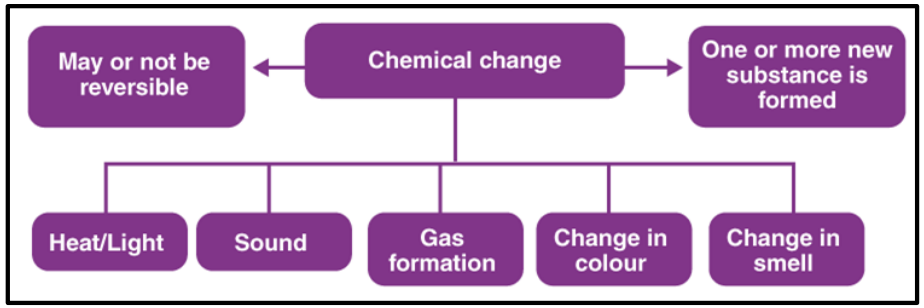
Tissues and Organs (Biology)

Chemical changes and physical changes

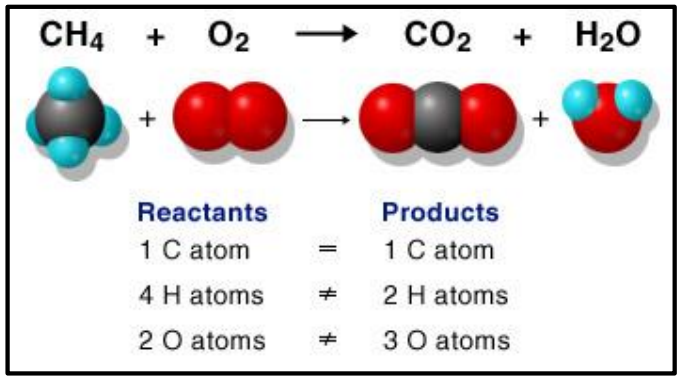
Chemical changes happen when chemical reactions occur. They involve the formation of new chemical elements or **compounds**.

Physical changes do not lead to new chemical substances forming. In a physical change, a substance simply changes physical **state**, eg from a solid to a liquid.



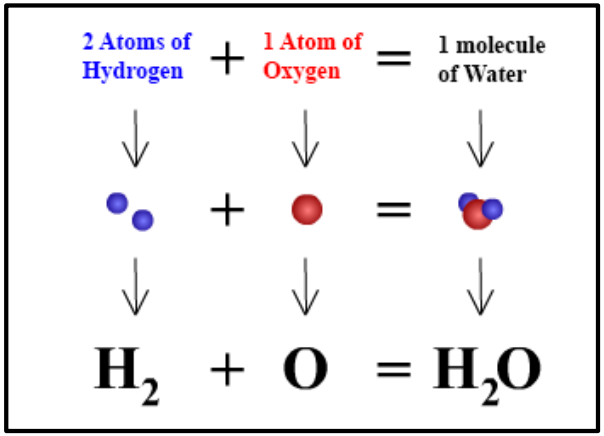


Chemical Changes (Chemistry)



- Thermal means heat. Decomposing is the process of breaking down.
- Thermal decomposition is a chemical reaction that happens when a compound breaks down when heated.

- Oxidation is when a substance reacts and combines with oxygen.
- Combustion (burning) is an example of an oxidation reaction.



History

Cycle 1 Knowledge Organiser: Empire and the enslaved

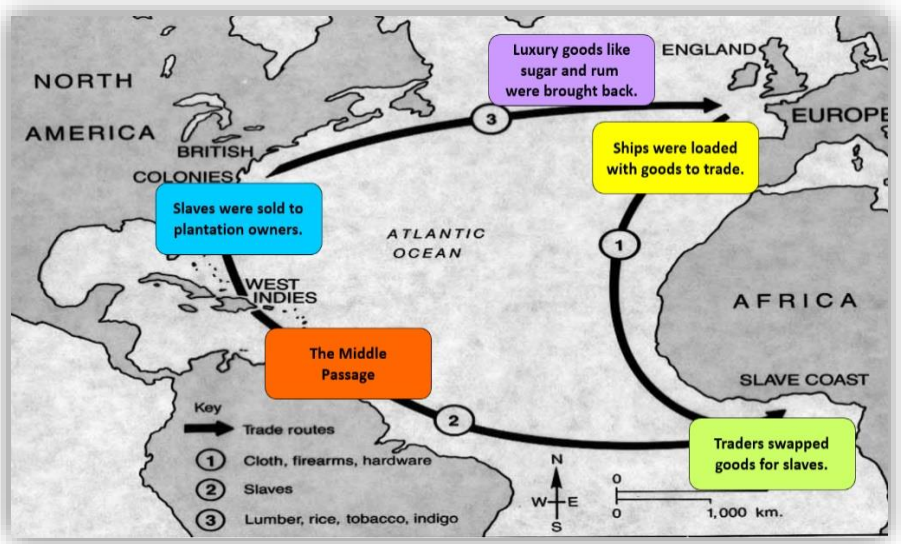
Year 8 Cycle 1 in History will focus on the theme **'Empire and Enslaved people'.** The three enquiries are: **What lay behind the horrors of the slave trade? What is the story of abolition and legacy?** and **How did the British Empire impact on the lives of the people in it?**

Key words and definitions	
sugar cane	a plant which is crushed and boiled to produce sugar
trade	buying and selling
plantations	large farm where sugar is grown
merchant	a person who buys and sells products
empire	a group of countries ruled over by one powerful country
slave	a person who is the property of another
docks	areas where ships stop to unload their cargo
Triangular trade	a trading route between Britain, Africa and America
Middle Passage	the terrifying middle journey of the triangular trade route where slaves were transported from Africa to America
East India Company	a British trading company which developed trade with the Far East
abolitionist	a group who wanted to abolish (get rid of) slavery and the slave trade
colony	a country or area which is owned by a powerful empire
The Raj	the name given to India under British rule

TIER 2 Vocabulary
discriminate = treating people differently because of a person's race, sex, age or disability
credible = something which can be believed
contrary/contradiction = fact or opinion opposite to one stated

Enquiry 1: What lay behind the horrors of the slave trade?

- The slave **trade** was all about **making money**.
- Sugar was a luxury, known as **'white gold'** and came from America and the West Indies.
- The slave trade worked by a **triangular trade system** (see diagram).



- The triangular trade **began** in the **British ports of Liverpool, London** and **Bristol**. Ships were loaded with textiles, swords, guns, gunpowder, iron, copper and other goods to trade overseas.
- The **population** of **cities** in Britain **grew** as people **moved** to get involved in the businesses which had come about because of the slave trade: ship builders, rope, sail and anchor makers, innkeepers, bankers and sugar refiners.

- The **second part** of the trade was in **Africa**. The ships from Britain sailed to the west coast of Africa where they **exchanged** the **goods** they had brought with them for people – **black slaves**. The great African kingdoms like the **Songhai didn't take part** in the trade but other kingdoms did. One of these was the **Benin** who became very **rich** by capturing people from other tribes and trading them for guns and other goods. This **caused war** between the African tribes.
- The slaves were taken on a **horrific journey** across the Atlantic called the **Middle Passage**. When the slaves reached America, they were **sold** to **plantation** owners who grew sugar or cotton.
- Slaves did **back breaking work** in high temperatures; they were the property of their masters so had **no rights**. If they tried to **rebel**, they could have their noses slit, ears cut off or faces branded; whipping was a common punishment.
- The **final** part of the trade was the **return to Britain** with the **luxury goods** which could then be sold for **profit**. Sugar, cotton and tobacco were all products of the slave trade.
- The **Abolition** Society was formed in 1787 to try to end the slave trade. Many people including a British MP called **William Wilberforce** and a former slave called **Olaudah Equiano** spoke out about ending the trade.
- In **1807** the British Parliament **banned** the slave trade; in **1833** all slaves in British lands were **freed** but it took till 1863 for American slaves to be freed.
- Laws can changer reasonably quickly but **it takes much longer to change attitudes**.

Enquiry 2: What is the story of abolition and legacy?

Slavery ended in British colonies in 1834. The explanation used to be that the good people of Britain rejected slavery, but now a more complex story has emerged.

1. There were resistance groups in Jamaica and Haiti. Their successes encouraged other enslaved people.
2. Black abolitionists formed a group called the Sons of Africa. Their members included Olaudah Equiano and Ottobah Cugoano. This group held public meetings, lobbied MPs and wrote to newspapers.
3. Some religious groups opposed slavery. Quakers helped Thomas Clarkson to collect evidence about the horrors of slavery.
4. William Wilberforce MP introduced abolition bills in parliament.
5. Profits began to fall on the sugar plantations.
6. The slave trade was abolished in 1807.
7. Slavery still existed which caused more resistance and more campaigning which put pressure on parliament leading to the 1833 act which abolished slavery.

Enquiry 3: How did the British Empire impact on the lives of the people in it?

Five short stories about the impact of the Empire in India

1. **The Prime Minister's Granny** is about Lord Liverpool who was our Prime Minister from 1812 to 1827. His grandmother was an Indian woman who had met his grandfather through his work for the East India Company.
2. **The Bristol statue** is the story of Rammohan Roy who worked with a Christian evangelist, William Carey to ban an ancient Indian custom called Sati.
3. **The Long Forgotten Hedge** is the story of how the East India Company created a salt tax and how this created a major problem in India because of smuggling salt. The hedge was the solution! It became a symbol of Britain's determination to uphold the laws they had passed in India.
4. **The tragic tale of the memsahib** is the story of Miss Williams who was the daughter of a colonel in the East India Company army. She was caught up in an event known as the Indian Mutiny which was a reaction to British rule in India.
5. **The Member of Parliament for Finsbury in 1892** is about Dadabhai Naroji. He arrived in London in 1855 and later set up the Indian National Congress. He was well respected and in 1892 he was elected as the MP for Finsbury.

