

Knowledge Organiser

Year 7

Cycle 1

Name:

Tutor Group:



What is a Knowledge Organiser and why are they important?

A knowledge organiser is designed to summarise the key information, concepts, and vocabulary for a specific topic or unit of work in each subject. Its purpose is to help students:

- o Understand what they are expected to learn.
- o Make connections between ideas.
- o Retain and recall essential knowledge more effectively.
- o Support independent study and revision

Your Knowledge Organiser contains the essential knowledge that we expect every student to know. Regular use of the Knowledge Organiser helps you to recap, revise and revisit what you have learnt in lessons. This can be part of your homework in some subjects or as independent revision. The aim is to help remember this knowledge in the long term and to help strengthen your memory.

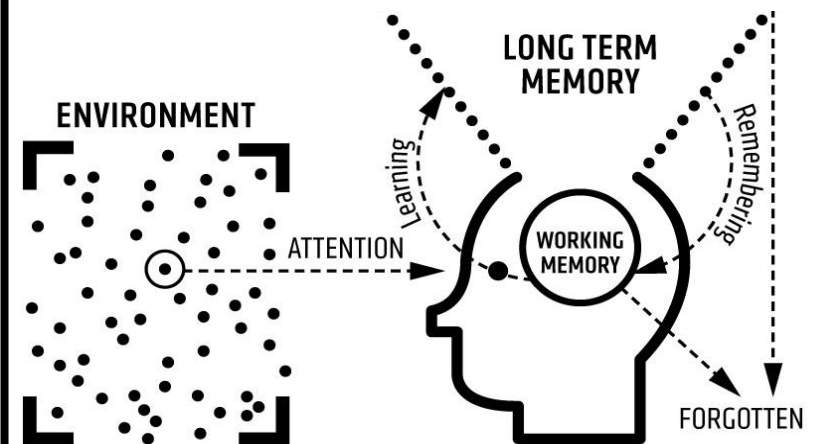
Each cycle there is an assessment in every subject and you will be assessed on the knowledge from your Knowledge Organiser; the more you revisit information the more likely it will be remembered for lessons, assessments and exams.

How we learn anything

We learn by focusing our attention on something. If we are distracted by other things in our environment (eg mobile phones, listening to music) it will affect how much/what we learn.

Information we pay attention to goes into our working memory, but our working memory is not very good and we quickly and easily forget things.

Learning happens when we think about, process or practise doing something so that it is stored in our long-term memory. Even then it can still be forgotten if we do not regularly think about it and go over it. *We remember what we think about.* Using your Knowledge Organiser outside of lessons helps you to remember things in the long-term.



Homework in Year 7-9

The purpose of homework

Homework plays a crucial role in reinforcing what you learn in the classroom, helping you to develop a deeper understanding of the material. It encourages independent learning, time management, and responsibility: skills that are essential for success both in school and in life.

Homework fosters a strong work ethic and a sense of discipline, preparing you for future academic and professional challenges. Homework is not just about completing tasks, it is about building lifelong learning habits. Learning is defined as a change in the long-term memory. You attend 5 hours of lessons per day, which is a lot of new information being taken in. Without additional opportunities to practise remembering, much of that information would be quickly forgotten.

Homework expectations

In Years 7-9 we expect every student to complete a maximum of 1 hour of homework a day, 4 days a week in the following subjects: English, Maths, Science, History, Geography, French/Spanish and RPE using the following timetable:

	Monday	Tuesday	Wednesday	Thursday	Friday
Week A	English Maths Science	English Maths Science	English Maths Science	History Geography	No homework
Week B	English Maths Science	English Maths Science	English Maths Science	French or Spanish RPE	No homework

Whilst homework is not formally set weekly/fortnightly in other subjects, you may still be provided with tasks to help further your learning, which we would strongly encourage you to complete. You should regularly review the Knowledge Organiser for all subjects to help your learning.

How do I do my Homework?

There are two types of homework that you will complete: Sparx Online (English, Maths and Science) and Knowledge Organiser homework (History, Geography, RPE and French/Spanish).

Platform	Subject	What to do	Reason we do it	How checked
Sparx	Sparx Maths	Homework is completed online. Complete the maths questions set weekly. Each student is set around 1 hour of questions per week. Book work codes must be written down in homework books.	Sparx Maths provides additional practice on topics that have been recently covered in class. This allows students to revisit and help embed mathematical procedures that may otherwise be forgotten.	Weekly check by teacher using online platform. Parents kept informed of progress by email.
	Sparx Reader (English)	Homework is completed online. Students read a book of their choice in sections and are asked comprehension questions at the end of each section. Students must earn a set number of Sparx Reader Points (SPR) to complete the homework. This should usually take around 1 hour per week.	We know that reading is essential for students to be able to access the curriculum, yet 1 in 4 students come to us in Year 7 at least one year below their chronological reading age. Sparx Reader encourages students to build positive reading habits and strengthen fluency and comprehension.	
	Sparx Science	Homework is completed online. Complete the science questions set weekly. Each student is set around 1 hour of questions per week.	Sparx Science provides questions to ensure students regularly revisit the key concepts that are required in Science.	
Knowledge Organisers	History Geography RPE French/Spanish	Using the Knowledge Organiser, complete the questions/tasks for the relevant subjects set according to the date	The Knowledge Organisers contain questions that directly relate to the content that students have learned in lessons. Regular review ensures that students embed the learning in the long-term memory. In French/Spanish students will practise learning and using key vocabulary.	Fortnightly check by teacher in lessons. Teachers will check the blue homework exercise books (provided for students) for completion of the questions.

For Thursday homework in your blue knowledge book you will always write the date, subject heading and ensure that they are underlined with a ruler.

Knowledge Organiser Contents Page

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History - Week A – Thursday 4 th September		History - Week A – Thursday 18 th September	
<u>Key Phrases</u> History- Finding out about the story of people in the past by investigating the evidence about it Source- every kind of evidence that human beings have left of their past activities	<u>Key Phrases</u> Claimant- someone who states that they are the next in line to the throne Contender- a person or group competing with others to achieve something	<u>Key Phrases</u> Fyrd- Working men who were called up to fight by Anglo-Saxon kings Witan- the king's council in the Anglo Saxon government Pope- Leader of the Roman Catholic Church	<u>Key Phrases</u> Cavalry- soldiers or warriors who fight mounted on horseback Papal Banner- This banner was personally blessed and sent to William by Pope Alexander II
Content- Anglo Saxons Anglo-Saxon Life England in 1066 was a wealthy country. There was peace. The people of England were mainly farmers. The King ran the country with the help of the Nobles. Nobles were responsible for their local area and controlled the peasants on the land. England had a strong system of law and order. One example is Trial by Ordeal where the person would hold a red-hot iron. If the burn healed well, they were seen as innocent.	Content- Claimants to the throne Edward the Confessor died in 1066 with no heirs (successor) to the throne. There were three contenders for the throne: Harold Godwinson, Harald Hardrada and William, Duke of Normandy. Watch this video and answer the questions below. https://youtu.be/1sK4JX0co8I?feature=shared (BBC Teach, who were the claimants to the throne?)	Content- How did the claimants react to Harold being made King? Harald Hardrada was very angry when he heard that Harold Godwinson had been crowned king by the witan in January 1066. He sailed to England with a fleet of Viking ships to fight for the throne. Hardrada lost the Battle of Stamford Bridge on the 25th Sept. He was killed during the battle so the Viking threat was dealt with. Watch this video: https://youtu.be/qtW7H7yPZLg?feature=shared (BBC Teach, Battle of Stamford Bridge)	Content- Battle of Hastings In late September 1066 the winds change direction and William of Normandy finally arrives in Sussex for the decisive battle against the Anglo Saxon army led by King Harold. They meet on a hill in Sussex and a long, bitter, battle takes place before Harold is killed and William is the victor. Watch the video. https://youtu.be/zigjVCFzZ38?feature=share (BBC Teach, Battle of Hastings)
Homework questions 1. What is a source? 2. Give an example of a historical source 3. Who helped the king run the country in Anglo-Saxon England? 4. Name one type of Trial from Anglo Saxon England.	Homework Questions 1. When did Edward die? 2. Write 2 facts about Harold Godwinson 3. Write 2 facts about Harald Hardrada 4. Write 2 facts about William, Duke of Normandy	Homework Questions 1. Who fought in the battle? 2. Where did the Anglo-Saxon army march to? 3. Why did the Vikings lose the battle? 4. What happened to Hardrada?	Homework questions 1. Who blessed William's army? 2. Why was William forced to wait on the French coast for weeks? 3. What tactic did William use to get the Anglo-Saxons down from the hill? 4. What tapestry shows the events of 1066?

History - Week A – Thursday 2 nd October		History - Week A – Thursday 16 th October	
Key Phrases Consolidate- make something stronger Historical Source- evidence that tells us about the past Feudal System- a system in which landholders provide land to peasants in exchange for their loyalty and service	Key Phrases Rebel- violent resistance against the people in charge Inference- an idea or conclusion that's drawn from evidence and reasoning	Content- Medieval England Almost everybody believed in the God and that Heaven and Hell were real places. The main Christian Church was the Roman Catholic Church. The pope was the leader of the Catholic Church. Doctors did not understand what caused people to be sick and often believed it was a punishment sent by God and evil spirits. Medieval society was still based on the feudal system that William the Conqueror had introduced. The king sat at the top of society. The Barons, wealthy and important individuals, came next. Then it was the knights followed by the largest group in society, the peasants or villeins.	Key Phrases Purgatory- where Roman Catholics believe the spirits of dead people are sent to suffer for their sins before they go to heaven Hierarchy- a system that organises or ranks things from most to least powerful.
Content- William's consolidation of power William rewarded his loyal supporters with large areas of land in England, which helped him control the country. This system was called the Feudal System. The Norman conquerors were unpopular with many people in England, so they quickly built motte-and-bailey castles. Watch the video: https://youtu.be/dGXkMVZac0?feature=shared (BBC Teach Key features of castles)	Content- Harrying of the North The people of England rebelled against William's authority. As revenge, William sent soldiers to hunt the rebels down and kill them. He ordered that all food, animals and homes were burned. More than 100,000 died. Watch this video: https://youtu.be/kNWoxIAZdkM?feature=shared (BBC Teach, revolt and resistance)		Content- What mattered to Medieval people? Every single person cared heavily about their religion and going to heaven – spending as little time as possible in purgatory. Kings & Queens – Cared about succession (who's next in line), winning battles, defending the country and looking good. Wealthy & Important – Succession & marriage (ensuring their children will inherit their land), being good lords and looking after their land, being loyal to the king. Commoners – Survival for many (simply having enough food), hope that they will improve their status, working hard for their lords, having fun and living peacefully..
<u>Homework Questions</u> 1. How did William take control of Dover and London quickly? 2. What new method of governance did William introduce? 3. What type of castle did William build?	<u>Homework questions</u> 1. Which two earls led a rebellion in the North? 2. How did the Normans respond to the Anglo-Saxon rebellion? 3. What was this brutal punishment called? H _____ of N _____	Homework questions 1. Who was the leader of the Catholic Church? 2. What was society organised by? 3. Who came under the King in terms of social status? 4. What caused sickness according to Medieval people?	<u>Homework Questions</u> 1. Write a definition of purgatory in your own words 2. Explain what a hierarchy is in your own words 3. Write down one thing that everyone in Medieval society cared about 4. Write down one thing commoners cared about

History - Week A – Thursday 6 th November		History - Week A – Thursday 20 th November	
Key Phrases Infer- use information/clues to arrive at a logical conclusion	Key Phrases Bishops, Abbots- Managers in the Church Monks, Priests, Nuns- worked for the Church	Key Phrases Crusade- A series of religious wars made by Europeans to recover the Holy Lands from the Muslims in the 11th, 12th, and 13th centuries	Key Phrases Miasma- Bad smelling air Trepanning- It involved making a hole in a person's skull to release the evil spirits they believed were causing the problem
Content- Medieval women It was normal for women in the Middle Ages to contribute to farm work. They would quite often do the same kinds of jobs as the men. However women did often have the role of looking after the household. However it is sometimes difficult to know exactly what life was like in the Middle Ages for lower class women as there are very few sources written about them. Watch this video: https://youtu.be/9YJImBcg-So?feature=shared (Women in Medieval Times)	Content- Medieval religion The medieval church had a great deal of power. Everyone was worried about purgatory and the afterlife. Doom painting is the term used to describe paintings that can be found the walls of churches and other religious building that show judgment day and souls either going to Heaven or Hell. Watch this video: https://youtu.be/jkhEdUxbaD0?feature=shared (Medieval Minds, Timelines)	Content- The Crusades Crusaders believed they were carrying out their God's work by taking part in military campaigns to 'reclaim' the Holy Land for Christianity. They followed the wishes of the Pope - the head of the Catholic Church. People who went on the Crusades were motivated by different reasons including the prospect of wealth, freedom or power. Explore: What were the Crusades? - The Crusades - KS3 History - BBC Bitesize	Content – Medieval medicine Doctors did not understand what caused people to be sick and often believed it was a punishment sent by God and evil spirits. This meant their cures were often not very effective. Watch this video: https://youtu.be/fuEuaSmDOec?feature=shared (Medieval medicine, English Heritage)
Homework Questions 1. Who did women have to obey? 2. What kind of women had access to education? 3. What was the main role of women? 4. If a woman did not want to be a wife, what was her only alternative?	Homework questions 1. Why was the church decorated in so many pictures? 2. What was a doom painting? 3. What was the purpose of a doom painting?	Homework questions 1. What were the crusades? 2. Who were the two sides fought by? 3. What were they fighting over? 4. Write down 2 additional facts, using the website link!	Homework questions 1. Why was Medieval medicine not very effective? 2. Name one cure! 3. Name one belief about cause of disease. 4. Write down 2 extra facts!

History - Week A – Thursday 4th December

Key Phrases

Plague- a disease

Buboes- puss filled boils **Bubonic-** a type of plague

Key Phrases

Population- all the inhabitants of a particular place

Wages- a fixed regular payment earned for work **Labour** - work, especially physical work

Content- Black Death

In 1348 - 49, the Black Death swept across Europe, killing up to half of the population. There were two main types of plague: bubonic and pneumonic. Treatments and cures were based on both natural and supernatural theories about the cause of the disease.

Watch this video: <https://youtu.be/FXGY-bc-dEE?feature=shared>
(The Black Death, BBC)

Content- Impact of the Black Death

There are various estimates of how many people died during the 1348-49 outbreak. Most historians believe between a third and half of the population were killed by the Black Death. Approximately 2-3 million people died.

Watch this video:
<https://youtu.be/OFMvDPRvL3M?feature=shared>
(Impact of The Black Death, Timewatch)

Homework Questions

1. When was the Black Death?
2. How many people died from the Black Death?
3. Describe one way medieval people thought the plague was caused
4. State one way they tried to cure it.

