Knowledge Organiser

Year 7

Cycle 2

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.

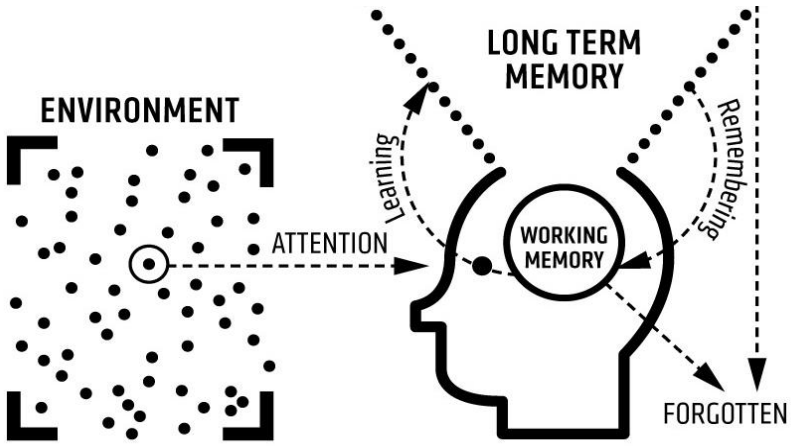
Each cycle there is an assessment in every subject and you will be assessed on the knowledge from your Knowledge Organiser; the more you revisit information the more likely it will be remembered for lessons, assessments and exams.

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

HISTORY 18th December DO ALL TASKS	
Medieval life consolidation	**Medieval life consolidation**
Focus - using History keywords! **Task: Look back through your work on Medieval life. Create a glossary of 10 keywords, defined for the topic in your homework book.**	**Focus - chronology** **Task: Look back through your work on Medieval life. Create a timeline of the key events that took place in your homework book.** **Criteria:** - **Create a timeline with a labelled start and end date** - **Describe 10 events, including the date and specific information about what happened** **Challenge: Add drawings to make your timeline memorable!**

15th Jan
Do all tasks

Topic: Inference Task: Write down what you can see in the inner box and what you can infer in the outer box. This medieval fresco (painting on a wall) is from Italy and was painted after an outbreak of the Bubonic plague.
What can you infer? = "What can you tell?"

What can you infer?

What can you see?

29TH Jan
Do all tasks

Create a simple timeline of **five major medieval events** (you can choose, but you need to look them up)
For each event, add:

- One sentence explaining why it mattered.
- Whether it happened earlier or later than they expected.

12th Feb
Do all tasks

Read the statements about the Middle Ages. For each, label it **Fact, Opinion, or Uncertain,** and explain how you know.

Statement	**Fact, Opinion or Uncertain**	**How do you know?**
Medieval villages often had wooden houses with thatched roofs.		
Life in the Middle Ages was harder than life today.		
Religion played a central role in medieval daily life.		
Medieval kings always controlled their entire kingdom.		
People in the Middle Ages believed in heaven and hell.		

5th March
Do all tasks

Task: Rewrite the following sentences to make them more historical. Your improved sentence must include: A specific example and some explanation. You could use ‘because, but or so’ to expands the sentences.

Sentence	**Improved Sentence**
Life in the Middle Ages was bad.	EXAMPLE: Life in the Middle Ages could be difficult for peasants because they had to work long hours on the land, as shown by records from medieval manors.
Medieval towns were dirty.	
The plague was bad.	
Women worked hard.	
The Crusades were about religion.	

26th March
Do all tasks

Topic - Reformation

Context - In 1500 virtually every person in England was a **Catholic**. The Catholic Church is part of the Christian Church. The Catholic Church was very powerful and run by the P**ope,** based in Rome. The church had influence all round Europe. In 1517, a German monk **Martin Luther** nailed up 95 criticisms to his local Cathedral door. His criticisms included corruption in the church, and the wealth of the church. He protested against the Catholic Church, and this movement became known as the Protestants. Many people across Europe agreed with Martin Luther's ideas and the ideas quickly spread with the aid of the **recently invented printing press.** The movement became known as the **REFORMATION** as people wanted to **REFORM** (change for the better) the church not completely overthrow it. The ideas spread to England during the reign of Henry VIII.

Keywords -

Catholic Church – Christian church that believes that Jesus is the son of God. Led by the Pope in Rome. Had dominated Christianity in western Europe through the Middle Ages/medieval period.

Protestants – Christians (see Jesus as the son of God) who protested about the Catholic Church, believing that it had lost it's way. They wanted to return to the word of God, as expressed through the Bible.

The Reformation – A religious reform movement that swept through Europe in the 1500s, which resulted in the creation of a branch of Christianity called Protestantism.

Homework questions

1. In 1500 what was the main religion in England?
2. Name the person that criticised the Roman Catholic Church.
3. What were his criticisms about?
4. Who were the Protestants?
5. Cover, write, check your definitions!

Topic - Reformation

Context -

Henry VIII was born a Roman Catholic, however eventually led the break from Rome. This changed the religion in England from Catholic to Protestant. He called this new religion the 'Church of England'. Henry made himself the Supreme Head, replacing the previous powers of the Pope over religion in England.

