Homework Journal

Year 8 —Half Term 5

Name: _____

Family Group: _____

Half Term 5 Homework Journal

Welcome to your new Homework Journal. Inside you will find all of your homework for the next half term. For each subject there will be the knowledge organisers for all the information you will need to know, along with a set of tasks your teachers will set you for homework.

You will be expected to complete your homework tasks by the time your teacher asks, and to the best of your ability. Make sure you keep your Homework Journal neat, organised and safe—if you lose your journal you will be expected to buy a new one and copy up all of the homework again!

If you want to do any extra revision at home, you can also use the knowledge organisers to revise all of the key knowledge for your subjects.

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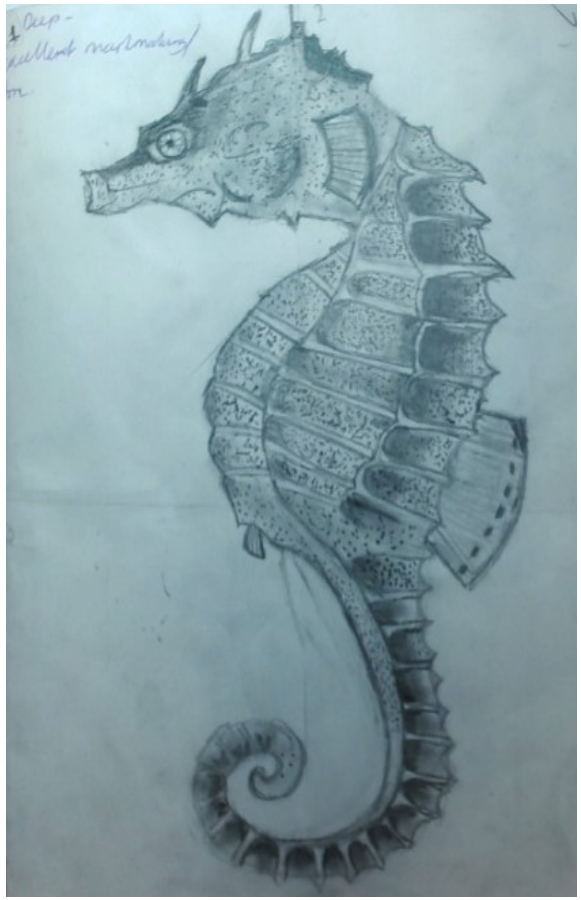
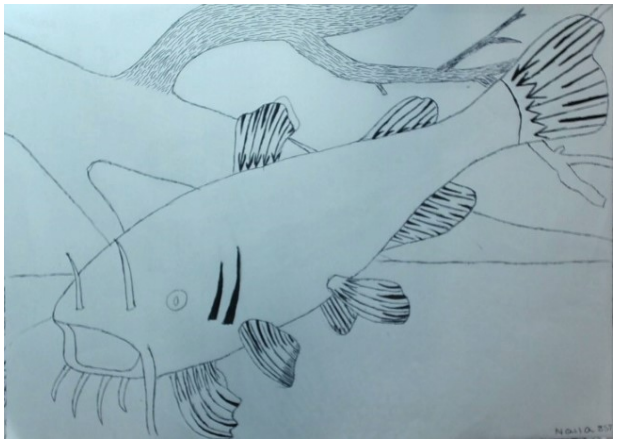
Art Knowledge Organiser

Y8: Summer Term - Natural Forms/ Sealife

What excellence looks like





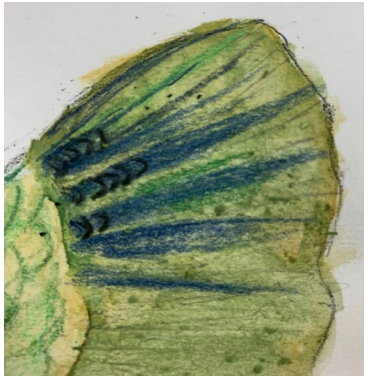
Exploration of materials and markmaking techniques (AO2)

Accurately record ideas and observations (AO3) (using grid method where relevant)

Art Knowledge Organiser

Y8: Summer Term - Natural Forms/ Sealife

What excellence looks like



Present a personal response (AO4) demonstrating:

Limited/ Emerging:

- Use of different colours

Developing/ Secure:

- Neat edges
- Smooth blending
- Range of tones and colour

Deep

- Lots of different textures
- Layers of colour

GCSE assessment objectives

AO1: Develop ideas through investigations, demonstrating critical understanding of sources

AO2: Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.

AO3: Record ideas, observations, and insights relevant to intentions as work progresses.

AO4: Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.

Keywords

Line	**A path left by a moving point such as a horizontal or curved mark**
Sketch	Drawing using lots of lines and pressing lightly
Tone	The lightness or darkness of something
Texture	You can create textures in your artwork through different markmaking
Markmaking	Using your materials in different ways to create a different effect
Pattern	A design that is created by repeating lines, shapes, colours or tones
Colour Harmony	Colours that are next to each other on the colour wheel
Blending	Gradually changing from one colour or tone to another
Composition	An arrangement of shapes, patterns, lines or colours to make an artwork
Mood	The feeling or emotion that is created by an artwork, eg Happy, sad, etc

Assessment

I can…	Tick if achieved
Draw accurately , using a light sketch (using grid method where relevant)	
Experiment with my materials to create lots of different marks and textures	
Blend tones and colours smoothly with pencil	
Blend tones and colours smoothly with paint	
Apply a full range of tones, from very dark to very light	
Show an understanding of colour harmony	
Include detail in my drawing	
Follow instructions to improve my work	

Number	Task	Completed
1	Draw a fish as accurately as possible. Add **shading** using pencil.	
2	Draw a fish as accurately as possible. Add **colour** using materials of your choice.	
3	Draw a "close up" of a fish or other sea creature. Try to include as much detail and pattern as possible, adding colour and/ or tone.	
Extension	Research and artist who is known for their images of fish / sealife eg David Miller. Complete a research page in your sketchbook by including: Print outs/ examples of their work Descriptions of their work A copy of their work using your chosen materials	

WWW/ EBI	Comments
Draw accurately , using a light sketch (using grid method where relevant)	
Experiment with my materials to create lots of different marks and textures	
Blend tones and colours smoothly with pencil	
Blend tones and colours smoothly with paint	
Apply a full range of tones, from very dark to very light	
Show an understanding of colour harmony	
Include detail in my drawing	
Follow instructions to improve my work	

Natural forms/ sealife Additional Comments

I have achieved
Deep
Secure
Developing
Emerging
Limited

Extension task—title page

Task 1

Task 2

Task 3

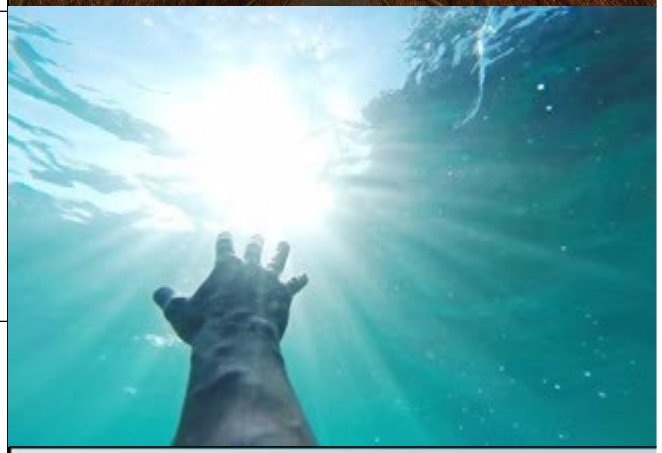
Creative Writing: Knowledge Organiser

Key words	
1	Narrative:- A piece of writing structured like a story with a clear beginning, middle and end **Tip**: Write as yourself or a character, keep the problem or situation simple and clear and focus on an even distribution of language techniques in each paragraph.
2	Descriptive:- An explanation of a situation which focuses on the senses **Tip**: Imagine that you are describing the photograph verbally to someone who hasn't seen it before. Use all of the senses to help them picture the scenario in their head.

The 5 'W's	
1	Who
2	What
3	When
4	Where
5	Why

Creative writing prompts
Scenario 1 Scientists recently discovered a new planet where half is always dark and half is always light. On this planet, it rains metal. Write a story in which you land on this foreign planet.
Scenario 2 You are a scientist who has never discovered anything exciting or interesting. One day you come into work and discover a brand new colour. Write the story of your discovery and how it impacts the world.
Scenario 3 One day you wake up and all adults have disappeared from the world. Write a story in which you wake up and find that everyone has disappeared except for people under the age of 15.
Scenario 4 You are an explorer looking for new and undiscovered countries. One day your boat crashes onto an undiscovered island. Describe what you find when you arrive and what you would do next.
Scenario 5 You are able to swap bodies with an animal for one day. Choose an animal and describe what the experience would be like of living in their body for a day. As a challenge, do not mention the name of the animal so that your audience have to guess,

Creative Writing prompt images



English Knowledge Organiser

Creative Writing: Independent tasks

Here are some options for independent tasks you should complete to practise your creative writing work. There is no set order for these tasks but you should attempt them all to help you improve your skills.

Use information on the knowledge organiser to help you with your work.

1	**Research:** Look up pictures of islands on the internet. Find an image which represents each of the following words. You can also use images from the knowledge organiser. Mysterious Paradise Ghostly Desolate Vibrant **Writing:** Write about a time when you travelled to a new place.
2	**Creative writing:** Write the opening to a story for scenario 1. **Creative task:** Storyboard your written task and create a series of images that show what this new planet would be like.
3	**Creative writing:** Write the opening to a story based on the first prompt image. **Use all of the following words in your story and highlight them when they have been used:** Astonishment Isolation Trapped Feeling Calm
4	**Creative writing:** Write the opening to a story for scenario 2.
5	**Research:** In what country do you imagine the final picture was taken? Research different mountains around the world and find out about two very different and interesting places. **Creative writing:** Write the opening to a story for scenario 3.
6	**Writing:** Write a story about a time when you have felt trapped or scared. **Vocabulary:** Write a list of 20 feelings that you might associate with picture 2.
7	**Characters:** Write a letter to a friend as if you are the scientist in scenario 2. Describe your discovery and how it made you feel.
8	**Writing:** Write a story for any of the remaining scenarios.

L.O: To be able to plot my own story.

Storyboard-_____

English—creative writing

English—creative writing

English—creative writing

English—creative writing

English—creative writing

English—creative writing

English—creative writing

English—creative writing

Geography Knowledge Organiser

Knowledge Organiser

The Changing Nature of Asia

THE BIG QUESTION

Map and Overview

-Asia is the largest continent in the world. It covers about 44.5 million km². This is about 30% of the earth's land surface area.

-It is also the most populous continent in the world – it has a population of about 4.5 billion people (about 60% of the world's population).

-It is mainly located in the Eastern and Northern hemispheres.

-Many of the world's first civilisations began in Asia.

Regions & Countries of Asia

Top 5 largest Asian countries

1. Russia – 17.1 million km²
2. China – 9.5 million km²
3. India – 3.2 million km²
4. Kazakhstan – 2.7 million km²
5. Saudi Arabia – 2.15 million km²

There are 48 countries in Asia, 3 of which (Russia, Turkey and Kazakhstan) also have part of their land in Europe. Because Asia is so big, it is often segmented into the sub-continents listed below.

Top 5 most populous Asian countries

1. China – 1.4 billion
2. India – 1.3 billion
3. Indonesia – 255 million
4. Pakistan – 208 million
5. Bangladesh – 163 million

Northern and Central Asia

Northern Asia is dominated by Russia, the largest country in the world by area. It sprawls from Europe in the west right across to the Pacific Ocean in the east. Some parts of Russia, including Siberia, are exceptionally cold. Central Asia contains several large, sparsely populated countries, for example Kazakhstan and Turkmenistan.

Eastern Asia

By far the largest country in Eastern Asia is China. China is also the most populous country in the world. The area also includes technologically advanced Japan, in which life expectancy is the highest in the world. Japan contains the world's largest city – Tokyo. The two Koreas (North and South) are also in Eastern Asia.

Southern/ South Eastern Asia

Southern Asia refers to the Indian subcontinent (e.g. India, Pakistan, and Bangladesh) and is a part of the Eurasia landmass. Much of South Eastern Asia encompasses peninsula/ island countries (e.g. Malaysia, Indonesia). Countries in these regions are amongst the most densely populated in the world.

Western Asia/ The Middle East

Western Asia (or the Middle East) contains much of the world's Arabic speaking population. A large proportion of this land area is desert. The largest country by area in the region is Saudi Arabia. Many of the oil-rich gulf states contain large skyscrapers, e.g. the Burj Khalifa in the UAE.

Longest Rivers

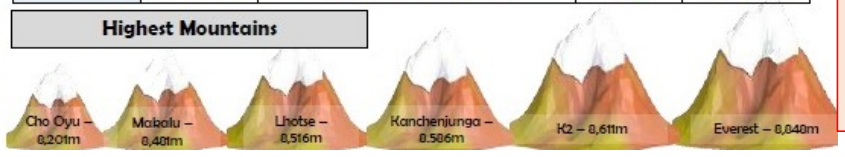
Human Geography Features

Languages		Hundreds of languages are spoken across Asia. Mandarin Chinese is the most spoken language in the world, with over 1.1 billion speakers. Sometimes countries share languages, for example Arabic in the Middle East.	**Why?** People across Asia emerged from many different tribes and groups.	**Key Fact:** In some Asian countries, there are many languages – India has 22 major languages!
Foods		As one might expect from such a vast continent, there are a huge variety of cuisines. Most are produced from local resources (e.g. fish in Japan). Some, e.g. Chinese, Thai & Indian dishes, have inspired food cultures across the world.	**What?** South Asia is famed for its many varieties of curry.	**Key Fact:** The healthy Japanese diet is believed to be a cause of their high life expectancy.
Politics/ Government		From the early 20thcentury onwards, several Asian countries became Communist states (e.g. USSR, Vietnam) - some remain so to this day. In the middle east, most countries remain absolute monarchies (e.g. Saudi Arabia).	**Where?** China, Laos and Vietnam are Communist in the present day.	**Key Fact:** The Sultan of Brunei was the richest man in the world in the 90s.
Festivals		Many Asian countries enjoy rich cultures, with numerous festivals and celebrations. The most famous amongst these are Diwali in India, the Taiwan Festival of Lanterns, Thaipusam in Malaysia and Chinese New Year.	**When?** Chinese New Year takes place in Jan/Feb of each year.	**Key Fact:** In Thailand, parties are held to celebrate of the full moon each month.
Wars/ Conflicts		Notable wars include the Vietnam and Korean Wars of the 20th Century. Asian countries fought in WWII - the USA dropped the first atomic bombs on Nagasaki and Hiroshima, in Japan.	**Where?** Wars still rage in countries like Yemen and Iraq.	**Key Fact:** The Korean War technically never ended!

Physical Geography Features

Temperature Extremes		Asia contains some of the most extreme temperatures on the planet. The temperature has reached 53.9°C in Israel, and can drop to -67.8°C in Siberia, northern Russia.	**How?** Asia stretches from the far north through the equator.	**Key Fact:** Asia has the widest continent temperature extremes.
Plate Tectonics		Most of Asia is on top of the Eurasian tectonic plate. However, this does not include much of the Asian subcontinent, meaning that areas lie on volatile fault lines.	**What?** The ends of plates are where earthquakes take place.	**Key Fact:** The 2011 Japan tsunami was caused by a 9.1 earthquake on coastal fault lines.
Deserts		Vast areas of the Middle East and Central Asia are hot, dry deserts. Some of the largest deserts are the Arabian Desert and the Gobi Desert.	**What?** The Arabian desert covers 2.3 million km²	**Key Fact:** The vast Gobi desert is elevated 1.5km above sea level.
Animals		Asia has some of the most diverse and unique wildlife species in the world. Examples include the Siberian tiger, the Asian elephant, the giant panda and the Japanese Macaque.	**Where?** Even the hottest Asian deserts contain wildlife.	**Key Fact:** There are just over 1,800 pandas left in the wild.
The Three Rivers		The flat, sandy wetland of the Tibetan Plateau is where the 3 major rivers (Yangtze, Yellow, and Lancang) begin, fed by water from the glaciers of the Himalayas.	**Where?** Tibetan Plateau, China	**Key Fact:** These become Asia's largest rivers.
The Himalayas		The Himalayas contain several of the world's highest peaks, including the highest (Mount Everest). It has over 50 mountains that exceed 7,200m, and 10 over 8,000m – in contrast, the highest outside Asia is 6,961m.	**Where?** Located across many countries – mainly Nepal, China and India.	**Key Fact:** In the Sanskrit language, Himalayas means 'abode of snow.'

Highest Mountains



Key Terms

Asia- Its 4.5 billion people (as of June 2019) constitute roughly 60% of the world's population, more than all other continents combined. In general terms, **Asia** is bounded on the east by the Pacific Ocean, on the south by the Indian Ocean, and on the north by the Arctic Ocean.

Continent- any of the world's main continuous expanses of land

Globalisation-- the process by which businesses or other organizations develop international influence or start operating on an international scale

Urbanisation- **Urbanisation** is the increase in the proportion of people living in towns and cities. **Urbanisation** occurs because people move from rural areas (countryside) to urban areas (towns and cities).

Megacity- A **megacity** is a very large city metropolitan area, typically with a population of more than 10 million people.

Pollution- **Pollution** is the introduction of contaminants into the natural environment that cause adverse change.

Culture-the ideas, customs, and social behaviour of a particular people or society

Homework #1

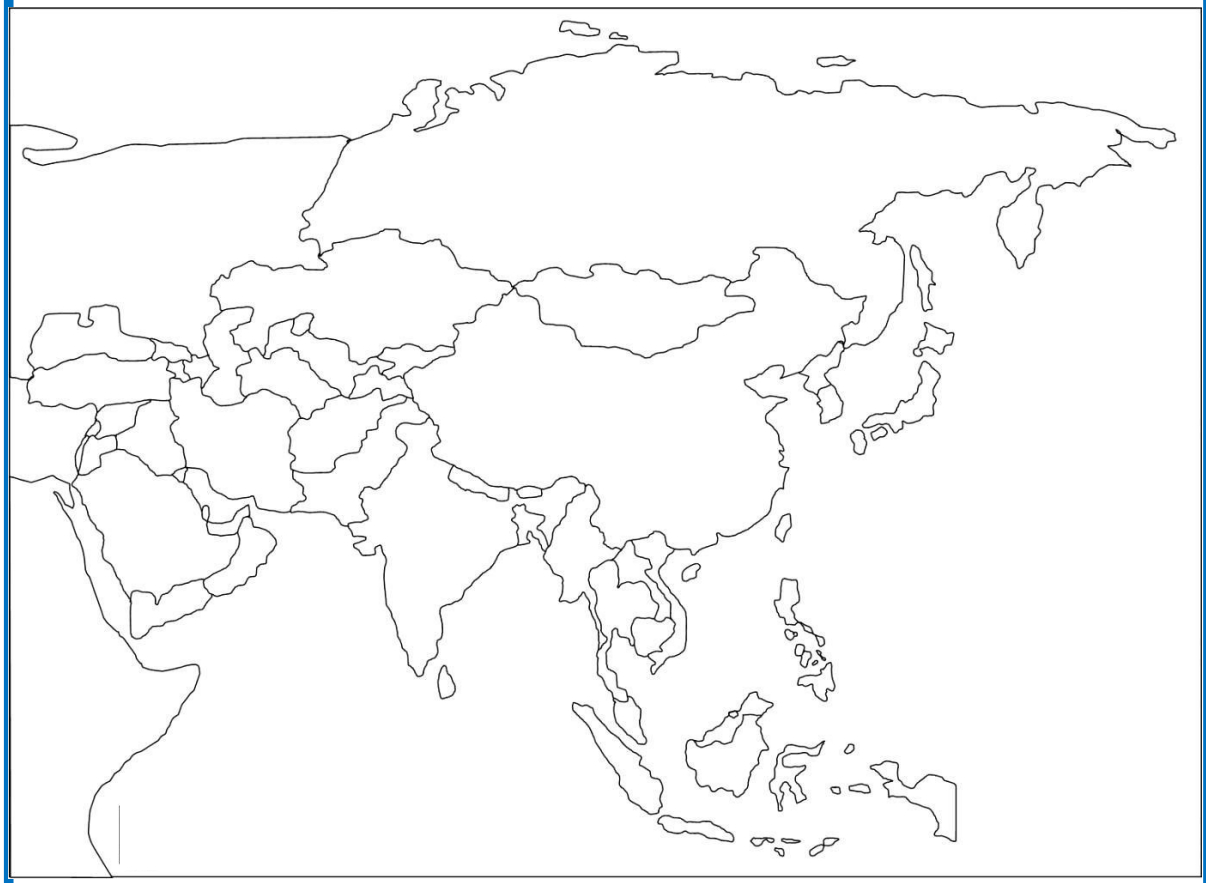
Use your knowledge organiser and your own research to add key geographical information to your diagram.