Homework Questions

1. Describe the impact of the Black Death in a PEEL paragraph!



Year 7 Cycle 1 Geography Knowledge Organiser – Our Place



Thursday 18th September 2025 (Week 1 & 2)

Lesson 1 – What is place?	Lesson 2 – Classifying geography	Lesson 3 – The largest places
Key Terms: Geography: The study of the Earth's people, places, and environments. Place: A space or location with meaning. Perspective: The way we see things or an attitude to something.	Key Terms: Physical geography: All geography that occurs naturally. Human geography: All geography that involves human activity. Environmental geography: All geography that involves humans working with, and changing, the natural world.	Key Terms: Continent: A large continuous mass of land. Ocean: A large body of water between continents. Country: Land that is controlled by a single government.
Content: Places affect people and people affect places. Different cultures and people have different perspective on places. Perspective will be affected by: • Age. • Gender. • How long someone has lived in a place. • What they use the place for.	Content: Examples of physical geography: Rivers, rocks, coasts, and mountains. Examples of human geography: How countries trade and human population. Examples of environmental geography: Increasing waste and people travelling.	Content: Continents (7 in total) and oceans (5 in total) are the largest physical places. Countries (195 in total) are the largest human places. 
Questions: 1. What is geography? 2. What is place? 3. What is perspective? 4. State the 4 things that affect perspective	5. What is physical geography? 6. What is human geography? 7. What is environmental geography? 8. Give 2 examples for each of the 3 different types of geography	9. What is a continent? 10. What is an ocean? 11. What is a country? 12. How many countries are there?



Year 7 Cycle 1 Geography Knowledge Organiser – Our Place



Thursday 2nd October 2025 (Week 3 & 4)

Lesson 4 – Compass points

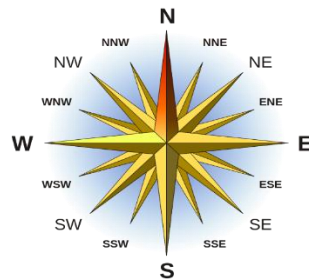
Key Terms:

Compass rose: A symbol on a map that shows the main compass points.

Scale: The ratio between the distance on a map and the corresponding distance on the ground

Content:

Compass rose:



When describing the location, we start at global scale and then work our way down the scale:

- Hemisphere
- Continent
- Country
- Region of the country
- Local area

Lesson 5 – Longitude and latitude

Key Terms:

Longitude: The measurement east or west of the prime meridian. They are imaginary lines that run up and down (vertical) and meet at the North and South Poles.

Latitude: The measurement on a globe or map of location north or south of the Equator.

Content:

Prime Meridian or Greenwich Meridian line is a line of **longitude** at 0 degrees.

The **Equator** is a line of **latitude** that runs around the middle of the Earth and is **halfway** between the North and South Poles. It separates the world into the Northern and Southern Hemispheres.

The Tropic of Cancer lies at 23.5 degrees north of the Equator and The Tropic of Capricorn lies at 23.5 degrees south of the Equator

Lesson 6 – Our place

Key Terms:

Environment: The air, water and land in or on which people, animals and plants live.

Environmental Quality Survey (EQs): Uses to assess an area's particular characteristics.

Fieldwork: The process of observing and collecting data about people, cultures, and natural environments.

Content:

Fieldwork is an important part of Geography. It involves investigating a geographical issue.

It involves collecting data, analysing results, and drawing conclusions.

An EQs allows us to collect information about a specific environment.

Site 1: _____

Low Quality	-3	-2	-1	0	1	2	3	High Quality
Ugly								Pleasing to the eye
Lots of litter								No litter
No greenery visible								Greenery visible
Area not maintained								Area well maintained
Not pleasant feel								Pleasant feel

Total Score: _____

A Radar Diagram allows the data to be presented.



Questions:

1. What is a compass rose?
2. Give the 8 main directions on a compass
3. What is scale?
4. Name the 5 different scales used to describe a location

5. What is longitude?
6. Which longitude line is at 0 degrees?
7. What is latitude?
8. Where is the equator and what does it separate?

9. What is the environment?
10. What is an Environmental Quality Survey (EQs)?
11. What is fieldwork?
12. State one way data can be presented



Year 7 Cycle 1 Geography Knowledge Organiser – Our Place



Thursday 16th October 2025 (Week 5 & 6)

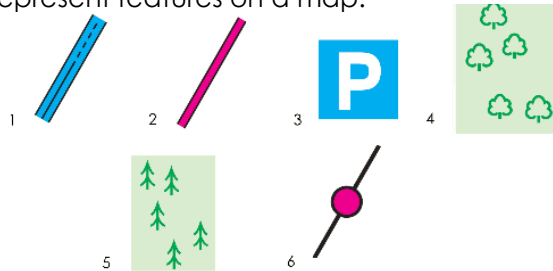
Lesson 7 – OS map symbols

Key Terms:

OS Map: A detailed map produced by the British map-making organisation – Ordnance Survey.

Content:

Maps use different types of symbols – line, letters, pictures, shapes, or coloured areas. They are used to represent features on a map.



Our place has the following features:

- Two A roads and four B roads
- A place of worship with a tower
- Train station
- Hospital

Questions:

1. What is an OS map?
2. Name 5 different types of symbols
3. Why are symbols used?
4. State 4 features of our place

Lesson 8 – Four figure grid references

Key Terms:

Grid References: Map references indicating a location using lines.

Eastings: Vertical lines that are numbered and increase to the east.

Northings: Horizontal lines that are numbered and increase in a northerly direction.

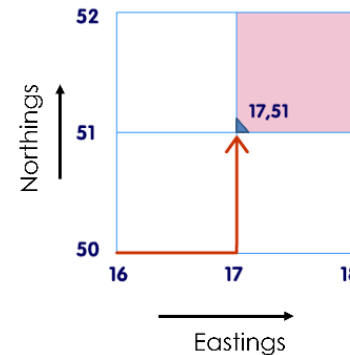
Content:

OS map is divided into squares. We can use the squares to locate places and navigate around the map.

4 figure grid references let you find a whole square on a map.

Grid references golden rules:

1. Bottom left-hand corner,
2. Along the corridor and up the stairs.



5. What are grid references?
6. What does 4 figure grid references let you find?
7. What are eastings and northings?
8. What are the golden rules?

Lesson 9 – Six figure grid references

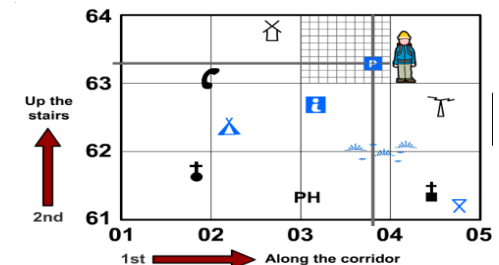
Key Terms:

Precise: Exact details about something.

Content:

These grid references contain 6 numbers. Imagine that each grid is divided into 100 tiny squares. The distance between one grid line and the next is divided into tenths.

6 figure grid references give you a more precise location than 4 figure grid references.



9. How many squares is a square divided into?
10. What is the distance divided into?
11. Why are 6 figures better than 4?
12. Give the 6-figure reference for parking, campsite and picnic site.



Year 7 Cycle 1 Geography Knowledge Organiser – Our Place



Thursday 6th November 2025 (Week 7 & 8)

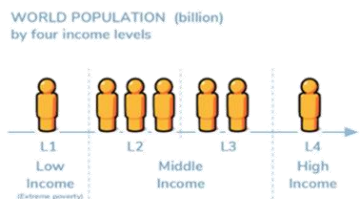
Lesson 10 – Relief	Lesson 11 – Measuring distance and scale	Lesson 12 – How are places different?
Key Terms: Relief: The shape of the land including the height and steepness. Contour lines: Lines join up areas of the same height on a map.	Key Terms: Scale: The ratio between the distance on the map and the distance in the real world. 1:25 000 0 0.5 1 km For example: 1:25 000 means 1cm on a map equals 25,000 cm (250m) in the real world.	Key Terms: HIC: A High Income Country. They have good health care, education. NEE: A Newly Emerging Economy where incomes, employment and education have improved. LIC: A Low Income Country. Tend to have less money and lower education rate & health care.
Content: The height and shape of the land. This can be shown in three ways: 1) Colour/ Layer Shading 2) Spot Heights 3) Contours Contour lines are used on an OS map. They are 10m apart on a 1:25 000 map. You can use them to calculate height and steepness. If the contour lines are close together it is steep. If the contour lines are far apart it is gentle. If there are no contour lines, then it is flat.	Content: Measuring straight line distances: • Get a ruler or piece of paper and simply measure the distance between the two points. • Then compare it to the scale to find out how far it is in real life. Measuring curved line distances: Move the paper or string and mark it all around the curves until you finally reach the point you wanted to measure to. Basically, you are turning the curvy line into lots of little straight lines.	Content: Development indicators are used to tell which country is a HIC, NEE or LIC. • Life expectancy: The average age people are expected to live. • Adult Illiteracy: % of adults that cannot read and write. • Exports: The value of all the goods sold to other countries. • Energy consumption per capita: The amount of energy consumed per person. • GNI (Gross National Income) per capita: The total earning of the country divided by its population. • Food intake (calories): The average amount of calories that a person eats.
Questions: 1. What is relief? 2. What are contour lines? 3. Contour lines closed together show what? 4. Contour lines far apart show what?	5. What is scale? 6. Compare cm on map to real life 7. How do you measure a straight line? 8. How do you measure curved line distance?	9. What does HIC, NEE and LIC mean? 10. What are development indicators? 11. What does life expectancy mean? 12. What does GNI mean?



Year 7 Cycle 1 Geography Knowledge Organiser – Our Place



Thursday 20th November 2025 (Week 9 & 10)

Lesson 13 – Life in different places	Lesson 14 – How is Kenya different?	Lesson 15 – Barriers to Kenya's development
Key Terms: Standard of living: The level of wealth, comfort, goods, and necessities available in an area. Development: The increase in the standard of living in a country's population. Inequality: Where things are not equal.	Key Terms: Highlands: An area of high or mountainous land. Semi-arid: An area that receives light rainfall that is irregular.	Key Terms: Subsistence farmers: Growing enough crops for yourself and your family to survive. Maize: A tall plant which produces long objects covered with yellow seeds called sweetcorn. Drought: A prolonged period of time where there are water shortages.
Content: Income Levels:  Level 1: People who earn less than \$2 a day. Level 2: People who earn between \$2 and \$8 a day. Half the world's population are here. Level 3: People who live on between \$8 and \$32 a day. Level 4: Income is more than \$32 a day. The richest billion people in the world are here.	Content: Location of Kenya: • East Africa on the Equator. • Eastern hemisphere. Physical Features: • The Great Rift Valley is in the west of the country. • Lake Turkana created when rains flooded the valley. Human activity: • The highlands receive high levels of rainfall and good for farming tea and coffee. • The north of the country is very hot and dry, so people rear animals. It suffers from drought. • To the south and west, the land is semi-arid (dry).	Content: Barriers to Kenya's development: • 70% rural population are subsistence farmers. • Many cannot afford school. • High unemployment. • Severe droughts. • Healthcare is not free. 2019 Drought: Causes: Driest season in 38 years, increasing temperature and decreasing rainfall. Impacts: Maize production decreased by 99%, food prices increased and 1.1 million at risk of starvation.
Questions: 1. What is standard of living? 2. What is development? 3. What is income level 1 and 2? 4. What is income level 3 and 4?	5. Where is Kenya? 6. State 2 physical features of Kenya 7. What do people do in the highlands? 8. What do people do in the north of Kenya?	9. What are subsistence farmers? 10. State 4 barriers to development 11. What is drought? 12. What were the impacts of the 2019 drought?

Year 7 French

Cycle 1



Instructions

- Look at the list of 12 words/phrases and practice saying them
- Cover the English side and try to say them to yourself, then write them down.
- Check your answers
- Repeat until you can remember all 12
- Complete the gapfill using the correct word from the list. Enter your answers into your homework book to be checked in class

Challenge : Can you cover up the French side and remember all 12 including the spellings ?

You have **two** weeks to revise each vocabulary list at home.

You will then be tested in class on how well you know all 12 words/phrases.

Still got time left ? Look at the back of this booklet for some MFL challenges to complete at home and show your teacher.

Bon Courage !

Due by : Friday 26th September

Test 1 – Greetings LC1

FRANCAIS	ANGLAIS
1. Bonjour	Good day
2. Bonsoir, enchanté(e)	Good evening, nice to meet you
3. Je suis Amélie et je suis content(e)	I am Amélie and I am happy
4. Je suis Pierre et je suis fatigué(e)	I am Pierre and I am tired
5. Je suis un peu malade	I am a bit ill
6. Au revoir	Good bye
7. À bientôt	See you soon
8. Bonjour, je suis super, et toi?	Good day, I am great, and you ?
9. Salut, ça va?	Hi, how are you ?
10. Comment tu t'appelles ?	What is your name?
11. Bonsoir, je suis Karim et je suis triste. À plus	Good evening, I am Karim and I am sad. See you later.
12. Salut, je suis Adèle et je suis pas mal. Au revoir	Hi, I am Adele and I am not bad. Goodbye.

Gapfill (Complete in your homework book)

1. Je _____ Olivier = I am Olivier
2. Bonjour, je suis _____, et toi? = Hello, I am ill, and you?
3. _____ je suis Juliette = Hi, I am Juliette
4. _____ tu t'appelles? = What is your name?
5. Je suis Simon et je suis _____ = I am Simon and I am tired
6. _____ revoir = Goodbye
7. _____ = Good evening
8. Salut, __ va? = Hi, how are you?

Due by : Friday 10th October

Test 2 – Quel âge as-tu ? LC1

FRANCAIS	ANGLAIS
1. J'ai onze ans	I am 11 years old
2. Mon anniversaire. C'est le...	My birthday is the...
3. Dix neuf août	19th August
4. Quinze juillet	15 th July
5. Huit avril	8th April
6. Seize septembre	16 th September
7. Bonjour, je suis Charlie et j'ai quatorze ans	Good day, I'm Charlie and I'm 14 years old
8. J'ai trente ans et mon anniversaire c'est le deux mai	I'm 30 years old and my birthday is the 2 nd May
9. J'ai deux ans et mon anniversaire c'est le vingt-cinq février	I'm 2 years old and my birthday is the 25 th February
10. J'ai quatorze ans et mon anniversaire c'est le trente janvier	I'm 14 and my birthday is the 30 th January
11. J'ai douze ans et je suis content(e)	I'm 12 years old and I am happy
12. Bonsoir, mon anniversaire c'est le dix-huit octobre. À bientôt	Good evening, my birthday is 18th October. See you soon.