Henry gained lots of money from becoming the new owner of church land, he gained power (from the Pope), and he also managed to solve his personal problems. Henry needed a male heir, which his first wife Catherine of Aragon was not able to provide. Without the Pope, Henry could grant himself a divorce, could choose to remarry and hoped he would manage to achieve a male heir. Henry's Reformation of religion in England caused massive changes!

Homework Questions

1. What caused the Reformation to begin?
2. How did Henry change religion in England?
3. Why did Henry VIII change the religion in England?
4. Why do you think the Reformation caused significant change for ordinary people's lives?

Year 7 Cycle 2 Geography Knowledge Organiser – Restless Earth

Thursday 18th December 2025

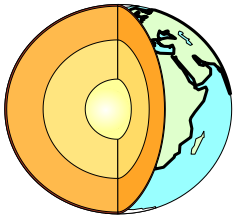
Lesson 1 – Structure of the Earth

Key Terms:
Core: The inner-most part of planet earth, divided into inner and outer core.

Mantle: The layer within the Earth, found immediately below the crust.

Crust: The solid, outer layer of planet Earth.

Content:
Structure of the Earth: The Earth has 4 main layers:



Crust: Rocky surface between 8-70km thick and the thinnest layer.

Mantle: Thickest layer (2900km). Solid rock that can flow. 1000-3700ºc

Outer Core: Liquid iron and nickel and reaches around 4000ºc. Creates a magnetic field which makes compasses work. 2200km thick.

Inner Core: Solid and made of iron and nickel. Reaches 5700ºc and 1200km thick.

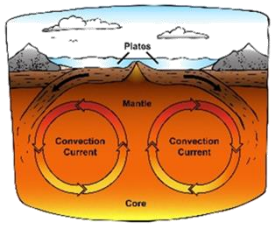
Questions:
1. What is the crust like?
2. What is the mantle like?
3. What is the outer core like?
4. What is the inner core like?

Lesson 2 – How do plates move?

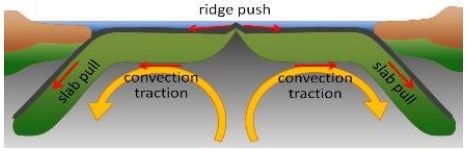
Key Terms:
Convection currents: Heat rises through the mantle dragging the crust/ plates.

Slab pull: The weight of the crust being pulled into the mantle by gravity.

Content:
Convection currents: The heating of the Mantle by the Core, which causes it to rise and drag the plates along, before cooling and sinking.



Slab pull: Where the plate sinks into the mantle, the crust behind it is pulled along with it. The sinking causes the plates to move apart at the middle.



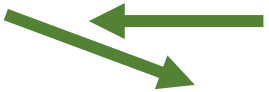
5. What are convection currents?
6. Draw a diagram of a convection current
7. What is slab pull?
8. Draw a diagram of slab pull

Lesson 3 – Plate boundaries

Key Terms:
Oceanic Plate: Formed under oceans, denser thinner, newer. Subducts under continental.
Continental Plate: Formed on land, older, thicker, can't subduct.
Subduct: Where the edge of one plate (ocean goes below the edge of another.

Content:
There are 7 main plates.

Destructive boundary: Oceanic plate and continental plate move toward each other such as Nazca Plate and South American plate.

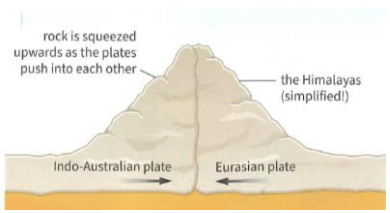
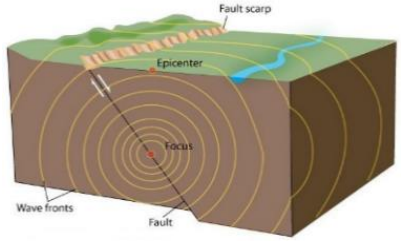


Constructive boundary: Plates move away from each other such as at the Mid Atlantic Ridge.

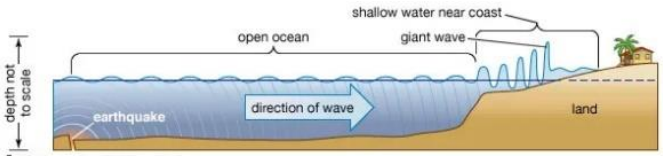
Conservative boundary: Plates move past each other such as the San Andreas Fault in California.

9. What are the different plates?
10. What happens at a destructive boundary?
11. What happens at a constructive boundary?
12. What happens at a conservative boundary?