Human Features of Asia

Physical Features of Asia

Homework #2

Use your knowledge organiser and your own research to add key geographical information to your map of Asia (Countries, Cities, Rivers, Mountain Ranges, Regions).



Geographical Skills Homework

Grid References

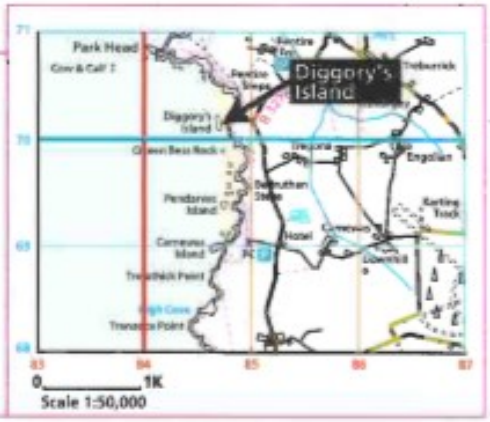
Maps often include a grid, which makes it is easier to find a specific point or area.

The numbers on the vertical lines are called eastings. The numbers up the horizontal lines are called northings. Eastings are always written before the northings when stating grid references.

Four-Figure Grid References

To find the four-figure grid reference for Diggory's Island...

- Find the easting value for the line directly to the left of the island. This is 84.
- Find the northing value for the line directly below the island. This is 70.
- Therefore, the four-figure grid reference for Diggory's Island is 8470.

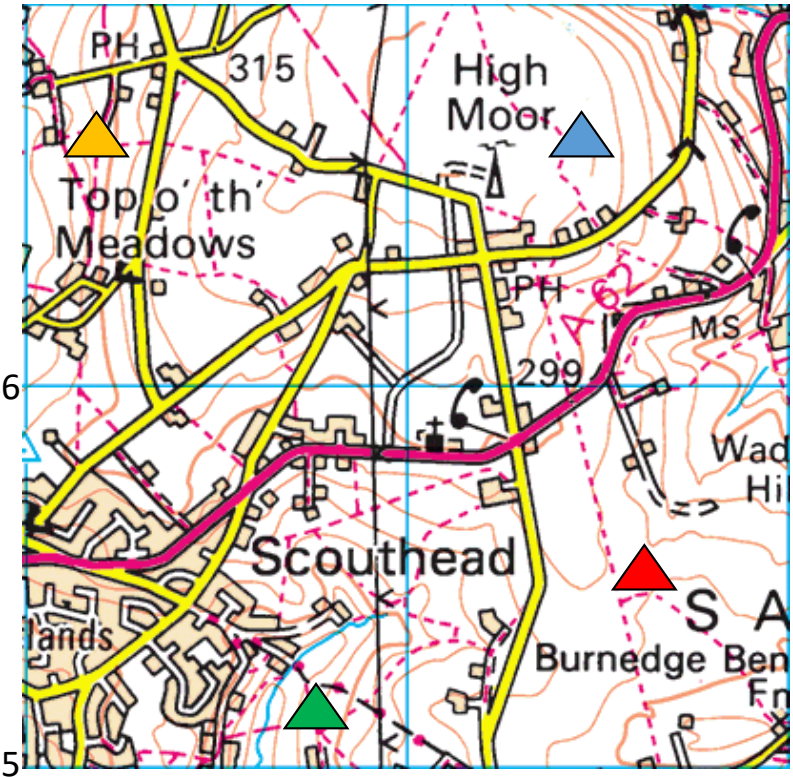


Six-Figure Grid References

To find the six-figure grid reference for Diggory's Island...

- Split this four-figure grid reference square into a 10 x 10 grid, and work out the easting and northing values within this grid. The easting is 7, and the northing is 1.
- Add these easting and northing values to the end of the original easting (84) and northing (70) values. The new easting is 847, and the new northing is 701.
- Therefore, the six-figure grid reference for Diggory's Island is 847701.

Practice!



4 Figure Grid Reference

6 Figure Grid Reference

Geographical Skills Homework

Find the 4 Figure Grid references for the following locations…

Glodwick:_____ Bib Knowl:_____
Newhey:_____ Dog Hill:_____
Moorside:_____ Clarksfield:_____
Oldham Edge:_____ Mumps:_____
White Gate:_____ Royton:_____
Hollingworth Lake:_____ Holts:_____
Ogden reservoir: _____ Roebuck Low:_____

Challenge: Can you give 6FGR for each of these locations?

Challenge: Find the 6 Figure Grid references for the following locations…

Ogden Reservoir: Example 952234 ___

Coppice:_____

Cinder Hill Farm:_____

Tandle Hill Park:_____

Knowledge Organiser

Year 7 **Slavery** Unit #2

THE BIG QUESTION "The British Empire was good for the world". Do you agree?

The Empire

The British Empire, at its largest, covered 13 million miles or 22% of the world! It controlled over 450 million people or 1/5 of the world's population. It began in the 16th Century, with British forces establishing trading posts oversees and grew all the way through to the 20th Century.

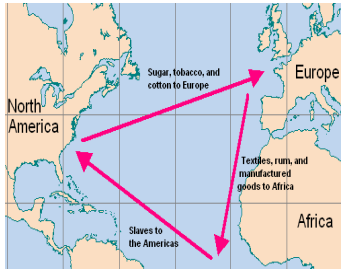
The Middle Passage

The Middle Passageway was the longest part of the journey for slaves from Africa to the Caribbean. Voyage could last between 2 and 5 months. Slaves suffered through terrible conditions and many died during the journey. Slaves were packed into the ship in very tight quarters (about 400 per ship) and laid down for most of the journey on decks that were only 5 feet high. They were only given little bits of food to keep them going and were severely punished should they disobey orders. Slaves were chained up for the entire journey, meaning that diseases spread quickly and easily from slave to slave. As many as 1 in 4 died of diseases like cholera, dysentery, yellow fever and smallpox. A lot threw themselves overboard in order to avoid their fate as a slave. Some were thrown over board as punishment, to stop the spread of disease or to lighten the ship. Towards the end of the journey they were taken up to the top deck for fresh air and more food to allow them to look healthier for sale.

Key Terms

Slave
A person who is the property of another and is forced to obey them.
Empire
A group of countries, people or land ruled by one single country referred to as the "mother" country.
Triangular Trade
A three part trading journey between 1)Europe 2)Africa 3)America/West Indies.
Middle Passage
The journey of slaves on ships from Africa to America.
Cargo
Goods carried for trade.
Auction
A market where the goods are sold by the highest bidder.
Scramble
Also known as a grab-an-go auction.
Plantation
A large farm on which crops such as coffee, sugar and tobacco were grown.
Branding
To mark a person or animal with a hot iron to show ownership.
House Slave
A slave that worked as a house servant – cook, cleaner, maid.
Field Slave
A slave that worked planting, tending and harvesting the crops.
Abolitionist
Someone who campaigned to end the slave trade

The Triangular Trade



The Triangular Trade ensured that the 'dirty business' of the slave trade stayed away from British Ports. No slaves for trade set foot on British soil.

The system in which slaves were traded across the world. Ships were loaded in **England** with goods such as **guns, cloth and salt**. This was taken to **Africa** and **traded for slaves**, who had been **kidnapped by African Slave Catchers** . The ships then went on a journey known as the **Middle Passageway** to the **Caribbean / America**. Here the **slaves were sold** to work in the **cotton, sugar and tobacco plantations** and farms. The ship was then **loaded with sugar and cotton,** to be **taken back to England** to be sold for **huge profits**. Many people made huge fortunes participating in this trade.

Slave Auctions

Slaves were offloaded from the ships and taken for sale to auctions. They were placed in pens until the sale and then loaded onto raised platforms so that they could be viewed. Here they were inspected like animals (teeth checked, muscles felt, etc.) and sold to the highest bidder (the person who offered the most money).

The largest slaves were the first to go because they were believed to be able to do more field work ($1000). Many women were sold away from children and husbands – they had no legal protection. Fertile and fair skinned women fetched the highest prices ($800). Pregnant women also fetched a high price – it was like buying 2 slaves for 1 and proved the woman was fertile and could have more. Many auctions were also meeting places to discuss war, politics, trade and other important issues at the time.

Grab and Go Auction/Sramble: All people who wanted to buy a slave would pay the auctioneer a set amount of money. The slave pen would be opened . Buyers would rush in and grab the slave or slaves that they wanted.

History Knowledge Organiser

Knowledge Organiser

Year 8 **Whitechapel** Unit #3

THE BIG QUESTION "Police failure meant Jack the Ripper wasn't caught". Do you agree?

Housing in Whitechapel

In 1881 – 30,709 people lived in Whitechapel in 4,069 homes which meant severe overcrowding.

-**Overcrowded slum housing called rookeries**. Some slum apartments contained 30 people in 1 or 2 rooms who had to share beds. In 1877, 1 rookery contained 123 rooms where 757 people lived.
-Homeless people used **lodging houses** =200 in Whitechapel which housed 8,000 people at a time in disgusting conditions. Some had 3 eight hour sleeping shifts, charging four pence or sixpence a night for a bed.
-**Flower and Dean Street** – Whitechapel rookery which had 31 lodging houses nicknamed dosshouses. Tensions in lodging houses were high because of many people of different nationalities. Crime was high in the rookeries because H Division were understaffed.
-Model Housing = **Peabody Estate** set up in 1881 with 286 flats. Rents were high e.g 3 shillings for 1 room flat meaning catered for skilled workers/not the poorest.
-**Whitechapel Workhouse** = last resort. Called South Grove/was built in 1872 and could take 400 people with the Casual Ward (a bed for the night) taking 60 people. In the workhouse they had to do hard work like picking oakum so it acted as a deterrent to keep costs low. Families were separated/people had to wear workhouse uniforms/food given was horrible.
-**Dr Barnardo's Orphanage** set up by Thomas John Barnardo in the East End in 1870 for homeless boys after an orphan boy called Jim Jarvis took Barnardo around the East End, showing him children sleeping on roofs and in gutters. Barnardo had already set up a ragged school in the East End where poor children could get a basic education. A sign was put up above the orphanage which said **"No Destitute Child Ever Refused Admission"** after John Somers (11 years old) was turned away because shelter full. He was found dead two days later. Barnardo opened the 'Girls' Village Home in Barkingside' which housed 1,500 orphan girls. Barnardo orphans were taught a trade so they could get jobs when they were adults. He also set up the first fostering scheme where respectable families looked after orphan children. When he died in 1905, he had set up 96 homes caring for 8,500 children.

Police Force in Whitechapel

-H Division (part of the Metropolitan Police) covered Whitechapel. They were understaffed with 500 police constables meaning 1 police officer to cover 300 people.
-Main police station in Whitechapel was Leman Street Police Station.
-Also had 15 detectives (plain clothes), 37 sergeants, 27 inspectors, a Chief Inspector and a Superintendent.
-23% of the Whitechapel police came from Ireland (showing the police were not well paid). Had to be literate/over 21 years and under 35.
-Police work was hard e.g walking 20 miles at night/7 days a week.
-Police viewed with hatred and suspicion in Whitechapel. Had to face violent attacks/drunkenness.-racial tensions –Jews/Irish made streets e.g Duke Street/Black Lion Yard hard to police.

Work in Whitechapel

-Low paid/casual employment.
-Many of the poor worked in '**sweated trades**' e.g. tailoring, shoe making, match box making. Worked in sweatshops with poor and unsafe conditions for up to 20 hours a day. Slept on site and received little pay.
-**London Docks** – casual labour (employed on a daily basis) = no stable income.
HIGH LEVELS OF UNEMPLOYMENT = 1870S = LONG DEPRESSION.

Crime in Whitechapel

-Most common type of crime = pick-pocketing/violent theft. Easy to commit in Whitechapel because police under-staffed and many narrow alleys/courts off the Commercial and Whitechapel roads.
-Problems with drunkenness e.g. in a one mile stretch along the Whitechapel Road were 45 pubs/gin palaces e.g. 'The Ten Bells'.
-Gangs in Whitechapel e.g. Bessarabian Tigers (from Southern Russia) and Odessian Gang from Eastern Europe- who set up protection rackets demanding money from Jewish shopkeepers. Police too understaffed to deal with this.

Prostitution in Whitechapel

--1888 =62 brothels in Whitechapel with 1,200 prostitutes because of poverty e.g. had sex for a loaf of bread to feed families or charged three pence.
-In Whitechapel, prostitutes walked around **St Botolph's Church** so customers could find them as prostitution was not illegal at this time.
-Victorian society classified prostitutes as 'unfortunates' who got what they deserved because of a life of sin.
-**1875 age of consent** (when you can legally have sex) increased from 12 to 13 years and then in 1885 to 16 years.
-Prostitutes often used 'double beds' in lodging houses.

Key Terms

Sweated Work
Unregulated low-paid work in poor/unsafe conditions.
Rookery
Over-crowded slum housing.
Slum
Poor standard, cramped housing
Lodging House / Doss House
Houses with dormitories of beds which could be rented by the night
Dr.Barnardo
Social reformer who opened home and school for orphaned / poor children
Prostitution
Exchanging sex for money
Petty Theft
Stealing small items, for example silk handkerchiefs
H-Division
The branch of the Metropolitan Police responsible for Whitechapel
Workhouse
Where the poor/destitute could go for long-term shelter – exchanged hard labour for food and board.
Casual Ward
A smaller workhouse where a single nights' bed and board was available for a days' work.
Anti-Semitism
An irrational hatred/prejudice towards Jews
Melting Pot
An area where many nationalities, religions and cultures exist together.

History Knowledge Organiser

Homework #1

Year 8 | **Whitechapel** | Unit #3

THE BIG QUESTION: "Police failure meant Jack the Ripper wasn't caught". Do you agree?

Using your knowledge organiser, complete the activities below about housing and crime in Victorian Whitechapel.

Housing in Whitechapel

Outline the key features of housing in Whitechapel. Include specific historical evidence (eg: names, dates, statistics, place names).

Type	Key Information
Rookeries	
Workhouse	
Dr.Barnado's Orphanage	
Lodging Houses	
Peabody Estates	

CRIME IN WHITECHAPEL

Describe 2 features of crime in Victorian Whitechapel. [4]

Homework #2

Year 8 | **Whitechapel** | Unit #3

THE BIG QUESTION: "Police failure meant Jack the Ripper wasn't caught". Do you agree?

Using your knowledge on housing conditions, annotate each source and identify inferences.

Lodging Houses
From this source I can infer that _____
_____
In the source we can see _____
_____
_____

The Casual Ward
From this source I can infer that _____
_____
In the source we can see _____
_____
_____

Rookeries
From this source I can infer that _____
_____
In the source we can see _____
_____
_____

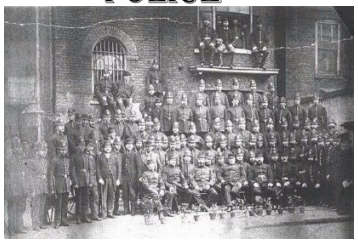
Rookeries
From this source I can infer that _____
_____
In the source we can see _____
_____
_____

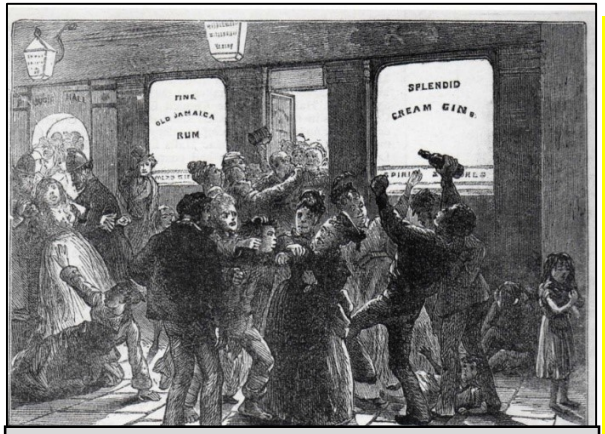
Homework #3

Year 8 **Whitechapel** Unit #3

THE BIG QUESTION "Police failure meant Jack the Ripper wasn't caught". Do you agree?

WHITECHAPEL POLICE





Source B - Drunken behaviour in the East End, drawn for the London News to show the problems of alcohol in Whitechapel 1887.

How useful is this source for an enquiry into disorderly behaviour in Victorian Whitechapel?

Describe 2 features of the police in Victorian Whitechapel. [4]

This source is a _____ from _____ .
This source infers that _____
_____
The details in the source that show this are _____
_____
_____
_____
Tis source is useful because _____
_____
_____
_____
From my own knowledge in know that _____
_____
_____
_____
_____

Maths Knowledge Organiser—Spring 2

Spring 2

Unit 10 - % increase and decrease			
No.	**Percentage**	**Fraction**	**Decimal**
10.1	25%	$\frac{1}{4}$	0.25
10.2	50%	$\frac{1}{2}$	0.5
10.3	75%	$\frac{3}{4}$	0.75
10.4	12.5%	$\frac{1}{8}$	0.125
10.5	20%	$\frac{1}{5}$	0.2
10.6	$33.\dot{3}$	$\frac{1}{3}$	$0.\dot{3}$
10.7	$66.\dot{6}$	$\frac{2}{3}$	$0.\dot{6}$
10.8	10%	$\frac{1}{10}$	0.1
10.9	20%	$\frac{2}{10} = (\frac{1}{5})$	0.2
10.10	30%	$\frac{3}{10}$	0.3
10.11	40%	$\frac{4}{10} = (\frac{2}{5})$	0.4
10.12	50%	$\frac{5}{10}$	0.5
10.13	60%	$\frac{6}{10} = (\frac{3}{5})$	0.6
10.14	70%	$\frac{7}{10}$	0.7
10.15	80%	$\frac{8}{10} = (\frac{4}{5})$	0.8
10.16	90%	$\frac{9}{10}$	0.9
10.17	100%	1 whole	1

Unit 10 - % increase and decrease (cont.)			
No.	**Question**	**Answer**	**Example**
10.18	How do you find 1% of an amount?	Divide by 100	1% of 70. 70 ÷ 100 = 0.7
10.19	How do you find 10% of an amount?	Divide by 10	10% of 70. 70 ÷ 10 = 7
10.20	How do you find 50% of an amount?	Divide by 2	50% of 70. 70 ÷ 2 = 35
10.21	How do you find 25% of an amount?	Divide by 4	25% of 70. 70 ÷ 4 = 17.5
10.22	How do you express a quantity as a percentage of another?	1. Represent the quantities as a fraction 2. Convert the fraction to decimal	I score 7 out of 25 on a test $\frac{7}{25} = \frac{28}{100} = 28\%$
10.23	How do you compare and order FDP?	Convert them all to be written in the same representation.	20% or $\frac{2}{5}$? $20\% = \frac{2}{10} = \frac{1}{5}$ $\frac{2}{5} > 20\%$
10.24	How do you increase by a %?	1. Find the percentage 2. Add it on	Increase £50 by 20% 20% = £10 £50 + £10 = £60
10.25	How do you decrease by a %?	1. Find the percentage 2. Take it away	Decrease £50 by 20% 20% = £10 £50 - £10 = £40
10.26	How do you calculate % change?	$\frac{new\ -original}{original} \times 100$	Was £200, now £250. $\frac{250-200}{200} \times 100 = 25\%$
10.27	How do you calculate reverse %s?	1. Divide the new amount by its total % 2. Multiply by 100. The original is always 100%.	After 20% increase, now costs £180. What was the original? $\frac{180}{120} \times 100 = 150$

Unit 11 - ratio			
No.	**Question**	**Answer**	**Example**
11.1	How do you represent a ratio?	1. Count how many of each part you're given 2. Write it as a ratio in the order specified.	Represent the following as a ratio Black : White 5 : 3
11.2	How do you represent a ratio as a fraction?	1. Add the total number of parts together 2. Each part of the ratio represents the numerator	2:3 as a fraction $2 + 3 = 5$ $\frac{2}{5}\ and\ \frac{3}{5}$
11.3	How do you divide a quantity into a ratio?	1. Divide the quantity by the total number of parts 2. Multiply by the number of parts in each share of the ratio	20 shared into the ratio 2:3 $2 + 3 = 5$ $20 \div 5 = 4\ (1\ share)$ $4 \times 2 = 8$ $4 \times 3 = 12$
11.4	Speed = ...	Speed= $\frac{distance}{time}$	Distance = 70m, time = 2 hours $S = \frac{70}{2}$ $S = 35m/h$

Topic	Hegarty Clip
Convert fractions to decimals	74
Find percentages of amounts	84
Percentage increase or decrease	90
Percentage change	97
Reverse percentages	96

	Student checklist for good HegartyMaths homework	✓ or ✗
1	I always write the date, title, clip number and H/W for all my tasks.	
2	I always watch the video before attempting the questions.	
3	I always take full notes of all the examples modelled in the video.	
4	I copy every question that I attempt in my book.	
5	I show all my workings for every question in the quiz that I do.	
6	I try to model my work the way I was shown in the video by Mr Hegarty.	
7	I use a pencil and ruler for all diagrams.	
8	I mark my work correct/incorrect as I go.	
9	I write down corrections when HegartyMaths tells me the correct answer.	
10	I write down my score at the end of quiz .	