Gapfill (Complete in your homework book)

1. J'ai ____ ans = I am nine years old
2. Mon _____, c'est le 15 mai = My birthday is 15th May
3. Mon anniversaire _____ le quatre juin = My birthday is 4th June
4. J'ai douze _____ = I am 12 years old
5. seize _____ = 16th July
6. _____ avril = 30th April
7. _____ quinze ans = I am 15 years old
8. _____ janvier = 19th January

Due by : Friday 24th October

Test 3 – Appearance. Tu es comment ? LC1

FRANCAIS	ANGLAIS
1. Je suis grand(e)/ petit(e)	I am tall / short
2. Mon père est gros / mince	My dad is fat / thin
3. Ma mère est belle	My mum is beautiful
4. Mon beau-père, il a les cheveux longs	My stepdad, (he) has long hair
5. Ma belle-mère, elle a les yeux bleus	My stepmother (she) has blue eyes
6. Je suis mince et j'ai les yeux marron	I am thin and I have brown eyes
7. Mes grands-parents sont beaux	My grandparents are beautiful
8. Ils/elles ont les cheveux blonds et les yeux gris	They have blond hair and grey eyes
9. Elle est grande et aussi elle a les cheveux roux	She is tall and also she has red hair
10. Il est gros et aussi il a les yeux verts	He is fat and also he has green eyes
11. Ma demi-soeur est petite et aussi elle a les cheveux courts	My half sister is small and also she has short hair
12. Mon chien est beau et aussi il a les yeux marron	My dog is beautiful and also he has brown eyes

Gapfill (Complete in your homework book)

1. Je _____ belle = I am beautiful
2. Ma mère est _____ = My mum is small
3. il a les _____ bleues = He has blue eyes
4. Elle a les cheveux _____ = She has blonde hair
5. Mon _____ est gros = My dog is fat
6. _____ père est beau = My dad is good looking
7. Ma demi-soeur _____ mince = My half sister is thin
8. Elle _____ les cheveux longs = She has long hair

Due by : Friday 14th November

Test 4 – Who I live with – tu habites avec qui ? LC1

FRANCAIS	ANGLAIS
1. Je pense que mon frère est sympa	I think that my brother is nice
2. Je pense que ma belle-soeur est amusante	I think that my stepsister is fun
3. Je pense que mes grands-parents sont timides	I think that my grandparents are shy
4. Je pense que mon oncle est très sérieux	I think that my uncle is very serious
5. Je pense que ma tante est assez idiote	I think that my aunt is quite silly
6. Je pense que mon chat est timide et aussi sympa	I think that my cat is shy and also nice
7. Mon demi-frère est gentil mais mon cousin est idiot	My half brother is kind but my cousin is silly
8. Ma belle-mère est sérieuse aussi elle est gentille	My stepmum/ mother in law is serious also she is kind
9. Ma cousine est amusante mais mes parents sont sérieux	My cousin is fun but my parents are serious
10. Je pense que mon chien est sympa aussi mes chats sont idiots	I think that my dog is nice also my cats are silly
11. Je pense que ma soeur est timide mais mon frère est gentil	I think that my sister is shy but my brother is kind
12. Je pense que mes grands-parents sont gentils et mes parents sont amusants	I think my grandparents are kind and my parents are fun

Gapfill (Complete in your homework book)

- 1. J'ai ____ ans = I am nine years old**
- 2. Mon _____, c'est le 15 mai = My birthday is 15th May**
- 3. Mon anniversaire _____ le quatre juin = My birthday is 4th June**
- 4. J'ai douze _____ = I am 12 years old**
- 5. seize _____ = 16th July**
- 6. _____ avril = 30th April**
- 7. _____ quinze ans = I am 15 years old**
- 8. _____ janvier = 19th January**

Due by : Friday 28th November

Test 5 – Qu'est-ce que tu aimes faire ? LC1

FRANCAIS	ANGLAIS
1. J'adore surfer sur internet	I love to surf the internet
2. J'aime bien tchatter en ligne	I like to chat online
3. Je n'aime pas regarder la television	I don't like to watch TV
4. Je déteste parler avec mes amis	I hate to talk with my friends
5. Je pense que c'est cool	I think that it's cool
6. Je pense que c'est intéressant	I think that it is interesting
7. Je pense que c'est assez barbant	I think that it is quite boring
8. J'aime chanter des chansons parce que c'est amusant	I like to sing songs because it is fun
9. Je n'aime pas du tout jouer au foot parce que c'est stupide	I don't like to play football at all because it's stupid
10. J'aime bien étudier pour le collège parce que je pense que c'est passionnant	I really like to study for school because I think that it's exciting
11. J'adore envoyer des texto parce que c'est intéressant	I love to send some text messages because it's interesting
12. J'aime bien jouer au rugby parce que c'est passionnant	I really like to play rugby because it is exciting

Gapfill (Complete in your homework book)

1. J'adore _____ en ligne = I love to chat online
2. Je _____ que c'est barbant = I think that it is boring
3. _____ regarder la television = I love to watch TV
4. Je déteste _____ sur internet = I hate to surf the Internet
5. Je pense que c'est _____ = I think that it is stupid
6. J'aime bien jouer au _____ = I really like to play football
7. _____ bien étudier = I really like to study
8. C'est _____ cool = It is quite cool

MFL challenges

These are some ideas for tasks to complete at home – they are totally optional but bring them in to show your teacher!

1. Research a French speaking country (*Francophone*) and create a poster to show what you have learnt
2. Research a French or Francophone recipe and have a go at making something at home
3. Create a poster all about you using the vocab in the lists – include pictures
4. Watch your favourite film in French or with French subtitles
5. Imagine you have £1000 to spend on holiday in France. Plan and budget for your holiday including travel, accommodation and activities for a one week stay
6. Find a song you like by a French speaking artist
7. Research Francophone flags and make a poster with 5 different flags
8. Research a Francophone festival or landmark that interests you and present in a poster / presentation.

Year 7 Spanish

Cycle 1



Instructions

- Look at the list of 12 words/phrases and practice saying them
- Cover the English side and try to say them to yourself, then write them down.
- Check your answers
- Repeat until you can remember all 12
- Complete the gapfill using the correct word from the list. Enter your answers into your homework book to be checked in class

Challenge : Can you cover up the Spanish side and remember all 12 including the spellings ?

You have **two** weeks to revise each vocabulary list at home.

You will then be tested in class on how well you know all 12 words/phrases.

Still got time left ? Look at the back of this booklet for some MFL challenges to complete at home and show your teacher.

Buena Suerte!

Due by : Friday 26th September

Test 1 – ¿Cómo estás? LC1

Español	Inglés
1. Buenos días	Good morning
2. Buenas tardes	Good afternoon
3. Buenas noches	Good night
4. Mucho gusto	Pleased to meet you
5. Estoy fenomenal	I am amazing
6. Estoy fatal	I am terrible
7. Estoy cansad@	I am tired
8. Estoy hart@ y cansad@	I am fed up and tired
9. Estoy fenomenal y motivad@	I am amazing and motivated
10. Estoy fatal y triste	I am terrible and sad
11. Buenas noches, estoy bien. Adiós	Good night, I'm well. Goodbye
12. Buenas tardes, estoy regular y triste. Hasta pronto.	Good afternoon, I am ok and sad. See you soon.

Gapfill (Complete in your homework book)

1. _____ **noches** = Good night
2. **Estoy** _____ **y cansad@** = I am terrible and tired
3. **Estoy fenomenal**, _____ **pronto** = I am amazing. See you soon
4. _____ **días**, **mucho gusto** = Good morning, pleased to meet you
5. **Buenas tarde**, _____ **bien** = Good afternoon, I'm well
6. _____ = Goodbye
7. _____ = Good morning
8. _____ = Pleased to meet you

Due by : Friday 10th October

Test 2 – ¿Cuántos años tienes? LC1

Español	Inglés
1. Tengo once/doce años	I am 11/12 years old
2. Mi cumpleaños es el quince de enero	My birthday is on 15 th January
3. El cuatro de febrero	4 th of February
4. El nueve de marzo	9 th March
5. El trece de abril	13 th April
6. El dieciséis de mayo	16 th May
7. El diecinueve de junio	19 th June
8. El veinte de julio	20 th July
9. El veintidós de agosto	22 nd August
10. El veintitrés de septiembre	23 rd September
11. El veinticinco de octubre	25 th October
12. Mi cumpleaños es el treinta y uno de enero	My birthday is the 31 st January

Gapfill (Complete in your homework book)

1. _____ **trece años** = I'm 13 years old
2. **Mi** _____ **es el 3 de enero** = My birthday is 3rd January
3. **El** _____ **de febrero** = 20th February
4. **El cuatro de** _____ = 4th September
5. **El** _____ **de marzo** = 31st March
6. _____ **cumpleaños** = My birthday
7. **Tengo catorce** _____ = I'm 14 years old
8. **El** _____ **de** _____ = 14th May

Due by : Friday 24th October

Test 3 – ¿Cómo es tu mejor amigo? LC1

Español	Inglés
1. Mi amigo/a	My friend (male/female)
2. Mi mejor amigo/a	My best friend (male/female)
3. Mi media naranja	My other half (half orange!)
4. Mi novio/a	My boyfriend/girlfriend
5. Mis amigos	My friends
6. Es divertido/a	He/she/it is fun
7. Son serios/as	They are serious
8. Listo/a	smart
9. Gracioso/a	funny
10. Mi amiga es orgullosa	My friend is proud
11. Mis amigos son perezosos	My friends are lazy
12. Mi mejor amigo es simpático	My best friend is kind

Gapfill (Complete in your homework book)

- 1. Mi _____ amigo= My best friend**
- 2. Mi _____ naranja = My other half ('half orange')**
- 3. Es _____ = He/she is serious**
- 4. Mis amigos _____ perezosos = My friends are lazy**
- 5. Mi _____ es orgullosa = my friend is proud**
- 6. Mi mejor amigo _____ listo = My best friend is smart**
- 7. Mi novio es _____ = My boyfriend is funny**
- 8. Mi _____ es _____ = My girlfriend is fun**

Due by : Friday 14th November

Test 4 – ¿Cómo es tu familia? LC1

Español	Inglés
1. Mi padre	My father/dad
2. Mi madre	My mother/mum
3. Mi padrastro	My stepdad
4. Mi madrastra	My stepmum
5. Mi hermano/a	My brother/sister
6. Mi hermanastro/a	My stepbrother/sister
7. Mi mascota es gorda	My pet is fat
8. Creo que mis hermanos son bajos	I believe that my siblings are short
9. gordo / delgado	Fat / thin
10. Creo que mi mascota es fea	I believe that my pet is ugly
11. Pienso que mis padres son altos	I think that my parents are tall
12. Creo que mi abuela es guapa y simpática	I believe that my grandma is good looking and kind

Gapfill (Complete in your homework book)

1. **madre**= My mum
2. **Mi** = my stepmum
3. **Mi** **es serio** = My stepdad is serious
4. **Mi hermanastra es** = My stepsister is thin
5. **Creo que mi** **es gorda** = I believe that my pet is fat
6. **Mis** **son bajos** = My siblings are short
7. **que mi padre es alto** = I think my dad is tall
8. **Mi** **es** = My sister is kind

Due by : Friday 28th November

Test 5 – ¿De qué color son tus ojos y tu pelo? LC1

Español	Inglés
1. El pelo	Hair
2. Negro	Black
3. Castaño	Brown (hair)
4. Pelirrojo	Red (hair)
5. Largo / corto	Long / short
6. Tengo el pelo largo y negro	I have long, black hair
7. Los ojos	eyes
8. azules	Blue
9. verdes	green
10. Tengo los ojos marrones	I have brown eyes
11. Tiene el pelo pelirrojo	He/she has red hair
12. Mi madre tiene el pelo rubio y los ojos grises	My mum has blond hair and grey eyes

Gapfill (Complete in your homework book)

1. **Tengo** ____ **largo** = I have long hair
2. **tengo** ____ **azules** = I have blue eyes
3. **Mi madre** ____ **el pelo liso** = My mum has straight hair
4. **Tiene el pelo** ____ = he/she has short hair
5. **Los ojos** ____ = Brown eyes
6. ____ **el pelo pelirrojo** = I have red hair
7. **Mi hermano tiene** ____ = My brother has green eyes
8. ____ = I have short hair

MFL challenges

These are some ideas for tasks to complete at home – they are totally optional but bring them in to show your teacher!

1. Research a Spanish speaking country and create a poster to show what you have learnt
2. Research a Hispanic recipe and have a go at making something at home
3. Create a poster all about you using the vocab in the lists – include pictures
4. Watch your favourite film in Spanish or with Spanish subtitles
5. Imagine you have £1000 to spend on holiday in Spain. Plan and budget for your holiday including travel, accommodation and activities for a one week stay
6. Find a song you like by a Spanish speaking artist
7. Research flags from Spanish speaking countries and make a poster with 5 different flags
8. Research a Spanish/Latin American festival or landmark that interests you and present in a poster / presentation.

RPE - Week B – Thursday 11th September

Lesson 1 – What Is Religion?	Lessons 2 - 3 – Applying The 7 Dimensions
Key Terms: Religion: A particular system of faith and worship. Social: A group of individuals involved in social interaction. Material: Physical objects, for example, clothes, food, buildings. Rituals: A religious ceremony consisting of a series of actions.	Key Terms: Tribe: A social group in society consisting of people with the same language, culture, religion etc. 
Content: Ninian Smart looked at the features that religions have in common and came up with 7 dimensions: 1. Beliefs and teachings 2. Rules 3. Feelings 4. Social 5. Material 6. Rituals 7. Stories	Content: In order for a tribe to live together harmoniously, different aspects would need to be considered. Smart's 7 dimensions from last lesson can be applied to these tribes. When suffering occurs and tribes are forced to work together, the beliefs of these tribes may conflict.
Questions: 1. What is religion? 2. What features do religions have in common? 3. What are Ninian Smart's 7 dimensions?	Questions: 1. What is a tribe? 2. How can Smart's dimensions be applied to a tribe? 3. What different beliefs might a tribe have?

RPE - Week B – Thursday 25th September

Lesson 4 – Why Do We Have Religion?	Lesson 5 – Using Different Lenses
Key Terms: Social Science: The study of human society and social relationships. 	Key Terms: Lens: A way of looking at a particular belief or worldview. Theology: Questions about belief: what it is, where it has come from, how it has changed over time, how it is applied in different contexts Philosophy: Questions about the nature of reality, existence and knowledge.
Content: Many people need religion for the following reasons: - It can explain the origins of life. - Religion can give hope that there is a life after death. - Most religions contain stories that can offer hope/calm - Religion can bond communities together - Religion offers guidance/help	Content: The 3 core disciplines used in RPE lessons are Theology, Philosophy and the Social Sciences. We all have our own lenses which will have developed from our life experiences and learning! Your personal lens may change as you learn and experience more.
Questions: 1. Why do people need religion? 2. What functions does religion contribute to society?	Questions: 1. What is a lens? 2. What are the 3 core disciplines used in RPE? 3. What might influence or change our lens?

Lesson 6 – What Is A Worldview?	Lesson 7 – What Is Truth?
Key Terms: Worldview: A particular philosophy of life or conception of the world. Influences: To cause someone to change a belief, behaviour or opinion. 	Key Terms: Truth: In accordance with fact or reality. Belief: An acceptance that something exists or is true, especially one without proof. Knowledge: Facts, information, and skills acquired through experience or education.
Content: Our own worldview journey is personal and will be shaped by our own individual background, family, and cultural influences. Worldviews differ from person to person.	Content: - There are different types of truths. Some examples are scientific, moral, spiritual and historical. - Many people would say for something to be true, there needs to be empirical evidence. - Some people would argue that beliefs can't be truths as they don't always have evidence
Questions: 1. What is a worldview? 2. How do worldviews differ from person to person? 3. What is your worldview?	Questions: 1. What is truth? 2. What is the difference between knowledge, belief and truth? 3. What different types of truths are there?

Lesson 8 – What Is An Ultimate Question?	Lesson 9 – Science and Religion
Key Terms: 'Ultimate' Questions: Questions which we may never know the answer to. 	Key Terms: Empirical: Based on or verifiable by observation or experience rather than theory. Evidence: Facts or information indicating whether a belief is true. Scientific: based on the methods and principles of science. Creationism: The belief that God created the world.
Content: Religious truths try to answer some ultimate questions. Science and religion often respond in different ways to different situations. For example, when thinking about how the world was created, a scientific approach may be to look at the Big Bang theory or Evolution.	Content: Many Christians believe in the concept of creationism: that God created the world. Scientists would approach this idea by looking at evidence – some would come to the conclusion that God did not create the world, but others may look to other evidence, e.g. The Big Bang theory – could God have caused this?
Questions: 1. What is an ultimate question? 2. What is the difference between a religious truth and a scientific truth?	Questions: 1. Is life after death a possibility? 2. What is the difference between the way a scientist and a religious believer would approach this topic?