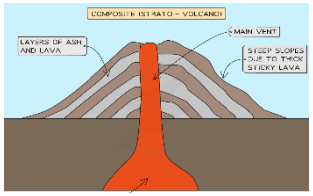
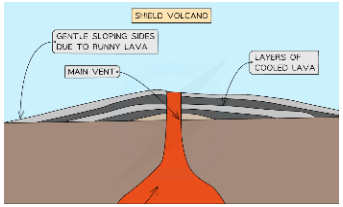
Year 7 Cycle 2 Geography Knowledge Organiser – Restless Earth

Thursday 15th January 2026		
Lesson 4 – Mountain building	**Lesson 5 – Earthquakes**	**Lesson 6 – Sichuan Earthquake: Effects**
Key Terms: **Convergent boundary:** Continental plates move together.	**Key Terms:** **Earthquake:** An intense shaking of Earth's surface caused by movements within and in between plates. **Focus:** Point within the earth where an earthquake starts. **Epicentre:** The place on the surface directly above the focus. **Seismic waves:** These waves radiate outwards and cause damage.	**Key Terms:** **Sichuan:** Province in west China. **Primary Effects:** The initial and direct result of an action/event. **Secondary Effects:** The indirect/knock-on effects caused by an action/event.
Content: **What happens at a convergent boundary?** • The Indo Australian and Eurasian Plate are both continental. • Neither can subduct. • The rock is squeezed upwards forming mountains. • They are called Fold Mountains. Himalayas are the largest fold mountain range. • The earthquakes are violent/ high on the Richter scale. • No volcanoes  	**Content:** Earthquakes occur when the plates get stuck but keep trying to move, building up energy! When they get stuck, pressure builds up, and the plates will suddenly move causing an earthquake. Seismic waves radiate outwards.  The Richter scale is a way of measuring the strength of an earthquake/the seismic waves	**Content:** **Sichuan earthquake:** Occurred on Monday 12th May 2008. 7.9 on the Richter scale. The Indo-Australian Plate pushing into the and Eurasian Plate. Convergent plate boundary. **Primary Effects:** • Over 87,000 dead & over 370,000 injured. • 70,000 schools were destroyed. **Secondary Effects:** • 200,000 landslides • Roads blocked, making rescue & aid delivery difficult. • 5 million homeless. • Shortage of clean water & sanitation, causing disease
Questions: 1. What is a convergent boundary? 2. What happens when the two plates meet? 3. What are the mountains that are created called? 4. Draw a diagram of a convergent boundary	5. What is an earthquake? 6. What happens when the plates get stuck? 7. Draw a cross section of an earthquake 8. How are earthquakes measured?	9. What are primary effects? 10. State 2 primary effects 11. What are secondary effects? 12. State 4 secondary effects

Year 7 Cycle 2 Geography Knowledge Organiser – Restless Earth

Thursday 29th January 2026		
Lesson 7 – Sichuan Earthquake: Responses	**Lesson 8 – Tsunamis**	**Lesson 9 – Boxing Day Tsunami**
Key Terms: **Responses:** The way people react (their actions) to an event such as an earthquake or volcano.	**Key Terms:** **Tsunami:** A large fast-moving wave caused by a sudden movement of the water column in the ocean. A Japanese word that translate are 'harbour wave'.	**Key Terms:** **Subducted:** When an oceanic plate runs into a continental plate and slides beneath it.
Content: 50,000 troops were mobilised but found it difficult to reach rural areas as roads had been damaged or blocked. The NY Times reported that the first 72 hours are critical and were wasted. 3 days later an additional 90 helicopters were mobilised to distribute tents, food and water. There was an inquiry into the poorly built school building. But as of today, no-one has been held responsible, and no families have received compensation	**Content:** **Cause of a tsunami:** 1.Earthquake happens below the ocean's surface. 2.Series of waves travel through deep water. 3.The wavelength is so long that they can be unnoticeable in deep water. 4.When the waves get to shallow water, they start to shoal (crest/ build up) 5.Waves hit the coastline at high speeds and inundate the coastline.  	**Content:** Indo-Australian plate subducted under the Eurasian plate – 9 magnitude and 60m wave. **Effects:** • 230,000 died and 65,000 injured. • Hundreds of fishing communities lost their boats. • Two million were made homeless. • Crops and drinking water were contaminated with salt. **Responses:** • $6.25 billion was donated in aid by 14 countries. • People were buried in mass graves to stop the spread of disease. • A new Indian Ocean Tsunami Warning System was set up in June 2006.
Questions: 1. What is a response? 2. Why did troops find it difficult? 3. What happened 3 days later? 4. What was the inquiry into?	5. What is a tsunami? 6. What causes a tsunami? 7. What happens when a tsunami reaches shallow water? 8. Draw a diagram of a tsunami	9. What does subducted mean? 10. What caused the Boxing Day Tsunami? 11. State 3 effects of the Boxing Day Tsunami 12. State 2 responses to the Boxing Day Tsunami.