Cycle 1 Knowledge Organiser

Geography

Cycle 1 in Yr 8 Geography will focus on the topic of dynamic development. They will learn what development is, how it affects people's lives and how it can be measured. Uganda will be studied as an example of a LIC.

Key words and definitions	
Development	Improving, moving forward
Development indicator	A statistic that shows level of development
Income	How much money is coming into a home or place
HDI	Human Development Index
Quality of life	How good a person's life is
Misconception	Something you think you know but are wrong
Single story	Only looking at a place in one way
LIC	Low income country
HIC	High income country
Absolute poverty	Not enough money to have even basic living standards
Relative poverty	Less money than other people have in a place
Trade	Exchange of goods
Gender inequality	Treating people differently if they are male or female
Aid	Helping someone
Intermediate technology	A simple idea to make life better in a place i.e. a well
SDGs	Sustainable Development Goals
Collaborate	Working together
Coordinate	Bring different elements together
Data	Information collected

Topic 1: What is development?

The level of development of a place changes over time. Development used to be measured by only looking at money.

Now as well as economic (money) indicators we also look at social indicators (quality of life). The United Nations now uses HDI which is made up of social & economic indicators such as:

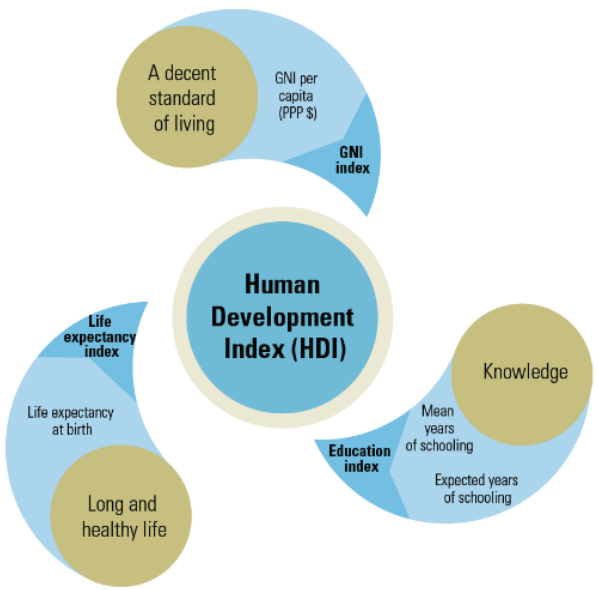
- GNP per capita
- number of years schooling
- life expectancy

The measures range from 0 to 1. An HDI between 0.8 and 1 is high and between 0.6 and 0.4 is low.

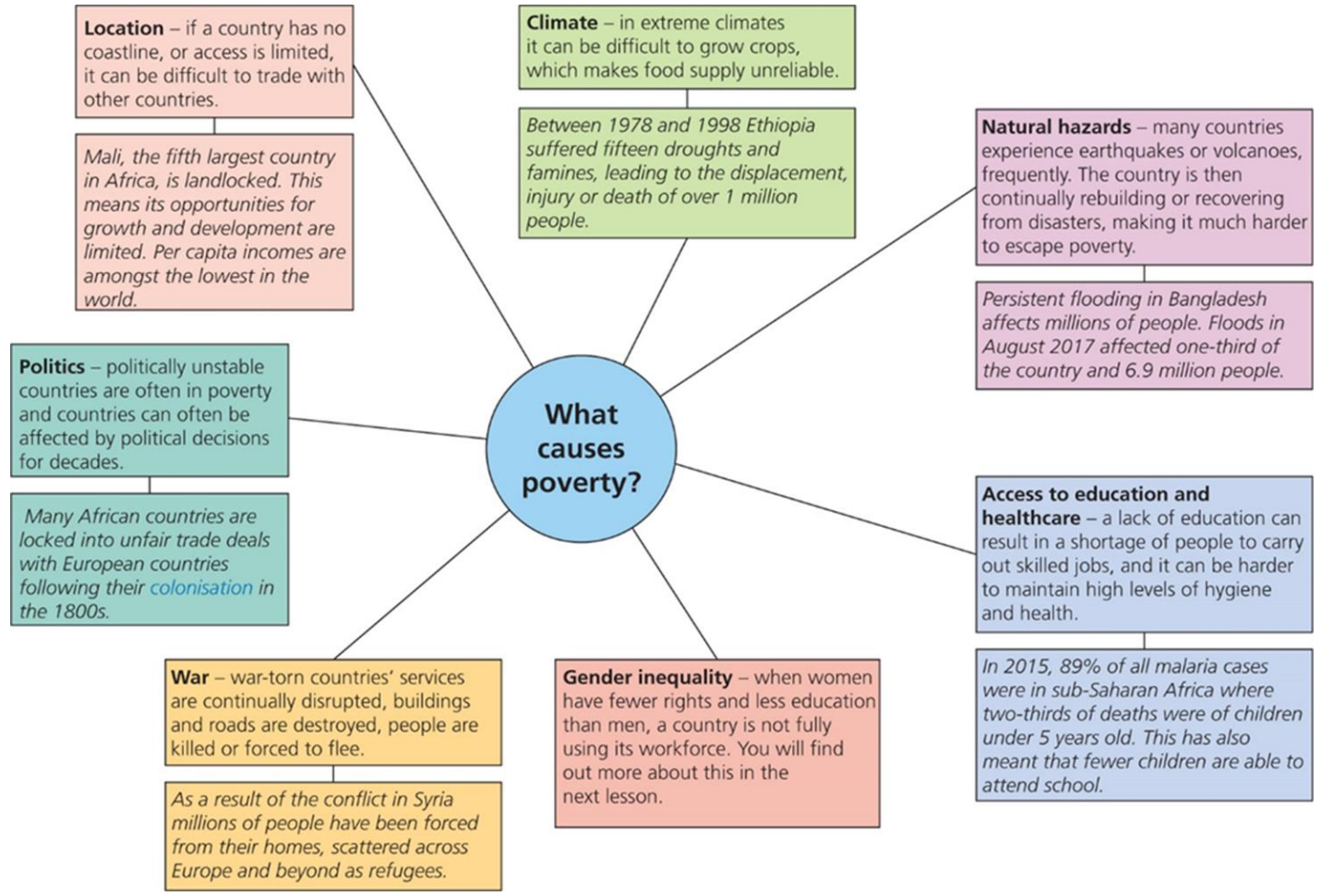
Uganda is a LIC and has a low level of development – the HDI is 0.516.

The UK is a HIC and has a high level of development – the HDI is 0.849.

However, we need to look beyond the single story – there are both rich and poor people in Uganda and the UK and people aren't always happier just because they are richer.



Topic 2: What causes poverty?



Topic 3: How can poverty be reduced?

Poverty reduction goes far beyond giving money to people as aid.

Fairer trade deals between LICs and HICs could make a huge difference.

Most people prefer aid to help them improve their own lives – intermediate technology helps.

LICs have contributed less to climate change than HICs but are more at risk from it. HICs need to support LICs in dealing with this to prevent quality of life declining.

The sustainable development goals are targets set by the United Nations to help countries around the world to develop. The 17 goals include no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water & sanitation, affordable and clean energy, decent work and economic growth, responsible consumption and climate action.

Religious Studies

Year 8 Cycle 1 Knowledge Organiser

Cycle 1 in RS will focus on the **beliefs and practices** of Hinduism.

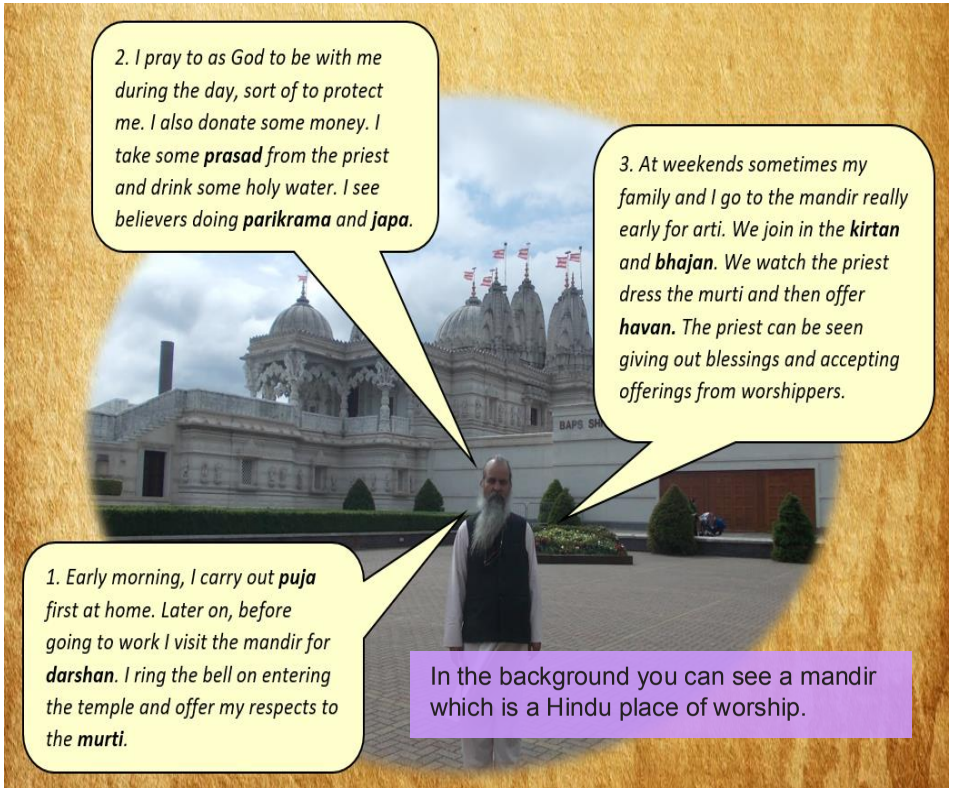
Key words and definitions	
Diwali	festival of light to celebrate the new year
samskara	a stage of life – there are 16 in the life of a Hindu
Ramayana	story of Rama and Sita remembered in the festival of Diwali (festival of light)
Holi	festival marking the coming of spring
shruti	Hindu holy book written down as four vedas.
smriti	stories which help Hindus understand the shruti
Aum	Hindu symbol – the sound of the universe
mandir	a Hindu temple
garbha griha	a shrine found in a mandir
Brahman	one supreme God
Sacred Thread	a ceremony where a child enters adulthood.
Vedas	the four books of the shruti
puja	worship
parikrama	circling the shrine
darshan	seeing the deity (gods)
prasad	offering and eating sacred food
bhajan and kirtan	hymns and chants
murti	image of God
havan	sacred fire ceremony
Trimuti	three images of God – Brahma, Vishnu, Shiva
samsara	reincarnation: birth, life, death, re-birth