Convert each percentage to a decimal.

1. 56%
2. 85%
3. 90%
4. 12%
5. 5%
6. 1%
7. 2.5%
8. 3.8%
9. 1.22%
10. 37.45%

Write each fraction as its decimal equivalent.

1. $\frac{2}{10}$
2. $\frac{4}{5}$
3. $\frac{3}{8}$
4. $\frac{7}{28}$
5. $\frac{19}{20}$
6. $\frac{1}{100}$

1. Write 45% as a fraction in its simplest form.

_____

2. Write 0.26 as a percentage.

_____

3. Calculate 965 ÷ 100.

_____

4. Evaluate 4.25 × 100.

_____

5. Convert $\frac{3}{8}$ to a percentage.

_____

6. Write 68% as a fraction in its simplest form.

_____

7. Convert $\frac{5}{25}$ to a decimal.

_____

8. Write 0.05 as a percentage.

_____

9. Evaluate 0.025 × 100.

_____

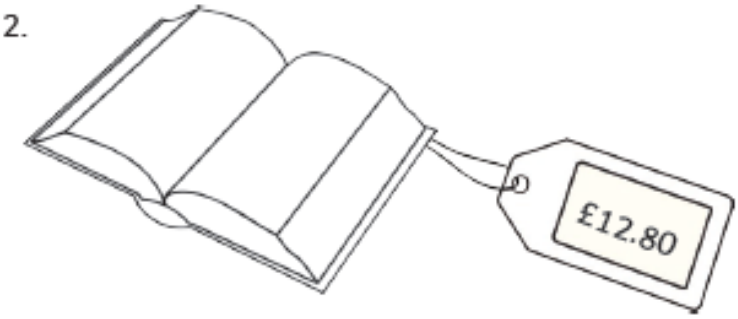
10. Evaluate 38.65 ÷ 100.

_____

1.

75% of price = _____

2.

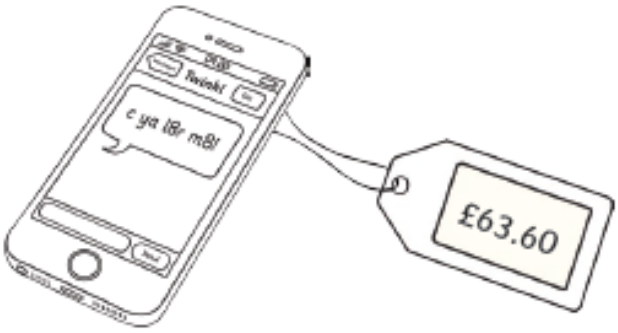


80% of price = _____

3.

65% of price = _____

4.



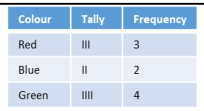
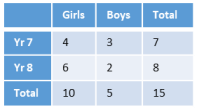
15% of price = _____

8	9	8	2	6	7	6	6	2	5
4	3	2	9	9	0	9	0	7	2
7	8	9	0	8	0	6	1	2	4
8	9	7	1	3	1	7	5	6	4
8	2	8	4	8	3	4	3	0	5
3	2	7	5	7	5	9	9	9	3
6	1	6	8	9	3	5	8	3	4
2	2	1	3	2	2	1	0	9	3
1	1	5	1	5	9	1	2	1	7
8	1	3	6	6	2	7	2	9	0

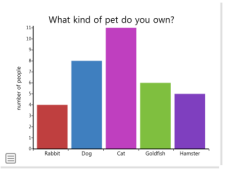
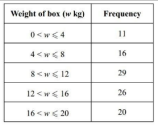
1. 50% of 8740 =
2. 60% of 4460 =
3. 20% of 48 935 =
4. 50% of 4348 =
5. 25% of 8840 =
6. 4% of 68 150 =
7. 5% of 107 900 =
8. 25% of 29 176 =
9. 40% of 13 605 =
10. 15% of 62 600 =
11. 10% of 81 180 =
12. 2% of 239 400 =
13. 4% of 66 575 =
14. 16% of 50 612.5 =
15. 20% of 34 835 =
16. 96% of 2393.75 =
17. 45% of 3420 =
18. 25% of 8780 =
19. 40% of 18 445 =
20. 0.5% of 1 984 600 =

	Bronze	Silver	Gold
Fluency (5 points)	Calculate 23% of £160.	Reduce £90 by 23%.	The price of a coat is reduced by 23% in the sale. It now costs £92.40. What did it cost before the sale?
Reasoning (10 points)	Which of these gives the larger amount: 17% of £50 or 50% of £17?	Explain why the answer to each of these must be the same: 47% of 9 and 9% of 47.	Statistics tell us that female employees in the UK earn 9.1% per hour less than their male colleagues. If all female employees were to receive a 10% increase on their pay, would this now mean they were earning more, less or the same as the male employees?
Problem-Solving (15 points)	Beth visits a large department store during the January sales. She spots these two sale stickers. Which one has the larger percentage reduction? Was £39.99 Now £25! Normal price £52 Take 35% off!	Ellie and Frederic are selling sweets at their respective schools' tuck shops. Ellie buys 100 sweets for £28 and sells them for £45. Frederic buys 50 sweet for £13 and makes a £7.50 profit. Who makes the bigger percentage profit?	I invest some money in a savings account. During the first year, I received 2% interest back, then in the second year I receive 3%. What percentage interest have I received overall?
The Big One! (30 points)	By looking online at "payday loan" lenders, design a short presentation to explain to your classmates why borrowing from one of these is never a good idea.		

Unit 12 – collecting data

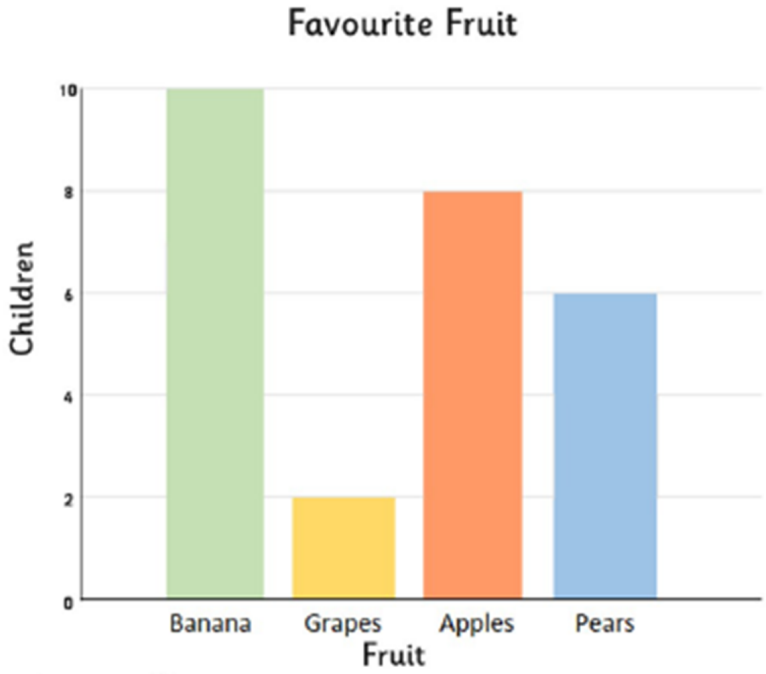
No.	Question	Answer	Example
12.1	What does qualitative mean?	Data that describes something	Hair colour
12.2	What does quantitative mean?	Data that can be measured or counted	Number of dogs in the park
12.3	What is discrete data?	Data that can only take set values	Shoe size Number of pets you have
12.4	What is continuous data?	Data that can take any value (can be decimal)	Height Weight
12.5	What is primary data?	Data that is collected first hand	Taking a survey
12.6	What is secondary data?	Data that is collected by someone else	The internet
12.7	What is a sample?	A smaller group taken from the total population you are testing	In year 8 there are 200 students, I took a sample of 40 to give my survey.
12.8	What are four things that questionnaires should NOT be?	• Too personal • Too complicated • Leading • Specific to only certain people	On average how many books do you read per month? ❑ none ❑ 1 – 2 ❑ 3 – 4 ❑ 5 – 6 ❑ 7 or more
12.9	What are four things that response boxes should be?	• Be exhaustive • Not overlap • Have specific units and time frame • Have specific quantitative answers	
12.10	What are three things that tally charts should include?	• The specific category • Tally • Frequency	 Colour / Tally / Frequency Red / III / 3 Blue / II / 2 Green / IIII / 4
12.11	What are three things that two way tables must include?	• One data set along the top row • One data set along the left column • 2 total headings	 Girls / Boys / Total Yr 7 / 4 / 3 / 7 Yr 8 / 6 / 2 / 8 Total / 10 / 5 / 15

Unit 13 – presenting data

No.	Question	Answer	Example
13.1	What three things must a pictogram include?	• A heading column • A sensible picture • A key	 Day / Number of apples sold Monday Tuesday Wednesday Thursday Friday Saturday Sunday Key: = 2 apples
13.2	What four things must a bar chart have?	• An x-axis representing frequency • A y-axis representing the groups • The bars must be the same width • The axis must go up in equal increments	 What kind of pet do you own? Number of people Rabbit Dog Cat Goldfish Hamster
13.3	What are grouped frequency tables?	A way of recording large data sets The categories are a set of data values represented using inequalities	 Weight of box (w kg) / Frequency $0 < w \leq 4$ / 11 $4 < w \leq 8$ / 16 $8 < w \leq 12$ / 29 $12 < w \leq 16$ / 26 $16 < w \leq 20$ / 20
13.3	What must grouped frequency tables include?	• A heading column • A frequency column • Sometimes a tally column	 Sales split month wise January February March April
13.4	How many degrees in a pie chart?	360°	
13.5	How do you calculate each angle in a pie chart?	Divide by the total frequency and multiply by 360	

Unit 14 – interpreting data

No.	Question	Answer	Example
14.1	How do you calculate the mean?	Add up all the data sets Divide by how many pieces of data there are	6, 3, 4, 7 $\frac{6+3+4+7}{4} = 5$
14.2	How do you calculate the median?	Put all the data in ascending order and find the middle value.	7, 2, 4, 8, 3, 9, 1 1, 2, 3, **4**, 7, 8, 9 4 is the median as it is in the middle
14.3	How do you calculate the mode?	Find the value that occurs the most	7, 2, 4, 8, 3, 9, 1, 9, 9 9 is the mode as it appears the most
14.4	How do you calculate the range?	Subtract the smallest value from the largest	7, 2, 4, 8, 3, 9, 1, 9, 9 9 – 1 = 8 therefore 8 is the range



Answer the following questions.

1. What is the favourite fruit? ____

2. How many children chose apples as their favourite fruit? ____

3. How many more children chose bananas than grapes, as their favourite fruit?

4. How many children chose apples or pears as their favourite fruit? ____

★

Find the mode

1) 2, 3, 4, 4, 7

2) 2, 5, 5, 7, 8

3) 1, 2, 3, 7, 7, 8

4) 1, 2, 4, 1, 6, 5, 1

5) 2, 5, 7, 1, 2, 1, 2

6) 4, 7, 2, 7, 3, 4, 7

7) 1, 0, 3, 0, 5, 4, 2

8) -2, 0, 1, -1, -2

★★

Calculate the median

1) 1, 3, 5, 5, 6

2) 3, 4, 10, 2, 1

3) 4, 5, 7, 11

4) 1, 2, 1, 6

5) 3, 2, 7, 3, 2, 5

6) 1, 7, 4, 7, 6, 2

7) 2, 2, 3, 7, 6, 8

8) 2, 3, 1, 14, 17, 18

★★★

Calculate the mean

1) 1, 2, 3, 2

2) 4, 3, 2, 4, 2

3) 5, 4, 6, 1

4) 2, 5, 1, 4, 7, 5

5) 10,11, 9, 12, 8

6) 1, 2, -2, 1, -2

7) 4, -2, 3, -3, 3

8) 4, 5.5, 3, 5.5

MFL Knowledge Organiser

Vocabulary Learning Homework

- Research has shown that regular vocabulary learning is very beneficial to a child's acquisition of language. Therefore, each week, vocabulary learning is set in MFL. Students are asked to learn 10 words per week on average (this is at the teachers' discretion). A proven method for learning vocabulary is the "Look, cover, write, check" method.
- Students will receive at the start of each half term a vocabulary sheet. There are pictures to help with retention of vocabulary. They are expected to look after this sheet and keep it for the duration of the half-term. Instructions will be sent for which words the students are to learn via "Classcharts". For this half-term, your child is studying "Le Petit Nicolas" (film) and the vocabulary that is set reflects this.
- You can help your child to learn this vocabulary by quizzing them, even a few minutes a day can make a huge difference. You can also help them by downloading apps such as "Duolinguo" and "Linguascope" (Username and password should be in your child's planner)
- "Quizlet" is also a useful website where students can quiz themselves. Please activate an account at home, and find either 'GHolmes234' for Miss Holmes or 'Mr_Gradwell' for Mr Gradwell.
- Watching TV programmes in the target language and changing your phone settings are also easy ways of improving your language skills.

A guide to MFL learning for parents

Revision Techniques for Your Child. Encourage Them To...

- create mind maps to revise vocabulary;
- make revision cards before exams. try to use different colours to distinguish word class (noun, adjectives, verbs etc.);
- use 'look, cover, write' and check lists to practise spellings;
- ask a friend to choose one topic and try to talk about it for one minute;
- use sticky notes to revise key vocabulary and phrases;
- involve you in vocabulary testing: test how many words they can remember;
- find apps about learning languages to revise through playing games;
- play word association games;
- put up posters around your home (e.g. fridge, bedroom) with key verbs, tenses, etc;
- record answers on your phone and listen to them for 5-10 mins a day.

Ideas to Support Language Learning

- Encourage your child to **watch a TV show or a movie with subtitles** in another language.
- Get **books, films and magazines from abroad** if you go on holiday.
- Get a subscription for a **language magazine.**
- Download **interactive games** about learning languages.
- **Ask your child to teach you** to say something in the foreign language every day.
- Encourage your child to look for most **popular singers and bands** from other countries and **play music** in the foreign language at home.

Strategies for Using a Dictionary or Online Translator

- Words usually have more than one translation. Read them all and decide which one works best for you!
- Check the grammar basics: is that word masculine or feminine? Plural or singular?
- Some online dictionaries also provide an audio version with the pronunciation. Listen to it and try to repeat it.
- Remember: be careful with online translators, they usually make no sense if you try to translate full sentences!

FRENCH Year 8- Summer 1- Le petit Nicolas film							
1	effrayant(e)	scary		9	les cheveux courts	Short hair	
2	passionnant(e)	exciting		10	les cheveux bruns	Brown hair	
3	entraînant(e)	Lively/catchy		11	les cheveux frisés	Curly hair	
4	affreux/euse	awful		12	il est grand	He is tall	
5	ennuyeux/euse	boring		13	il est petit	He is small	
6	ça me fait peur	it's scary		14	il est de taille moyenne	He is average size	
7	ça me fair rire	It makes me laugh		15	médecin	doctor	
8	ça me plaît	I like it		16	bandit	robber	
9	les cheveux longs	Long hair		17	policier/ière	Police officer	

FRENCH Year 8- Summer 1- Le petit Nicolas film							
18	je ne sais pas	I don't know		27	il va nettoyer	he is going to clean	
19	méchant(e)	mean		28	si j'avais le choix, je voudrais…	if I had the choice, I would like…	
20	amusant(e)	funny		29	si j'avais le choix, j'aimerais…	if I had the choice, I would like…	
21	le (la) chou-chou(te)	Teacher's pet		30			
22	un cafard	cockroach		31			
23	bête	stupid		32			
24	il va fuguer	he is going to run away		33			
25	il va réussir	he is going to succeed					
26	il va échapper	he is going to fail					

If you feel it is useful, use this grid to help you revise.

LOOK	COVER	WRITE	CHECK
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Other fantastic websites for French are-

BBC (http://www.bbc.co.uk/languages/french/)

The French Experiment (https://www.thefrenchexperiment.com/)

Music Knowledge Organiser

Music Theory Grade 1

Vocabulary

Tempo—speed, time

Accelerando (accel)	Gradually getting quicker
Adagio	Slow
Allegretto	Fairly quick
Allegro	Quick, cheerful
Andante	Walking pace
Legato	Smoothly
Lento	Slow
Rallentando (rall)	Getting slower
Ritardanto (rall)	Getting slower
Staccato	Detached (a dot under or over note)

Dynamics—volume

Fortissimo (ff)	Very loud
Forte (f)	Loud
Mezzo forte (mf)	Quite loud
Mezzo piano (mp)	Quite quiet
Piano (p)	Quiet
Pianissimo (pp)	Very quiet
Cresendo (cresc)	Getting louder
Diminuendo (dim)	Getting quieter
Mezzo	Half
Moderato	Moderately
Poco	A little
Poco a poco	Little by little

Music Knowledge Organiser

Music Theory Grade 1

Vocabulary

Music Elements

Dynamics	Volume
Rhythms	Note lengths
Pitch	High and low
Structure	How music is built from start to end
Melody	The tune
Instrumentation	What instruments are used
Tempo	Speed
Texture	Layers of sound. How music is built from top to bottom
Timbre	Sound quality
Harmony	What backs up the melody

Note Values

Note Name	Draw the note	Name the note length	How many beats does it last?
Semibreve			
Minim			
Crotchet			
Quaver			
Semiquaver			

Dotted Notes

A dot next to the note (not above or below) means that you half the note value and then add it on.

For example: A semibreve is worth 4 beats

The dot means I halve it which is 2 beats

And then I add it on

4 + 2 = 6

A dotted semibreve is worth <u>6 beats</u>

Do the same for the following:

Note	Without the dot	Half the value	Added together

Time Signatures

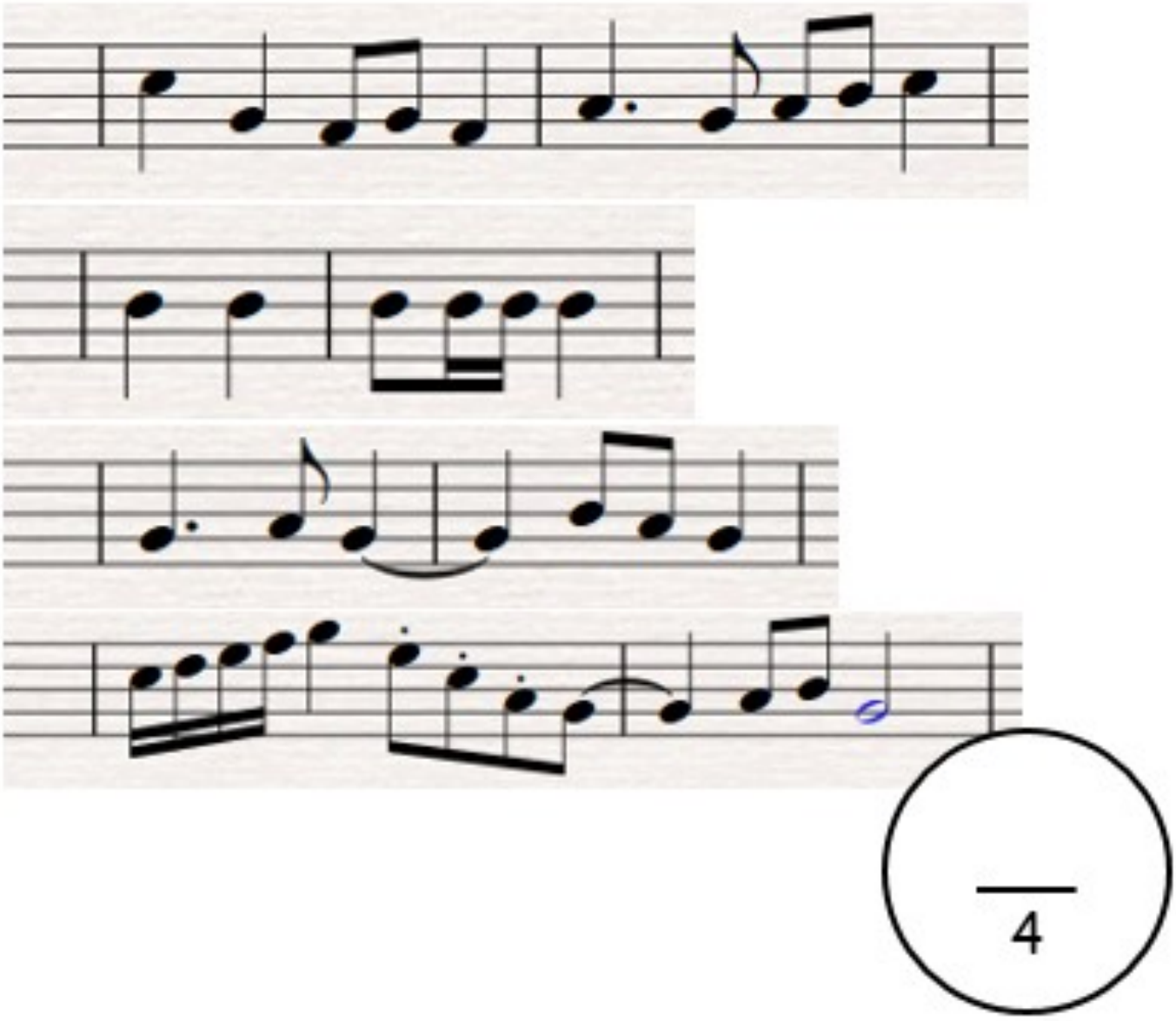
Time signatures explained:

The top number tells you how many beats are in a bar.