Year 7 Cycle 2 Geography Knowledge Organiser – Restless Earth

Thursday 12th February 2026		
Lesson 10 – Volcanoes	**Lesson 11 – Eyjafjallajökull (E15)**	**Lesson 12 – Living in a danger zone**
Key Terms: **Volcano:** Opening in the Earth's surface usually found in a mountain. **Composite Volcano:** A steep sided volcano. A typical cone shape. **Shield Volcano:** A wide volcano with long, gently sloping sides.	**Key Terms:** **Eyjafjallajökull (E15):** A volcano located in the south of Iceland. It is 1666m tall. It is covered by a glacier. Known as E15. Lies between the North American and Eurasian plate. **Jökulhlaups:** Glacial flood outburst caused when the volcano melts the ice/glacier that covers it.	**Key Terms:** **Fertile:** The ability of soil to keep plants growing. **Geothermal Energy:** Hot water and steam from deep underground can be used to drive turbines and create electricity.
Content: **Composite Volcanoes:** Occur on destructive plate margins and are more violent and dangerous.  **Shield Volcanoes:** Occur on constructive plate margins and wider and lower and less dangerous.  	**Content:** Iceland lies on the **Mid Atlantic Ridge**, a **constructive plate** margin. On 14th April 2010, E15 started to erupt more violently. It melted the glacier which poured onto the lava and caused steam and ash to rise 11 km into the air. It entered the jet stream. **Impacts:** • No death or injury. • 150m ice cap melted. • Homes and roads were damaged. • 20 farms and the surrounding farmland was damaged by the Jökulhlaups. • 10 million air passengers (100,000 flights cancelled) had their travel disrupted. • Airlines lost $2 billion.	**Content:** **Reasons why people live near volcanoes:** **Farming:** Ash is weathered overtime into the soil, it makes it fertile which can produce more and better-quality crops. **Tourism:** Volcano tourism is big business for communities. **Mining:** Lava contain minerals that can be extracted. These include gold, diamonds, silver, copper, and zinc. **Geothermal Energy:** Predictable and reliable source of energy. Iceland creates their electricity this way.
Questions: 1. What is a volcano? 2. What are composite volcanoes? 3. What are shield volcanoes? 4. Draw a diagram of a composite and shield volcano	5. What is Eyjafjallajökull? 6. What is a Jökulhlaups? 7. What happened on the 14th of April? 8. State 5 impacts of the eruption	9. Why is farming a reason? 10. Why is mining a reason? 11. What is geothermal energy? 12. Why is geothermal energy a reason?

Year 7 Cycle 2 Geography Knowledge Organiser – Restless Earth

Thursday 5th March 2026		
Lesson 13 – Ice ages and glaciation	**Lesson 14 – Glacial processes**	**Lesson 15 – Glacial landforms**
Key Terms: **Ice Age:** A period in Earth's history, when the temperature drops, and ice covers large areas of land. **Alpine Glacier:** Huge, thick masses of ice on sides of mountains. **Icesheet:** They form broad domes and spread out from their centres in all directions.	**Key Terms:** **Bulldozing:** Pushing of deposited sediment at the snout (front) of the glacier as it advances. **Glacial deposition:** Rocks dropped by a glacier when it melts (ablation).	**Key Terms:** **Landform:** A natural feature e.g., a cliff formed by natural processes.
Content: The last ice age started about 110,000 years ago and lasted for 100,000 years. Ice covered around 1/3 of the earth. Ice covered much of northern Europe, including northern Britain. Vatnajökull is the largest glacier/ icesheet in Iceland. 8000 km2 in area. Average thickness 400m. Thickest part 980m. Alpine glaciers form when lots of snow falls in one location for many years. They move downward through valleys.	**Content:** **Freeze thaw:** This occurs when water continually seeps into cracks, freezes, and expands (by about 9%), this process continues eventually breaking the rock apart. **Plucking:** The glacier freezes around rocks. As the glacier moves downhill it "plucks" the rocks from the slope and transports them downhill. **Abrasion:** A process of erosion involving the wearing away of the valley floor and sides. As a glacier moves, the ice (and rock within the glacier) scrapes against the rock, slowly removing the top layer. It can smooth it down and cause scars.	**Content:** Glaciers from when snowflakes collect in hollows (dips) and compress into ice. **U-Shaped valley:** A valley with a wide flat floor and steep sides. **Corrie (cirque):** A large hollowed-out depression found on the upper slopes of glaciated valleys. They have steep back walls and a raised lip at the front. **Arete:** A knife-edged ridge often found at the back of a corrie or separating two glaciated valleys.
Questions: 1. What is an ice age? 2. What is Vatnajökull? 3. What are Alpine glaciers? 4. How do Alpine glaciers form?	5. What is bulldozing and glacial deposition? 6. What is freeze thaw? 7. What is plucking? 8. What is abrasion?	9. What does the term 'landform' mean? 10. What is a u-shaped valley? 11. What is a corrie? 12. What are aretes?

Year 7 French

Cycle 2

<u>Instructions</u>

- **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 !