RPE - Week B – Thursday 13th November

Revise your learning from this cycle, by creating a brain-dump of knowledge below!
First: Mind-map down everything you can remember.
Then: Using a purple pen look back through your knowledge organiser and add the information you missed.

RPE - Week B – Thursday 27th November

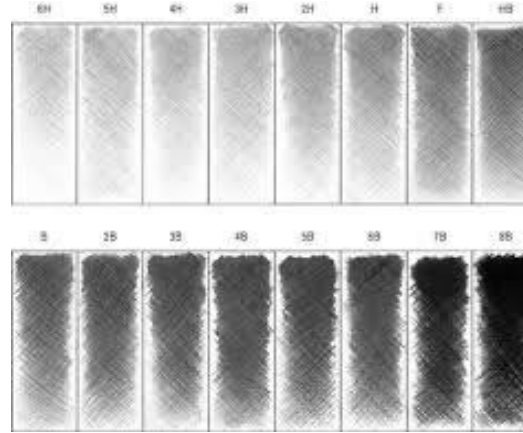
Create a glossary of key words for the topic.
Practice using these words, by choosing 3 to use in written sentences relating to the topic.

A. Visual Elements Keywords

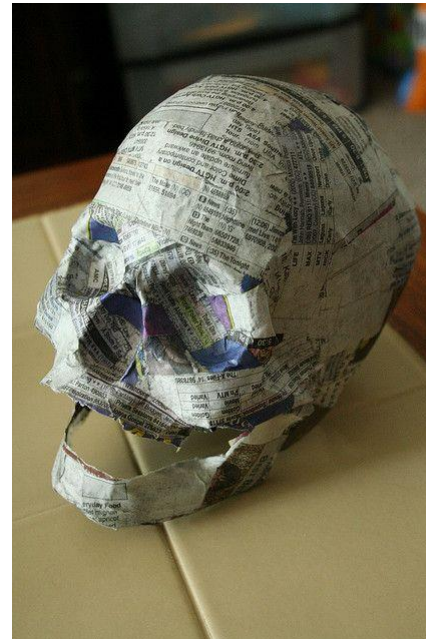
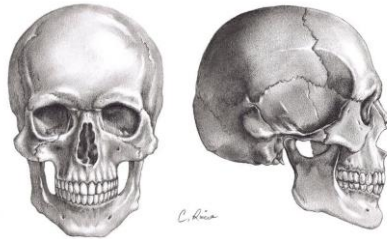
Line	Line is the path left by a moving point. A line can be horizontal, diagonal or curved and can also change length.
Shape	A shape is an area enclosed by a line. Shapes can be geometric or irregular.
Form	Form is a three dimensional shape, such as a cube, sphere or cone.
Tone	This refers to the lightness or darkness of something. This could be a shade, or how dark or light a colour appears.
Texture	This is to do with the surface quality of something. There are two types of texture: Actual texture really exists, so you can feel it or touch it; Visual texture is created using marks to represent actual texture.
Pattern	A design that is created by repeating lines, shapes, tones or colours.
Colour	Red, yellow and blue are primary colours, which means they can't be mixed using any other colours.

B. Key Knowledge 1: How to create a range of tone

- Create different tones by using different grades of pencil
- HB means 'hard black' this is a standard pencil.
- H pencils are **lighter** as the number gets higher
- B pencils are **darker** as the number gets higher
- You can use pencils to make a variety of marks and tones by how much pressure you apply when using them



E. Expert Modelling:



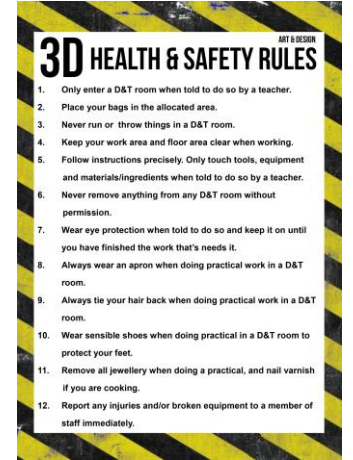
What Visual Elements can you see in this work?

CREATIVE ARTS

3D DESIGN – YR 7 – 3D SKULL

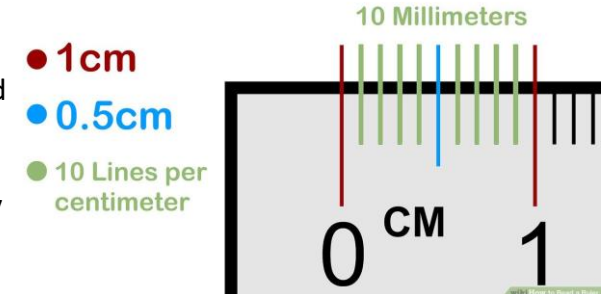
C. Key Knowledge 2: HEALTH & SAFETY RULES

Refer to your booklet for a larger version of the H&S Rules



D. Key Knowledge 3: How to use a ruler

Lines on a ruler help you to measure and mark accurately. This is a very important **life skill**.



F. Wider thinking / further reading:

Watch this video on how to create a paper mâché skull from egg boxes

<https://www.youtube.com/watch?v=1v6b0elCJVU>

A. Visual Elements Keywords

Line	Line is the path left by a moving point. A line can be horizontal, diagonal or curved and can also change length.
Shape	A shape is an area enclosed by a line. Shapes can be geometric or irregular.
Form	Form is a three dimensional shape, such as a cube, sphere or cone.
Tone	This refers to the lightness or darkness of something. This could be a shade, or how dark or light a colour appears.
Texture	This is to do with the surface quality of something. There are two types of texture: Actual texture really exists, so you can feel it or touch it; Visual texture is created using marks to represent actual texture.
Pattern	A design that is created by repeating lines, shapes, tones or colours.
Colour	Red, yellow and blue are primary colours, which means they can't be mixed using any other colours.

B. Key Knowledge 1: Tonal Drawing

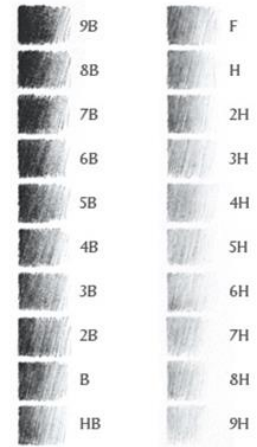
Create different tones by using different grades of pencil

HB means 'hard black' this is a standard pencil.

H pencils are lighter as the number gets higher

B pencils are darker as the number gets higher

You can use pencils to make a variety of marks and tones by how much pressure you apply when using them



D. Key Knowledge 3:

Art History: There are 3 key phases

- 1. Traditional Art** = Art that is made using skills and knowledge which are passed down through generations from master craftsmen to apprentices.
- 2. Modern Art** = Art in which the traditional styles and values of the past have been thrown aside in a spirit of experimentation, in particular art created between the late 19th and the late 20th centuries.
- 3. Contemporary Art** = The art of today, produced in the second half of the 20th century or in the 21st century.

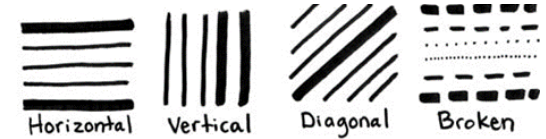
ART & DESIGN

Project – YEAR 7 MARK MAKING

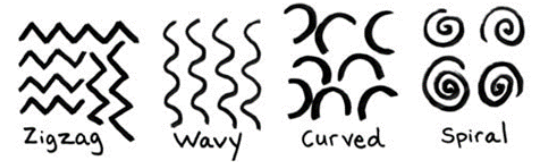
Threshold Concept #1 - Artists observe, make marks and respond to the world around them around them

C. Key Knowledge 2: Types of Line

Experiment with drawing different types of line in your sketchbook:



Straight, curved, vertical, horizontal, diagonal, messy, continuous, jagged, broken, thick, thin, bold, freehand



E. Expert Modelling:



TRADITIONAL ART
'Basket of fruit'
by Caravaggio 1599



MODERN ART
'Still Life' by Roy Lichtenstein, 1972



CONTEMPORARY ART
'Sundae Bliss'
by Sarah Graham, 2014

F. Wider thinking / further reading:

https://www.youtube.com/watch?v=V_KN8Lt427Q

Computer Science Knowledge Organiser KS3: TERM 1

Learn these key terms: You can do this by using the look / cover / write technique or by writing them into a sentence

Keyword	Meaning	Word used in a sentence	Picture link
Format	To change or arrange information in a document	I need to format my Word document so that it looks more professional	
Align	To change the position or placement of something in your document	I chose the centre align tool to position my title in the middle of the page.	
Font	A font is a graphical representation of letters and numbers	I chose a modern font so that my text is clear to read.	
Header	Text at the top of a page in an electronic document. Information placed in the header will appear on all pages	I put my name in the header of the document so that it will appear on all of the pages	
Footer	Text at the bottom of a page in an electronic document. Information placed in the header will appear on all pages	I put the page number in the footer of my document	
Cursor	A cursor is an indicator used to show the current position for user interaction on a computer monitor .	The cursor helped me to see the current position of my mouse so that I can select the correct information easily	

Plagiarism



SCAN ME

Step 1: Understand what **Plagiarism** means:

Plagiarism is when you use another person's words or ideas and try to pass them off as your own. This could be copying from a book, copying from the internet or copying from your friend!

Step 2: Properly Quote and Paraphrase your work. This means if you want to use someone's ideas in your work you can but you must say whose idea it is and reference it. Referencing means giving links to the books or websites or any sources that you have used.

Step 4: Check Your Work



Computer Science Knowledge Organiser KS3: TERM 1

Learn these key terms: You can do this by using the look / cover / write technique or by writing them into a sentence

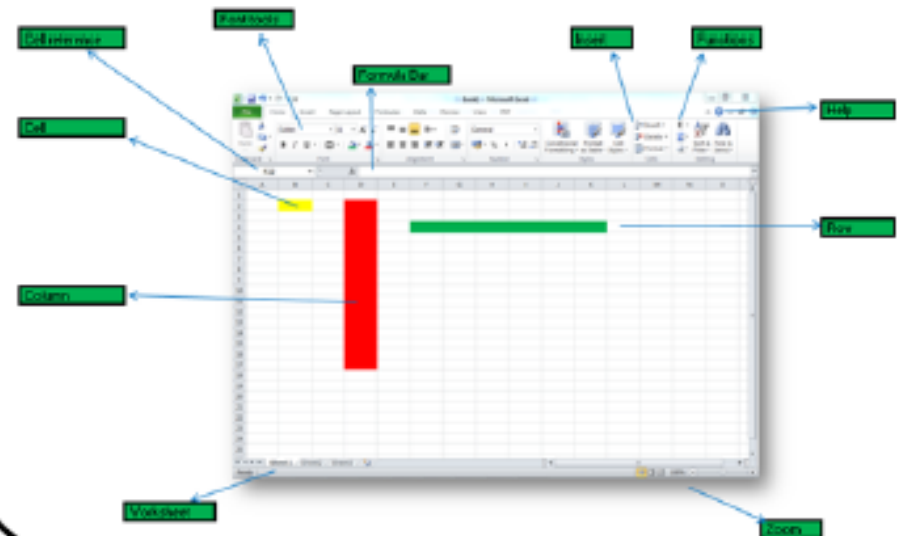
Why do we use Spreadsheets?

Spreadsheets are used to store information and data. Once we have our information in a spreadsheet we can run powerful calculations, make graphs and charts and analyse patterns.

Uses of spreadsheets:

- Budget tracker
- Stock tracking of a business
- Money use in a business
- Teacher may use it to keep a record of students grades

Layout of a Spreadsheet



Cell reference

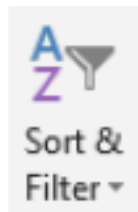
A cell reference is the name given to a cell to uniquely identify it. E.g. E4

An **absolute cell reference** ensures that 1 cell always remains constant even when autofill is used.

E.g. \$E\$4

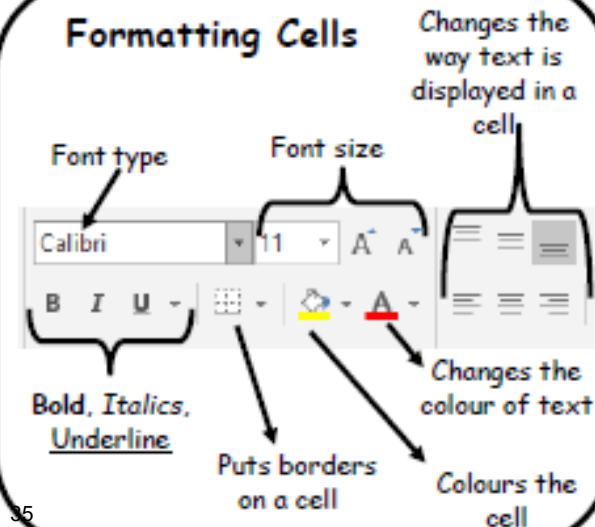
Sort & Filter

Sorting data organises it in a specific way e.g. alphabetically



Filtering data makes it easy for us to find one specific piece of data without having to look through every piece of data

Formatting Cells



Formulas

Only use when creating a calculation between 2 cells.

E.g.

= A1 + B1 (adds)

= A1 - B1 (subtracts)

= A1 * B1 (multiplies)

= A1 / B1 (divides)

Year 7 Cycle 1 - Drama Knowledge Organiser

A. Theatre Makers

Director: A director is the person who tells the actors where to stand on stage and how to perform their lines.

Designer: A designer decides what the stage, lighting, sound and costume could look like. They create / make the different production elements.

Performer: The performer plays a role or roles within a performance. Listening to the decisions of the director.

Keywords:

Improvisation: created spontaneously/without preparation.

Transition: the movement from one scene to another.

Thought Track: when a character says inner thoughts out loud.

Still image: frozen picture that communicates meaning.

Challenge: How is a director different to a performer?

C. Drama Terminology

Props: Items used in a performance, either placed on the set or carried by a performer.

Role Play: act out or perform the part of a person or character

Costume and Props: Items worn during a performance to communicate location, time period or character: Clothing, Make-up, Face paint, Mask.

Set/Stage furniture: The physical structure on the stage used to create a sense of when & where the action is taking place.

Lighting: Any source of light used to illuminate a stage and the actors, also include blackouts.

Sound/Sound effects: Sound heard during a performance either recorded or produced live.

Context:

Air Raid Shelter: a building or structure designed to protect people from bombs dropped during air raids.

D. Lighting

GEL – please ensure you copy the picture too!

A Gel is coloured plastic that filters the light, creating different colours on stage. Gels can be used in Fresnel's and spot lights.

FRESNEL - please ensure you copy the picture too!

A Fresnel is used for lighting a moderate to large area of the stage. It creates a soft edged beam of light that cannot be focused. Barn doors can be used to shape the wash.



Key Skills:

Narration: the action or process of narrating a story.

Thought track: When a character says their inner thoughts out loud, often in a freeze frame.

Direct Address: an actor talking to the audience.

Levels: Using different heights or levels onstage

B. Physical Definitions

Body Language: How you use your body to express mood, emotion and status.

Gesture: How you use your hands to communicate meaning.

Facial expressions: How you use your expressions to communicate mood, emotions and reactions.

Actions: Movements to convey meaning.