The bottom number tells you what type of beat it is. Having a 4 on the bottom represents a crotchet beat.

3 means 3 crotchet beats in a bar.
4

Write the time signature at the start of the music.

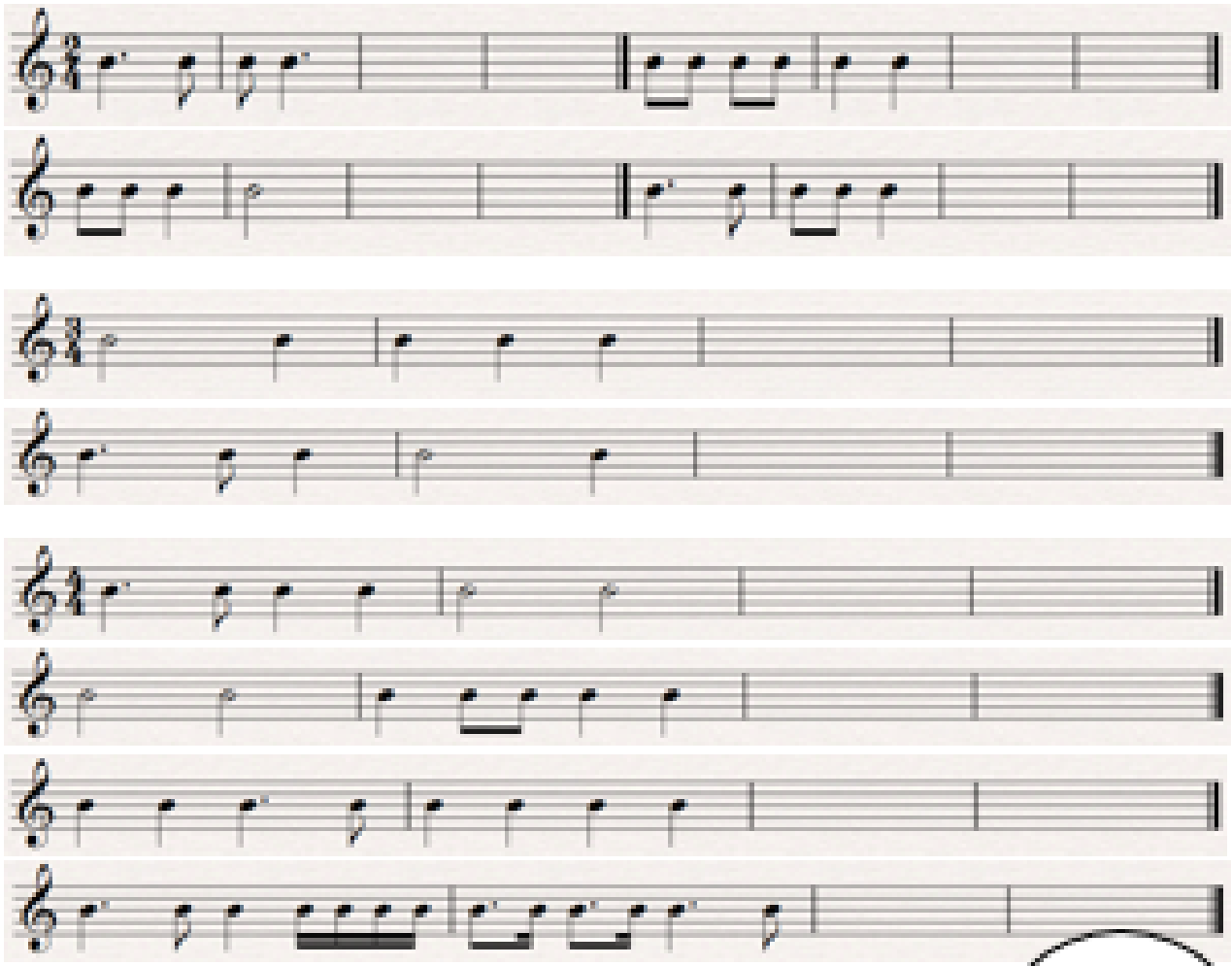


Composing a 2 bar rhythm

Because you're writing a rhythm and not a melody you only need to use one line on the stave.

<u>Advice for writing a 2 bar response.</u>

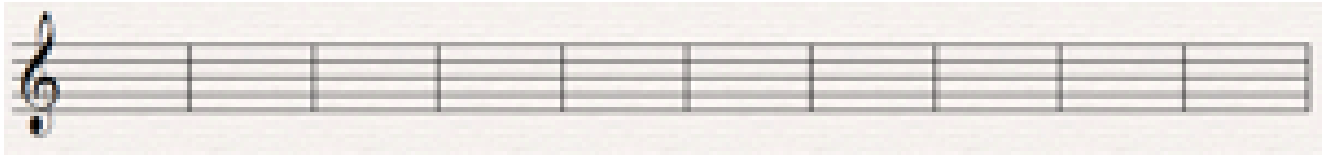
- Look at the time signature first.
- Tap the written rhythm to yourself.
- Tap a response that sounds good.
- Make the rhythm interesting.
    - Use the existing rhythm and amend it to be an answer.
    - This will make it similar but different.
- End on a longer note.



10

Notes of the treble clef

Firstly, practice drawing 10 treble clefs on the staff below. Copy the first one as accurately as you can.



Next you need to start learning what notes are on what lines and in which spaces.

The best way is with mnemonics.

The notes on the lines:

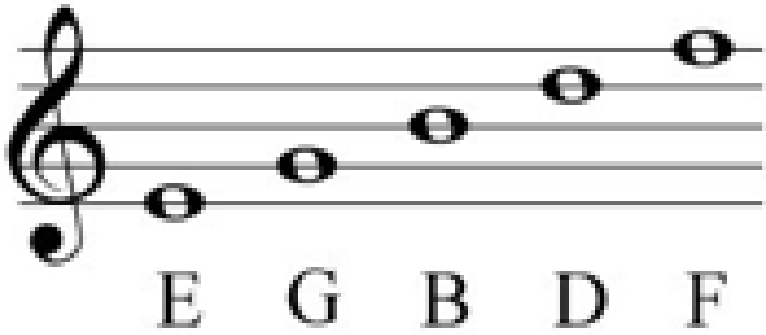
Every

Good

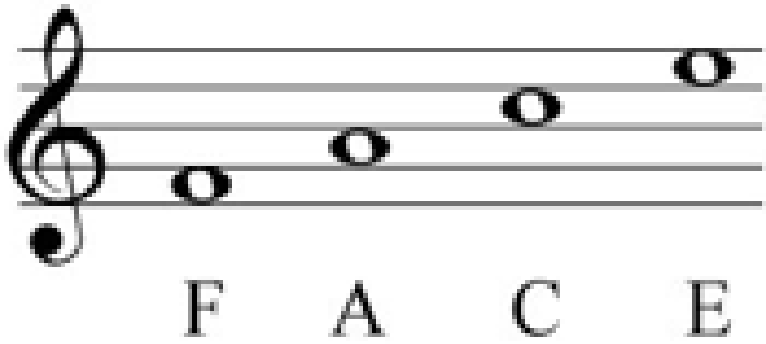
Boy

Deserves

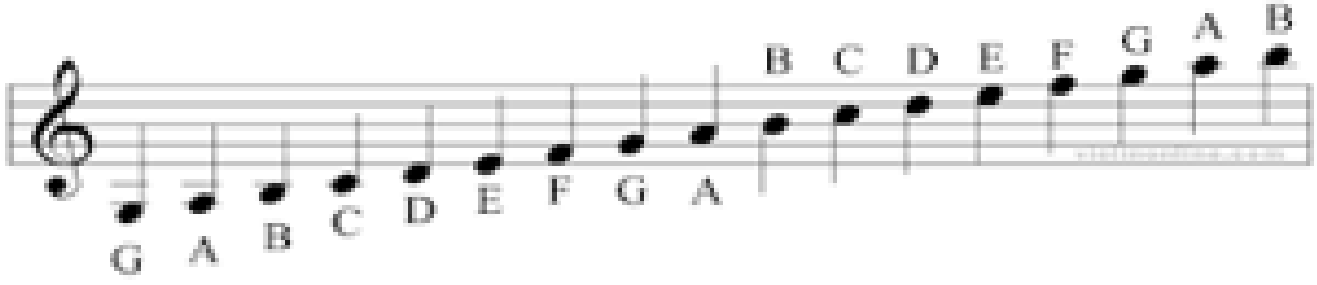
Football



The notes in the spaces
Spell FACE



When you go beyond the lines and spaces you keep going through the alphabet from A – G and then start again at A, like this:



 # is the symbol for sharp

This means that you raise the note by a semitone.

A semitone is the *very next note*.

So seeing C# means that you play the black note **above** C.

♭ is the symbol for flat

This means that you **lower** the note by a semitone.

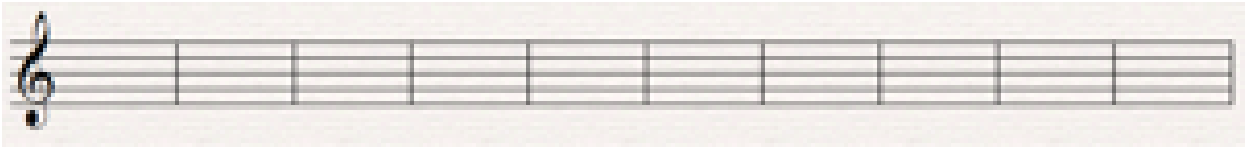
A semitone is the *very next note*.

So seeing A♭ means that you play the black note **below** A.

♮ is the symbol for natural

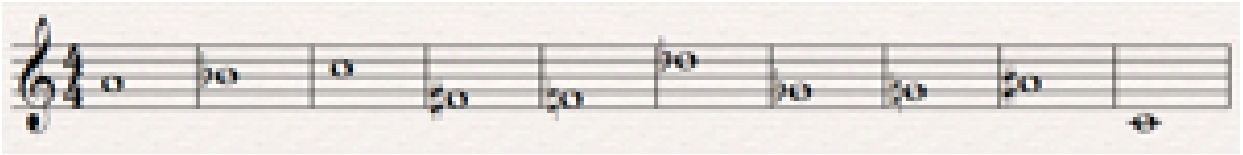
This means that a # or ♭ note returns to being 'normal'.

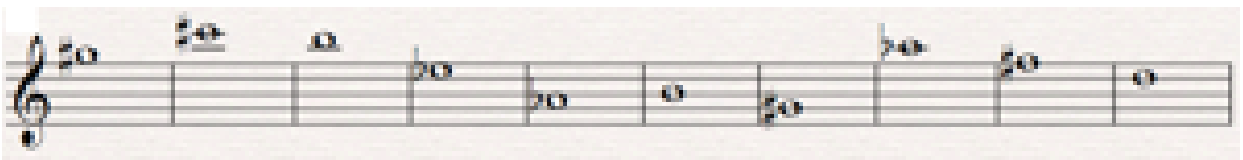
Practice drawing some sharp, flat and natural symbols



Accidentals – sharps, flats and naturals

Name these notes





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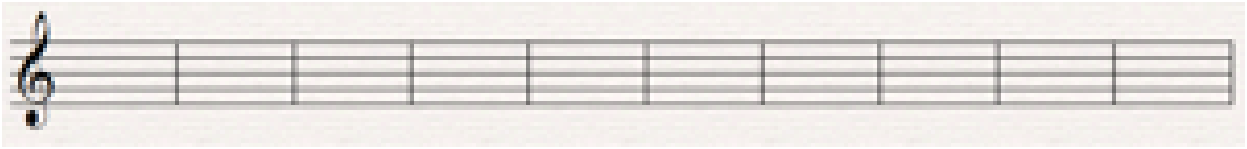
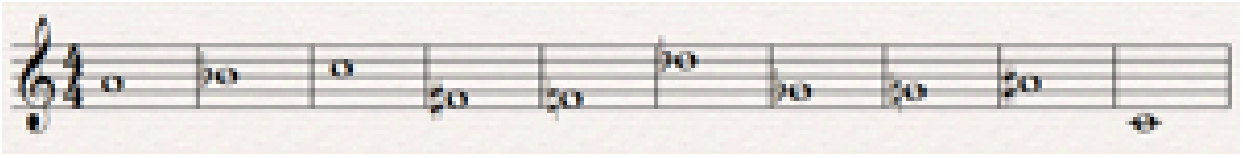
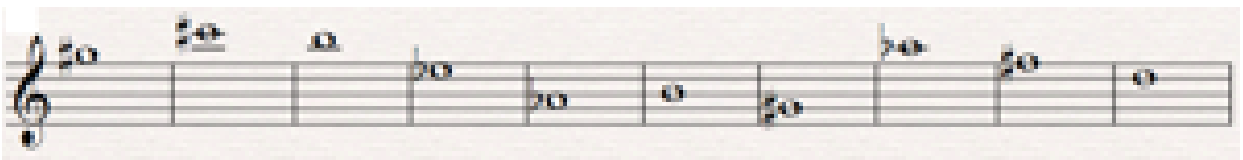


Accidentals – sharps, flats and naturals

Name these notes





Using the pattern of tones and semitones, write out all the notes (including # and b) for the following scales:

G major

G ___ ___ ___ ___ ___ ___ G

D major

D ___ ___ ___ ___ ___ ___ D

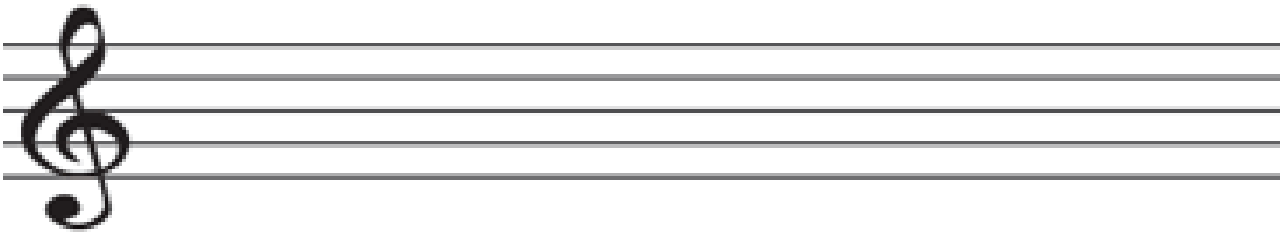
F major

F ___ ___ ___ ___ ___ ___ F

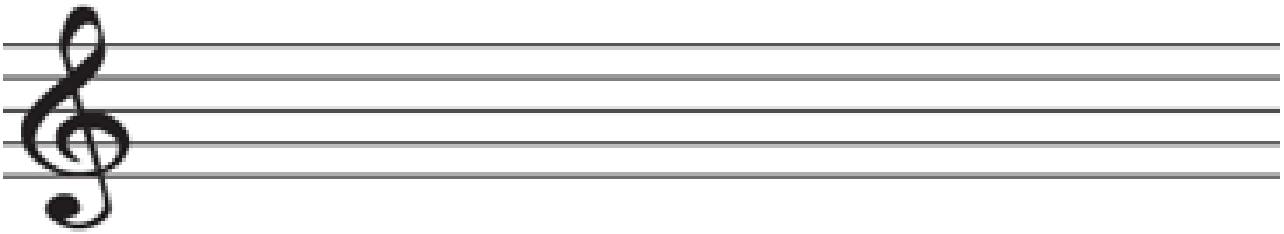
Constructing a major scale.

Now it's time to draw these scales on the staff. Using crotchets, draw the C, and G major scales using the correct # or *b*.

C Major



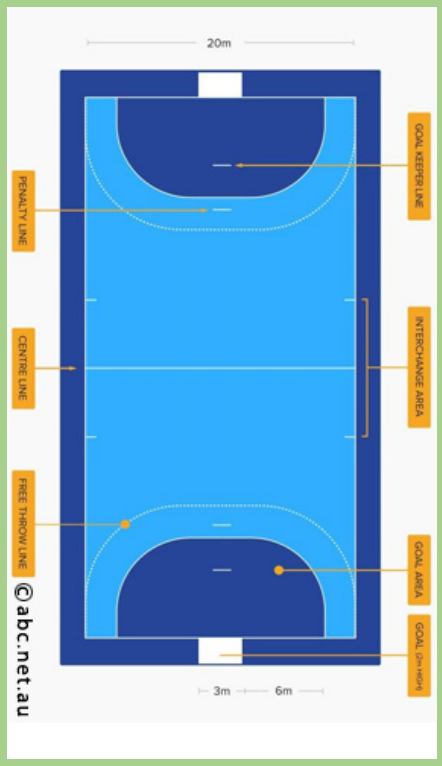
G Major



PE Knowledge Organiser

Knowledge Required

Rules:



- Mixture of Football, Basketball & Ice Hockey
- Played in two teams of 7
- 1 GK and 6 outfield players
- No more than 3 seconds or 3 steps
- Cannot go onto the goal area
- Defenders do = penalty throw
- Attackers do = no goal
- 60 minutes per game – (2 x 30 minutes)
- Score by throwing the ball into the net
- Side line ball to the opposite team if the ball goes out of play
- 1 point scored for goal
- You can block an opponent but cannot grab them
- Game start with a Centre Line
- 7 metre line (Penalty)
- Double dribble – just like basketball
- Passive play is forbidden (no attempt to score)
- 1 foul = Yellow card
- 2 fouls = 2 minute time out
- 3 fouls = 2 minute time out

4 fouls = Red card

PE Knowledge Organiser

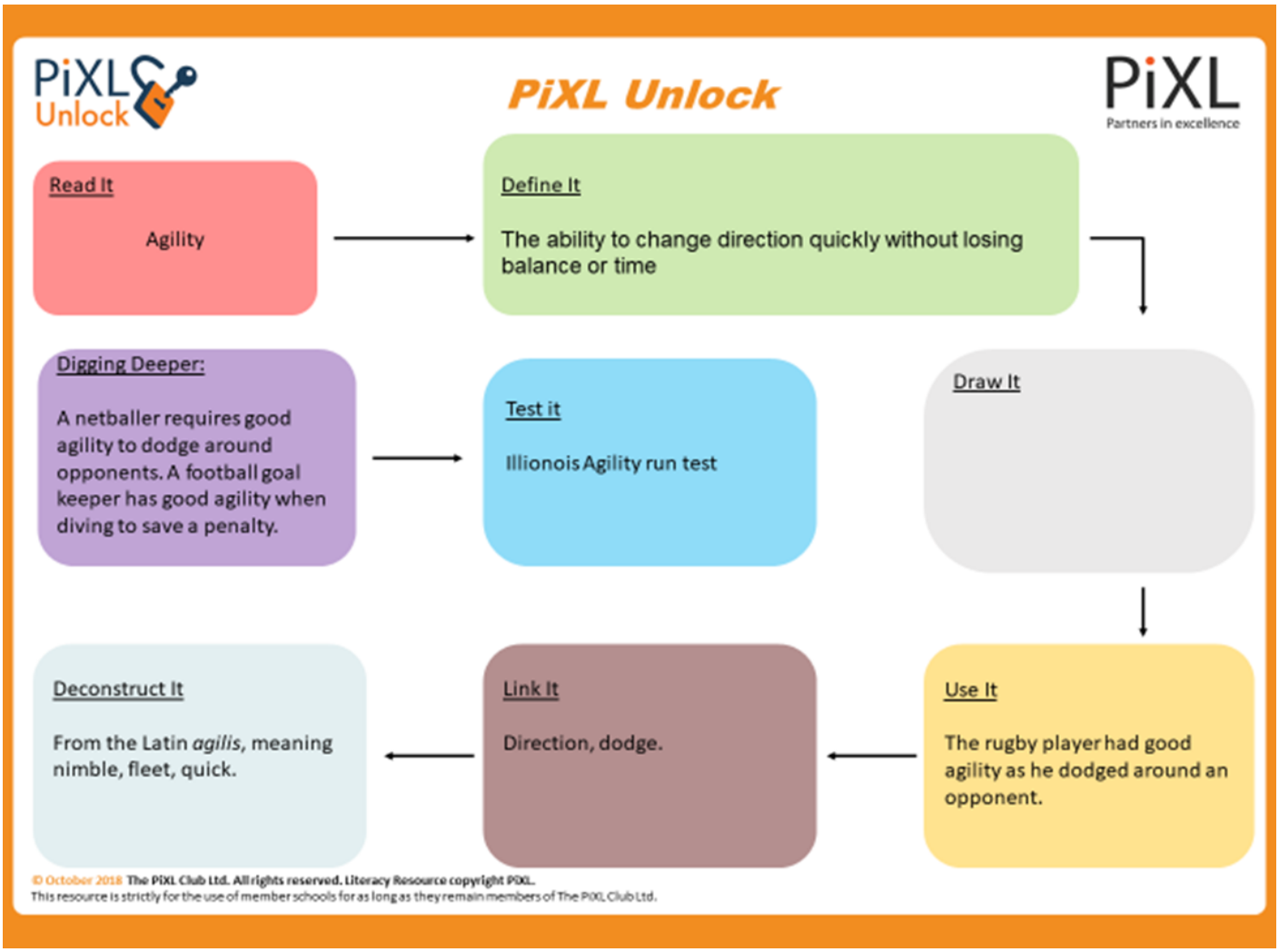
Catching	Catching of the ball is an essential technical element in handball. Accurate catching is very important and ensures a fast, smooth and skilful game. Coaching points = W shape, eyes on the ball, feet shoulder width apart
Chest pass	<u>PASS OVER A SHORT DISTANCE WITH NO DEFENDERS INBETWEEN</u> • W Shape = Grip • Step into the pass = Power Extend your arms = Accuracy
Shoulder pass	<u>PASS MADE OVER A LONGER DISTANCE WITH POWER AND NO DEFENDERS IN DIRECT</u> • Fingers spread as wide as possible = Grip • Step into the pass = Power • Extend your arms = Accuracy Throw the ball = Distance