Test 1 – Où habites- tu ? LC2

FRANCAIS	ANGLAIS
1. J'habite dans une maison	I live in a house
2. Nous habitons dans un appartement	We live in an appartment
3. Il/elle habite dans le sud de la France	He/she lives in the south of France
4. Près de la plage	Near to the beach
5. Loin de la campagne	Far from the countryside
6. Ils habitent dans le nord de l'Angleterre	They live in the North of England
7. J'habite dans un appartement loin de la montagne	I live in an appartment far from the mountains
8. Elle habite dans une maison près de la grande ville	She lives in a house near the city
9. Nous habitons dans l'ouest de l'Allemagne	We live in the West of Germany
10. Tu habites dans une maison dans l'est des États-Unis	You live in a house in the East of USA
11. J'habite dans une maison dans le sud de l'Espagne près de la lande	I live in a house in the south of Spain near the moor
12. On habite dans un appartement dans l'est du pays de Galles loin de la rivière	We live in an appartment in the East of Wales far from the river

Gapfill (Complete in your homework book)

1. **J'_____ dans un appartement** = I live in an apartment
2. **J'habite ____ de la campagne** = I live near to the countryside
3. **Ils habitent dans le _____ de l'Angleterre** = They live in the East of England
4. **Elle _____ dans une maison** = She lives in a house
5. **J'habite en _____** = I live in Spain
6. **Nous habitons _____ un appartement** = We live in an apartment
7. **Loin de la _____** = Far from the beach
8. **Il habite dans le nord de l'_____** = They live in the North of Germany

Test 2 – Ta ville est comment ? LC2

FRANCAIS	ANGLAIS
1. Je pense que ma région est animée	I think that my region is lively
2. Je dirais que mon pays est tranquille	I'd say that my country is peaceful
3. À mon avis ma ville est moche	In my opinion my town is ugly
4. Ma région est beaucoup plus jolie que Cornouailles	My region is much prettier than Cornwall
5. Ma ville est un peu moins bruyante que Paris	My town is a bit less noisy than Paris
6. Mon pays est plus historique que la Suisse	My country is more historic than Switzerland
7. Ma région est beaucoup plus industrielle que Londres	My region is much more industrial than London
8. Ma ville est un peu plus intéressante que la campagne	My town is a bit more interesting than the countryside
9. Mon pays est beaucoup plus petit que la France	My country is much smaller than France
10. Ma région est un peu moins barbante que la grande ville	My region is a bit less boring than the city
11. Je dirais que mon pays est un peu plus joli que la Belgique	I'd say that my country is a bit prettier than Belgium
12. Je pense que ma ville est beaucoup moins animée que Londres	I think that my town is much less lively than London

Gapfill (Complete in your homework book)

1. **Ma ville est _____** = My town is lively
2. **Ma _____ est un peu industrielle** = My region is a bit industrial
3. **Plus tranquille ____ Londres** = More calm than London
4. **Je _____ que c'est moche** = I'd say that it is ugly
5. **Mon _____ est plus jolie que la France** = My country is prettier than France
6. **__ ville est un peu bruyante** = My town is a bit noisy
7. **Moins _____ que Cornouailles** = Less pretty than Cornwall
8. **A mon _____ c'est intéressant** = In my opinion it is interesting

Test 3 – Qu'est-ce qu'il y a dans ta ville? LC2

FRANCAIS	ANGLAIS
1. **J'aime ma ville car il y a un parc**	I like my town because there is a park
2. **Il y a un centre sportif où je peux jouer**	There is a sports centre where I can play
3. **Nous aimons la ville car Il y a une plage et une bibliothèque**	We like the town because there is a beach and a library
4. **Elles aiment la ville mais il n'y a pas de cinéma**	They like the town but there is no cinema
5. **Il n'y a pas de centre commercial**	There is no shopping centre
6. **Il aime la ville car il y a une patinoire**	He likes the town because there is a skating rink
7. **Elle aime la ville car il y a un musée**	She likes the town because there is a museum
8. **Il y a une place où on peut traîner**	There is a town square where we can hang out
9. **J'aime la ville car il y a une piscine et un théâtre**	I like the town because there is a pool and a theatre
10. **On aime la ville car il y a une mairie**	We like the town because there is a town hall
11. **J'aime la ville car il y a une patinoire où on peut passer un bon moment**	I like the town because there is a skating rink where we can have a good time
12. **J'aime la ville car il y a un parc où je peux jouer**	I like the town because there is a park where I can play.

Gapfill (Complete in your homework book)

1. **Nous _____ ma ville** = We like my town
2. **Il n'y a pas de _____** = There is no museum
3. **J'aime la ville _____ il y a un cinéma** = I like my town because there is a cinema
4. **On _____ passer un bon moment** = we can have a good time
5. **je peux _____** = I can play
6. **il y _ une patinoire** = There is an ice skating rink
7. **___ aime la ville** = She likes the town
8. **Il y a un parc ____ on peut jouer** = There is a park where we can play