DID YOU KNOW? The symbol for Aum is drawn on a baby's tongue in honey to encourage a sweet natured child.

The origins of Hinduism

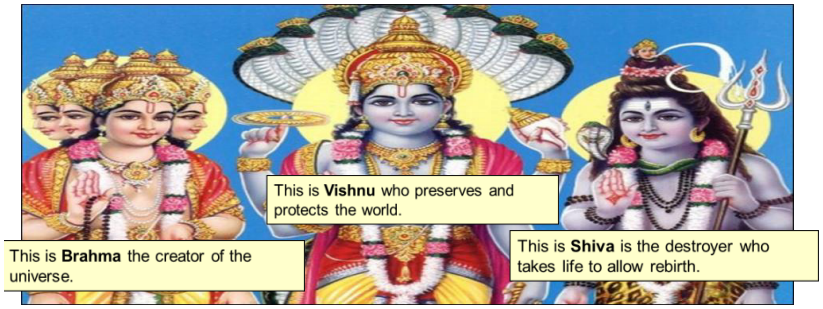
Hinduism began in the area of the Indus Valley in India. Hinduism was not started by a single person but was instead a collection of ideas, beliefs and traditions. Many Hindus refer to their faith as Sanathan Dharma which means eternal spiritual path having no beginning and no end.

How do Hindus worship?



What do Hindus believe about God?

Hindus fundamental belief is in the One Supreme God called Brahman. Hindus believe that God is so great an idea, it is beyond our understanding. To help people understand, Hindus break down the idea of God into different parts called deities. Each deity is represented by an image or statue. The Trimurti means three images of God:



The Trimurti

Brahma	*Brahma created the universe.* *He has four heads to see all.* *He has four arms to show power.* *He carries beads as a reminder to pray.* *His book represents the Vedas.*
Vishnu	*The preserver and protector.* *He is blue like the sky to demonstrate he is everywhere.* *Came to earth in many forms (avatars) to help people.* *Three lines on his forehead to show he is part of the Trimurti.* *He carries four objects – conch shell, the sun, the lotus flower and the mace.*
Shiva	*Shiva has a third eye to show wisdom.* *Cobra necklace shows power over dangerous creatures and Shiva's power of destruction and recreation.* *Three lines in white ash across the forehead represent superhuman power and wealth.* *Shiva destroys and then brings new life*

Why are festivals so important to Hindus?

There are lots of Hindu festivals. The festivals a Hindu celebrates will depend on the part of India they originate from and the tradition they follow.

Diwali celebrates the Ramayana.

Diwali is an 8 day festival of light to celebrate New Year.

Festivals remember stories from Hindu scriptures about gods and goddesses - the epic stories. Other festivals remember the lives of a holy person.

Festivals are fun occasions with food, parties and clothes, but they have a serious side too - the stories have important religious and moral teachings. They help people to remember the scriptures better and inspire people to worship.

Kumbha Mela is the festival of the jug! At this festival in Prayag, India, pilgrims (people who travel to a special place) meet at a place where the River Ganges, Yamuna and Sarasvah meet. Hindus believe the river washes away their sins and gives them purity, wealth and fertility.

Holi is a festival which marks the coming of spring. It usually happens in March. It is really colourful with singing, dancing and people throwing coloured water and powders over each other. The purpose is to being everyone together.

MFL

Learning Cycle 1 will enable you to talk about your personality and friendships.

You will explore French music and fashions and will begin using the perfect (past) and near future tenses.

Time phrases

la semaine dernière	*last week*
l'année dernière	*last year*
avant hier	*the day before yesterday*
hier	*yesterday*
aujourd'hui	*today*
demain	*tomorrow*
le lendemain	*the day after*
la semaine prochaine	*next week*
l'année prochaine	*next year*

Key verbs (past participle)

faire (j'ai fait)	*to do (I did)*
manger (mangé)	*to eat (eaten)*
jouer (joué)	*to play (played)*
porter (porté)	*to wear (worn)*
rigoler (rigolé)	*to have fun (had)*
écouter (écouté)	to listen (listened)
regarder (regardé)	*to watch (watched)*
acheter (acheté)	*to buy (bought)*
chanter (chanté)	*to sing (sung)*
danser (dansé)	*to dance (danced)*

Making past participles

-ER verbs	remove ER, add É
-IR verbs	remove IR, add I
-RE verbs	remove RE, add U

Avoir (to have)

j'ai	*I have*
je **n'**ai **pas**	*I have **not***
il/elle a	*he/she has*
il **n'**a **pas**	he **doesn't** have
on a	*we have*
on **n'**a **pas**	*we **don't** have*
ils/elles ont	*they (m/f) have*
ils **n'**ont **pas**	they **don't** have

Aller = to go

je vais	*I'm going*
tu vas	*you're going*
il/elle va	*he/she is going*
on va	*we are going*
ils/elles vont	*they are going*

*To talk about what you're **going to** do, combine **aller** with another verb in the infinitive ↓*

Je vais *I'm going* Il va *He's going* Elle va *She's going* On va *We're going* Ils vont *They're (m) going* Elles vont *They're (f) going*	faire *to do* regarder *to watch* aller *to go* jouer *to play* porter *to wear*	du VTT *mountain biking* du skate *skateboarding* du bowling un film *a film* une émission *a TV programme* en ville *into town* au café *to the café* au foot *football* un pantalon *trousers* une chemise *a shirt*

Être (to be)

je suis	*I am*
je **ne** suis **pas**	*I am **not***
il/elle est	he/she is
il **n'**est **pas**	he is **not**
on est	we are
on **n'**est **pas**	we are **not**
ils/elles sont	*they (m/f) are*
ils **ne** sont **pas**	*they are **not***

Les adjectifs (Adjectives)

drôle	*funny*
sympa	*nice*
pénible	*annoying*
timide	*shy*
égoïste	*selfish*
intélligente	*intelligent*
patiente	*patient*
paresseux (se)	*lazy*
sportif (ve)	*sporty*

Adding detail

très	*very*
assez	*quite*
vraiment	*really*
aussi	*also*
cependant	*however*

Les vêtements (Clothes)

un jean	*jeans*
un pantalon	*trousers*
un sweat à capuche	*hoodie*
un pull	*jumper*
un polo	*polo shirt*
un short	*shorts*
une jupe	*skirt*
une chemise	*shirt*
une veste	*jacket*
une robe	*dress*
une cravate	*tie*
une ceinture	*belt*
des bottes	*boots*
des chaussures	*shoes*
des chaussettes	*socks*
des baskets	*trainers*

MFL

Key words – COMPLEX and ELABORATE

To elaborate (extend) on your writing you should try to include extra details such as intensifiers (e.g. very) and connectives (e.g. and/or).

To make your work more complex you can use *negatives* (e.g. isn't, hasn't). You can also include the past and future tenses (e.g. has done / is going to do)

Les couleurs (colours) (m/f)

blanc / blanche	*white*
noir / noire	*black*
bleu / bleue	*blue*
vert / verte	*green*
gris / grise	*grey*

rouge (*red*), rose (*pink*), jaune (*yellow*), orange (*orange*) marron (*brown*)

← Remember you need to make some colours **agree** in gender.

← These don't change in the feminine

Mon père **est** drôle et sympa.	My dad **is** funny and nice.
M**on frère** est sportif.	M**y brother** is sporty.
Mon **meilleur ami** est patient	My **best friend (m)** is patient
Ma mère est **très** intélligente.	My mum is **very** intelligent
Ma soeur est pénible **et** paresseuse	My sister is annoying **and** lazy
Ma **meilleure amie** est sportive	My **best friend (f)** is sporty
Mes parents **sont** sympas	My parents **are** nice
Mes **grands-parents** sont gentils	My **grand-parents** are kind
Mes cousins **écoutent** du rap	My cousins **listen** to rap
Ma cousine va à un concert	My cousin (f) is going to a concert
Ma demi-soeur est timide	**My half sister** is shy
Mon demi-frère écoute **beaucoup** d'artistes **différents**	My half brother listens to **a lot** of **different** artists
Mon oncle **aime** le rock	My uncle **likes** rock
Ma tante **n'aime pas** la musique classique	My aunt **doesn't like** classical music

Writing task 1:

Write a description of your family (or make one up).