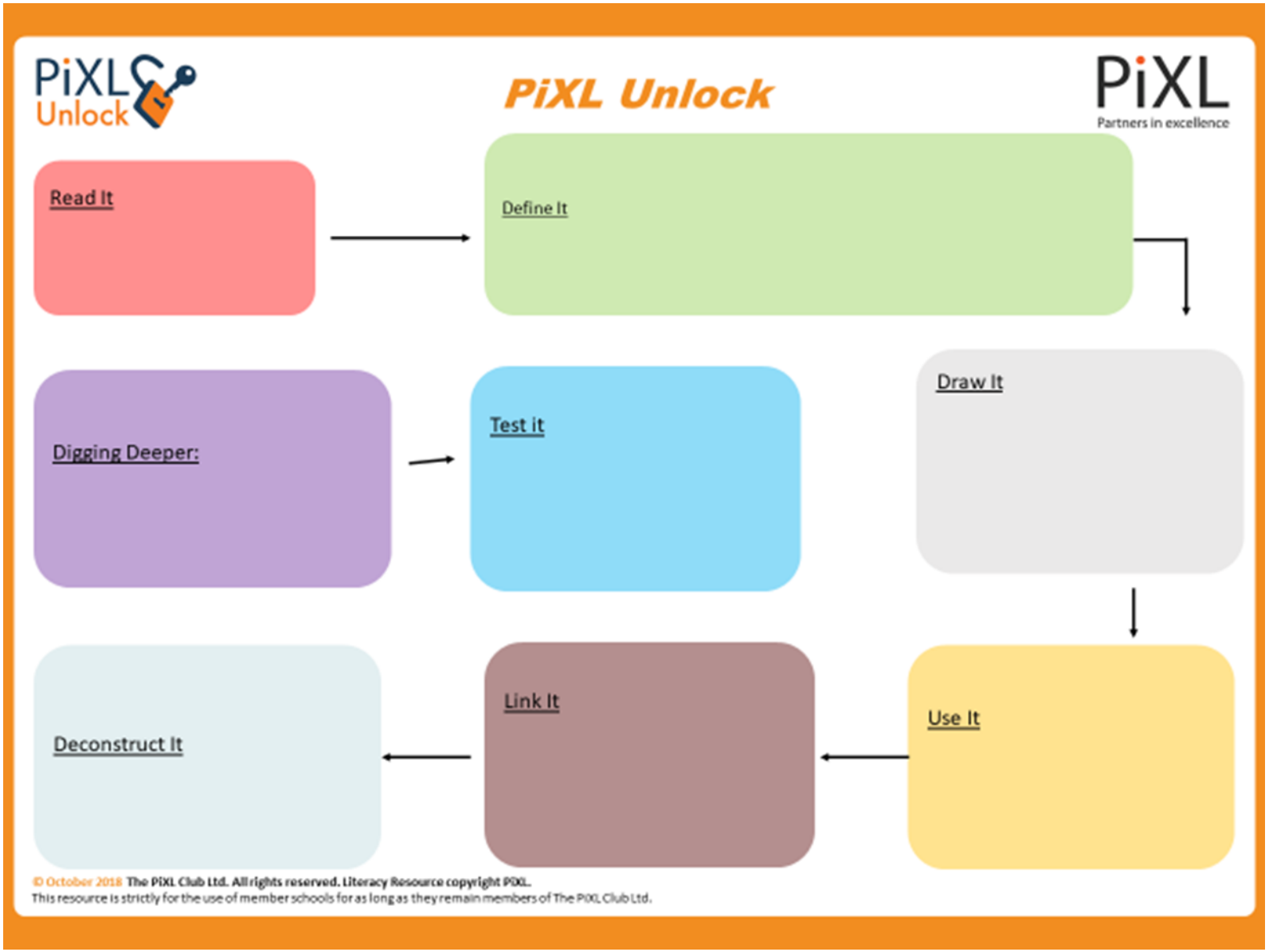
Components of fitness and how they are needed?

COF	Definition	How are they used?
Agility	The ability to change direction quickly	You need this to dodge and opponent or the GK to dive to save the shot
Balance	The ability to maintain equilibrium The ability to hold a fixed position	You need this to not fall over when people are trying to tackle you or when landing
Co-ordination	The ability to use two or more body parts	You need this to throw and catch the ball
Power	Strength x speed	You need this when jumping or any explosive actions such as shooting
Reaction Time	The time taken to respond to a stimulus	A GK needs this to react to the ball when somebody has shot at his goal Re-acting to a referees whistle
Aerobic Endurance	The ability for the cardiorespiratory system (heart/lungs) to supply the muscles with oxygen and nutrients to take part in sustained physical activity.	You need this to keep running for the 60 minutes without becoming fatigue.
Speed	The ability to move the whole or parts of the body quickly	You need this to run fast past defenders

Components of Fitness:

You are going to spend 5 minutes memorising as much information on the following pages ready for a look, cover, write and check on the next page. It is crucial that you do not just copy this! The PE department will constantly be asking you throughout the term on these.





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Read It

Balance

Define It

Balance is the ability to maintain centre of mass over a base of support or to hold a fixed position

Static – Remaining still (handstand)
Dynamic – on the move (cartwheel)

Digging Deeper:

Balance is the ability to maintain the body's centre of mass above the base of support. A sprinter holds a perfectly still sprint start position using balance and is ready to go into action as soon as the gun sounds.

Test it

Standing Stork **Test**.

Draw It

Use It

The gymnast showed good balance whilst on the beam.

Link It

Centre, body.

Deconstruct It

From the Latin work *bilanx*, meaning to be equal with and serve as a counterpoise. Bringing or keeping equilibrium.

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Read It

Coordination

Define It

Coordination is the ability to use two or more body parts together **or**
A smooth flow of movement needed to perform a task efficiently and accurately

Digging Deeper:

A trampolinist timing their arm and leg movements to perform the perfect tuck somersault uses coordination.

Test it

Alternate hand wall toss test

Draw It

Use It

A tennis player has good hand eye coordination to hit the tennis ball with their racquet in the right direction consistently

Link It

Balance, hand, eye.

Deconstruct It

From the Latin *co*, meaning together, with + *ordin,* meaning order.

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Read It

Power

Define It

Power is the product of Strength X Speed

Draw It

Use It

A basketball player would need power to jump high enough to perform a slam dunk.

Link It

Explosive, Strength, Speed,

Deconstruct It

From the Latin *Patis*, which means Powerful (like a king)

Digging Deeper:

A trampolinist timing their arm and leg movements to perform the perfect tuck somersault uses coordination.

Test it

Vertical wall jump Test

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Reaction Time

Define It

Reaction time is the time it takes to respond to a stimulus and the initiation of their response

Draw It

Use It

A 100m sprinter needs a fast reaction time at the start of the race to set off as soon as the gun is sounded

Link It

Stimulus, response, start.

Deconstruct It

From the Latin *re,* meaning back, again.

Digging Deeper:

An example of reaction time is where the boxer perceives a punch from their left and rapidly moves their head to avoid being struck.

Test it

Ruler Drop Test

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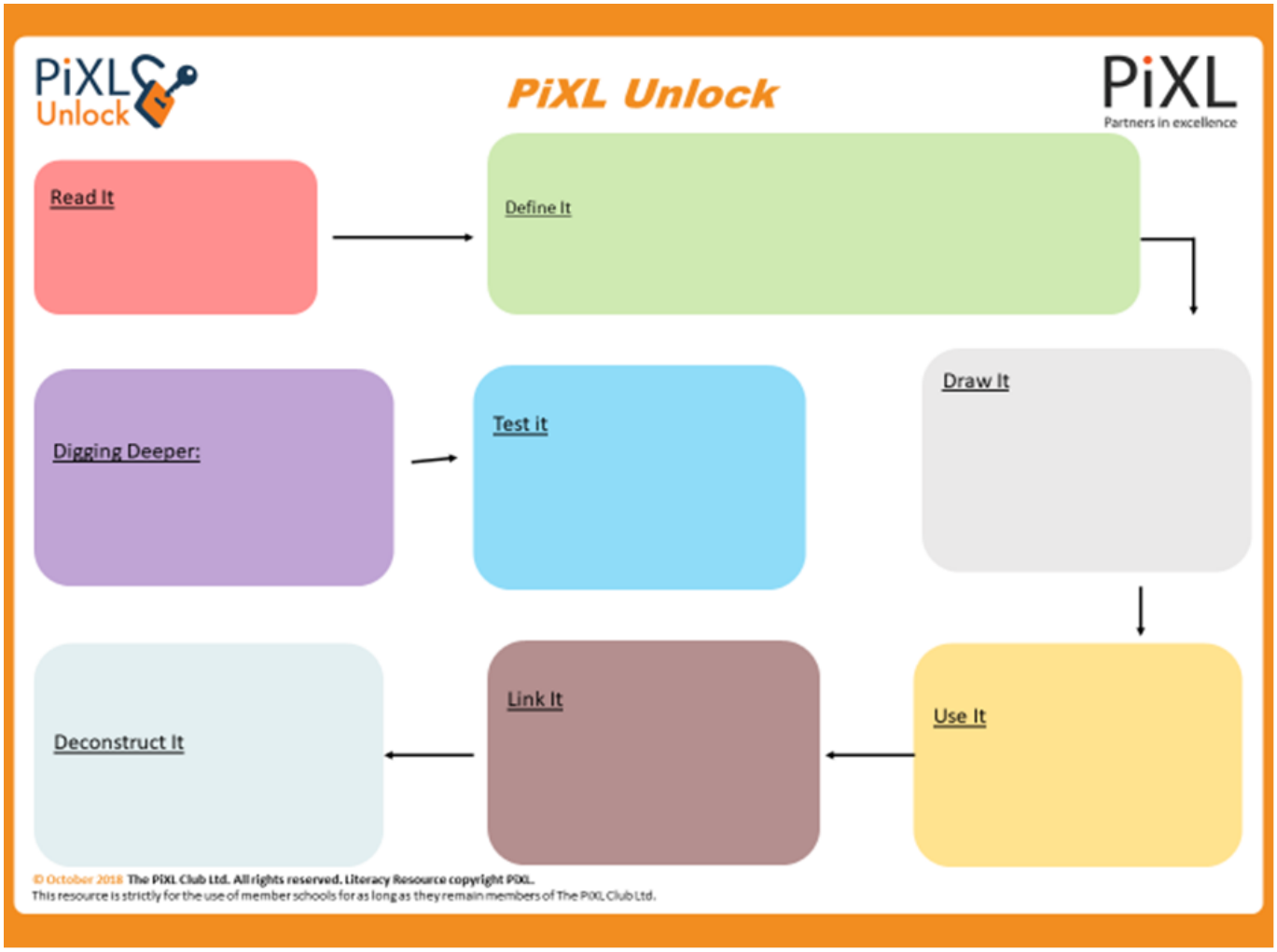
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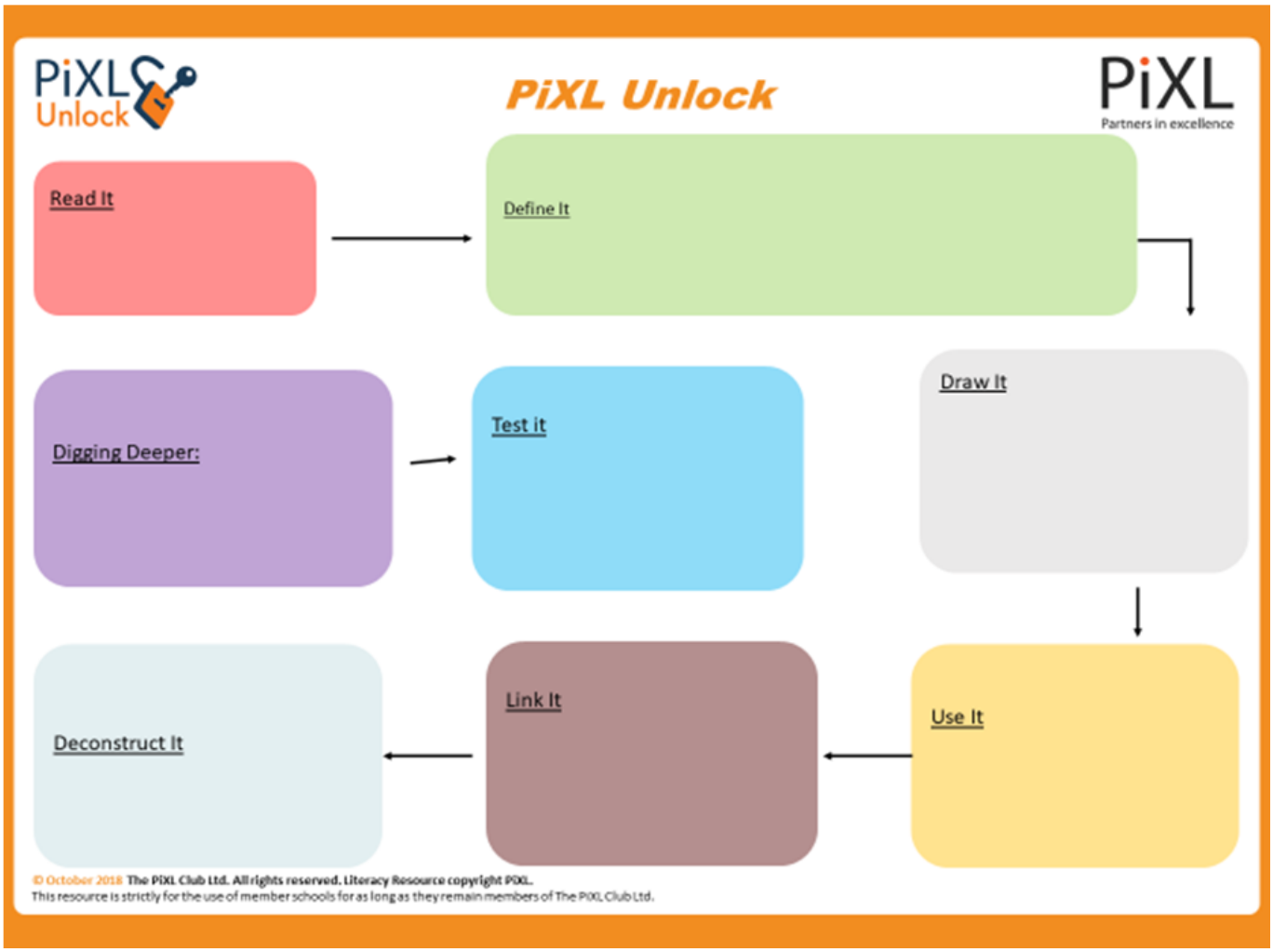
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Read It

Body Composition

Define It

The relative ratio of fat, muscle and bone in the body.

Digging Deeper:

An Sumo wrestler will have high levels of fat to suit the needs to their sports as will a heavy weight boxer in comparison to lightweight

Test it

- Skin Fold Testing
- BIA Testing
- BMI Testing

Draw It

Use It

A gymnastic has low levels of body fat as this is suitable to the needs of their sport

Link It

Fat, Skin, Weight, Obesity, BMI.

Deconstruct It

From the Old English *bodig*, meaning the trunk of something and Compos – to put things together

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Read It

Aerobic Endurance
(Cardiovascular endurance)

Define It

Aerobic endurance is the ability for the cardiorespiratory system (heart/lungs) to supply the muscles with oxygen and nutrients to take part in sustained physical activity.

Digging Deeper:

Cardiovascular endurance is the ability of the heart, lungs and blood to transport oxygen. A marathon runner has high levels of cardiovascular endurance to continue to run for several hours without stopping

Test it

- Multi stage fitness test (bleep)
- Forestry step

Draw It

Use It

A midfielder in football will need good Aerobic endurance in football to continue to attack and defend for the whole 90 minutes of a game

Link It

Oxygen, carbon dioxide, aerobic, heart, lungs.

Deconstruct It

Aerobic – working with oxygen
Endure, meaning make hard.