Levels: Using different heights to shows status.

Stance: The way an actor stands in role.

Challenge:

Can you explain how you would use facial expressions to show how an Evacuee feels about leaving home?

E. Vocal Definitions

Pause: Deliberate use of silence.

Pace: How fast or slow you speak.

Accent: How you speak based on where you're from.

Tone: Matching mood or emotion.

Pitch: How high or low you speak.

Elongation: Using the vowel sound to lengthen a word.

Volume: How loud or quiet you speak.

Challenge: What vocal skills would you use to show that you were missing home when writing a letter to your parents?

F. Drama techniques

Cross Cutting: Effectively cutting between different scenes – like a snapshot.

Emphasis: the pressure on individual words to makes them stand out

Repetition: using the same word or phrase over and over

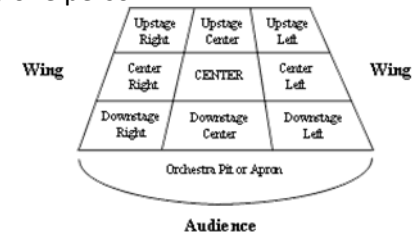
Canon: When a group of people all complete the same action, movement or gesture one after the other

Choral Speaking: speaking as a group

Monologue: an extended speech by one person.

Stage positions:

are used to help keep track of how performers and set pieces move during rehearsal and performance.



English

Start with Week 1. Each week, complete the next colour block. Write each word out 3 times and each definition once. Write as much of the theme/character information as you can remember. Check it all with a purple pen. Tick what is correct, fix what is wrong.

Coombeshead Academy Inspiring Excellence			English Learning Area		Much Ado About Nothing – William Shakespeare	
wk	keyword	definition	example			
Week 1	Moral	A message that we can learn from a story.	The Hare and the Tortoise teaches us that slow and steady will always win the race.	Week 1	Aesop: - Lived in 6th Century BC - Greek - Wrote fables- short stories with a moral message - Fables usually contain talking animals 	
	Audible	Able to be clearly heard.	When you read in class, you need to be audible .			
	Fable	A short story with a moral message, usually with animals as characters.	The Hare and the Tortoise. The Lion, the Ass and the Fox.			
	Narrator	The person who is telling the story.	Aesop's fables have a third person narrator			
	conjunction	A word or phrase to join two clauses.	I will wear a coat because it is cold today.			
Week 2	Culture	The ideas and social behaviour of a particular group of people.	It is a cultural tradition that children are told fairy stories before bed.	Week 2	Charles Perrault: - Lived in the 17th century (died 1703) - French writer - One of the first writers to explore fairy tales. - Wrote 'Sleeping Beauty', 'Little Red Riding Hood' and 'Cinderella'. 	
	Narrative	A story; a spoken or written account of events.	Aesop's fables and fairy stories all contain similar narratives .			
	Oral tradition	The act of passing stories through generations by word of mouth.	In Europe, there has been an oral tradition of passing on fairy stories and fables.			
	Society	A large group of people who live alongside one another in an organised way.	We can consider the students at school a society because you all exist in school according to rules.			

English

	Universal	Existing everywhere or involving everyone.	The moral messages in fables are universal .		
Week 3	Tone	Another word for atmosphere.	The tone of the text is one of peacefulness.		Brothers Grimm: 19th century (Died 1859 and 1863) - German writers - Adapted existing fairy tales into darker stories. - These were not intended for children. 
	Text	Any piece of writing.	We will study many texts over the course of your English studies.		
	Conflict	A disagreement or clash between two or more things (e.g. people, groups, countries).	There is always some sort of conflict in stories.		
	Character function	The purpose of a character in a text.	The character function of the Hare in 'The Hare and the Tortoise' is to remind people of the dangers of arrogance.		
	atmosphere	The mood created in a text, location or between peoples	* ominous * * full of tension * scary calm * peaceful *		

Week 4	Context	The wider situation in which something happens or exists.	The context of 'Animal Farm' is the Russian Revolution.	Week 4	George Orwell: - Lived in the 20th century- died 1950 - Was born Eric Arthur Blair - He became anti-Stalinist after fleeing for his life from Soviet-backed communists. 'Animal Farm' was written as a way of recounting his experiences of the Soviet regime. 
	Morality	The belief that some behaviour is right and acceptable and other behaviour is wrong.	Some people get their ideas about _____ from the Bible. Others have their own ideas of right and wrong.		
	Convey	Expressing a thought feeling or idea in a way that is understood by others.	Orwell conveys his thoughts about Stalin in 'Animal Farm'.		
	persecute	Someone who is a bully or a tyrant.	Stalin can be considered a tyrant because he persecuted those who disagreed with him.		
	Allegory	A story with a partly hidden moral or political meaning.	Animal Farm in an allegorical novel.		
Week 5	Animalism	A set of rules the animals agree to live by.	The animals come up with these rules based upon Old Major's words.	Week 5	Old Major: - In Chapter 1, Old Major calls an assembly in the barn. - He gives them a speech about how poorly they have been treated by humans. - He persuades them to rebel against Farmer Jones. - He teaches them a song called 'Beasts of England'. - He is well-spoken, intelligent and well-respected. 
	Rebellion	Organised and often violent action against a government or ruler.	The animals decide to rebel against Farmer Jones because of the way he treats them.		
	Persuade	Using language to make someone behave in a certain way.	Old Major is very persuasive because he makes all the other animals agree with him.		
	Power	Control of influence over people of things.	Old Major appears to have a lot of power over the other animals.		
	Exploit	Use someone or something unfairly for your own personal gain.	Farmer Jones exploits all of his animals.		
Week 6	Corrupt	Dishonestly using power for your own gain	Napoleon shows he is corrupt when the milk disappears.	Week 6	Napoleon: In Chapter 2, the work of organising and planning the rebellion falls to the pigs because they are 'clearly' the cleverest of all the animals. 
	Stalin	He turned the struggling Soviet Union into a thriving military superpower. However, he was violent and cruel.	Napoleon is symbolic of Stalin .		

	Manipulate	To influence or control someone for your own gain, often without them knowing it.	Napoleon manipulates the other animals to feed his power.			• The animals are left unfed and drive away Jones and his men in revenge. • The farm becomes 'Animal Farm'. • Napoleon quickly becomes the leader. • Napoleon doesn't contribute to the rebellion itself. • It becomes clear that he isn't interested in the strength of the farm, only the power he has over it. • An example of this is when the cows are milked by the pigs and the milk later disappears after Napoleon promises it will be looked after. • He represents Stalin.
	Liberty	The freedom to live as you wish and go where you please.	The animals gradually have their liberty taken away again by the pigs.			
	Oppression	Where people are ruled in an unfair way and are prevented from having opportunities.	The animals on the farm are oppressed by the pigs.			

Week 7	Eloquent	Using language to express ideas very clearly and well.	Snowball is more eloquent than Napoleon.	Week 7	Snowball: - In Chapter 3, the animals work really hard to bring in the harvest. Snowball establishes various committees; the animals all achieve varying degrees of literacy. - The puppies are taken from their mother and educated privately by Napoleon. - In Chapter 4, other farmers are growing worried about the possibility of rebellions on their own farms. - The farmers stage their own rebellion to prevent this but are easily overpowered by the animals. This known as the 'Battle of the Cowshed'. - Snowball is a pig and therefore an 'enemy'. However, Snowball intimidates Napoleon because he thinks for himself and comes up with better ideas than him. - Napoleon knows that Snowball is a threat to his power.	
	Maxim	A short and simple statement containing a rule.	Boxer's maxim is "I will work harder!"			
	Protagonist	The main character in a narrative.	The animals, as a group , are the protagonists in the story.			
	Antagonist	The character that goes against the main character creating conflict.	Napoleon is a very obvious protagonist .			
	Rights	An entitlement to what we need to be healthy and happy.	The animals are gradually having their rights taken away.			
Week 8	Allusion	A brief, indirect reference to something, making us think of it.	The novel frequently alludes to the Russian revolution.	Week 8	Squealer: - In chapter 5, Snowball proposes the animals build a windmill to help secure their future. Napoleon disagrees. - They both give speeches to try and persuade the animals to agree with them, but Snowball is a better speaker. - Snowball is chased off the farm by the puppies on Napoleon's command. - Squealer then spends his time trying to convince the animals that Napoleon is doing right by them. - Eventually, the animals accept his explanations because of his eloquence. - In Chapter 6, the animals begin work on the windmill. - Napoleon hires Mr Whympers to help the trade on the farm.	
	Character development	The changes a character experiences in a story.	Benjamin does not undergo much character development; he always believes the animals are better off after the rebellion.			
	Propaganda	Ideas or information that only show one side of a situation.	The pigs make it their business to manipulate the others through the use of propaganda .			
	Tyrant	A ruler who has unlimited power over others and uses it cruelly.	Napoleon is a tyrant ; he eventually starts killing the animals that stand in his way.			
	juxtaposition	When two things are in contrast to each other	Napoleon and Boxer juxtapose each other.			

						- The pigs move into the farmhouse; the commandments keep being changed to ensure the pigs can't be accused of breaking them. - A storm rips down the windmill; Napoleon declares Snowball is responsible. - Squealer is conveyed as Napoleon's propaganda machine- whenever the animals begin to doubt the success of the rebellion, he steps in to reassure them.
Week 9	Contrast	The state of being strikingly different to something else.	There is not much of a contrast between how the animals were treated under Jones and now under the pigs.		Week 9	Benjamin:  - In Chapter 7, he animals begin to protest about their treatment and many are killed for their actions. Maximus writes a poem to replace 'Beasts of England'. - In Chapter 8, the men attempt to take back the farm and blow up the windmill. - The pigs discover whisky in the cellar; Napoleon has a hangover from drinking. - The retirement paddock is ordered to be used for growing barley. - Benjamin is intelligent and literate, but refuses to engage in the rebellion. He doesn't like to meddle. - He represents all the people who were capable of opposing Stalin, but never did.
	Reader's reaction	The way a reader thinks or feels about a text.	The reader feels angry towards the pigs for the way they treat the other animals when they were promised freedom.			
	Totalitarianism	A political system in which people in power have complete control and no-one is allowed to go against them.	Napoleon operates a totalitarian regime on the farm.			
	Pathetic fallacy	When the weather or setting reflect the mood of a scene	The weather that destroys the windmill reflects the mood of the animals.			
	Idiom	A phrase commonly used, whose meaning isn't always obvious.	Four legs good, two legs bad.			
Week 10	Violence	Extreme force intended to cause harm.	Many tyrants use violence against people.		Week 10	Boxer: - In Chapter 9, the animals begin rebuilding the windmill. Boxer gets a split hoof and then collapses with a lung problem. - A van arrives to take him for 'treatment'. Benjamin read the word 'knacker' on the side of the van and
	Satire	A way of criticising someone's ideas in a humorous way, often linked to politics.	The novel is a satire of the Russian leadership during the revolution.			

	First person	When you express your opinion	I believe that... We should do this...	
	Third person	When you write from a wider perspective. This develops your academic voice	The novel is written with an uninvolved third person narrator.	
	connotation	What is suggested by a word, image or action/.	The word 'violence' has connotations of pain and bloodshed.	

the animals encourage Boxer to escape. He isn't able to. Boxer isn't seen again, but the pigs reassure the animals that Boxer received the best care possible.

- In Chapter 10, years have passed. Many of the animals are dead and those living are not able to retire.
- The animals see the pigs walking on their hind legs and carrying whips. Eventually, the pigs are living as humans full-time.
- Boxer is the hardest-working animal on the farm.
- Is also very gullible (easily manipulated).
- Has the maxims "I will work harder" and "Napoleon is always right".
- He represents the Russian working- classes who supported the Soviet Union but were betrayed by Stalin.

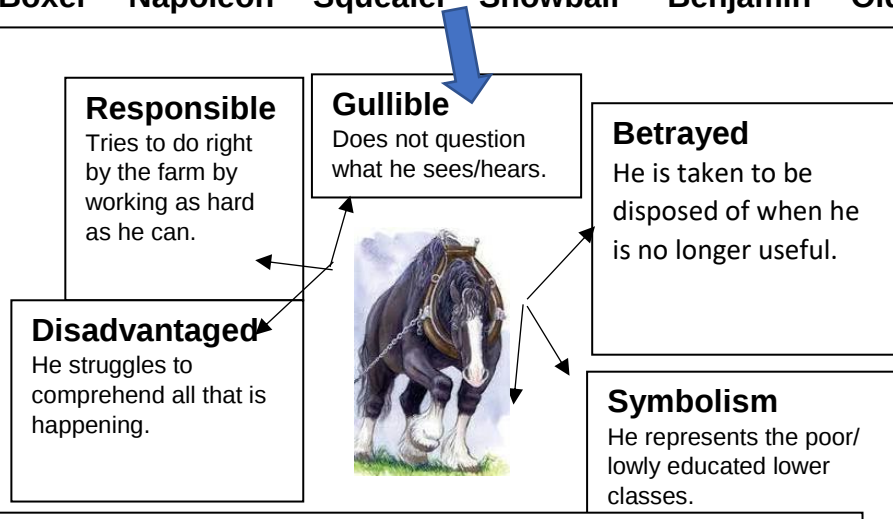




Key Characters

- (pick 1)
- ☐ Create a character sheet
 - ☐ Create a mind map
 - ☐ Plot their activities and actions
 - ☐ Draw their picture using evidence from the book
 - ☐ Write a letter containing their thoughts and feelings
 - ☐ Write a script between two characters

Boxer * Napoleon * Squealer * Snowball * Benjamin * Old Major *



Developing Cultural Capital - Themes

Read a newspaper article on a theme linked to current events.

- Tasks:
- ☐ Print them out and highlight literary techniques.
 - (pick 1) ☐ Write a summary of the article
 - ☐ Find two conflicting articles

Example:

Betrayal – Russia's invasion of Ukraine/ NATO agreement

Conflict – Any newspaper article on any war or their **Liberation**

Responsibility – Young carers

Goodness – find an article about someone who was a hero

AO3 – Social Context – (*Influences on the book and author*)

- George Orwell (Eric Arthur Blair) was born in India and attended many private schools throughout his education.
- This meant that he was exposed to lots of snobbery and social class divisions throughout his childhood.
- He was a socialist- this means that he believed that money and resources should be shared amongst the people of a society, not the most elite.
- He wrote 'Animal Farm' to highlight the poor behaviour of the Soviet Communists, in particular, Stalin. Stalin is represented by Napoleon in the story.
- Orwell was anti-totalitarianism, which means that he disagreed with anyone having absolute power.
- The Russian Revolution falsely promised progress for the people; instead, it brought misery and dictatorship.
- ☐ **YOU COULD DO A RESEARCH LEAFLET ON ONE OF THESE TOPICS:**
 - **Russian Revolution**
 - **Socialism**
 - **Totalitarianism**

SIGNIFICANT SETTINGS IN THE NOVEL:

Think about Orwell's use of setting in the novel. Find descriptions, key chapters and events that link to these key settings:

Other farms (not Animal Farm)

The Barn

The Farmhouse

BIG WRITE: Write you own description of these locations



Year 7 Food & Nutrition Knowledge organiser - Macronutrients

Week 1 & 2 Why we need food & the Eatwell guide	Week 3 & 4 Protein
The body needs food for: • Growth and repair of cells • Energy • Warmth • Protection from illness • Keeping the body working properly Your diet should include: • A variety of foods to make sure you get all of the nutrients to stay healthy. • No single food can supply all of the nutrients that you need Foods are vital for our survival and are made up of different things called nutrients. Each nutrient has its own function in the body • Protein - growth and repair of cells, maintenance of the body and to provide energy. • Fat - provide energy, to keep the body warm, to protect internal organs and provide fat soluble vitamins and essential fats • Carbohydrates - needed for energy • Vitamins & minerals - needed to protect the body and prevent illness and disease <u>The Eatwell guide:</u>  <u>Questions:</u> 1. Why should you eat a variety of foods? 2. List the 5 main nutrients needed by the body and give a function of each 3. How much water should we drink a day? 4. List the sections of the Eatwell Guide including foods you would find in each section	There are two main types of nutrients: • Macronutrients - needed in large amounts by the body (protein, fats and carbohydrates) • Micronutrients - needed in smaller amounts (vitamins and minerals) Protein is needed for growth, repair, maintenance and a secondary source of energy Some people will need more protein than others e.g. children, teenagers and pregnant women Proteins are made from amino acids and there are 20 of them Essential amino acids must be provided by food because the body cannot make them 10 are essential for children and 8 are essential for adults. High biological value (HBV) • Contain all of the essential amino acids • Mainly come from animals e.g. meat fish and eggs Low biological value (LBV) • Missing 1 or more essential amino acid • Mainly come from plant foods e.g. peas, beans Complimentary proteins • When 2 or more LBV proteins are combined they can make a HBV protein e.g. beans on toast <u>Questions:</u> 1. What is the 4 letter word to remember the functions of protein 2. Which groups of people need more protein in their diet? 3. What are proteins made from and how many are there? 4. Can the body make all of the amino acids?