- Include at least one positive and negative thing about **you**
- Use an adjective about someone else (e.g. il/elle est...)
- Talk about more than one person (e.g. mes parents *sont*...)
- Include a negative using ne...pas *and* an intensifier

Translation task ↑

Choose to translate into English (easy) or French (harder).
LOOK at one line of the text at a time
COVER the language you're translating into
WRITE your translation
CHECK and correct mistakes with purple pen

Writing task 2:

Imagine you're going to a birthday party at the weekend.
Write 2 sentences for each of these bullet points:

- Whose party it is
- What you're going to wear (2+ things)
- Who you're going with
- Describe their outfit

Opinions

j'aime	*I like*
je n'aime pas	*I don't like*
j'adore	*I love*
je déteste	*I hate*
je préfère	*I prefer*
j'aimerais	*I would like*

All your LC1 vocab is also on **Quizlet:**

Musical Elements

Tempo	The speed of the music
Dynamics	How loud or quiet the music is
Pitch	How high or low the notes are
Rhythm	Note values, and the patterns of different notes
Meter	Time signatures - how many beats are in each bar

Tempo

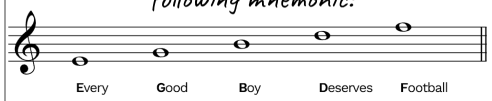
Term	Definition
Largo	Very Slow
Adagio	Slow
Andante	Walking Pace
Allegro	Fast
Vivace	Very Fast

Dynamics

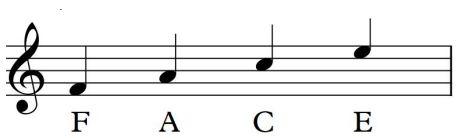
Term	Symbol	Definition
Pianissimo	*pp*	Very quiet
Piano	*p*	Quiet
Forte	*f*	Loud
Fortissimo	*ff*	Very loud

Pitch

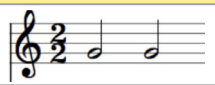
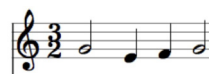
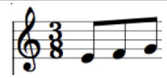
To remember notes on the lines, use the following mnemonic:



To work out notes below the ledger line, you should count onwards from the musical alphabet, e.g. the letter before E is D.



Meter

Time Signature	Beats in the bar
2/2 	2 minim beats per bar
3/2 	3 minim beats per bar
3/8 	3 quaver beats per bar

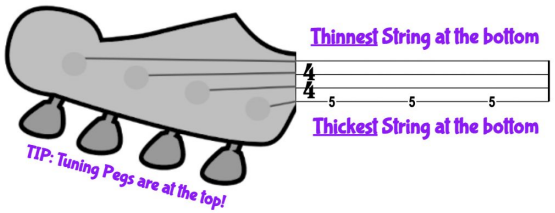
Rhythm

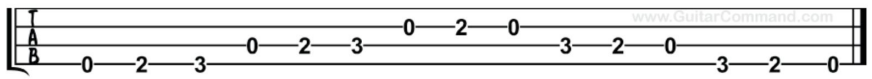
	John	1 crotchet beat (1 beat) note
	Su-san	X2 quaver (½ beat) notes
	An-ge-la	X2 semi-quaver (¼ beat) and X1 quaver (½ beat) notes

When composing, always remember to ensure each bar has the correct number of beats

Vocabulary Alert! Ensure - Make sure something happens.

Bass Guitar

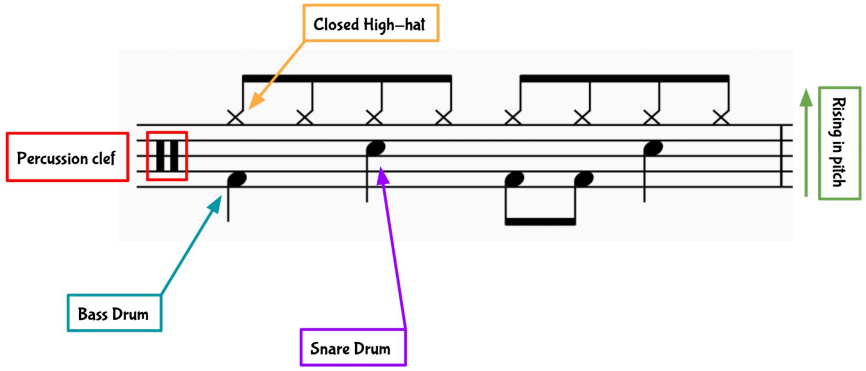




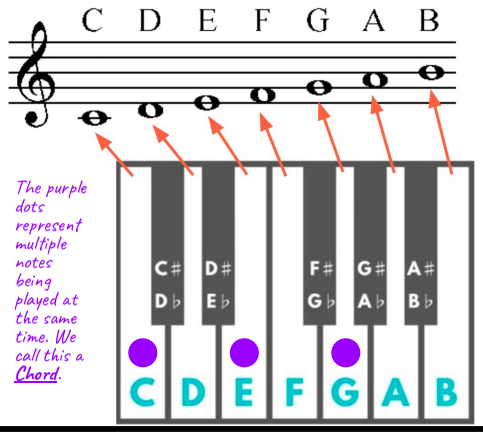
Reading TAB – Tips & Tricks:

- The numbers represent the frets.
- Frets are run vertical along the guitar.
- TAB is read upside down.
- The four lines running horizontally represent the strings on the guitar

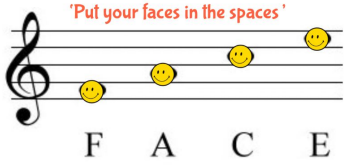
Drum Kit



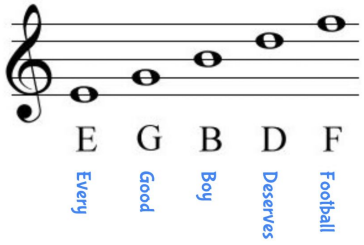
Piano



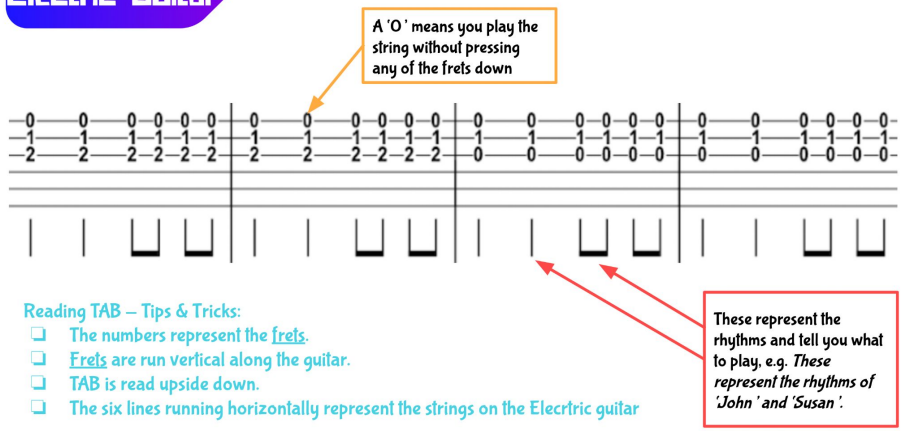
For notes in the spaces, remember
'Put your faces in the spaces'



For notes on the lines:



Electric Guitar



Reading TAB – Tips & Tricks:

- The numbers represent the frets.
- Frets are run vertical along the guitar.
- TAB is read upside down.
- The six lines running horizontally represent the strings on the Elecrtric guitar

Drama

Cycle 3 in Drama will focus on: Using your performance skills to perform a scripted piece of drama.

Stage Positioning

The positions are from the actors perspective.

The highest status point of the stage is downstage centre. This is called the 'point of command'.

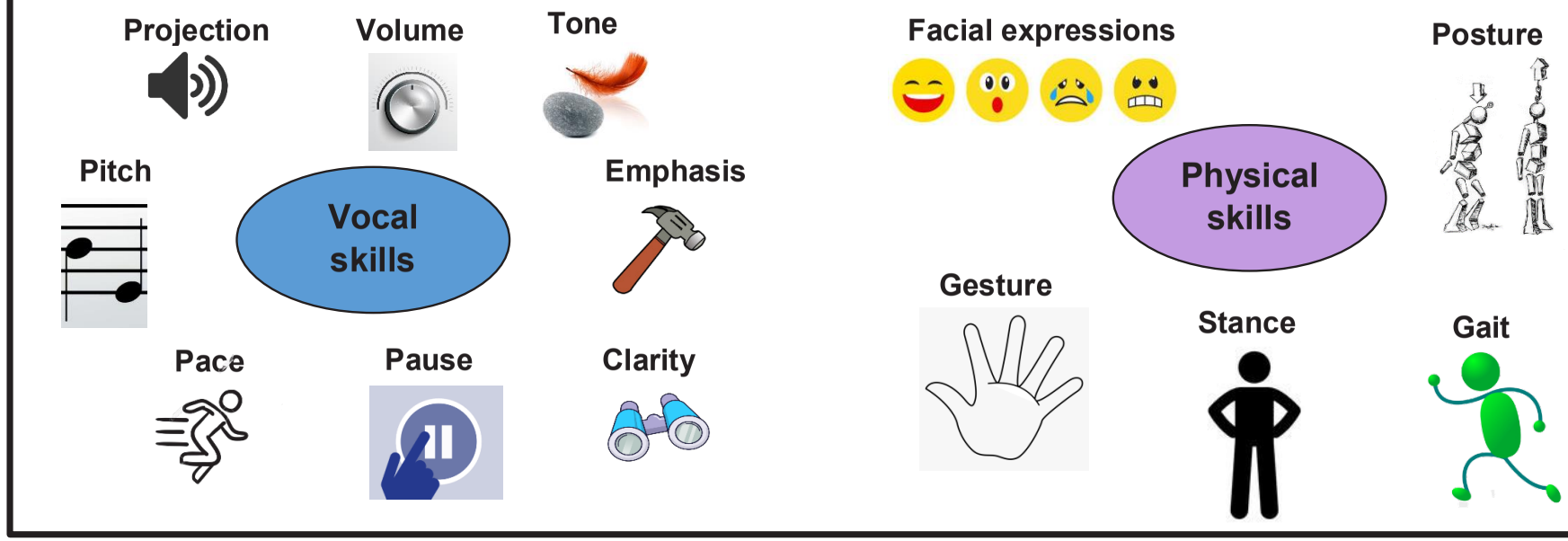
Using a variety of space and levels on the stage helps you to make the performance more engaging for the audience.