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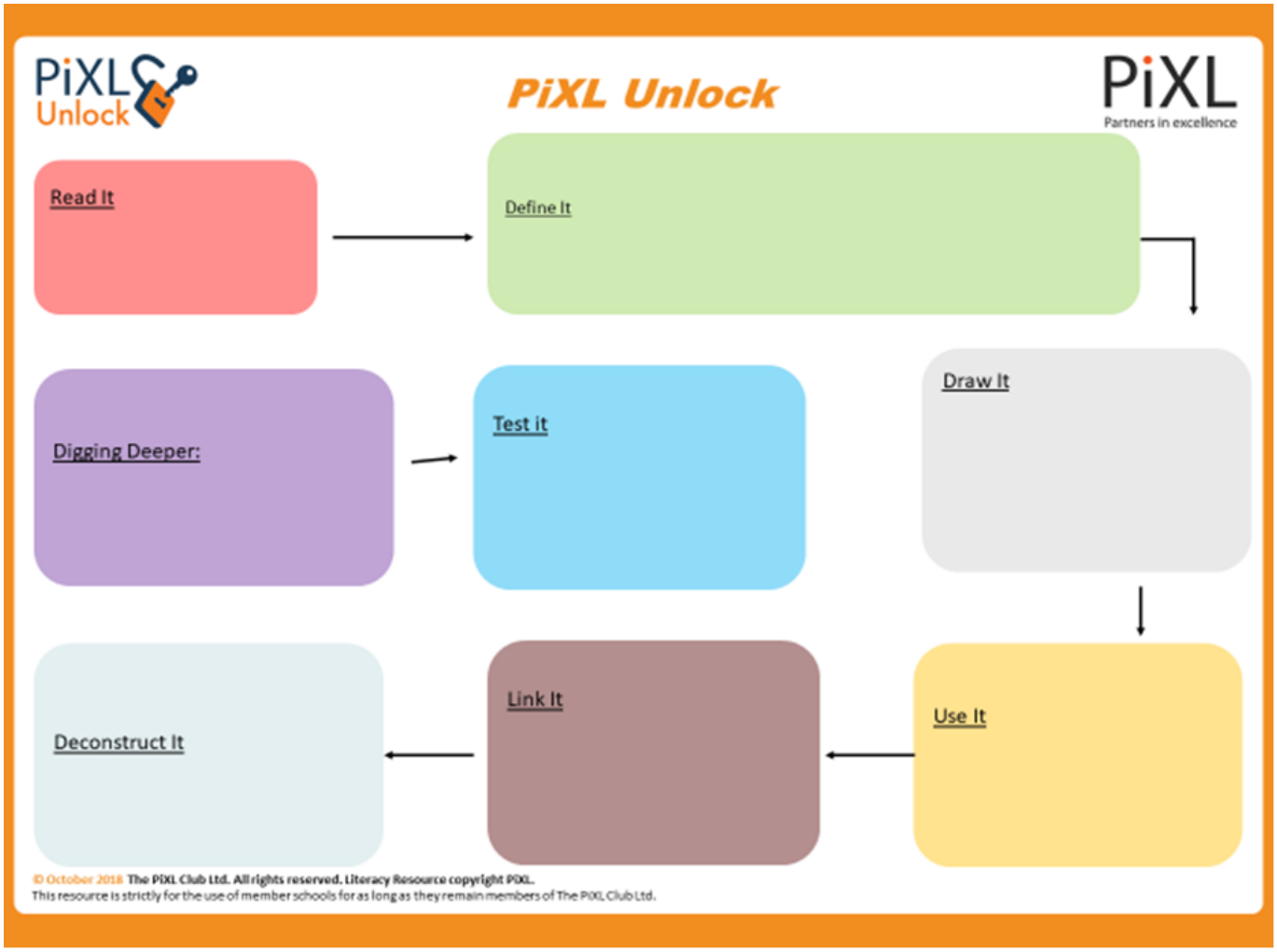
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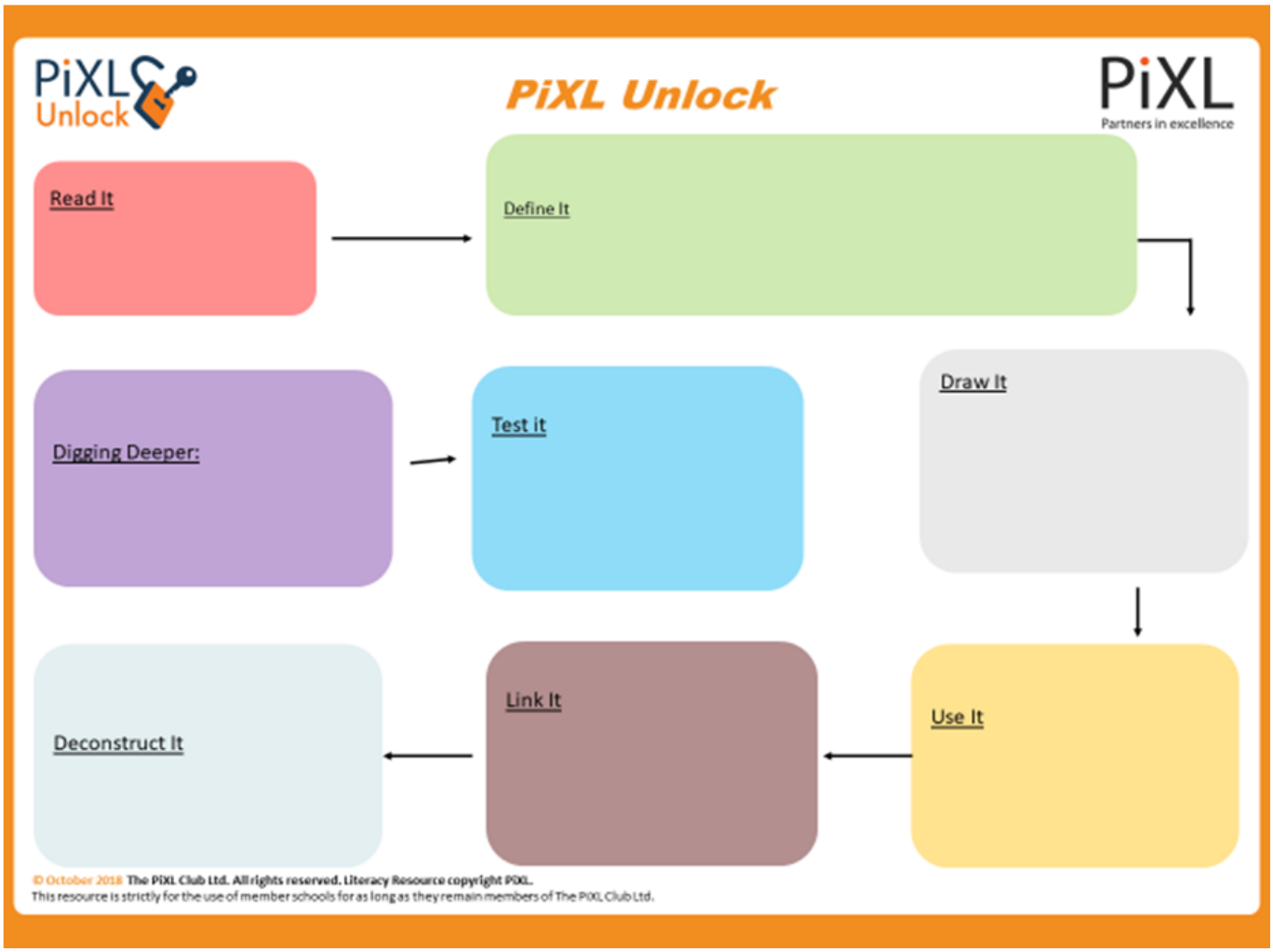
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Read It

Speed

Define It

Speed is the time taken to cover a distance

Accelerate 0-30m, pure speed 0-60m and endurance > 60m

Digging Deeper:

Usian Bolt needs good speed as he needs to get from 0-100M as quickly as possible.

Test it

35 Sprint Test (s)

Draw It

Use It

A badminton player needs good speed to get around the court quickly

Link It

Fast, Quick, Rapid

Deconstruct It

From the Latin *spedum*, meaning rate of motion.

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Read It

Muscular Strength

Define It

Strength is the ability for the muscles to exert the maximum amount of force. How strong are you!

Digging Deeper:

An example of strength is where a rugby player is pushing with all of their force in a rugby scrum against the resistance of the opposition pack.

Test it

- Hand grip dynamometer
- One rep max

Draw It

Use It

A weight lifter has high levels of strength to be able to lift heave weights

Link It

Muscle, tendon, force, push, power, resistance.

Deconstruct It

From the Old English *strengpu*, meaning bodily force, firmness and vigor.

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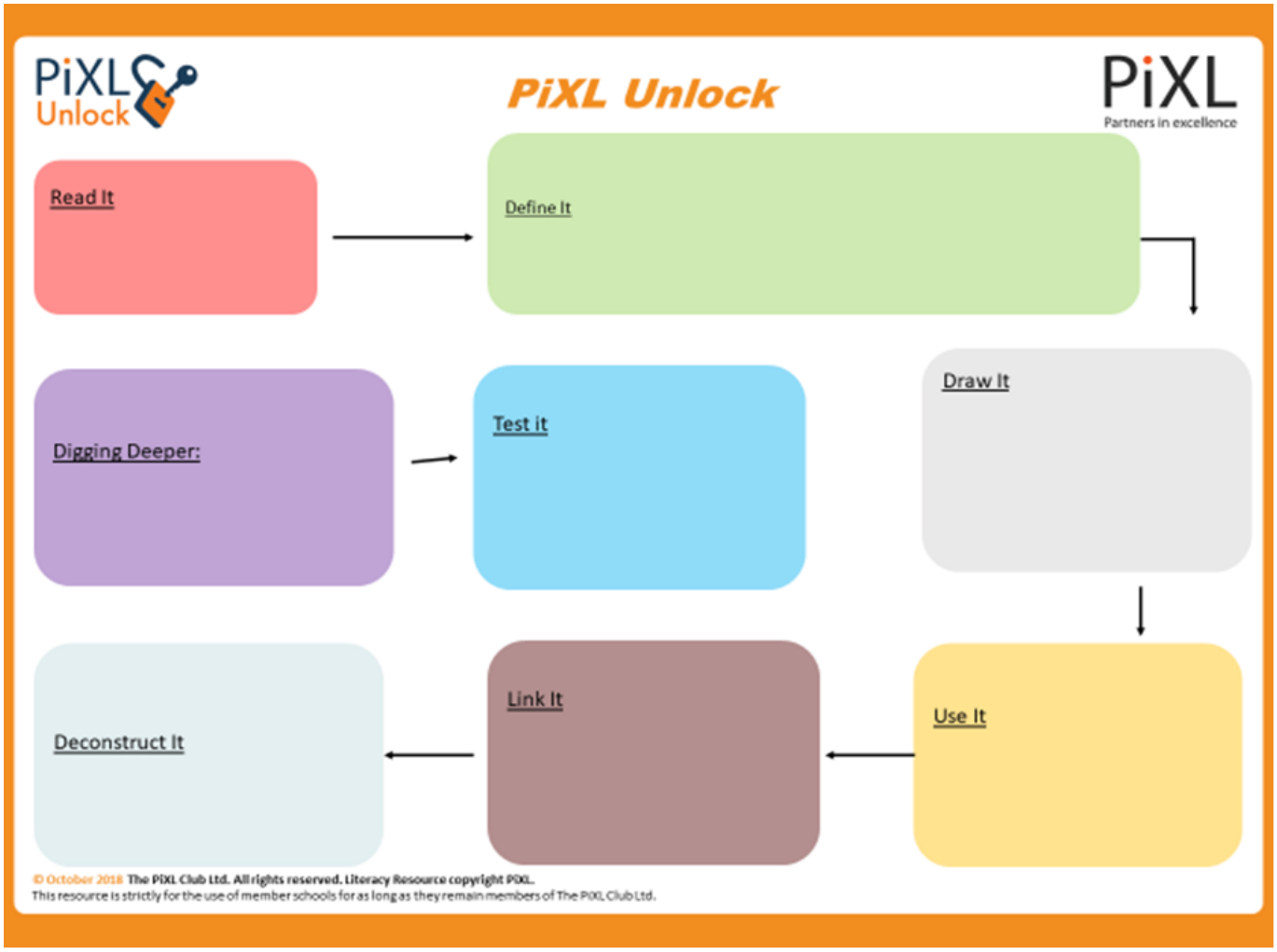
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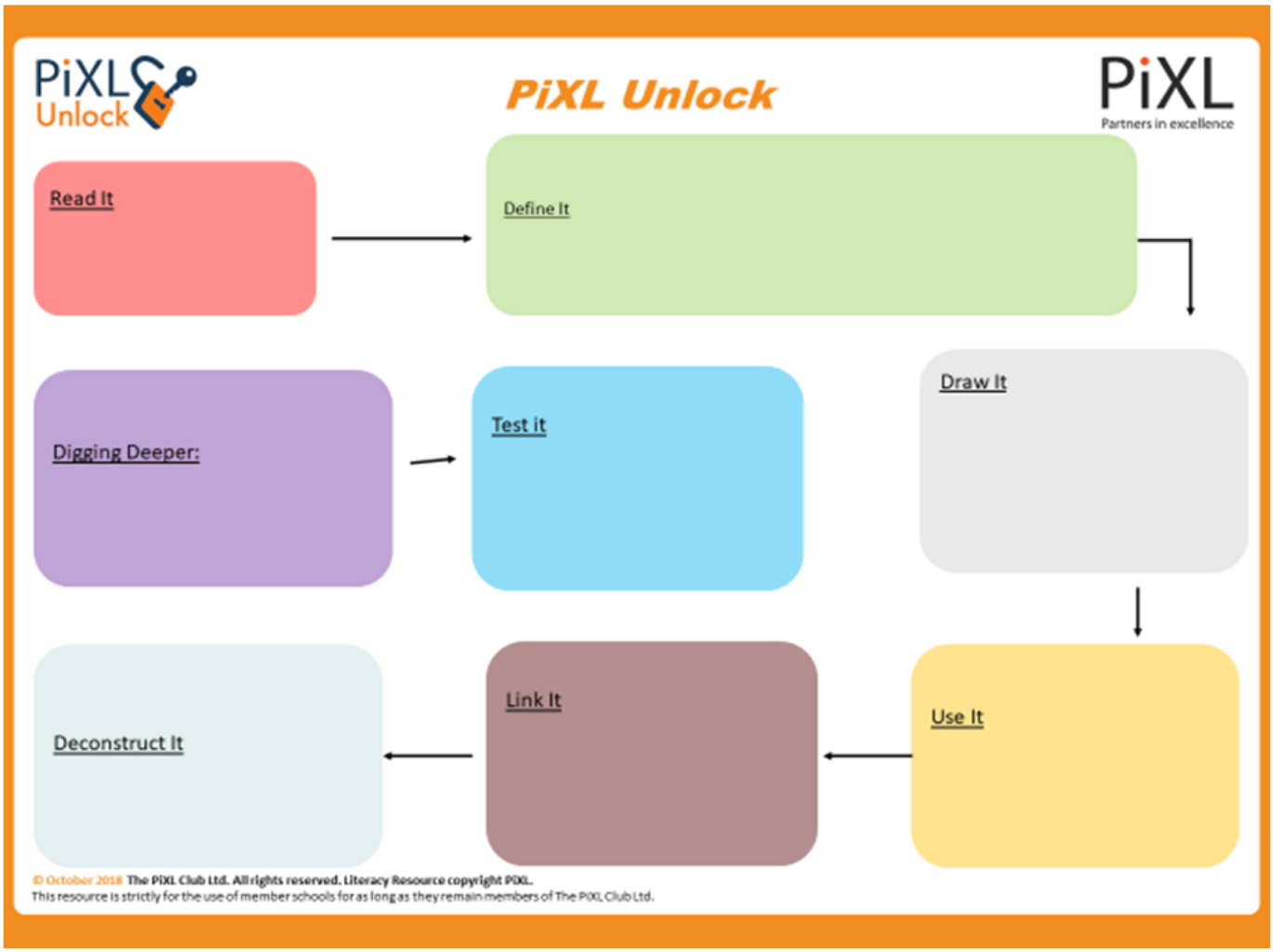
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Read It

Flexibility

Define It

Flexibility is the range of movement available at a joint.

Draw It

Use It

A gymnast requires high levels of flexibility to perform the splits.

Link It

Movement, joint, stretching.

Deconstruct It

From the Latin *flectere*, meaning to bend.

Digging Deeper:

A gymnast training to increase hip mobility to improve the quality of their split leap on the beam improves their flexibility.

Test it

Sit and reach test

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Read It

Muscular Endurance

Define It

Muscular endurance is the ability of a muscles to repeatedly contract over a period of time with some resistance

Draw It

Use It

A long distance runner requires high levels of muscular endurance in their legs.

Link It

Muscle, contraction, sprinting, long distance running.

Deconstruct It

From the Latin *musculus*, meaning pertaining to muscles and an ability to bear suffering. From the Old French *endure*, meaning make hard.

Digging Deeper:

Muscular endurance is the ability to use voluntary muscles many times without becoming tired. It helps sportspeople to sprint or repeat quick actions for longer.

Test it

Press up test (60 seconds)
Sit up test (60 seconds)

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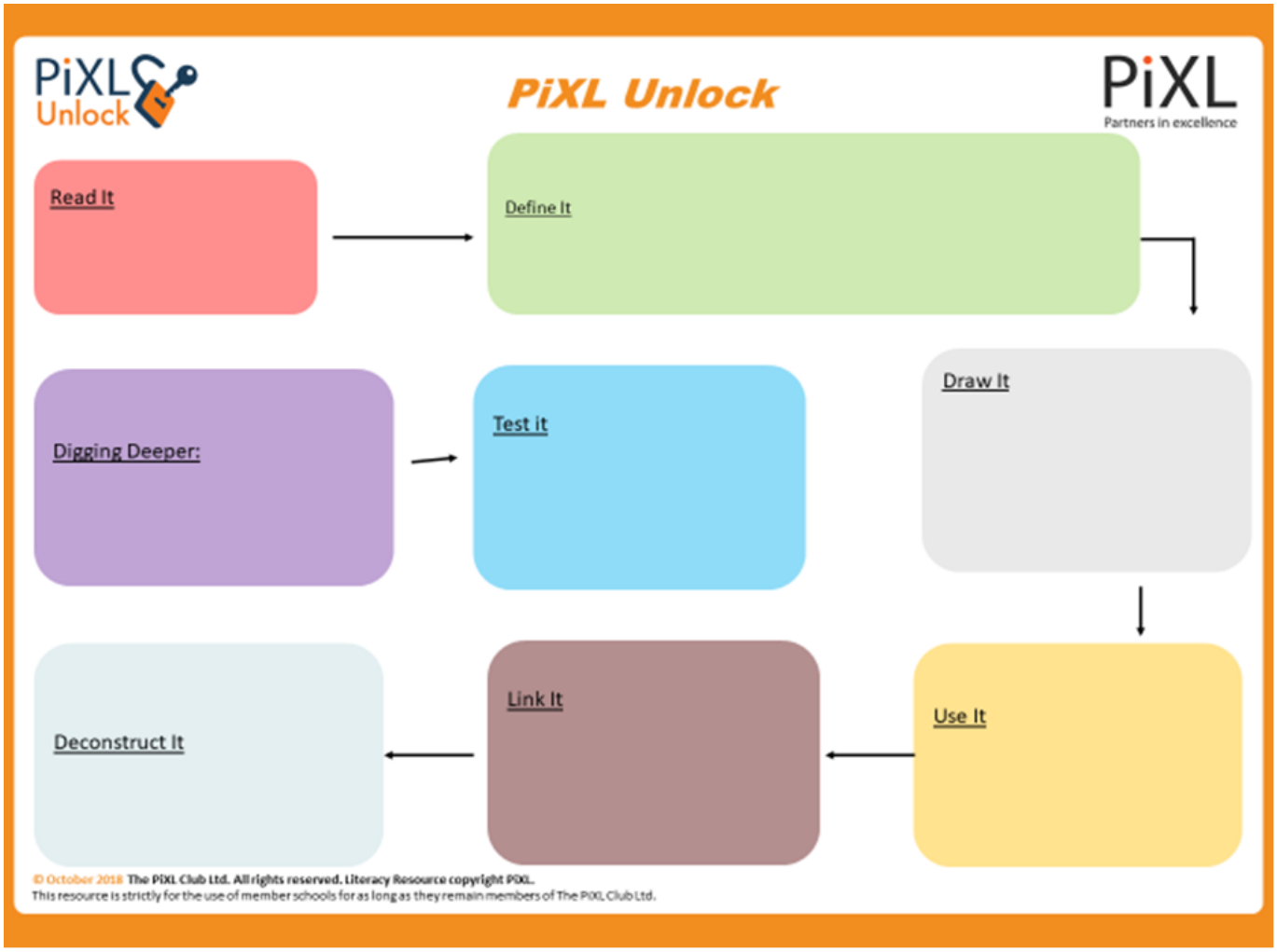
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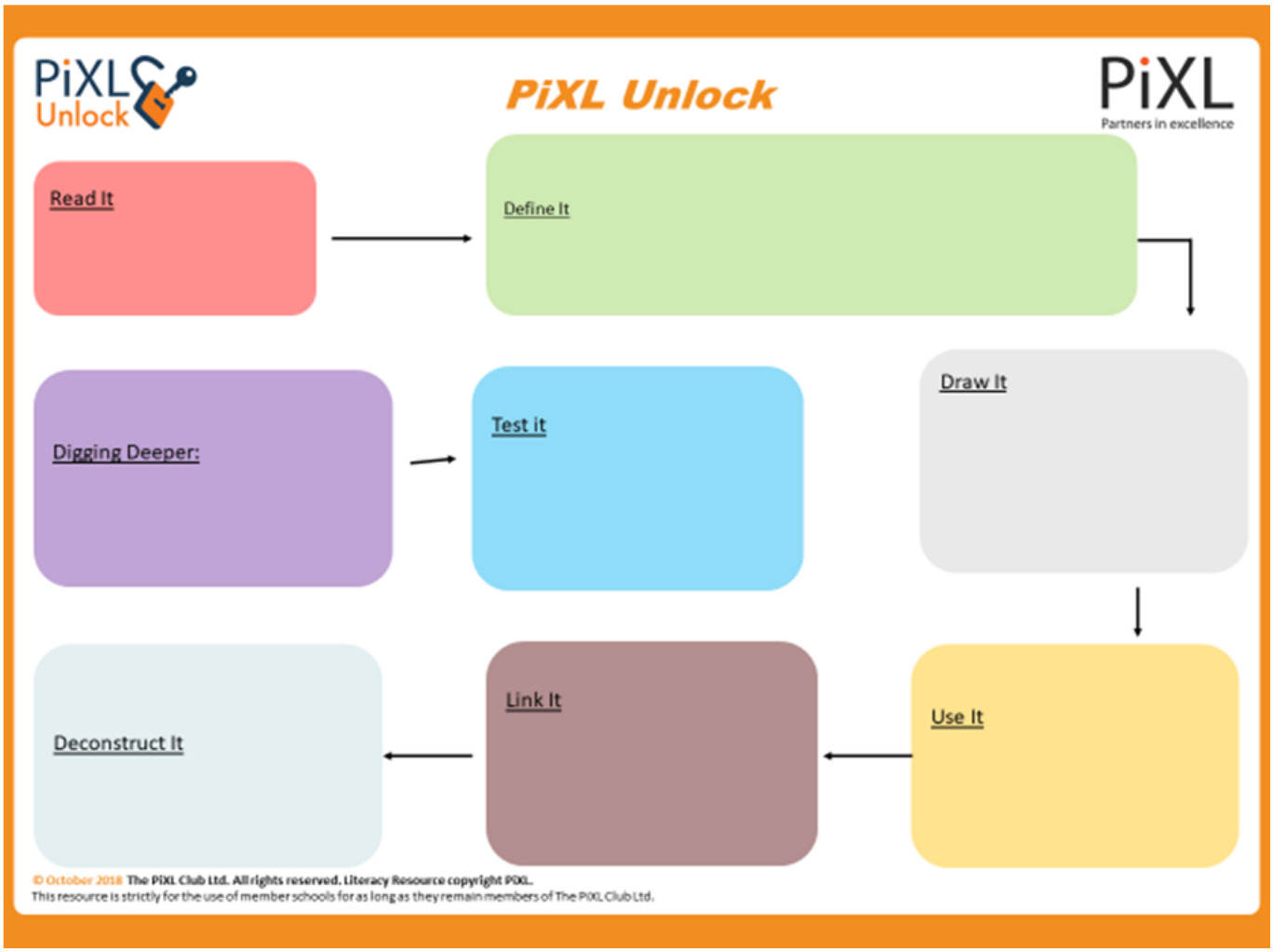
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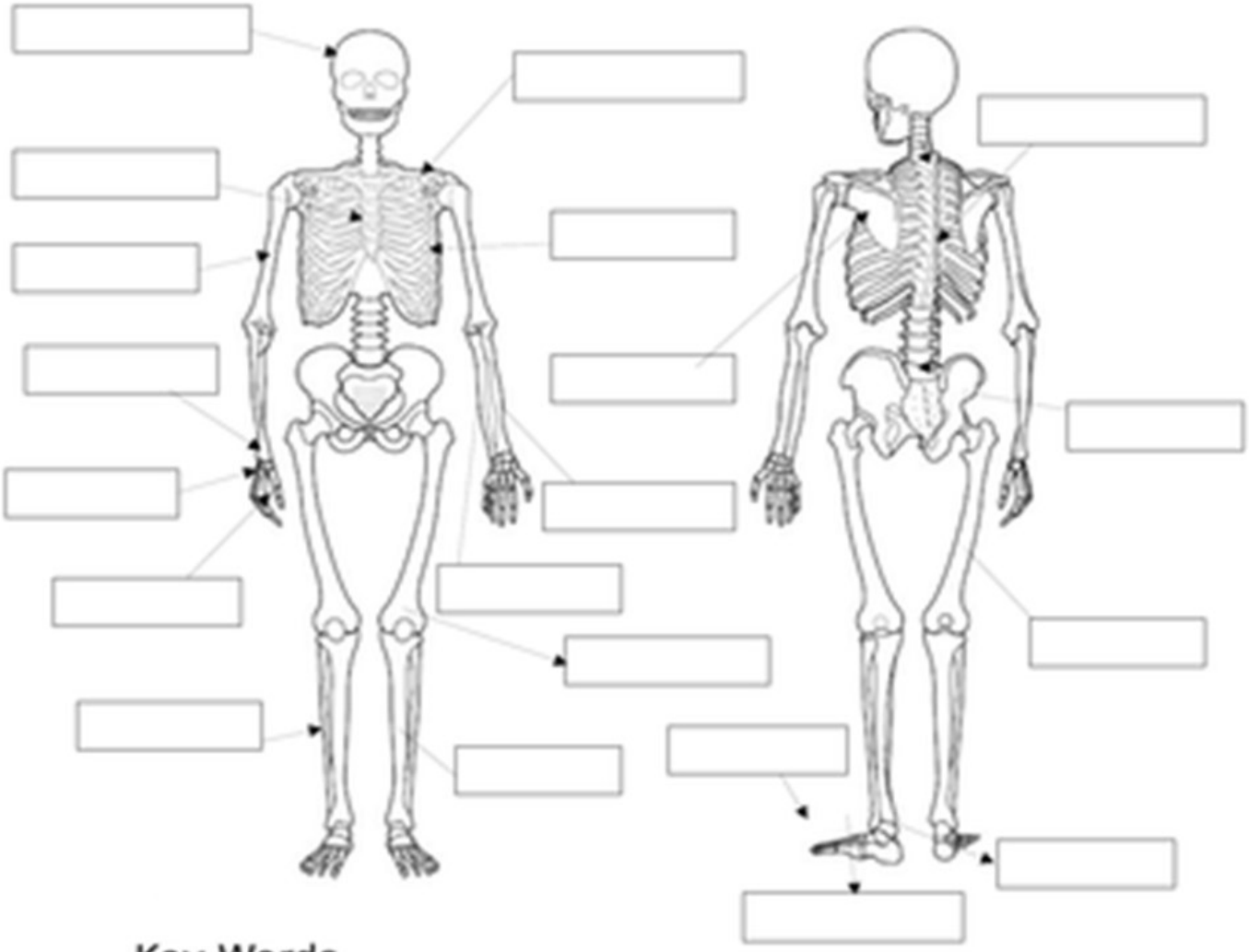
INDEPENDENT RESEARCH TASK – IPADS ARE AVAILABLE AT HOMEWORK CLUB IF REQUIRED