Test 4 –Que fais-tu? LC2

FRANCAIS	ANGLAIS
1. Quand il fait beau je chante	When it is nice weather I sing
2. S'il fait mauvais j'écoute de la musique	If it is bad weather I listen to music
3. Quand il pleut je joue au jeux en ligne	When it rains I play games online
4. Quand il y a du soleil je joue au foot	When it is sunny I play football
5. S'il neige je joue de la guitare	If it snows I play the guitar
6. S'il fait chaud j'étudie pour le collège	If it is hot I study for school
7. Quand il fait froid on regarde la télé	When it is cold **we** watch TV
8. Quand il pleut on danse et on chante	When it rains we dance and we sing
9. S'il fait beau je surfe sur internet avec mes copains	If it is nice weather I surf the internet with my friends
10. Quand il fait froid je joue au foot avec ma famille	When it is cold I play football with my family
11. Quand il neige je regarde la télé avec ma copine	When it snows I watch TV with my friend (female)
12. S'il pleut j'écoute de la musique avec mon ami	If it rains I listen to music with my friend (male)

Gapfill (Complete in your homework book)

1. **Quand il fait _____** = When it is bad weather
2. **Quand il pleut je _____** = When it rains I sing
3. **s'il _____ beau j'étudie** = If it is nice weather I study
4. **_____ il pleut je regarde la télé** = When it rains I watch TV
5. **je joue au foot _____ ma famille** = I play football with my family
6. **S'il pleut _____ de la musique** = If it rains I listen to music
7. **S'il fait mauvais je _____ sur internet** = If it is bad weather I surf the net
8. **Quand il y a du _____** = When it is sunny

Test 5 –Tu aimes la région? LC2

FRANCAIS	ANGLAIS
1. **J'adore ma région parce que c'est intéressante**	I like my region because it is interesting
2. **J'aime bien ma ville car il y a beaucoup à faire**	I really like my town because there is lots to do
3. **Je déteste où j'habite parce que il n'y a rien à faire**	I hate where I live because there is nothing to do
4. **J'aime mon pays parce que c'est beau et c'est animé**	I like my country because it is beautiful and it is lively
5. **Il y a une plage mais c'est un peu moche**	There is a beach but it is a bit ugly
6. **C'est tranquille mais il y a un cinéma**	It is quiet but there is a cinema
7. **Je n'aime pas ma région car c'est industrielle**	I don't like my region because it is industrial
8. **J'adore où j'habite parce qu'il y a une piscine et c'est animé**	I love where I live because there is a swimming pool and it is lively
9. **Je déteste mon pays parce que c'est industriel et trop tranquille**	I hate my country because it is industrial and too quiet
10. **J'aime bien ma ville parce que il y a une plage mais il n y a pas de cinéma**	I really like my town because there is a beach but there is no pool
11. **Je n'aime pas du tout ma région car c'est moche aussi c'est industrielle**	I really don't like my region because it is ugly, also it is industrial.
12. **J'adore où j'habite parce que c'est historique et il y a un cinéma**	I love where I live because it is historic and there is a cinema

Gapfill (Complete in your homework book)

1. **je _____ ma région** = I hate my region
2. **J'aime ___ pays** = I like my country
3. **Il y a _____à faire** = There is lots to do
4. **il y a une _____** = There is a beach
5. **il n'y a ____ de cinéma** = There is no cinema
6. **J'adore où _____ car c'est animé** = I love where I live because it is lively
7. **J'aime ma ville car c'est _____** = I like my town because it is historic
8. **Je n'aime pas __ ____ ma ville** = I really don't like my town

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. Choose a region or town in France or a Francophone country. Research the area and create a poster.

2. Draw a map of your home area / town and label all the places in French

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 improving your local area. Plan and budget your improvements and create a map / poster to show your dream region

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 2

<u>Instructions</u>

- **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!

Test 1 – ¿Quién es tu profesor favorito? LC2

Español	Inglés
1. **Mi profesor de matemáticas**	My maths teacher (m)
2. **Mi profesora de matemáticas**	My maths teacher (f)
3. **Español**	Spanish
4. **dibujo**	art
5. **deporte**	PE
6. **informática**	IT
7. **Mi profesora de religión es graciosa**	My RE teacher (f) is funny
8. **Mi profesor de tecnología es divertido**	My technology teacher (m) is fun
9. **Aburrido/a**	boring
10. **Antipático/a**	unkind
11. **Mi profesor de historia es listo y me ayuda**	My history teacher is smart and he helps me
12. **Mi profesor de teatro es simpático y nos apoya**	My drama teacher is kind and she supports us

Gapfill (Complete in your homework book)

1. __ _____ **de español**= My Spanish teacher (f)
2. __ _____ **de dibujo** = My art teacher (m)
3. **Mi profesora es** _____ = My teacher(f) is funny
4. **Mi profesor es** _____ = My teacher (m) is boring
5. **Mi profesora de deporte** __ _____ = My PE teacher helps me
6. __ _____ __ _____ = My teacher (m) is unkind
7. __ _____ ___ _____ = My teacher (f) supports us
8. __ _____ ____ _____ = My teacher (m) is fun