You must consider audience sightlines when blocking. This means making sure no set or performers are blocking anything/anyone.

Spellings to learn this cycle:

Script	Physicality	Pace	Posture
Performance	Vocal	Emphasis	Body language
Audience	Volume	Clarity	Gesture
Sightlines	Projection	Pause	Dialogue
Characterisation	Tone	Facial expressions	Rehearsal

PERFORMANCE SKILLS



How to read a script

At the start of each line, it will indicate which character is saying this dialogue.

Stage direction which tells us how the actor should say the dialogue.

Tom: What are you doing here Sarah?

(Sarah sits down on a chair and folds her arms)

Sarah: I'm not leaving until I know the truth.

Tom *(angrily):* You can't just walk in here and demand answers!

Sarah: Yes I can, and I will.

The words the characters say are called 'dialogue'. Each bit of dialogue is called a 'line'.

Stage direction which tells us what action the actor will do on stage.

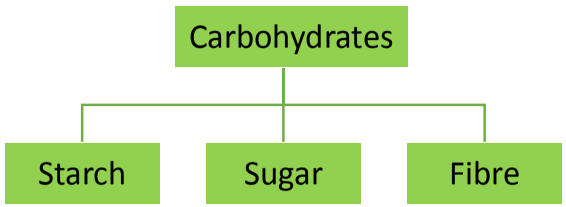
Design and Technology

This Learning cycle in Food covers:
carbohydrates, special diets and cooking methods.

Food Cycle Knowledge Organiser

Quiz 1 General Knowledge | **Carbohydrates**

Key words and definitions:	
Nutrient	**A chemical in foods that your body can absorb and use**
Carbohydrate	**A macronutrient used for energy**
Starch	**A complex carbohydrate used for long term energy**
Sugar	**A simple carbohydrate used for short term energy**
Fibre	**A type of complex carbohydrate used to fill you up and clean out your digestive system**
Sources	**Foods that contain high amounts of a nutrient**
Functions	**The jobs nutrients do in your body**
Excess	**If you have to much of a nutrient in your diet**
Deficiency	**If you don't have enough of a nutrient in your diet**
Allergy	**A medical condition, results in an allergic reaction which might be damaging to your health or even fatal.**
Intolerance	**A reaction to a food that will cause some discomfort but that is not threatening to your life.**
Allergen	**The food or ingredient that causes an allergic reaction.**
Vegetarian	**Limits the animal products they eat - there are different types.**



Sources of starch, sugar and fibre: Use this link
https://www.nhs.uk/live-well/healthy-weight/why-we-need-to-eat-carbs/
or google NHS Livewell Carbohydrates.
Find and learn the sources of starch, sugar and fibre.

Functions of fibre:
Insoluble fibre – collects rubbish, keeps your system clean, prevents constipation, diverticular disease and cancer in your colon.
Soluble fibre – makes you feel fuller for longer, feeds healthy gut bacteria and can help lower cholesterol.

Function of sugar: gives you energy quickly, if you don't use it immediately it is converted to fat and stored.
Excess sugar= tooth decay, gum disease, obesity, type 2 diabetes.
How much sugar should you eat? As little as possible, your body can make it from other foods.

Function of starch: a slow and steady release of energy.
Other nutrients in starchy foods: B vitamins, calcium, iron.
How much starch should you eat? 30% (1/3) of the food you eat should be starchy food.
Is starch healthy? The NHS recommend that you get 50% of your energy from starch, it contains less than half the calories of fat and also bulks out your diet if you choose wholegrain varieties.

Food Knowledge Organiser

Design and Technology

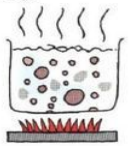
Quiz 2 Key Words

To form an idea about something. To assess — **Evaluate**

To think carefully or deeply about — **Reflect**

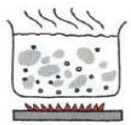
Quiz 2 Processes — Cooking Methods

Boiling



Food is cooked in deep boiling liquid [water, stock, wine etc.] in an open or covered saucepan.

Simmering



Like boiling, but the liquid is kept just below boiling point in an uncovered pot.

Steaming

Food is placed on a container and cooked in the steam from boiling water in a covered pan or steamer.

Stewing

Cooking food in its own juices with a little additional liquid, in a covered pan, at simmering point.

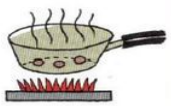
Braising

Pieces of food are first browned in a little fat, then cooked with some liquid in a closed pan.

Deep-frying

Frying pieces of food in a deep pot or fryer with plenty of hot oil or fat.

Sautéing

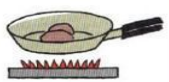


Cooking small or thin pieces of food in a little very hot oil or fat. The frying pan is shaken constantly to stop the food from burning.

Flambéing

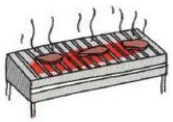
After frying, alcohol is added to the food in the frying pan and set on fire. This gives added flavour to the food.

Pan-frying



Frying food in a little oil or butter using a frying pan over moderate heat.

Broiling/grilling

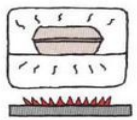


Cooking food like steak or fish, over or under open heat, e.g. under the oven grill, or on a barbecue or hot plate.

Roasting

Cooking food like meat or poultry with some fat in a hot oven [between 200-240 degrees centigrade].

Baking



Cooking food like cakes, pies, bread etc. in a closed oven at a temperature of between 120-240°C.

Frying safety:
1. Do not leave pan unattended.
2. Use dry food.
3. Reduce heat if it smokes.
4. NEVER put water on a fat fire.

Blanching (part cooking)
1. Food is submerged in boiling water for a few mins.
2. Food is plunged into cold water.

Quiz 3 General Knowledge — special diets

Lactose intolerance intolerance to the sugar (lactose) in cow's milk.

Coeliac disease an allergy to the protein (gluten) in wheat. Some people are also allergic to the proteins in other cereals eg oats, corn.

Gluten intolerance intolerance to the protein (gluten) in wheat.

The 14 most common allergens have to be highlighted on food labels BY LAW in the ingredients list (underlined or put in bold text). Think of the reasons why this is the law. Look them up.

Vegetarians:
Pescetarians - no meat
Lacto-ovo vegetarians - no meat, no fish
Lacto vegetarians - no meat, no fish, no eggs
Vegans - no meat, no fish, no eggs, no animal products (honey, gelatin (in jellies, gravies, made from bones and cartilage)). They need to eat foods fortified with Vitamin B12 because it is only found in animal foods.
(Hint - pesce = fish (Italian), lacto = milk, ova/ovum = egg)

Religious diets:
Halal and Kosher meats are slaughtered in a particular way. Ramadan is an Islamic festival that prohibits eating and drinking during daylight hours.

Religion	Alcohol	Pork	Beef	Lamb	Chicken	Fish
Islam	No	No	Halal	Halal	Halal	No
Hinduism	No	No	No	Yes	Yes	Yes
Judaism	Yes	No	Kosher	Kosher	Kosher	Yes
Sikhism	No	No	No	Yes	Yes	Yes
Buddhism (strict)	No	No	No	No	No	No
Seventh Day Adventist	No	No	No	No	Yes	Yes
Rastafarian	No	No	No	No	No	No

Belong Believe Be Proud

Timbers Cycle Knowledge Organiser

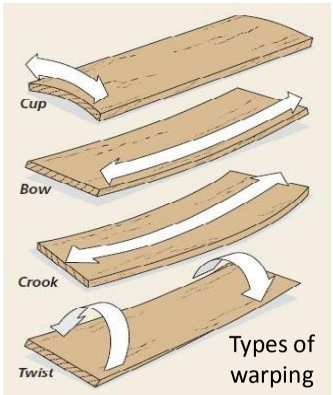
Design and Technology

Quiz 1 Key Words

Accurate	Reliable, Exact, Correct
Assemble	To fit separate parts together

Quiz 1 General Knowledge — Natural timbers

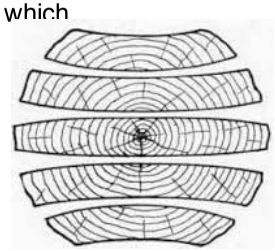
Wood is an organic material that is the main substance in the trunk and branches of a tree. Wood prepared for use in building and carpentry is know as timber. There are two types of natural timber: Hardwood and softwood. These names do not refer to how hard the wood is.