The Structure of the Skeleton

Fill in the missing blanks

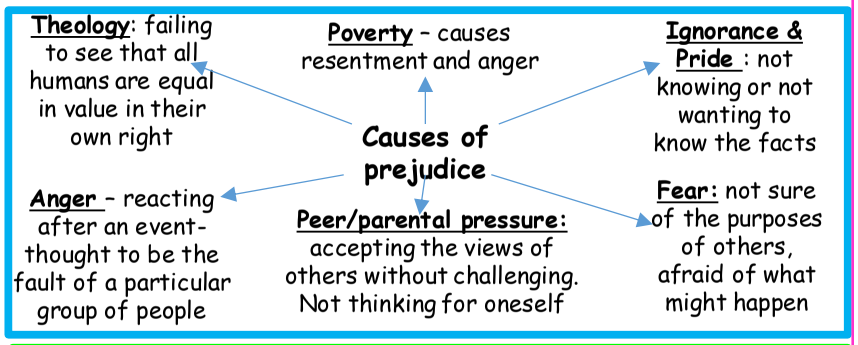


Key Words

Ulna	Tarsals	Radius
Pelvis	Cranium	Carpals
Femur	Humerus	Scapula
Tibia	Ribs	Vertebral Column
Fibula	Patella	Sternum
Metacarpals	Clavicle	Phalanges
Metatarsals	Phalanges	

Knowledge Organiser

Year 8 **Prejudice & Discrimination** Unit #3



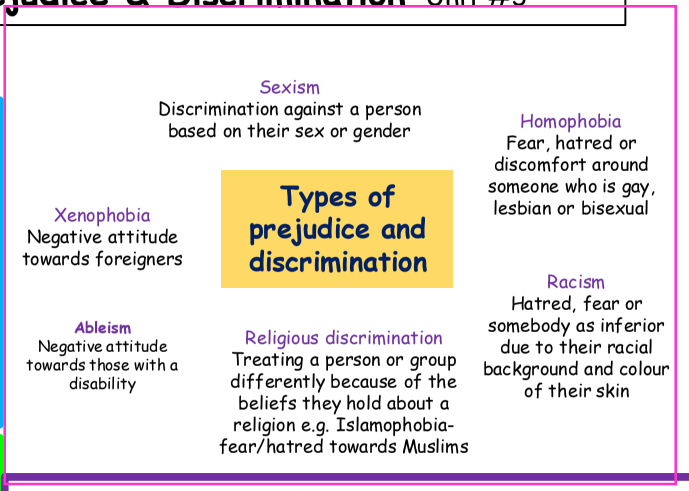
Islam, Equality & Discrimination

All Muslims are part of the Ummah. The Ummah is the community of Muslims worldwide from different nationalities and races- this shows they are all equal. All humans are equal and the only thing that distinguishes them is their level of commitment to their religion and prayer to Allah.

The concept of Zakah/Zakat is important as it is one of the 5 pillars of Islam. It requires Muslims to give 2.5% of their income to those in need. This ensures that there is nobody left in need and everybody has access to resources through other Muslims. This act is a form of ibadah (worship). It is compulsory and is a tool to remove inequality and poverty. Because of this many Muslims work with charities that try to restore equality in society, such as Muslim Aid and Islamic Relief. The Quran outlines how differences in colour, tribe, race, traditions should not be used as an excuse for unjust treatment. On Hajj (the holy pilgrimage) Muslims wear simple white garments to show they are all equal in the eyes of Allah. Through this the Ummah is emphasised – the worldwide community of Muslims from all over. Here Muslim from every nation, race, gender, rich and poor come together to pray and perform the pilgrimage.

During his time the prophet Muhammed treated women with utmost respect. **'Treat your women well and be kind to them, for they are your partners and committed helpers.'** (The Farewell Sermon) The first Muslim after the prophet himself in Islam was a woman- **Khadijah** the Prophet's wife. She was a **successful businesswoman** and she was the one that **proposed marriage to Muhammed** before he became a prophet. *'Whether male or female, whoever in faith does a good work for the sake of God will be granted a good life and rewarded with greater reward.'* (Qur'an, surah 16:97)

Muslims believe that no race is more superior to any other-everybody is equal in the eyes of God. In the farewell Sermon Muhammed instructed his followers to abide by this. **"All mankind is descended from Adam and Eve, an Arab is not better than a non-Arab and a non-Arab is not better than an Arab; a white person is not better than a black person, nor is a black person better than a white person except by good actions".** The first Muslim to do the call for prayer **(Adhan)** was a black man called **Bilal**. He was a companion of the prophet Muhammed and one of the first Muslims to support him when Muslims were being discriminated against. Bilal became the regular **muezzin (caller to prayer).**



Christianity, Equality & Discrimination

Christians believe that all humans are equal in the eyes of God as they were all created by God. Everybody, no matter what race, gender or nationality, is important in their own right (this is called the Sanctity of Life). All people deserve dignity and equal opportunities. Jesus did not discriminate against anyone but rather helped those and supported those that were outcast, for example he cured the lepers and the blind.

"There is neither Jew nor Greek, there is neither slave nor free, there is neither male nor female; for you are all one in Christ Jesus"

Christians believe that if you treat others with kindness and tolerance, you will go to heaven.

Jesus showed equal respect to women even though society at the time saw women as having lower status. Mary Magdalene was a female disciple of Jesus who was an outcast in society but Jesus accepted her. Jesus also taught lessons about equality and kindness through the parable of the Good Samaritan. **"Thou shalt love thy neighbour as thyself"**

He valued all people irrespective of their gender or nationality. To Jesus, these people were all equal and worthy of kindness. Because of this many Christians work with charities that try to restore equality in society, such as Christian Aid.

Christians believe that loving people is not only a religious duty but a command of Jesus himself. Jesus said that only loving the people who love you in return is not so difficult; loving someone who is your enemy, or who dislikes you, or someone who is a complete stranger is another matter. **"I was hungry and you gave me food, I was thirsty and you gave me drink, I was a stranger and you welcomed me, I was naked and you clothed me, I was sick and you visited me, I was in prison and you came to… And the King will say to you, as you did it to one of the least of these my brethren, you did it to me."**

Key Terms

Prejudice
Making a decision about someone without knowing them.

Discrimination
unjust or prejudicial treatment of different categories of people

Stereotype
an over-generalized idea or belief (often negative) about a particular set of people.

Institutionalised Racism
unjust and discriminatory mistreatment of an individual or group of individuals by society

The Good Samaritan
Parable told by Jesus to teach lesson about tolerance and kindness

Ummah
The Muslim global community

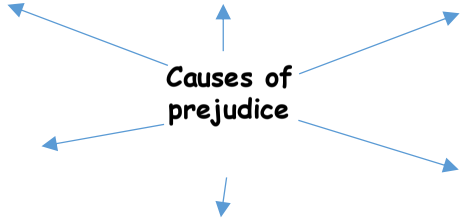
Bilal Ibn Rabah
An early Muslim and the first muezzin (caller to prayer)

Zakah
One of the 5 pillars of Islam. 2.5% of the income given to charity to remove inequality.

Sanctity of Life
The principle that all human life is holy and sacred

RE Knowledge Organiser

Year 8 **Prejudice & Discrimination** Unit #3 **Homework #1 (use knowledge organiser)**



Describe the different causes of prejudice.(5)

Key-terms

Prejudice	
Discrimination	
Stereotype	
Institutionalised Racism	
Xenophobia	
Religious discrimination	
Homophobia	

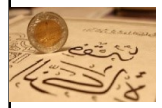
Year 8 **Prejudice & Discrimination** Unit #3

Homework #2 (use knowledge organiser)

Islamic beliefs and teachings about equality and discrimination

Christian beliefs and teachings about equality and discrimination

Key-terms

The Good Samaritan		
The Sanctity of Life		
Ummah		
Zakah		
Bilal Ibn Rabah		
Discrimination		
Equality		

Homework #3

Who was Rosa Parks?

Rosa Louise McCauley Parks (February 4, 1913 – October 24, 2005) was an American activist in the civil rights movement best known for her pivotal role in the Montgomery bus boycott. The United States Congress has called her "the first lady of civil rights" and "the mother of the freedom movement".

Rosa Parks was a Christian, born to Leona, a teacher, and James McCauley, a carpenter. In addition to African ancestry, one of Parks' great-grandfathers was Scots-Irish and one of her great-grandmothers a part-Native American slave.[She was small as a child and suffered poor health with chronic tonsillitis. When her parents separated, she moved with her mother to Pine Level, just outside the state capital, Montgomery. She grew up on a farm with her maternal grandparents, mother, and younger brother Sylvester. They all were members of the African Methodist Episcopal Church (AME), a century-old independent black denomination founded by free blacks in Philadelphia, Pennsylvania, in the early nineteenth century.In 1932, at 19, she married Raymond Parks, a self-educated man 10 years her senior who worked as a barber and was a long-time member of the National Association for the Advancement of Coloured People (NAACP).

Protest

On December 1, 1955, in Montgomery, Alabama, Parks rejected bus driver James Blake's order to give up her seat in the "coloured section" on a segregated bus to a white passenger, after the whites-only section was filled. Three of the other black passengers on the bus complied with the driver, but Parks refused and remained seated. The driver demanded, "Why don't you stand up?" to which Parks replied, "I don't think I should have to stand up." The driver called the police and had her arrested. Her defiance and arrest sparked the Montgomery Bus Boycott. Its success launched nationwide efforts to end racial segregation of public facilities.

Issues

Rosa Parks believed in freedom and she believed that we should all be treated the same. Co-existing with white people in a city governed by "Jim Crow" (segregation) laws, however, was fraught with daily frustrations: Blacks could attend only certain (inferior) schools, could drink only from specified water fountains and could borrow books only from the "black" library, among other restrictions. On December 5, Parks was found guilty of violating segregation laws, given a suspended sentence and fined $10 plus $4 in court costs. Meanwhile, black participation in the boycott was much larger than even optimists in the community had anticipated.

Beliefs & Fight for Human Rights

"In the end, God used a simple bus ride to accomplish more than we could have ever dreamed."

Rosa was devoted to her faith, carrying her Bible with her. It was her faith in God that gave her the courage to stand up to segregation on that fateful day in December 1955. "I instantly felt God give me the strength to endure whatever would happen next," she recounted. "God's peace flooded my soul, and my fear melted away. All people were equal in the eyes of God, and I was going to live like a free person."

Rosa was an activist even before her arrest, serving as secretary of her local NAACP, investigating acts of violence against Blacks and attending civil rights training. "People always say that I didn't give up my seat because I was tired, but that isn't true," Parks clarified. "I was not tired physically, or no more tired than I usually was at the end of a working day. I was not old, although some people have an image of me as being old then. I was forty-two. No, the only tired I was, was tired of giving in." In the end, she never faltered in her fight for justice, believing God was with her. She once declared, "God has always given me the strength to say what is right."

Use information sheet to help you complete.
Homework #3

Case Study: Rosa Parks

Personal Conviction:
Something a person feels strongly about.

Full Name:_____
Date of Birth:_____
Religion:_____
Nationality:_____
Occupation:_____

What are her beliefs? How did she fight for Human Rights?

What Human Rights Abuse did she protest against?

What issues did black people face in America?

How is she an example for others? Why do you think some people see her as an inspiration?

Summarise Rosa's personal conviction in one sentence: _____
_____
_____

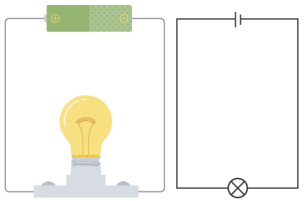
Science Knowledge Organiser

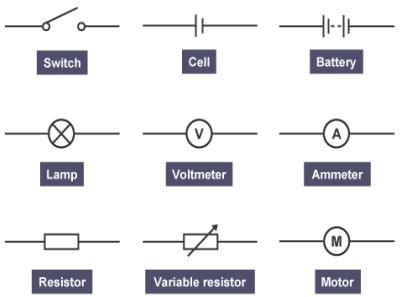
Year 8- Knowledge- Science- Spring 2 Electricity and Electromagnets

Electricity

Symbols

Electrical symbols are used for making electrical circuits.
Below is a circuit diagram for a basic circuit.





Current

Current is a measure of how much electric charge flows through a circuit. The more charge that flows, the bigger the current. The current is measured using an ammeter that is placed in series in Amps (A). Below is the current in series and parallel.

In series the current is: the same everywhere. The more cells you add the greater the current. The more lamps you add the dimmer they become. The current is not used up by the components in a circuit. This means that the current is the same .

In parallel the current is: When two components are connected in parallel, the current is shared between the components. The current is shared when it reaches the branches, then adds again where the branches meet.

Potential difference

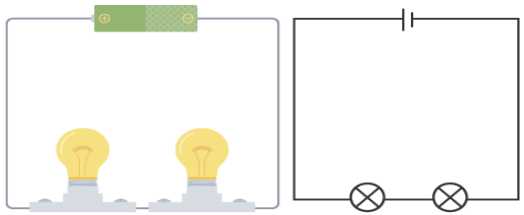
Potential difference (p.d.) is a measure of the difference in energy between two parts of a circuit. The bigger the difference in energy, the bigger the potential difference. The p.d. is measured by a voltmeter that is connected in parallel to a circuit component in volts (V). Below is the potential difference in series and parallel. $I_1 = I_2 + I_4 = I_3$

In series the potential difference is: There are different loops, the current will split as it leaves the cell and pass through one or other of the loops

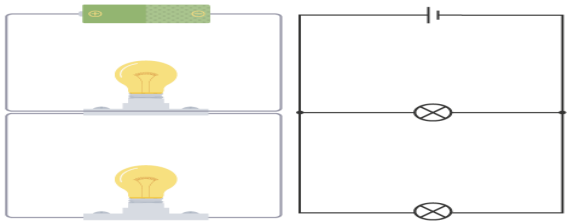
In parallel the potential difference is: The potential difference supplied is equal to the potential differences across each of the parallel components.

Parallel and series circuits

In a series circuit all the components follow one another.



In a parallel circuit the components are branched off.



Resistance

The wires and the other components in a circuit reduces the flow of charge through them. This is called resistance. The unit of resistance is the ohm, and it has the symbol Ω. The resistance increases when you add more components in series. To calculate resistance use the equation below:

resistance = potential difference ÷ current

For example, 3 A flows through a 240 V lamp. What is the resistance of the lamp? resistance = 240 ÷ 3 = 80 Ω

If you plot a graph of current against potential difference for a wire, you get a straight line.

Charging up

An atom is electrically neutral - has no overall electrical charge. However atoms contain small electrons. If an atom gains an electron, it becomes negatively charged. If an atom loses an electron, it becomes positively charged. Static electricity is the electric charge that accumulates on an insulated object for example, because of friction.

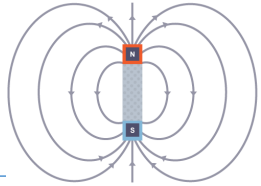
For example, if you rub an acetate plastic rod with a duster:

- electrons move from the rod to the duster
- the duster becomes negatively charged and the rod becomes positively charged

Magnets

Most materials are not magnetic, but some are. A magnetic material can be magnetised or will be attracted to a magnet. These metals are magnetic: iron, cobalt, nickel and steel. A bar magnet is a permanent magnet. This means that its magnetism is there all the time and cannot be turned on or off. It has a north and south pole. South and north pole are attracted. But N and N repel as do S and S poles.

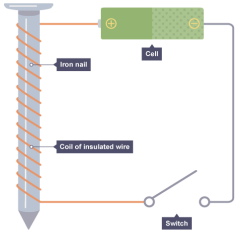
A force is exerted on a magnetic material brought into a magnetic field. It is a non-contact force. You can use a plotting compass or iron filings to detect a magnetic field.