Test 2 – ¿Qué opinas de tus clases? LC2

Español	Inglés
1. **Me gusta**	I like (singular)
2. **Me gusta el inglés porque es creativo**	I like English because it is creative
3. **Me gusta la geografía porque es divertida**	I like Geography because it is fun
4. **Me encanta**	I love (singular)
5. **Me encanta el español porque es divertido**	I love Spanish because it is fun
6. **Me encanta la informática porque es tan práctica**	I love IT because it is so practical
7. **bastante complicado**	Quite complicated
8. **demasiado lento**	Too slow
9. **un poco difícil/es**	A little bit difficult (singular/plural)
10. **me gustan**	I like (plural)
11. **Me gustan las matemáticas porque son muy fáciles**	I like maths because it is very easy
12. **Me encantan las ciencias porque son fascinantes**	I love science because it is fascinating

Gapfill (Complete in your homework book)

1. __ _____ **la infomática**= I like ICT
2. __ _____ **el inglés** = I love English
3. **Me gusta** __ _____ = I like Geography
4. ___ _____ ____ _____ = I love Maths
5. **porque** __ _____ _____ = Because it is quite slow
6. **la geografíá es** _____ = Geography is practical
7. **Las ciencias son** _____ = Science is practical (pl)
8. __ _____ ____ _____ = I like Science

Test 3 – ¿Qué haces en tus clases? LC2

Español	Inglés
1. En mi clase de deporte	In my PE lesson
2. puedo	I can
3. debo	I have to
4. quiero	I want to
5. escribir	To write
6. escuchar al profesor siempre	To listen to the teacher, always.
7. tocar un instrumento	Play an instrument
8. hacer experimentos	To do experiments
9. crear algo a menudo	To create something often
10. Trabajar en equipo	To work in a team
11. En mi clase de teatro debo estar en una obra a veces	In my drama lesson I have to be in a play sometimes
12. En mi clase de informática puedo usar los ordenadores mucho	In my IT lesson I can use the computers lots

Gapfill (Complete in your homework book)

1. **_____ escuchar la profesora**= I can listen to the teacher
2. **_____ escribir** = I want to write
3. **_____ trabajar en equipo** = I have to work in a team
4. **En __ _____ ___ _____** = In my Spanish class
5. **Puedo _____ ___ __ _____** = I can create something often
6. **_____ _____ ___ _____**= I want to play an instrument
7. **___ ____ _____** = I have to do experiments
8. **____ ___ ____ _____** = I can use the computers

Test 4 – ¿Qué vas a estudiar en el futuro? LC2

Español	Inglés
1. **En el futuro**	In the future
2. **Voy a estudiar**	I am going to study
3. **cocina**	cooking
4. **español**	Spanish
5. **ciencias**	Science
6. **deporte**	sport
7. **informática**	IT
8. **Porque (no) es**	Because it is (not)
9. **Aburrido/a**	Boring
10. **útil**	Useful
11. **En el futuro voy a hacer geografía porque es fácil**	In the future I am going to do geography because it is easy
12. **En el futuro voy a estudiar inglés porque es necesario**	In the future I am going to study English because it is necessary.

Gapfill (Complete in your homework book)

1. __ __ _____= I'm going to study
2. **Voy a estudiar** _____= I'm going to study Science
3. _____ __ ___ _____ = because it is not boring
4. ___ __ _____ _____ = I'm going to do English
5. __ ____ _____ = In the future
6. __ _____ __ _____ **historia** = I'm not going to study history
7. _____ ___ _____ = because it is boring
8. _____ __ __ _____ = Because it is not necessary

Test 5 – ¿Qué haces durante el recreo? LC2

Español	Inglés
1. **Durante el recreo**	During break
2. **Charlo/hablo**	I chat/talk
3. **Como comida rápida**	I eat fast food
4. **bebo agua**	I drink water
5. **hago mis deberes**	I do my homework
6. **voy a la biblioteca**	I go to the library
7. **Voy a ir a la biblioteca**	I am going to go to the library
8. **voy a jugar al fútbol**	I am going to play football
9. **Voy al gimnasio**	I go to the gym
10. **Voy a ir al gimnasio**	I am going to go to the gym
11. **Durante el recreo juego a los deportes**	During break I play sports
12. **Durante el recreo voy a hacer ejercicio**	During break I am going to do exercise

Gapfill (Complete in your homework book)

1. **Durante el recreo** _____= During break I chat
2. **A veces** ____ _____ = Sometimes I drink water
3. ___ __ _____ _ _____ = I'm going to play football
4. ____ __ __ _____ = I go to the library
5. __ _ __ __ _ _____ = I'm going to go to the library
6. _____ __ _____ **hablo** = During break I talk
7. ___ __ ____ ___ _____ = I'm going to go to the gym
8. ____ ___ _____ = I do my homework

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. Create a poster to show your ideal school / teacher / school subject. Put the information in Spanish

2. Research what school is like in Spain / a Spanish speaking country. How does it compare to your experience?

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. Rewrite your school timetable in Spanish

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

<table>
<tr><td colspan="2">11th December</td><td colspan="2">8th Jan</td></tr>
<tr><td colspan="2">People have different reasons for believing—or not believing—in God. A theist believes in God and may argue that the world's creation shows signs of a powerful being. They might point to the order and beauty of nature as evidence that it could not have appeared by chance. An atheist, however, does not believe in God and may claim that the world contains dangerous or harmful features, such as storms or lightning, which suggest that no guiding or protective creator is involved. An agnostic is unsure whether God exists because they do not think there is enough clear evidence to decide.