Types of warping

Warping is the bending or twisting that happens to natural timber as it dries out.

Manufactured boards do not have a grain in the same way, which means they are much more stable and do not warp like natural boards.



Quiz 1 General Knowledge — Manufactured boards

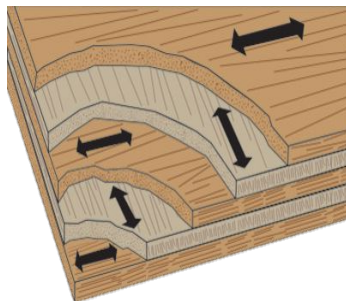
Made from wood; often using off-cuts from natural timber. They are bonded together with adhesives. They tend to be cheaper than solid wood planks

Plywood

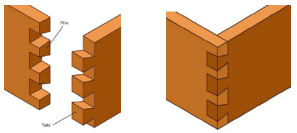
- Plywood is very strong in all directions; often stronger than solid wood.
- Outside layers are finished with a higher-quality veneer.
- Must always include an odd number of layers with the grain running in alternating directions.
- **Used in construction, furniture.**
- Flexi ply is a form of plywood but it is extremely flexible.

Alternate layers of wood (veneers) are glued together at 90 degrees to each other, to build up the thickness needed.

Construction of plywood.
Arrows show direction of wood grain.

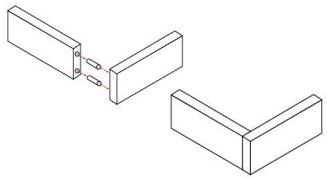


Quiz 1 General Knowledge — Wood joints



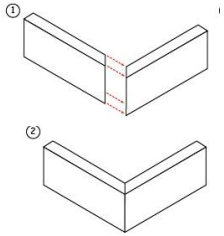
Dovetail joint

A very strong because of the way the 'tails' and 'pins' are shaped. This makes it difficult to pull the joint especially when glued. Used in box constructions such as drawers, jewellery boxes and other pieces of furniture where strength is required.



Dowel joint

This joint consists of drilling accurate holes in both sections of wood and joining them with dowel pegs. Within industry this is often used to construct flat pack furniture.



Mitre joint

Mitre joints are often used to produce the corners of picture frames and boxes. The mitre needs to be cut at a 45 degree angle, this is often used with a mitre saw that can cut at many different angles.

Timbers Cycle Knowledge Organiser

Design and Technology

Quiz 2 Properties — Properties of wood

Softwood

Properties	Uses	Pine
• Easy to work with • Quite strong • Lots of knots	• Furniture • Construction • Door frames	

Hardwood

Properties	Uses	Mahogany
• Hard • Easy to work • Resistant to rot • Expensive	• Flooring • Fine furniture • Jewellery boxes	

Properties	Uses	Beech
• Hard • Tough • Finishes well	• Laminated furniture • Children's toys • Flooring	

Quiz 2 Properties — Wood Properties

Density	Compactness of a material, defined as mass per unit volume
Stability	Ability to resist changes in shape over time
Stiffness	The ability to resist bending

Quiz 3 Processes — Tool names and uses

1.	**Twist drill**	Cutting tool used to create holes	6.	**Mallet**	Used with chisels and for knocking pieces of wood together
2.	**Marking gauge**	To mark a line parallel to an edge	7.	**Power drill**	Drills holes in material – battery powered and hand held
3.	**Mitre square**	Used to mark out 45° angles	8.	**Bevel chisel**	Bevelled blades can get in corners for cutting dovetails
4.	**Palm sander**	Sanding, finishing wood surfaces	9.	**Counter sink**	Creates a cavity in material so screw heads can be flush to the surface.
5.	**Flat bit**	Drills larger holes in wood	10.	**Mitre box**	Used to guide a hand saw to make precise mitre cuts

Design and Technology

During this topic you will learn the types, properties and uses of metals

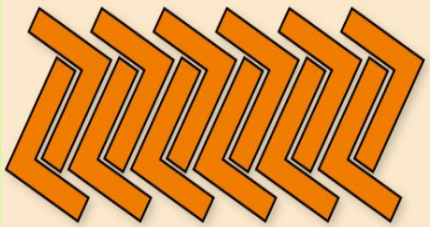
Metal Cycle Knowledge Organiser

Quiz 1 General Knowledge

Planning, cutting and shaping

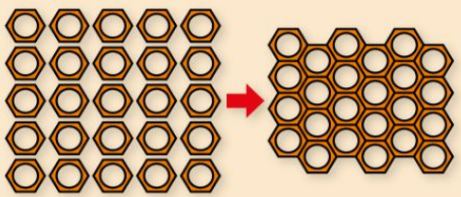
Wastage = total area of material – area of material used for shapes

Nesting



Arrange shape efficiently and close together. **Reduces** amount of **waste material** between each shape.

Tessellation



Used for shapes that **fit perfectly together** with **no space** between them. **Waste material is kept to the edge.**

Area of a square
A = base x height

Area of a triangle
A = ½ x base x height

When cutting shapes from materials, try to determine the best way to organise the shapes so that as many as possible can be cut from the least amount of material, here are two examples:

Quiz 1 Key Words

The standard, or excellence of something	Quality
An item, or substance that is manufactured	Product

Quiz 2 Properties

Metal Properties

Non-ferrous metals and properties

Aluminium

- Lightweight
- Corrosion resistant
- Malleable
- Tough
- High electrical & thermal conductivity

Zinc

- Corrosion resistant
- Used mainly for plating (covering) metals like steel and iron.

Ferrous metals and properties

Cast Iron

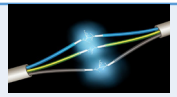
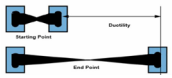
- Iron + Carbon (2-4%)
- Hard skin but brittle, soft core.
- Good in compression
- Poor corrosion resistance

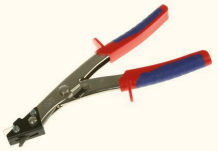
Mild Steel (low carbon steel)

- Iron + Carbon (0.25%)
- Malleable
- Ductile,
- Tough.
- Poor corrosion resistance

Metal Cycle Knowledge Organiser

Design and Technology

Quiz 2 Properties	Material Properties
Insulator 	A material which does not conduct electricity or heat.
Hardness 	The resistance to indentation, scratching and wear and tear at the surface.
Toughness 	The ability to withstand a sudden impact.
Thermal conductivity 	The ability to transfer heat through the material.
Electrical conductivity 	The ability to allow electricity to pass through the material.
Ductility 	The ability to draw the material out so it gets longer and longer and thinner and thinner.
Malleability 	If a metal is able to be hammered or pressed into a flatter and wider shape without breaking or cracking.
Corrosion Resistance 	The ability of a material to be weather resistant and not rust.

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 

Quiz 3 Processes		Tool names and uses			
1.	**Metal vice**	To hold work whilst cutting/ filing.	6.	**File/s**	Removes fine amount of material from work.
2.	**Hacksaw**	Cutting straight lines in metal.	7.	**Ball pein hammer**	Use to shape metal/ or use with centre punch.
3.	**Tin snips**	Cutting straight lines in sheet metal.	8.	**Steel rule**	Measuring material in cm/mm.
4.	**Sheet metal nibbler**	Cuts through sheet metal.	9.	**Centre punch**	Make an indent in metal before drilling.
5.	**Twist drill**	Cutting tool used to create holes	10.	**Scriber**	Use to mark out lines/ design on metal.

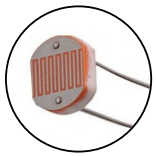
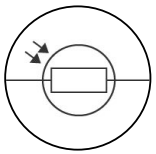
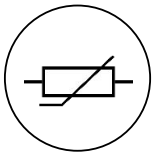
Belong Believe Be Proud

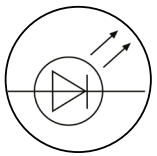
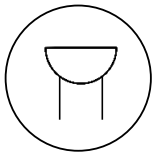
Electronics & CAD/CAM Cycle Knowledge Organiser

Design and Technology

Quiz 1 General Knowledge

Electronics

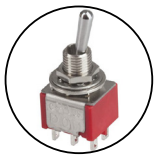
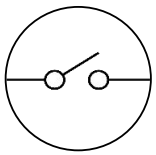
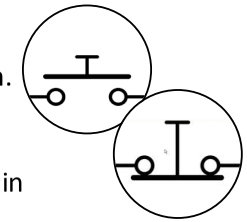
Picture	Sensors (input devices)	Symbol
	**Light-dependant resistor (LDR)** Detects changes in light levels. The resistance decreases as the brightness increases. LDRs are used in **outdoor street lamps**	
	**Thermistor** Its resistance changes with **temperature.** Thermistors are often used where it is important to know the temperature, such as inside a **refrigerator**	

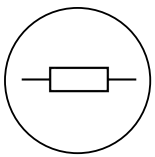
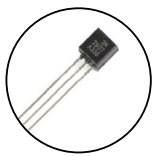
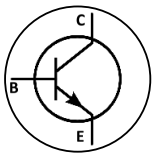
Picture	Outputs	Symbol
	**Light-emitting diode LED** Gives out light when current passes through it. Low voltage/ low power consumption. E.g. power indicators and **TV screens**	
	**Buzzer** Makes a **noise** when a **current passes** through it. Useful in a sensing device to give people a warning that something needs their attention	

A system is made up of several parts that work together as a whole to carry out a function.
All electronic systems require an **input**, a **process** (control device…) and an **output.**

System

Input device	Control devices and components	Output device
Key on a keyboard pressed.	Controller reads the input and tells the program what to do.	Monitor displays the processed data.