Week 5 & 6 Fat	Week 7 & 8 Carbohydrate
Many people eat too much fat which is not good for our health and can lead to several health problems Fats like butter are solid at room temperature and are called saturated fats. Oils are liquid at room temperature and are called unsaturated fats. Saturated or unsaturated fat: - Saturated fat - too much in the diet can be harmful to health. - Unsaturated fat - this type of fat is better for our health and can have several benefits.  Eating this type of fat is better for our health and can have several benefits. The functions of fat are: - It protects vital organs by covering them with a layer of fat - It insulates us and keeps us warm - Provides energy (2 x as much as a gram of carbohydrate) - It provides fat soluble vitamins A, D, E & K Cholesterol is a fatty substance needed to function properly and help with the digestion of fats. Eating foods high in fat can raise cholesterol levels in the blood Eating too much fat can cause: - Obesity - Type 2 diabetes - Heart disease Questions: - What are 3 of the main functions of fat in the body? - Name 3 sources of animal fat & 3 sources of vegetable fat - Which type of fat should we be eating less of and which should we eat more of?	The main function of carbohydrate is to provide energy! There are 3 different groups of carbohydrate. Sugar: - All sugars, treacle and syrups, honey, jam and marmalade - Known as simple or double sugars Starch: - Potatoes, rice, pasta, bread - Known as complex carbohydrates. Made up of lots of simple sugars joined together Fibre: - Found in cell walls of fruit, vegetables and cereals - Also a complex carbohydrate There are 2 other types of sugar that we need to be aware of in our diets. These are: - Free sugars = sugars that are added to foods e.g. sugar, honey and syrup. Can be more harmful to our health if we eat too much. - Fruit sugars = natural sugars found in fruits and vegetables e.g. apples. Better for us. We should be getting 50% of our energy from carbohydrate foods 45% of our energy should come from starchy foods 5% should come from sugars If the diet contains too much carbohydrate than we need then it will be turned into fat and stored in the body. This could lead to obesity. Fibre is needed to keep the digestive system healthy. If you don't eat enough fibre you could become constipated. The recommended amount of fibre for adults is 30g per day. Questions: - What is the main function of carbohydrate in the body? - What are the 3 main groups of carbohydrate? - What percentage of our energy should come from carbohydrates? - What problems do you think eating too many free sugars could cause in the body?

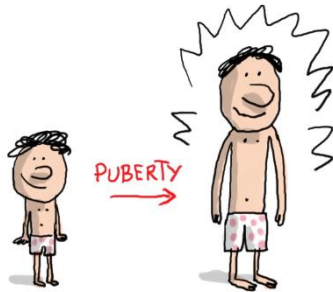


Lesson 1 and 2– Transitioning from Primary School	Lesson 3 and 4 – Friendship
Where to access support https://www.childline.org.uk/ https://www.nhs.uk/live-well/	Where to access support https://www.youngminds.org.uk/young-person/coping-with-life/friends/
Content: GROUND RULES FOR LIFE SKILLS LESSONS • To follow the Coombeshead Way rules • To behave sensibly and maturely. • To actively participate in the activities. • To keep our discussions in the classroom. • To be respectful and polite towards others (peers and teacher) and to show self-respect. Mental Wellbeing- Your mental state - how you are feeling and how well you can cope with day-to-day life. Our mental wellbeing is dynamic. It can change from moment to moment, day to day, month to month or year to year. Primary Emotions- There are 5 primary emotions but over 600 words in the English language for different emotions. The primary emotion groups are: Joy, Anger, Sadness, Disgust, Fear Some self-care techniques include • Mindfulness • Doing something you enjoy • Relaxation techniques • Get outdoors	Content: What makes a good friend? Listening- A good friend allows you to talk and doesn't interrupt you. They're interested in what you have to say. Someone who makes you feel good- Good friends say and do things that make you feel good, giving compliments and congratulations and being happy for you. Supportive - If you're feeling down, a good friend will support you. If you need help, a good friend will try to help you out. Trustworthy- If you tell a good friend something private, they won't share it. You can trust a good friend not to be judgmental. Handle Conflict Respectfully- A good friend will tell you if you've done something to hurt them. If you tell a good friend they've hurt you, they'll be sorry and won't do it again.
Questions 1. Give two ground rule of Life Skills lessons 2. Suggest another rule that you think should be followed in Life Skills lessons 3. What is meant by mental wellbeing? 4. What are the 5 primary emotions? 5. Give an example of a self-care technique	Questions 1. Why is listening to a friend important? 2. What does being supportive mean? 3. Why is being trustworthy important? 4. Give an example of how to resolve conflict between friends 5. What website could you use to get more support with friendship issues?



Lesson 5 and 6 – Online Safety	Lesson 7 and 8 – Diet, exercise and sleep
Where to access support Parents and trusted family, school staff and Pastoral team, directly to the police. Report any inappropriate behaviour to the website. NSPCC - https://www.nspcc.org.uk Childline - Helpline: 0800 1111 (24 hours)	Where to access support https://www.nhs.uk/live-well/
Content: E-Safety- Strategies and systems to help people stay safe online. Cyber Bullying- The use of electronic communication to bully a person, typically by sending messages of an intimidating or threatening nature SMART rules Safe- Keep your personal information safe! Meet - If an adult who you don't know ever asks you to meet up, say no and report it... Accept- Think before you accept something from someone online e.g. a file, a download, a picture etc Reliable- Make sure you know who you are talking to and use reputable sites and services to protect you and your computer. Tell- Tell a parent, carer or trusted adult if someone, or something makes you feel worried or uncomfortable online.	Content: Diet Aim for 5 portions of fruit or vegetables per day Exercise- Aim for an average of at least 60 minutes of moderate intensity physical activity a day across the week. Sleep- Teenagers need approximately 9 hours of sleep per night Tips for good sleep: 1. Routines – set a routine which your body can recognize is a wind down for sleep. 2. Tech free bedrooms – stop using technology such as tablets and phones 2 hours before bed or use a blue light filter. 3. Clutter free bedrooms – Keeping your bedroom clutter free and tidy and help make the room feel calmer and more relaxing. 4. Reduce stimulant food intake – foods and drinks which contain a lot of sugar and caffeine can impact your sleep so try not to consume too much after 3pm. 5. Temperature – suggested temp around 18 Degrees Celsius.
Questions 1. What is E-Safety? 2. What is cyber bullying? 3. Write down the SMART rules 4. Which rule do you think is the most important and why? 5. What is the telephone number for the Childline helpline?	Questions 1. How many portions of fruit and vegetables should you eat a day? 2. How much exercise should you get a day? 3. How much sleep does a teenager need each night for healthy growth? 4. Give a tip for getting good sleep 5. What website could you use to find out more about sleep?



Lesson 9 and 10– Puberty	
Where to access support https://amaze.orghttp://www.becomingateen.co.uk/	
Content: Puberty- The process of physical maturity in a person that takes place in adolescence. Menstruation- Also known as a period. The process in a woman of discharging blood and other material from the lining of the uterus at intervals of about one month from puberty until the menopause, except during pregnancy. Hormones- A chemical substance produced in the body that controls and regulates the activity of certain cells or organs Physical Changes during Puberty- Males: • Facial Hair • Voice Breaking • Erections • Wet Dreams  Physical Changes during Puberty- Females: • Menstruation / Periods begin • Breast growth • Stretch Marks • Cellulite	
Questions 1. What is puberty? 2. What is menstruation and who experiences it? 3. What are hormones? 4. How does puberty differ between boys and girls? 5. Can you think of a change that both boys and girls might experience during puberty?	

Y7C1 Key Maths Knowledge

Your Maths Homework is to complete your sparx

Use this guide to make sure you know **what to do**, **when to do it** and **how to do it**:

Maths homework is to complete sparx



What to do

- Do Sparx **on the days in the homework timetable**
- **Compulsory Homework:** You **must do this** part of your homework every week
- Optional/Target Homework: Do this to **gain loads of XP** and to improve your maths!

Top Tips

- Do your homework as soon as you can
- Watch the help video
- If you are stuck, speak to your maths teacher before hand-in or pop in to Sparx Support club during breaks

Always:

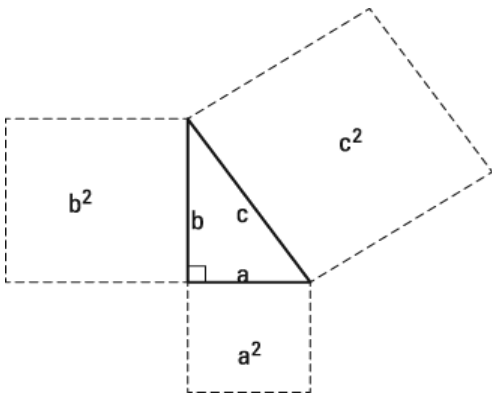
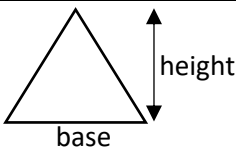
- Write down the date
- Write down your bookwork code
- Read the question carefully
- Show all your workings
- Highlight/underline your final answer
- Tick if correct/cross if wrong



We want you to do well with your maths and doing Sparx will help.

If you've tried something, watched the video and are still not sure how to do something make sure you ask for help!

You're expected to complete it every week and catch up if you haven't.

Topic	Description
To reset a CASIO calculator	Shift + 9  + 
To enter a fraction	
To enter a mixed number	Shift + fraction button  + 
To find a fraction of an amount with a calculator	$\frac{12}{26}$ of 400 means the same as $\frac{12}{26} \times 400$
Equivalent fractions	$\frac{3}{6} = \frac{9}{18} = \frac{1}{2}$ fully simplify → make numbers are as small as possible
Add or Subtract fractions	The denominators must be the same $\frac{2}{3} + \frac{4}{5} = \frac{10}{15} + \frac{12}{15} = \frac{22}{15} = 1 \frac{7}{15}$
Steps to use Pythagoras Theorem	1) Square all of the lengths 2) Add (for hypotenuse) or Subtract 3) Square root your answer
Pythagoras Theorem in words	The area of the smaller squares add to equal the area of the LARGEST square. 
Pythagoras Theorem	as an equation $a^2 + b^2 = c^2$
Area of a rectangle	$\text{Area of rectangle} = \text{base} \times \text{height}$
Area of a triangle	$\text{Area of triangle} = \frac{1}{2} \text{base} \times \text{height}$ 
Term	An algebraic object made of numbers and letters joined by multiplication or division. Eg.
Expression	An algebraic object made from one or more terms added together.

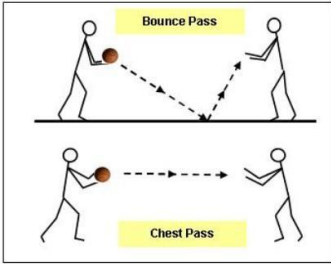
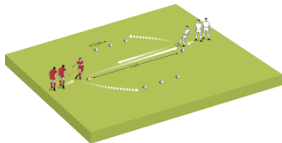


COOMBESHEAD ACADEMY

Y7 Cycle 1 Knowledge Organiser: STEP UP TO MUSIC

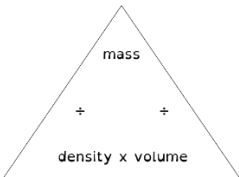
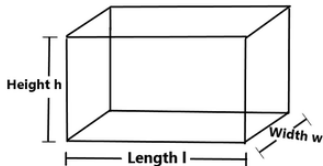
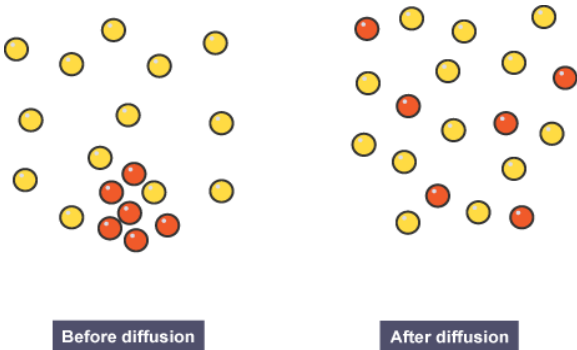
Building Bricks		Exploring the Elements of Music	
Pitch The highness or lowness of a sound.	Tempo The speed of a piece of music. FAST: <i>Allegro, Vivace, Presto</i> SLOW: <i>Andante, Adagio, Lento</i> GETTING FASTER – Accelerando (accel.) GETTING SLOWER – Ritardando (rit.) or Rallentando (rall.)	Dynamics The volume of a sound or piece of music. VERY LOUD: <i>Fortissimo (ff)</i> LOUD: <i>Forte (f)</i> QUITE LOUD: <i>Mezzo Forte (mf)</i> QUITE SOFT: <i>Mezzo Piano (mp)</i> SOFT: <i>Piano (p)</i> VERY SOFT: <i>Pianissimo (pp)</i>	Duration Note Lengths The length of a sound. NOTES Semibreve = 4 beats Minim = 2 beats Crotchet = 1 beat Quaver = 1/2 beat Semiquaver = 1/4 beat
E. Texture How many LAYERS of sound we hear. THIN TEXTURE: (sparse/solo) – small amount of instruments or melodies. THICK TEXTURE: (dense/layered) – lots of instruments or melodies.	F. Sonority Describes the unique sound or tone quality of different instruments voices or sounds. <i>Velvety, Screechy, Throaty, Rattling, Mellow, Chirpy, Brassy, Sharp, Heavy, Buzzing, Crisp, Metallic, Wooden etc.</i>	G. Articulation How individual notes or sounds are played/techniques. LEGATO – playing notes in a long, smooth way shown by a SLUR. STACCATO – playing notes in a short, detached, spiky way shown by a DOT.	
The Keyboard The Piano Keyboard – you need to know with where the notes are. Flat Black note to the LEFT Sharp Black key to the RIGHT TONE – Whole step eg C to D SEMITONE – Half a step eg C-C#		Notation STAFF NOTATION – music written on a STAVE (5 lines and spaces) Treble Clef Notes The Importance of Middle C Line Notes Space Notes	