Electromagnets

When an electric current flows in a wire, it creates a magnetic field around the wire. The effect can be used to make an electromagnet. You can make an electromagnet stronger by doing these things: 1. wrapping the coil around a piece of iron (such as an iron nail) 2. adding more turns to the coil 3.increasing the current flowing through the coil

There is a limit to how much current can be passed safely through the wire because the resistance of the wire causes heating. Electromagnets have advantages over permanent magnets. For example: they can be turned on and off the strength of the magnetic field can be varied.



	Topic:	Introduction of circuits (P.16)
1	State how objects can become charged with static electricity (extension only)	Rubbing two surfaces together transfers charge (electrons)
2	Name the device used to create static electricity (Ext)	Van de Graaff generator
3	Define "electrical conductor"	Material that allows electricity to flow through it easily
4	Define "electrical insulator"	Material that does not allow electricity to flow through it easily
5	Name the circuit component used to measure current	Ammeter
6	Name the circuit component used to measure potential difference	Voltmeter
7	Name the circuit component that transfers chemical energy store to electrical energy	Cell
8	What is the name for more than one electrical cell	Battery
9	Name the circuit component used to reduce the current	Resistor
10	Name the circuit component used to turn the current on and off	Switch

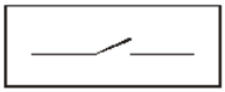
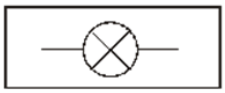
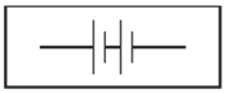
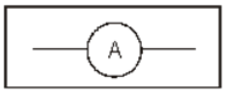
	Topic:	Properties of circuits (P.17)
1	Define "current"	Flow of electricity
2	Define "potential difference" (or "voltage")	Energy carried by the flow of electrical charge
3	State the units of current	Ampere (Amp)
4	State the units of potential difference	Volt (V)
5	Define "series" circuit	Components in a circuit are all in one loop
6	Define "parallel" circuit	Components in a circuit are in separate loops
7	Define "resistance"	Slows down the flow of electricity
8	State the units of resistance	Ohms
9	State the equation used to calculate resistance	R=V/I, Resistance= potential difference/current
10	State the equation used to calculate electrical power	P=IV, Power=current x potential difference

	Topic:	Magnets (P.18)
1	Define "magnetic force"	Non-contact fore from a magnet or magnetic material
2	Define "permanent magnet"	An object that is magnetic all of the time
3	Define "magnetic material"	Material that becomes magnetic when in a magnetic field, but does not stay magnetic when it is removed
4	Define "magnetic field"	The area around a magnet in which a magnetic material will experience a magnetic force
5	Define "magnetic poles"	The ends of a magnetic field, called north-seeking (N) and south-seeking (S)
6	State the direction that magnetic field lines flow	From the north-seeking to the south-seeking poles
7	State what happens when two 'like' magnetic poles are placed near each other (e.g. N and N)	Repel
8	State what happens when two 'unlike' magnetic poles are placed near each other (e.g. N and S)	Attract
9	State the instrument used to find the direction of a magnetic field	Compass
10	What do magnetic field lines close together show?	A strong magnetic field
	Topic:	**Electromagnets (extension only) (P.19)**
1	Define "electromagnet"	A non-permanent magnet turned on and off by controlling the current through it
2	Define "solenoid"	Wire wound into a coil, part of an electromagnet
3	Define "core"	Soft iron core which the solenoid if wrapped around
4	State three ways that the strength of an electromagnet can be increased	Increase the current, increase the number of coils in the solenoid, the core
5	State three uses of electromagnets	Bells, circuit breakers, loudspeakers
6	State the reason that an electromagnet creates a magnetic field	A wire carrying a current produces an magnetic field
7	State what happens to the strength of the magnetic field with increasing distance from the electromagnet	Decreases
8	Name two things that have similar shape magnetic fields	Permanent magnet and electromagnet
9	State two advantages of using an electromagnet instead of a permanent magnet	1. Can be turned on and off, 2. can increase the strength

Homework 1

circuit symbols

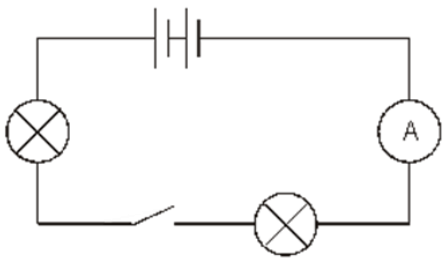
Q1. (a) Draw a line from each circuit symbol below to the correct name.
Draw **only four** lines.

circuit symbol	**name**
	ammeter
	switch
	motor
	battery
	bulb

(3 marks)

Fred made **circuit 1** as shown below.

circuit 1



Give the name of the part that is the energy source for the circuit.

.....

(1 mark)

Homework 2

Current in series and parallel circuits.

Q1. Complete the sentences by using the word bank below

Electric current is the flow of _____ around a circuit. Current can only flow if the circuit is _____ and all the components are _____. The piece of equipment which is used to measure current is called an _____ (amps, A).

In a series circuit all the components are connected in a single _____. If one _____ blows they all go.

In a parallel circuit the current is split between different _____.

loop	*branches*	*conductors*	*electrons*	*bulb*	*ammeter*	*complete*

(7 Marks)

Q2. Nikki tries to set up three electric circuits.

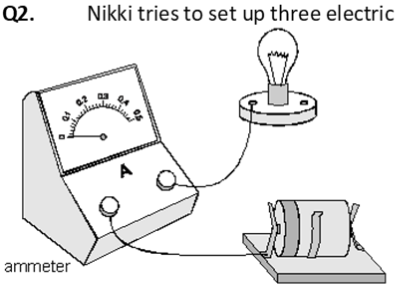


diagram 1

(a) In diagram 1 the ammeter reading is zero. What is wrong with this circuit?

.....

.....

(1 mark)

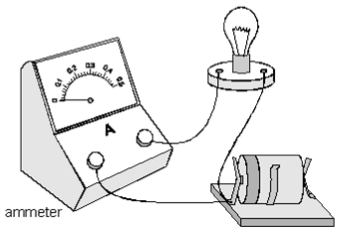


diagram 2

(b) In diagram 2 the ammeter reading is zero. What is wrong with this circuit?

.....

.....

(1 mark)

(1 mark)

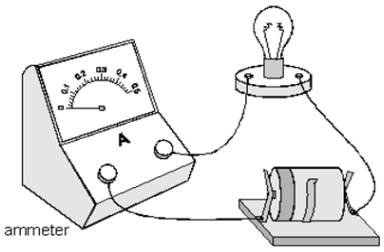


diagram 3

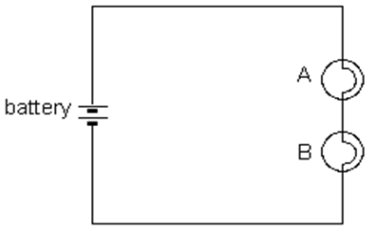
(c) In diagram 3 the ammeter reading is zero. Why is this **not** a complete circuit?

.....

.....

(1 mark)

(2 marks)



Q 4. In the circuit, both the bulbs light up. Suddenly they both go out.

The two bulbs are tested. Bulb A works but bulb B is broken.

(a) Bulb A was not broken but it went out. Why did it go out?

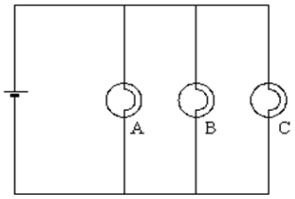
.....

.

.....

(1 mark)

In the circuit below, only bulb B is broken.



(b) (i) Does bulb A light up?

Tick the correct box.

Yes ☐ No ☐

(1 mark)

(ii) Does bulb C light up? Yes or No? _____ 1 mark

Homework 3

Voltage, resistance and power

Voltage:

Q1. (a) Define voltage (1 mark)

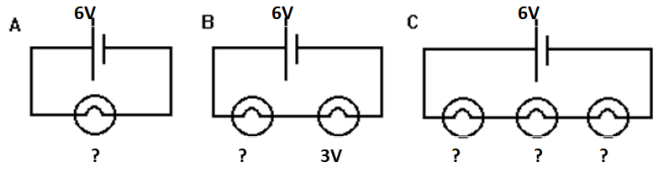
……

……

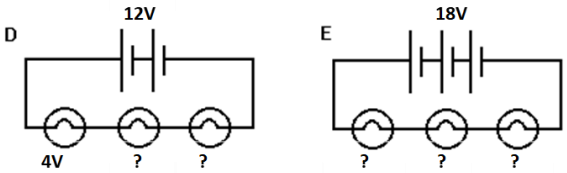
(a) Draw the symbol for a voltmeter below: (1 mark)

Q2. Below are some circuit diagrams. Your task is to work out the missing voltages.

(a) Series Circuits

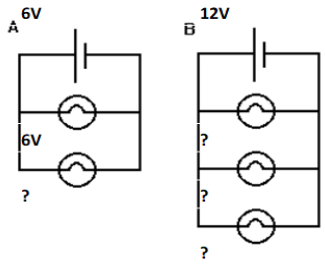


A: …… B: …… C: ……



D: …… E: …… (3 marks)

(a) Parallel Circuits



A: …… B: …… (1 mark)

Resistance:

Q 3. A set of Christmas tree lights is made from twenty identical lamps connected in series.

(a) Each lamp is designed to take a current of 0.25 A. The set plugs directly into the 230 V mains electricity supply.

(i) Write down the equation that links current, potential difference and resistance- INCLUDE THE UNITS FOR EACH ONE.

……

……

(2 marks)

(ii) Calculate the resistance of **one** of the lamps. Show clearly how you work out your final answer and give the unit.

……

……

……

……

Resistance = …… **(4 marks)**

(iii) What is the total resistance of the set of lights?

……

……

Total resistance = ……

(1 mark)

Homework 4

Magnetic fields and permanent vs. induced magnets

NORTH	REPEL
FORCE	SOUTH
COBALT	IRON
ATTRACT	
STEEL	POLES
NICKEL	

Q1. (a) Complete the sentences using the words in the box:

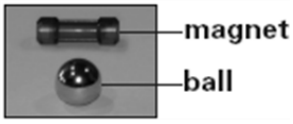
i) Magnetism is a _____that acts only between magnetic materials like _____, _____, _____and _____. (1 mark)

ii) Magnets have 2 _____ – a _____and a _____. (1 mark)

iii) If two magnets are put together the poles that are the same will _____each other. If two magnets are put together the poles that are different will _____ each other. (1 mark)

Sam has a toy made of magnets and balls.

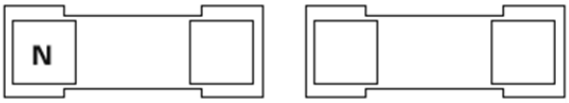
He tries to put different magnets together.



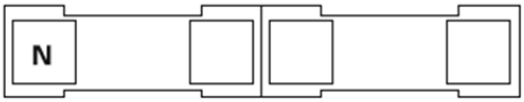
Write **N** (North) or **S** (South) on each end of each magnet below to explain Sam's observations. Some have been done for you.

Sam's observations

The ends of these magnets push away from each other.

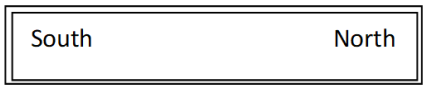


The ends of these magnets pull together.



(1 mark)

Q2. Draw the magnetic field around this magnet



(3 marks)

Q 3. Explain the difference between an induced and a permanent magnet.

……

……

(2 marks)

Q4. State two ways we can make a material magnetic:

1. ……

2. ……

(2 marks)

Knowledge Organiser: Technology Year 8

Information Technology: Summer Term

I.T. Key Words
Strong Password
User name
Data protection
Phishing / cyber theft
Confidential
Excel spreadsheet
Graphs and pie charts
Wrap text
Power point
Transition
Animation
Slide
C.A.D. (Computer Aided Design)
Adobe Photoshop
Rasterise
Magic Wand
Layer
Techsoft 2D Design
Vector
Package

Passwords
- Keep safe / don't share
- Must contain an uppercase letter, a number and a symbol

Data Protection
The right to keep your personal information protected (your personal bank account, sort code, address, emails, etc.)

Phishing
The act of trying to steal personal information, usually bank details, by deception (pretending to be someone honest like a bank)

Excel spreadsheet
- A Microsoft Office spreadsheet document
- A spreadsheet is made up of **numerical rows** and **alphabetical columns**
- Can contain **formulas** to calculate
- Stores **data** – can be used to keep business accounts (profit and loss, debit and credit payments), student progress data
- Pivot tables can be used to create **graphs** and **pie charts**

Power point
- A Microsoft Office presentation document
- **Slides** are used to split up presentations
- Easier to copy, paste and position **images** into Power point than Microsoft Word
- Slide **transitions** are effects such as fade, split, and wipe that cause a visual effect when each slide changes
- **Animations** add effects to the way text and images appear on each slide
- **Timings** can be added to each part of a slide
- **Sound effects** can be added to slides with timings.
- Power points can be designed with a wide range of **backgrounds**, designs and text effects

Techsoft 2D Design is a **vector C.A.D.** program
- It is a simple **Product Design** package
- **Tools** such as **line, shapes** and **ABC** can be used to draw and add text
- **Dimensions** or measurements can be added to a C.A.D. drawing
- 2D Design helps designs to be **precise** and **accurate**
- 2D Design files can be **uploaded** to **Computer Aided Manufacture machines (C.A.M.)** such as **laser cutters** and the designs can be cut or engraved.
- C.A.M. machines react to a **red** line by **cutting** and a **black** line by **scoring**

Adobe Photoshop is a **visual raster** program
- It is a popular **Graphic Design** package
- **Photographs** or **scans** of art work can be **edited** using Photoshop
- The **Magic Wand** tool paints or fills areas that have been selected. Use it to paint inside the lines
- The **T** Tool adds text
- Images can be built up using **layers**
- Each layer can have effects such as multiply or screen
- These interact with other layers
- Other effects can be created, such as outer glow or emboss.

Technology Knowledge Organiser

Knowledge Organiser: Technology Year 8

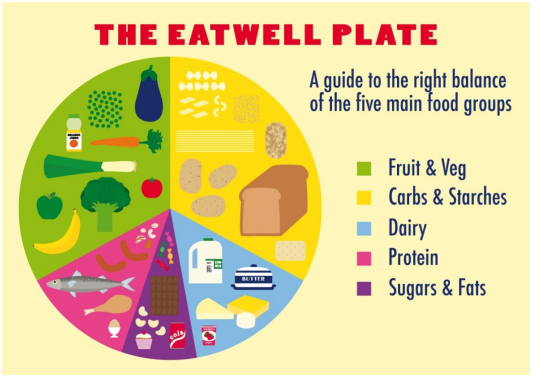
Food & Nutrition: Summer Term

Key Words
Carbohydrate
Protein
Amino Acids
Essential Fatty Acids
Micronutrients
Macronutrients
Vitamins
Minerals
Fibre
Balanced diet
Eat well plate
Seasonal
Sustainable
Digestive system
Stomach
Intestines
Dietary restrictions
Coeliac
Diabetes
Food allergies
Intolerances (egg, dairy)

Carbohydrates are sugars such as glucose. Complex carbohydrates are starch-based. They give us energy. We can store carbohydrates in our liver. When we eat too much carbohydrate, our bodies convert it to fat and store it. Eating too many carbohydrates for many years can cause **Type II diabetes**.

Protein is used by our bodies to form new cells. We are made up of **globular protein** (such as mucus) or **fibrous protein** such as hair or keratin (nails).
We cannot store protein unless we reanimate it into our own cells. Protein is made up of **amino acids**.
There are 21 amino acids and **9 essential amino acids**. We can break up and rebuild the other 12 amino acids to make the other amino acids.

Fats are a necessary part of our diet. **Essential fatty acids** are necessary for many chemical reactions in our bodies.
We **don't need much fat** in our diet. Fat is always stored in our bodies when we eat it.
Fat is much harder to break down into energy than carbohydrate.
Unsaturated fat comes from fruit and vegetables. **Saturated fat** is more difficult to break down by our bodies and comes from eating meat.
Saturated fat can cause **coronary heart disease**.



A **balanced diet** containing foods with the 5 food groups in the **portions** shown helps to keep people fit and healthy with regular exercise.

You should **eat 5 portions of fruit and vegetables every day**.
One portion = one handful.

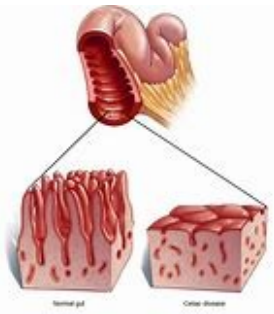
Food is **imported** from all over the world. This increases our **carbon footprint.**
Some of the food we eat is **unethical** because it causes animal cruelty or too much harm to the environment. **Palm oil** causes **deforestation** and is threatening **orang-utans.**

A lot of our fruit and vegetables are not grown in the UK so have to be imported. Bananas, avocados, soya, pineapple and coconut is not native to the UK. They grow in warmer tropical climates.

Eating **seasonal fruit and vegetables** has a lower impact on the environment because they grow here in the UK in certain seasons. Carrots, potatoes, parsnips, suedes and beetroot are **winter root vegetables.**

Raspberries, blackberries, blueberries, redcurrants, blackcurrants, sweetcorn, peas, tomatoes, lettuce, apples, pears and cabbage are **summer fruit and vegetables.**

Coeliac disease is an **intolerance** to a protein called **gluten**. This means people who are coeliac cannot eat anything containing gluten. (No bread, pasta, gravy, or breaded foods.)
Gluten irritates **villi** in the **small intestine** causing them to swell. This means important nutrients such as **iron** and **calcium** are not digested. People don't always know they are coeliac until they are found to be **anaemic** (lacking in iron) when they have a blood test. Coeliac can cause **brittle bones** over time because calcium has not been absorbed.



Some people cannot eat any **egg white** or **egg yolk** because they have an intolerance to it. They can be sick or even have a seizure if they eat it.

Lactose intolerance is very common. This is where people cannot drink or eat **milk**-based products. They can have soya instead.

Technology Knowledge Organiser

Knowledge Organiser: Technology Year 8

Food & Nutrition: Summer Term

Key Words
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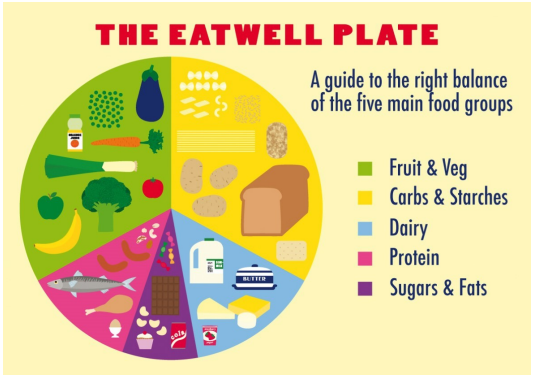

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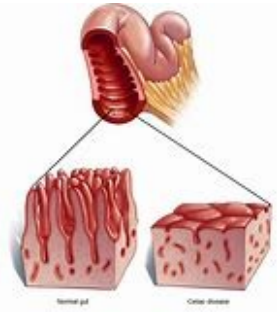

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Food & Nutrition Fact sheet

Give 4 facts about Carbohydrates

1) _____

_____

2) _____

_____

3) _____

_____

4) _____

_____

Give 4 facts about Protein

1) _____

_____

2) _____

_____

3) _____

_____

4) _____

_____

List 8 examples of vitamins and minerals

_____

_____

_____

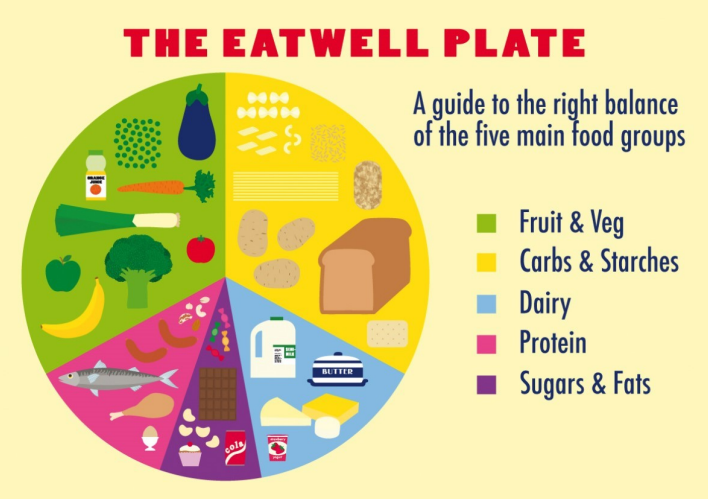
_____

_____

_____

_____

_____



Draw your own Eatwell Plate below.
Show at least 3 examples of <u>each</u> food type.