Picture	Control devices and components	Symbol
	**Toggle switch** Used to **complete** or **disconnect** a **circuit.** Can be turn on (closed) to let current flow or turned off (open) to stop current flow.	
	**Push to make switch** Current flows when pushed in. **Push to break switch** Circuit is broken when pushed in	

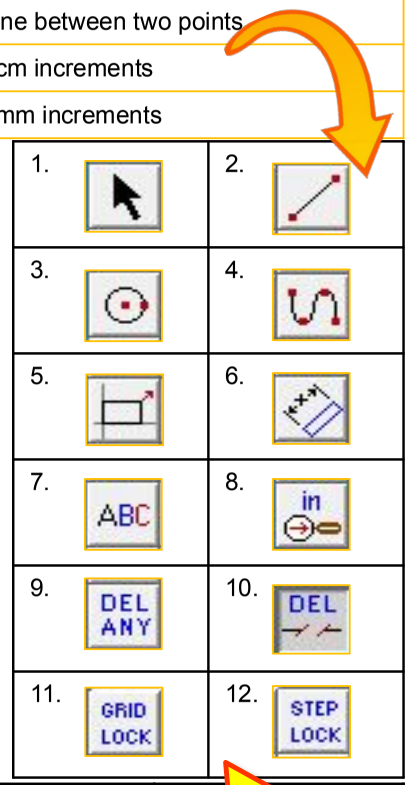
Picture	Control devices and components	Symbol
	**Resistor** It can be added to a circuit to change its **resistance.** It can **restrict** the **flow** of **electricity** in a circuit.	
	**Transistor** Used as either a electrical switch or a current amplifier. When a small **voltage** at the **B**ase connection is detected, **current** can flow between the **C**ollector and the **E**mitter.	

Electronics & CAD/CAM Cycle Knowledge Organiser

Design and Technology

Quiz 2 Processes — 2D Design tools

1. Select	Select shapes and icons	**7. Text**	Allows text to be written on work
2. Straight line	Draws a straight line	**8. Zoom to selected area**	Allows user to see close up within the workspace
3. Circle	Draws a circle	**9. Delete any object**	Deletes selected object
4. Curved line	Draws curved shapes	**10. Delete part of line**	Delete a part of a line between two points
5. Rectangle	Draws rectangular shapes	**11. Grid lock**	Moves cursor in 1 cm increments
6. Dimensions	Measures in mm between two points	**12. Step lock**	Moves cursor in 1 mm increments



Quiz 3 Computer Aided Design — Computer Aided Manufacturing

CAD software is commonly used by designers to create design ideas, develop and model 2D and 3D products and manipulate before manufacturing. e.g. 2D design and Autodesk Inventor (3D)

CAM uses computer numerical control (CNC) to manufacture the CAD designs. e.g. Laser cutter, 3D printer, CNC router and lathes.

Advantages

- More accurate than hand drawings
- Designs can be changed and tested before production.
- Offers views of 3D models from all angles
- Final drawing/file can be emailed instantly

- High level of accuracy
- Consistent quality of product manufactured
- Increases speed of production
- Can operate 24 hours a day
- Products can be made directly from CAD files

Disadvantages

- Can be difficult to learn
- Expensive software

- Expensive equipment
- Replaces human workforce

Quiz 3 Properties and Key Words — Types of Thermoplastics

Acrylic

- Hard and rigid
- Range of colours
- Easily scratched
- Waterproof
- Insulator

HIPs
High impact polystyrene

- Flexible
- Lightweight
- Can be vacuum formed
- Range of colours
- Waterproof
- Insulator

In a favourable or superior position Or, in an unfavourable or inferior position	**Advantage/ disadvantage**
the quality of being attractive or interesting	**Appeal**
Evolution, Growth, Expansion, Maturing	**Development**

Belong Believe Be Proud

Cycle 1 in Year 8 PE will focus on developing your ***Personal Development*** through sports such as Hockey, Rugby, Dance and Badminton.

Cycle 1 Knowledge Organiser

Key words and definitions	
Concept - Personal Development	***Personal Development - Focus Statement***
Develop	*Developing my knowledge of skills*
Perseverance	*Being aware of my gross motor skills and the impact on performance*
Application	*Applying my skills within modified games*
Attitude	*Developing confidence in competitive activities / performing*
Communication	*Communicating with other students effectively to develop tactics/ strategies/ routines*
Focus	*Making informed choices regarding skills/ tactics / routines with some reasoning*
Growth	*Acting upon peer feedback to develop my weaknesses*
Confidence	*Completing my assessment to the best of my ability*
Evolution	*Responding to feedback to improve my skills/ understanding*

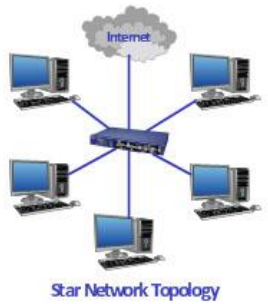
THE PRIORY LEARNING TRUST

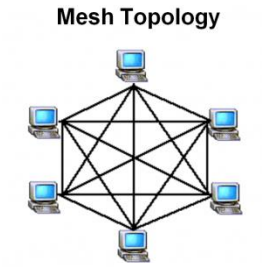
Personal Development - Develop competence to excel in a broad range of physical activities.

THE KING ALFRED SCHOOL

Cycle 1 in Computer Science will focus on networks, the Internet and its protocols, and on computer systems. You will learn that the Internet does more than just provide web pages; that companies use networks to allow people to work together; and we look inside a computer to understand the role of the Central Processing Unit.

Key words and definitions	
LAN	Local Area Network – computers linked together in single building or location
WAN	Wide Area Network – computers linked together over a wide geographical area
Topology	The layout of a computer network, such as in a STAR or MESH topology
IP Address	A set of numbers that uniquely identified a host on the Internet (e.g. 154.45.32.16)
URL	Uniform Resource Locator - A 'friendly name' for a website (e.g. www.bbc.co.uk)
Packets	A small piece of data sent from one computer to another across a network
The Internet	A global system of interconnected computer networks using TCP/IP to link devices worldwide.
Protocols	Rules to allow for the sending and receiving of information between devices
DNS Server	Domain Name Service – Servers that list website URLs and their IP addresses
Router	Hardware device that sends packets over the Internet between networks





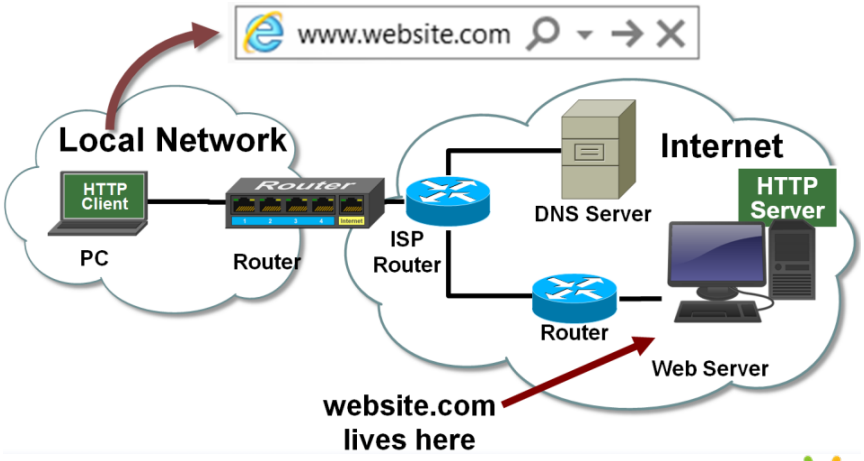
Topic 1

Networks

Understand: how computers are linked together to form networks; how networks help people to work together; how information flows around the world on the Internet.

Internet Protocols

TCP/IP	Transmission Control Protocol / Internet Protocol
HTTP	HyperText Transfer Protocol (web pages)
HTTPS	Secure HyperText Transfer Protocol (e.g. banks)
FTP	File Transfer Protocol (sending and receiving files)
POP	Post Office Protocol (simple email downloads)
IMAP	Internet Mail Access Protocol (manage email)
SMTP	Simple Mail Transfer Protocol (sending email)