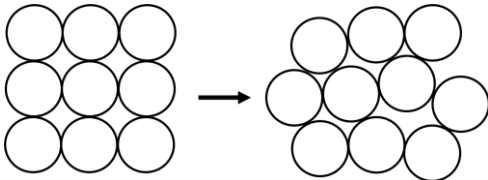
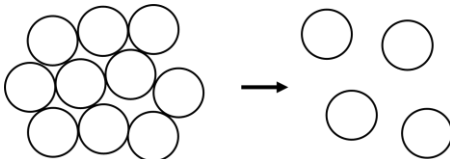
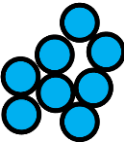
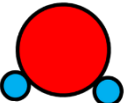
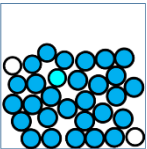
Year 7 Cycle 1 Sport and PE Knowledge Organiser

Week 1 and 2	Week 3 and 4	Week 5 and 6	Week 7 and 8	Week 9 and 10	Week 11 and 12
<u>Warming Up</u>	<u>Benefits of Warming Up</u>	<u>Sporting examples:</u>	<u>Design your own:</u>	<u>Cooling Down</u>	<u>Benefits of Cooling Down</u>
Stage 1: Pulse raiser Gradually raising heart rate to increase blood flow around the body and speed up oxygen delivery to the working muscles by performing exercise that make the performer breathe faster. Stage 2: Stretching Stretching the muscles that will be used during the main activity. Stretches can be static or dynamic and aim to increase the range of movement. Stage 3: Skills practice Familiarising the performers body with the movements they are about to perform e.g. passing drill before football or netball fixture Stage 4: Mental preparation Ensuring the performers attention are entirely focussed on the performance e.g. mental rehearsal, deep breathing, visualisation, imagery and positive self-talk	-Effect on body temperature -Range of movement increased -Gradual increase of effort to full pace -Psychological preparation -Practice of movement skills through the whole range of movement -Injury prevention.  	Netball: Pulse raiser: 2 x laps of the netball court at a medium pace together as a team Stretching: In 1/3 of the netball court dynamic stretches: Lunges Squats Side lunges heel flicks High knees Skill related:  Mental preparation: Positive self-talk to team mates Visualising playing well and making successful passes into the 'D'.	Time to design your own warm up for a sport of your choice: Use the template below: Sport: Pulse raiser:  Stretching:  Skill related drill:  Mental preparation: 	Stage 1: Elevated Breathing Maintain elevated breathing and heart rate allows oxygenated blood to travel through our vessel, helping speed up recovery and removing waste products. Stage 2: Gradual reduction of Heart Rate A gradual reduction in the intensity of exercise, such as talking a jog down to a walk, keeps blood flowing through our vessels. Stage 3: Stretching We must stretch our muscles after exercise. Stretches can be static or dynamic and aim to reduce DOMS (delayed onset of muscle soreness)	- Allows to body to recover quicker from exercise - Helps remove lactic acid, carbon dioxide and waste products - Helps to prevent DOMS  

Lesson 1 Safety Your teacher will have made the safety rules for the laboratory very clear. Below are some important safety rules, which should always be followed, but there may be others which you need to consider in addition to these. - Always wear eye protection during a practical. - Carry out a practical while standing up. - Do not eat or drink in the laboratory. - Tie long hair back and tuck loose clothing in during practicals. - If something is spilled or broken, tell the teacher. - Ensure that the floor and work space is clear of obstacles. <table><tr><td>flammable</td><td>acute toxicity</td><td>corrosive</td><td>explosive</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td>moderate health hazard</td><td>serious health hazard</td><td>harmful to the environment</td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	flammable	acute toxicity	corrosive	explosive					moderate health hazard	serious health hazard	harmful to the environment						Lesson 2 Measuring Skills When taking measurements in science there are various different pieces of equipment you can use and different units as well Below are examples of measurements the equipment you can use and some units. Measurement Length Equipment: Ruler, trundle wheel Units cm, m, Km Measurement Mass Equipment: Top Pan Balance, scales Units g, Kg Measurement Temperature Equipment: Thermometer Units °C Measurement Time Equipment: Stopwatch Units seconds (s) When making measurements always get down to eye level.	Lesson 3 Bunsen Burners Bunsen Burner The Bunsen burner is an important piece of scientific equipment. It is used in many science experiments and uses methane gas. roaring flame chimney collar air hole base tubing The Safety Flame The safety flame is used when the Bunsen burner is not in use. The flame is easier to see when it is the yellow flame. To produce this flame, the air hole is fully shut. Less oxygen will get into the Bunsen burner, hence the yellow flame. The Roaring Flame The roaring flame is used to heat things quickly. To produce this flame, the air hole must be fully open. More oxygen will get into the Bunsen burner, hence the blue flame.
flammable	acute toxicity	corrosive	explosive															
moderate health hazard	serious health hazard	harmful to the environment																

Lesson 4 States of Matter & Particle Model		Lesson 5 Changes of State																
Matter: any substance that has mass and volume. Mass: how much of something there is Volume: how much 3D space something takes up Matter can exist in three physical states: • Solid • Liquid • Gas <table><tr><td></td><td>Solid</td><td>Liquid</td><td>Gas</td></tr><tr><td>Can it be compressed?</td><td>✗</td><td>✗</td><td>✓</td></tr><tr><td>Can it flow?</td><td>✗</td><td>✓</td><td>✓</td></tr><tr><td>Does it have a fixed shape?</td><td>✓</td><td>✗</td><td>✗</td></tr></table>		Solid	Liquid	Gas	Can it be compressed?	✗	✗	✓	Can it flow?	✗	✓	✓	Does it have a fixed shape?	✓	✗	✗	All substances are made up of particles. Particles are attracted to each other. The particles move around. The higher the temperature of the matter the more the particles move around Solid • Particles in a fixed arrangement • Particles vibrate around a fixed point • Particles are close together • Very strong attraction between particles Liquid • Particles in an irregular arrangement • Particles move around each other • Particles are close together • Strong attraction between particles Gas • Particles in a random arrangement • Particles move randomly in different directions and at different speeds • Particles are far apart • Weak attraction between the particles	Changes of state - Substances can change state, usually when they are heated or cooled. The closeness, arrangement and motion of the particles in a substance change when it changes state. Melting – The process that occurs when a solid turns into a liquid when heated. Evaporating – The process by which a liquid changes state and turns into gas. Condensation – A change in state in which gas becomes liquid by cooling. Freezing – A change of state in which liquid becomes solid by cooling. Boiling – Evaporation occurs at all temperatures, boiling happens at a fixed temperature depending on the liquid. The stronger the forces between particles the higher its melting or boiling point. Some chemicals do not exist as a liquid. • Going from a solid to a gas is called sublimation. • Going from a gas to a solid is called deposition.
	Solid	Liquid	Gas															
Can it be compressed?	✗	✗	✓															
Can it flow?	✗	✓	✓															
Does it have a fixed shape?	✓	✗	✗															

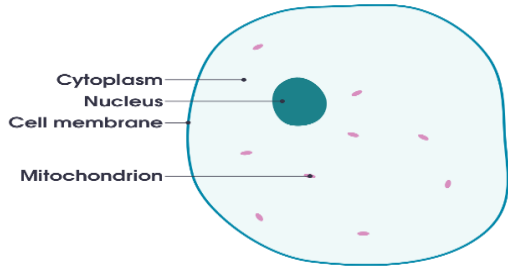
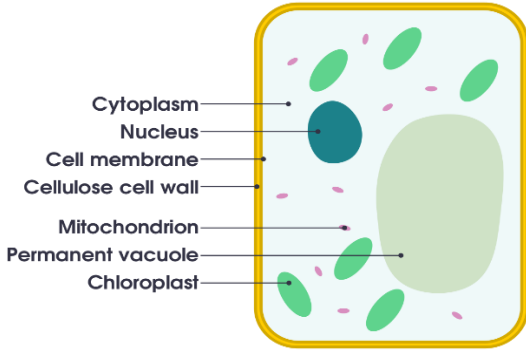
Lesson 6 Density	Lesson 7 Density calculations	Lesson 8 Diffusion
Density is the amount of mass in a given volume. Denser objects sink in less dense fluids. General rule for density: - Solids > Liquids > Gases - We know that this is not always the case. When objects are heated their particles move further apart, this causes their density to decrease. Limitations to the particle model: - Only 2D - Don't show movement of particles - Don't show particle interactions Some substances have a higher density as liquid then as a solid (For Example ice)	Density is a measure of how heavy an object is for its size. Density = mass ÷ volume Mass in kg or g Volume in m³ or cm³ Density in kg/m³ or g/cm³  The density of regular solids can be found by determining the mass and volume of the solid, and then calculating the density. Mass is measured with a balance. For regular solids, you can calculate the volume if you measure the length of the sides using a ruler.  The volume of a cuboid is equal to: length × width × height	Diffusion is the movement of particles from a high concentration to a low concentration  Diffusion can also happen in liquids - particles in liquids can move around each other, which means that eventually they are evenly mixed. Diffusion in liquids is slower than diffusion in gases because the particles in a liquid move more slowly. It happens faster if the temperature is increased. Diffusion does not take place in solids as the particles are fixed in solids and cannot move round each other.

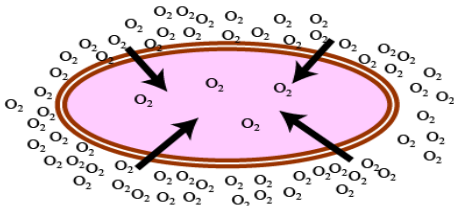
Lesson 9 & 10 Particle Circus	Lesson 11 Elements, Mixtures and Compounds
Making Observations: • Notice things using your senses • Writing down what you have seen change, in as much detail as possible • A valid observation is that there has been no change If an object changes state (by heating) • Particles in a solid will vibrate so much they move further apart and begin to move  • Particles in a liquid will move so fast they get further apart and will begin to move freely 	Atoms are the smallest particle of an element that can exist.  An element is a pure substance made from one type of atom.  Compounds are substances that are made up of two or more atoms chemically bonded together in a fixed ratio.  Molecules are substances that contain two or more (non-metal) atoms, chemically bonded together. • Molecules can be elements, two or more of the same atom. • Molecules can be compounds, two or more different atoms.  Mixtures can be defined as impure, as they are made from two or more different substances that are not chemically joined together. 

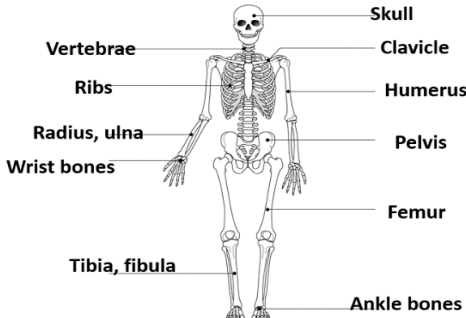
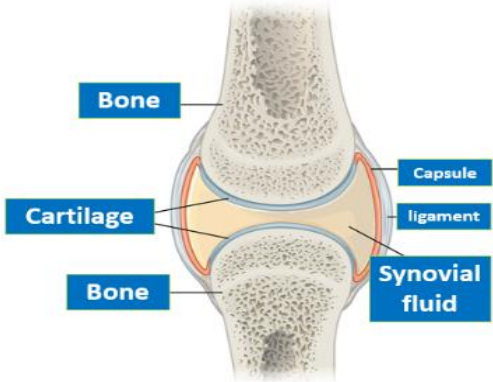
KS3 Science - Physics
Matter

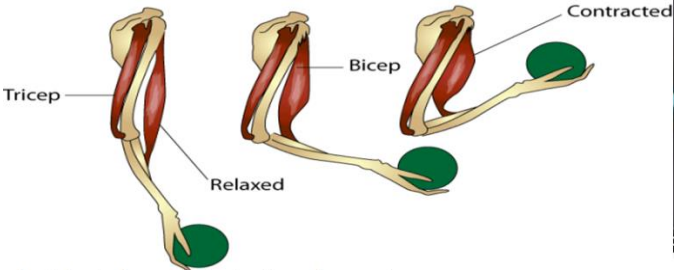
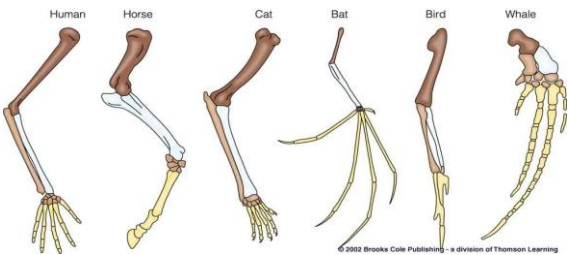
Answer these questions in full sentences in your homework book:

Lesson 1 1. Draw the hazard symbol for flammable. 2. What should you do if something is broken during a practical? 3. True or false? Sitting is allowed during practicals. 4. True or false? You cannot eat in a science lab. 5. True or false? Hair must be tied up during practicals.	Lesson 2 1. Length is measured with what? 2. Seconds is the unit for... 3. A thermometer allows the measurement of... 4. Length is measured in which units? 5. When reading volume what should you do, to record the best possible measurement?	Lesson 3 1. Which Bunsen flame has the highest temperature? 2. How do you change between the two Bunsen flames? 3. Why does the flame change? 4. What colour is the safety flame? 5. Which gas is used as a fuel for a Bunsen burner?	Lesson 4 1. What is the arrangement of particles in a solid? 2. Describe the movement of particles in a gas? 3. Which state of matter can be compressed? 4. Which state of matter can particles move and are touching? 5. Which state of matter would you find the strongest attraction between particles?	Lesson 5 1. What is the name of the process when a liquid changes state to a gas? 2. What is the name of the process when a gas changes state to a liquid? 3. What is the name of the process when a solid changes state to a liquid? 4. True or false? Evaporation can occur in a liquid at any temperature? 5. The stronger the forces between particles the higher/lower its boiling point?
Lesson 6 1. What is density? 2. True or false? Gases have a higher density than liquid. 3. When particles are heated what happens to their density? 4. True or false? Denser liquids float in less dense liquids. 5. Give an example of a substance which does not obey the normal density trends.	Lesson 7 1. Give the equation for density 2. What is the equation for measuring the volume of a cuboid? 3. What are the common units for measuring density? 4. What can be used to measure the mass of an object? 5. What can be used to measure the height of an object?	Lesson 8 1. True or false? Diffusion is the movement of particles from area of high concentration to low concentration? 2. True or false? Diffusion can take place in solid? 3. True or false? Diffusion is slower in liquids than in gases? 4. True or false? Temperature affects the rate of diffusion? 5. True or false? Particles can move around each other in solids?	Lesson 9/10 1. What is an observation? 2. True or false? No change is a valid observation. 3. True or false? You should include as much detail as possible in your observation. 4. Particles vibrate when they are in which state of matter? 5. When an object is heated what happens to the distance between particles?	Lesson 11 1. What is an atom? 2. What is an element? 3. What is a compound? 4. What is a molecule? 5. Draw a particle diagram of an atom, element, compound and molecule

Lesson 1 Microscopes	Lessons 2 and 3 Plant and Animal Cells	
Magnification is when we make something appear larger than it actually is. Resolution is the actual detail an image shows. A higher resolution means more detail in the image. Using a Microscope. • Adjust the lowest objective lens so that it is over the hole in the stage. • Turn the large focusing wheel to make the gap between the stage and the objective lens as small as possible. • Adjust the light source so that the light is reflected up into the hole in the stage. • Place the slide on the stage • Look into the eyepiece lens • Slowly turn the focusing wheel so that the gap between the stage and the objective lens gets bigger. • Keep turning to focus the image. • To magnify the image, switch the objective lens to the next magnification and use the small focusing wheel to focus the image if needed.	“Cells” were first discovered by Robert Hooke when he looked at a piece of cork under a microscope. Cells are made up of different parts called organelles. Animal Cell  Plant Cell 	Nucleus – Contains the DNA and controls the cell Cell Membrane – Controls what goes in and out of the cell Cytoplasm - Jelly like, all chemical reactions occur in here. Mitochondria – Respiration occurs inside to release energy for the cell to use. Cell Wall – Protects the cell and gives it structure Chloroplasts – Carry out photosynthesis to make food for the plant. Vacuole – Filled with cell sap and gives the cell shape. Animal Cells contain a nucleus, cell membrane, cytoplasm and mitochondria. Plant cells contain a nucleus, cell membrane, cytoplasm and mitochondria PLUS a cell wall, chloroplasts and a vacuole.