THE PRIORY LEARNING TRUST

Topic 2

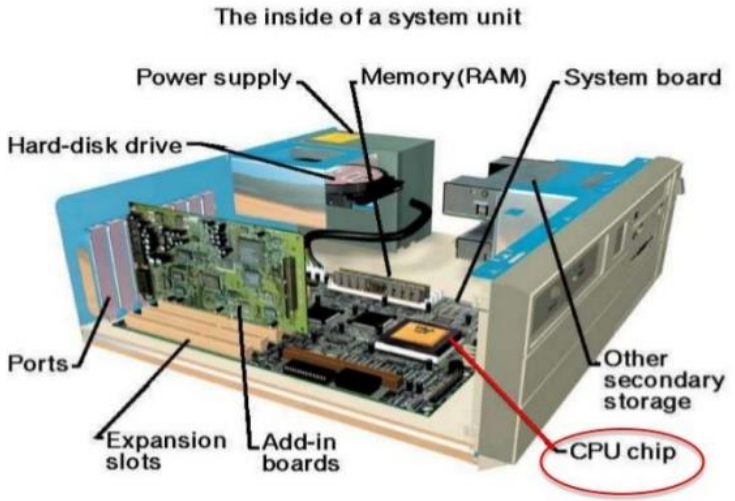
Computer Systems

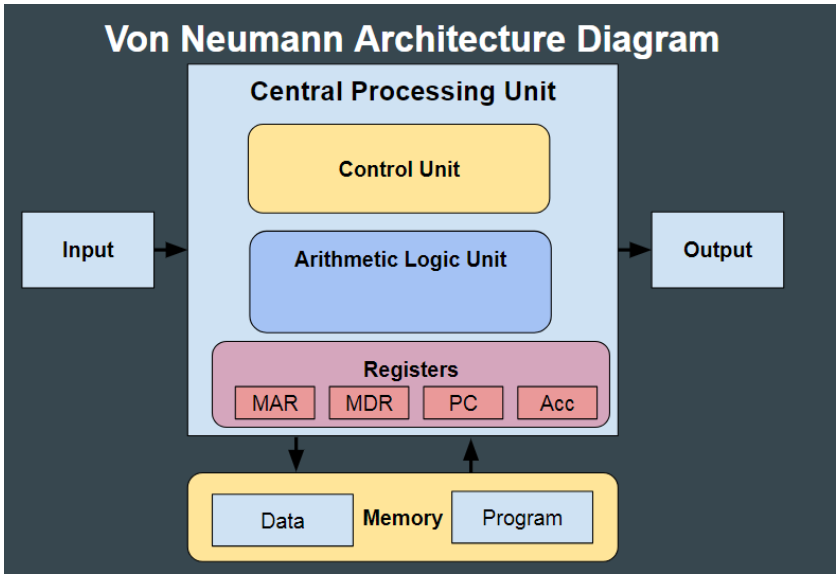
Understand: the role of the Central Processing Unit within a computer; the difference between RAM and ROM memory; and how a computer system is described using the Von Neumann Architecture.

Key words and definitions	
CPU	Central Processing Unit – the 'brains' of the computer – carries out instructions.
ALU	Arithmetic and Logic Unit – carries out calculations and logic tests inside the CPU
CU	Control Unit – controls the flow of data and instructions in and out of the CPU
Clock	Part of the CPU that 'ticks' millions of times a second to control internal processes
RAM	Random Access Memory – holds the instructions and data needed by the CPU
ROM	Read Only Memory – holds the instructions needed to start up the computer.
Cache	Type of memory that holds the next few instructions for the CPU
Registers	Memory locations that hold information and instructions being used by the CPU
Embedded systems	A computer system that is inside another system, e.g. a Microwave Oven, a Car.

The CPU (Central Processing Unit) is the part of a computer system that is commonly referred to as the "brains" of a computer. The CPU is also known as the processor or microprocessor.

The CPU is responsible for executing a sequence of stored instructions called a program. This program will take inputs from an input device, process the input in some way and output the results to an output device.





Cycle 1 will develop your understanding about the importance of insects on our planet. You will study the shape, texture and colour of insects, learning how to draw them using different types of media. Abby Diamond is a watercolor artist that we will study in this cycle.

FOOD FOR ANIMALS

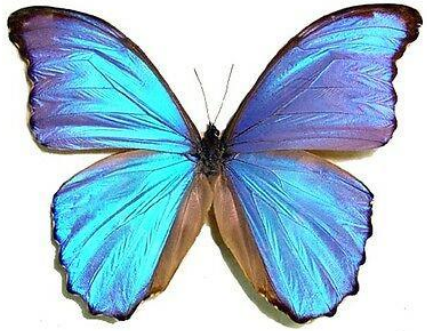
Insects are an important part of the food chain and a direct food source for many animals, including humans. Insects such as beetle grubs, termites, and honeybees, are eaten as food in some societies.

POLLINATION

One of the most important services insects provide is pollination. Though some plants are self-pollinated, many flowering plants rely on insects to transport their pollen to other flowers, ensuring fertilization.

DECOMPOSERS

An important benefit of insects is their role in decomposition of organic matter. Without insects, Earth would be covered in dead leaves and animals - as these are fed upon by insects.



Without insects, the environment could not function as it does!

BIOLOGICAL CONTROL

All insects are likely to be eaten by either another insect or something bigger. It is an insect-eat-insect world out there, but this can be of real use to humans too, for example; using parasitic wasps to control aphids. Aphids are a pest of plants and cause huge damage to plants as they remove nutrients.

Without bees, many of the plants we rely on wouldn't be able to reproduce—and produce many of the fruits we eat, such as apples and blueberries.

career information

Abby Diamond is a freelance illustrator from Pennsylvania, USA. Diamond primarily works in pen, ink, watercolour paint and markers. She enjoys using wet media as she finds them experimental, especially how watercolour paint behaves differently during the paint process.

Key features include…

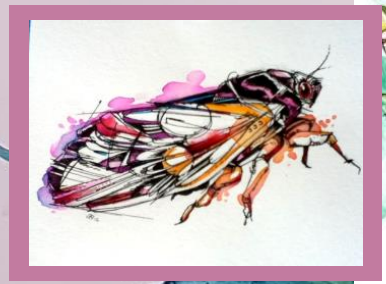
- Bold black lines to **emphasise** form (shape)
- Creative shapes
- Mark making to **enhance** texture
- Pattern
- Harmonious, bold colours that **complement** the design

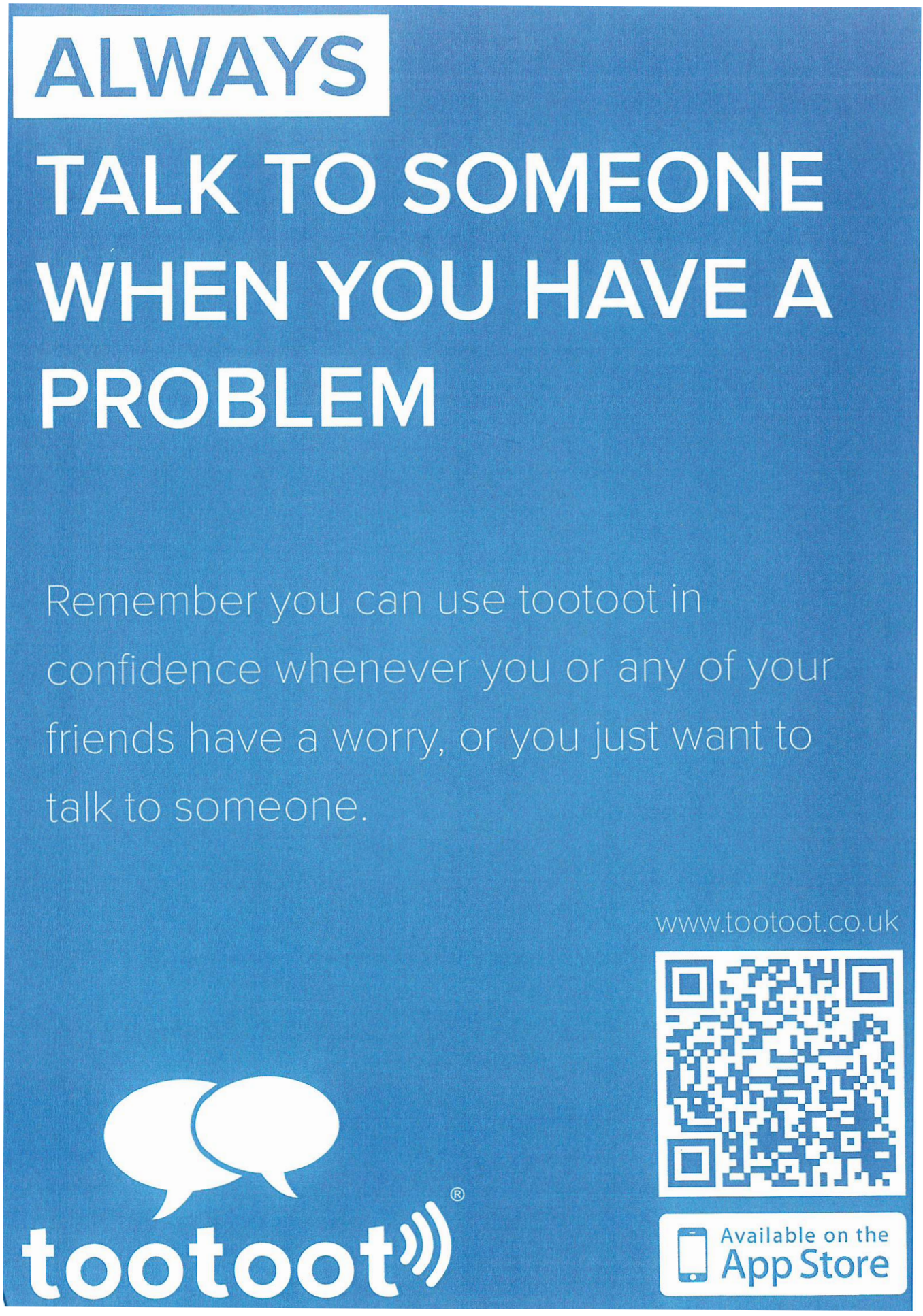
Abby Diamond

Illustrators are commissioned to produce still drawings for use in advertisements, books, magazines, packaging, greetings cards and newspapers. They can earn £20,000 - £40,000 PER YEAR

ILLUSTRATORS

Abby Diamond, Harriet Popham
Quentin Blake, Iain McIntosh
Lee Crutchley, Mike Mitchell

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TALK TO SOMEONE WHEN YOU HAVE A PROBLEM
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