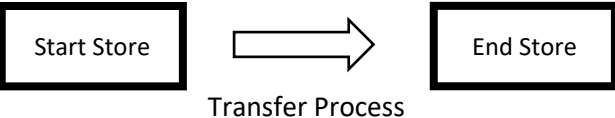
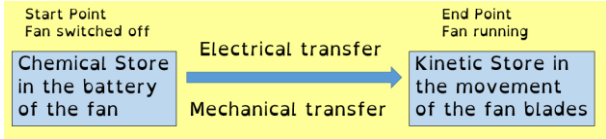
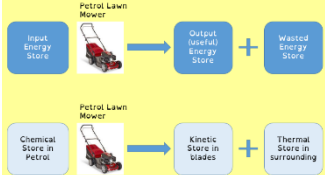
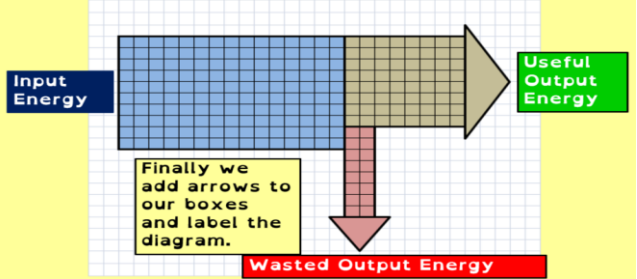
Lesson 4 Specialised Cells	Lesson 5 Movement of Substances	Lesson 6 Unicellular Organisms
Cells are designed to carry out the job they perform. Egg cell (ovum) Job: Reproduction to be fertilised by sperm Features: Nucleus contains half the genetic info to create a baby and contains lots of energy to allow egg to develop if it is fertilised. Sperm cell Job: Reproduction to fertilise the egg cell Features: Contains half the genetic info to create a baby and has a tail to swim to meet the egg Neurone (nerve cell) Job: Help nerve impulses move around the body Features: Long and thin, can send electrical impulses large distances around the body Plant Palisade cell Job: Help the plant photosynthesis and make food Features: Lots of chloroplasts to trap light energy for photosynthesis Plant Root cell Job: Help the plant take in water through the roots Features: large surface area so they can absorb more water from the soil.	Diffusion is the movement of particles from an area of high concentration to an area of low concentration. This happens in liquids and gases but not solids because the particles can only vibrate in a solid, but can't move from place to place Substances that move in and out of cells by diffusion include • Oxygen into cells for respiration • Glucose into cells for respiration • Carbon dioxide out of cells from respiration and into leaf cells for photosynthesis • Water into root hair cells  Particles diffuse faster at higher temperatures because the particles have more kinetic energy so move faster.	Unicellular organisms are made up of only one cell e.g. Amoeba and Euglena Multicellular organisms are made up of more than one cell. All species of animals, land plants and most fungi and algae. Amoeba • Have no fixed shape • Found in fresh water, salt water, wet soil and inside animals • Moves by changing shape • An amoeba reproduces by splitting into two cells • This is called binary fission Euglena • Euglena are found in freshwater • The eyespot detects light and move using their flagellum to 'swim' towards the light. • Euglena have chloroplasts and make their own food by photosynthesis • Euglena also reproduce asexually by binary fission

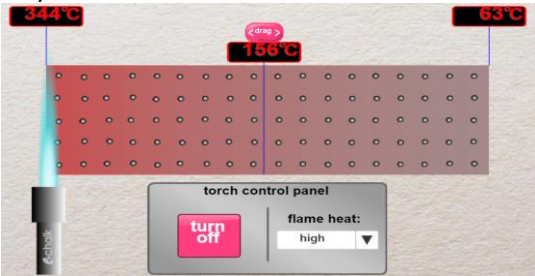
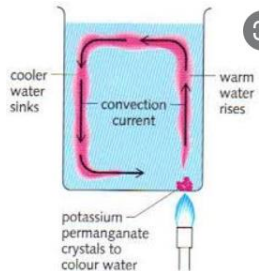
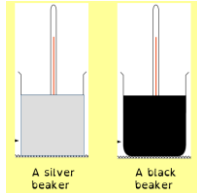
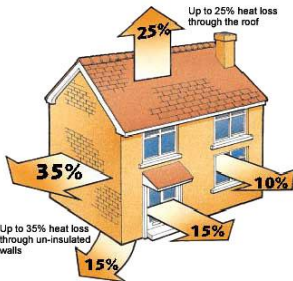
Lesson 7 Levels of Organisation	Lesson 8 The Skeleton	Lesson 9 Movement – Joints
Tissues are a group of cells with similar structures, working together to perform a shared function. eg muscle tissue is made up of lots of muscle cells. Organs are made up of a group of tissues, working together to perform specific functions. eg the Heart is made up of muscle, connective, nervous and fat tissues Organ Systems are made up of a group of organs with related functions, working together to perform body functions. eg the Digestive system which is made up of many organs including the mouth, stomach, small and large intestines. Circulatory System- transports blood around the body Nervous System- allows us to sense and react to our surroundings Reproductive System- used to produce young Respiratory System- for gas exchange in and out of the body	Bones are living tissue supplied by blood. They are growing all of the time. They can repair themselves when damaged. Calcium and other materials make bones strong.  <u>Functions of the skeleton:</u> • Protection – skull protects the brain, rib cage protects the heart and lungs, vertebrae protect the spinal cord. • Support – the skeleton provides a framework for muscles and organs to connect to. • Movement – the skeleton has joints with muscles, ligaments and tendons allowing movement. • Blood production – long bones contain bone marrow which makes blood cells	<u>Joint</u> Where two or more bones join together.  <u>A Synovial joint</u>  • Cartilage – soft tissue at the end of a bone • Synovial fluid – fluid found in the joint which stops bone rubbing against bone • Ligament – joins bone to bone • Tendon – joins muscle to bone

Lesson 9 Movement – Joints (continued)	Lesson 10 Movement – Muscles
<u>Types of joint</u> • Pivot – the ends of the bones are covered in cartilage, allows 360° movement • Hinge – works like a lever and allows 180° movement • Fixed – forms between two bits of bone that don't move • Ball and socket – an example is the hip joint, allows 360° movement	<u>Muscles</u> • Are a type of tissue which contains specialised cells which contract. • Have lots of mitochondria for respiration to produce energy. • Have a good blood supply. <u>Three main types of muscle</u> • Cardiac – found in the heart • Skeletal – attached to bone, the main type of muscle • Smooth – used for involuntary movements like in your gut. <u>Major muscle groups</u> Bicep: Flex the arm (bend towards the body) Triceps: Extends the arm (straightens away from body) Quadriceps: Extends the lower leg Abdominals: Move the torso and helps with breathing <u>Antagonistic pairs</u> Muscles only pull. Two muscles that work at a joint to move are called antagonistic pairs. Example – bicep & triceps  <u>Homologous Structures:</u> • The chicken wing and the human arm are examples of homologous structures. • This means they have a similar underlying structure but have different functions. 

Answer these questions in full sentences in your homework book:

Lesson 1 1. What is the term for the actual detail an image shows? 2. Which objective lens do you begin with when focusing a microscope? 3. The light source should reflect where? 4. Where do you place the slide? 5. Where do you look into?	Lesson 2 1. Who first discovered cells? 2. What are the different parts that make up cells called? 3. Name three organelles you find in plant cells but not animal cells. 4. What do chloroplasts do? 5. What is the function of a plant cell wall?	Lesson 3 1. Where is the site of respiration? 2. Where is photosynthesis carried out? 3. Where is the site of chemical reactions in a cell? 4. What controls what goes in and out of a cell? 5. Where is DNA found in plant and animal cells?	Lesson 4 1. Which cell contains lots of chloroplasts? 2. Which cell is fertilised by a sperm? 3. Which cell has a large surface area to absorb water from the soil? 4. Which type of cell is long and thin to send electrical impulses large distances? 5. Which cell fertilises an egg cell?	Lesson 5 1. Define diffusion 2. Which substances can it occur in? 3. Why doesn't it occur in solids? 4. List 3 substances that can diffuse 5. Why do substances diffuse faster at higher temperatures?
Lesson 6 1. Give a definition of a unicellular organism. 2. Give an example of a unicellular organism. 3. Give a definition of a unicellular organism 4. Give an example of a multi cellular organism 5. State one difference between an amoeba and a euglena.	Lesson 7 1. What are a group of similar cells which perform a similar function called? 2. Give an example of a tissue 3. Give an example of an organ. 4. What is an organ system? 5. Give an example of an organ system.	Lesson 8 1. Why are bones classed as living? 2. What strengthens bones? 3. List 3 organs protected by our skeleton 4. What is needed to allow our skeleton to move? 5. Which cells our produce by bone marrow?	Lesson 9 1. What is a joint? 2. Where is cartilage found in a joint? 3. What does cartilage do? 4. What do ligaments do? 5. What is the role of a tendon?	Lesson 10 1. Give 3 features of muscle cells that allow them to perform their job. 2. How is smooth muscle different to skeletal muscle? 3. How do antagonistic pairs of muscle work? 4. Give an example of a pair of antagonistic muscles

Lessons 1 & 2 Conservation and Energy Stores	Lesson 3 Energy Transfers and Energy Diagrams	Lesson 4 Energy Dissipation and Efficiency
Energy is defined as having the ability to do work. It has a numerical value and is usually measured in Joules (J) Conservation to look after something and keep it the same as it has always been. Conservation of Energy Energy cannot be created or destroyed, it can only be transferred from one store to another Energy isn't something that you can see or pick up – we only notice it when it transferred between different objects and stored in different ways. We use these words to describe energy stores. Chemical- found in chemical reactions. Kinetic- found in moving objects. Gravitational potential- found in objects raised above the ground. Elastic potential- Energy found in stretched objects. Magnetic- attraction and repulsion between magnets. Electrostatic- Attraction and repulsion between charges. Thermal/ internal - Energy stored as heat e.g. fire. Nuclear – Energy from the splitting or fusing of atoms.	Energy can be transferred from one store to another but it cannot be created or destroyed. There are 4 energy transfer processes: Mechanical - when a force acts and something moves. Electrical - when a current flows. heating - because of a temperature difference. radiation - a wave such as light, IR or sound. We can show the idea of energy transferring using flow diagrams (energy transfer diagrams)  e.g a battery-operated fan 	Dissipation of Energy- When energy spreads out it gets less useful. Input Store - the total amount of energy going into a device or machine. Output Store - the amount of energy that is transferred into a useful store by the device or machine. Wasted Store- the amount of energy that is transferred into a wasted store (non-useful store) by the device or machine.  Efficiency - is a measure of how much of the Input energy from a device ends up in a Useful (Output) energy store. The more efficient a machine the less energy is dissipated. Sankey Diagrams 

Lessons 5 & 6 Temperature, Heat and Conduction	Lessons 7 & 8 Convection and IR Radiation	Lessons 9 & 10 Reducing Heat Loss
Temperature is a measure of how hot or cold something is. The most commonly used unit for temperature is degrees Celsius °C. Temperature can also be measured in degrees Fahrenheit °F or Kelvin K. The coldest temperature possible is called Absolute Zero. This is 0K or -273.16 °C. Using a Thermometer – Always read from the middle of the meniscus at the top or bottom. Heat (Thermal Energy) - The heat an object contains is the amount of energy in its thermal energy store, measured in joules (J). Heat Energy depends on two things. 1) The mass of the material – the bigger the mass the more heat energy stored 2) The temperature of the material – the higher the temperature the more heat energy stored. Conduction - The transfer of heat energy from particle to particle by vibrations. 	Convection - the transfer of energy by particles vibrating and carrying their energy with them and is driven by different densities in the gas or liquid. Convection cannot happen in solids because the particles cannot move past each other, they can only vibrate.  Infra-Red Radiation (IR) • All warm objects give off Infrared Radiation. • Infrared Radiation travels in straight lines as waves (like light). • Infrared will travel out from warm objects in ALL directions. • Infrared Radiation does NOT need particles to travel through and so can pass through space (vacuum) • Infrared Radiation travels at the speed of light. 	Dissipation of Energy- When energy spreads out it gets less useful. In our homes we want the thermal energy to be conserved within the walls of our home and not spread out. A house that dissipates energy easily is a house that will cost more money to keep warm Heat energy can escape from houses by the processes of Conduction, Convection and IR Radiation Insulation reduces the energy dissipating.  1) Loft Insulation 2) Cavity Wall Insulation 3) Double Glazed Windows 4) Draught Proofing 5) Curtains and Carpets 6) Reflective surfaces behind radiators

Answer these questions in full sentences in your homework book:

Lesson 1 1. Define energy 2. What unit is energy measured in? 3. What is the conservation of energy rule? 4. Can we see or pick up energy? 5. What is kinetic energy?	Lesson 2 1. What is gravitational potential energy? 2. What store of energy is heat? 3. How is nuclear energy transferred? 4. Where is elastic potential energy found? 5. What is the difference between magnetic and electrostatic energy?	Lesson 3 1. List the 4 types of energy transfer 2. How is energy transferred in a battery-operated fan show as a flow diagram	Lesson 4 1. What is meant by dissipation of energy? 2. What is an “input store”? 3. What is the “output store”? 4. What is the non-useful store better known as? 5. What is efficiency a measure of?	Lesson 5 1. What is temperature? 2. What units do we commonly use to measure temperature? 3. Give 2 other units used to measure temperature. 4. What is absolute zero? 5. How should we read from a thermometer?
Lesson 6 1. Define thermal energy. 2. What unit is thermal energy measure in? 3. How does mass of an object affect the heat energy stored? 4. What other factor affects heat energy? 5. Define conduction	Lesson 7 1. What is convection? 2. Why can't convection happen in solids? 3. Draw and label a diagram to show convection happening.	Lesson 8 1. What objects give off Infrared radiation? 2. How is IR similar to light? 3. Which direction does IR travel from an object? 4. Can IR pass through space? 5. How fast does IR travel?	Lesson 9 1. What is energy dissipation? 2. Why do we want thermal energy to be conserved in our homes? 3. List the 3 ways energy can escape from our houses	Lesson 10 1. What does insulation do? 2. List the 6 ways we can insulate our homes. 3. Which of these methods do you have in your home?