These discussions often lead to questions about proof. People usually want evidence before believing something is true, such as seeing someone in real life. However, proving God's existence is more difficult because God cannot be observed directly.

Philosophers have developed three major arguments to suggest that God exists. The Cosmological Argument says that everything has a cause, and the universe's first cause must be God. The Teleological Argument claims that the world's design and complexity point to a designer. The Ontological Argument suggests that the very idea of God as the greatest possible being means God must exist.
Theist – Someone who believes in God.
Atheist – Someone who does not believe in God.
Agnostic – Someone unsure whether God exists.
Proof – Evidence showing something is true.</td><td colspan="2">Many Jews and Christians believe in creationism, the belief that God created the world. This idea comes from the book of Genesis, which describes God bringing the universe into existence. For many believers, the Creation story is seen as evidence of God's power and a key reason for accepting God's existence. They argue that such a detailed and purposeful world could not simply have appeared without a creator.

These discussions link closely to the idea of design. The Design Argument, also known as the Teleological Argument, claims that the universe is too ordered and complex to have developed by chance. Supporters point to examples in nature where living things seem perfectly suited to their environments. For instance, trees take in carbon dioxide and release oxygen, helping humans and animals to survive. This appears purposeful rather than accidental.

The philosopher William Paley famously explained the Design Argument using the example of a watch. If someone found a watch on the ground, they would assume it had been designed because of its detailed structure and purpose. Paley argued that the world is far more complex than a watch, so it too must have a designer. For believers, that designer is God.
Creationism – The belief that God created the world.
Design – A plan showing how something should work.
Teleological – Explaining something by its purpose rather than its cause.</td></tr>
<tr><td>Questions:
1. Why might a theist believe in God?
2. What reason might an atheist give for not believing in God?</td><td>Questions:
1. What does the Cosmological Argument claim?
2. Why is proving God's existence difficult?</td><td>Questions:
1. What is creationism?

2. How might the Creation story be used as proof of God's existence?</td><td>Questions:
1. What is the Design Argument?
2. How does William Paley use the Design Argument to prove the existence of God?</td></tr>
</table>

RPE

<table>
<tr><th colspan="2">22ND Jan</th><th colspan="2">5th Feb</th></tr>
<tr><td colspan="2">The Big Bang Theory was first proposed in the 1920s by Alexander Friedman. It suggests that the universe began as an extremely hot, dense point and has been expanding ever since. Scientists continue to support this theory because we can still observe the universe expanding today, and we can detect cosmic background radiation, which is seen as leftover energy from the Big Bang.

Another important scientific idea is evolution, proposed by Charles Darwin. Evolution explains how living organisms gradually change over long periods of time in order to survive. Darwin suggested that species adapt to their environments, and those best suited are more likely to live and reproduce.

These scientific explanations link to discussions about cause and effect. Everything that happens has a cause that leads to a result. Based on this idea, the philosopher Thomas Aquinas developed the Cosmological Argument, which states that since everything has a cause, the universe itself must also have a cause. Aquinas argued that this “First Cause” must be God, and therefore God exists.

However, critics argue that this raises another question: if everything needs a cause, then what caused God? This remains one of the main challenges to the Cosmological Argument.

Cosmological – Related to the origin of the universe.
Evolution – The process of species changing over time.</td><td colspan="2">The philosopher Immanuel Kant developed the Moral Argument for the existence of God. He believed that all humans have an inner sense of right and wrong, which guides their behaviour and helps them make moral choices. Kant argued that moral laws—such as fairness, honesty, and justice—must come from somewhere. Since laws require a lawgiver, he concluded that the source of these moral rules must be God. Therefore, the existence of a shared moral understanding supports the idea that God exists.

However, not all philosophers agree. The ancient Greek thinker Epicurus argued that the existence of evil challenges belief in God. Epicurus claimed that if God is all-powerful, He should be able to stop evil and suffering. If God is good, He should want to prevent them. Yet evil and suffering clearly exist in the world. Epicurus reasoned that if God cannot stop evil, He is not all-powerful; if He chooses not to stop it, He is not good. Since believers claim God is both powerful and good, the presence of evil creates a contradiction. Therefore, Epicurus concluded that God cannot exist.

These two arguments highlight how different ideas about morality and suffering influence beliefs about God.

Moral – Principles of right and wrong behaviour.
Evil – Morally bad or cruel actions.
Suffering – Experiencing pain or hardship.</td></tr>
<tr><td>Questions:
1. What modern evidence supports the Big Bang Theory?

2. What did Charles Darwin propose about species?</td><td>Questions:
1. What does the Cosmological Argument claim?
2. What major challenge is raised against the idea of a First Cause??</td><td>Questions:
1. What did Immanuel Kant argue about morality?

2. Why did Kant believe a lawgiver must exist?</td><td>Questions:
1. What challenge did Epicurus raise against belief in God?

2. How does the existence of evil create a problem for believers?</td></tr>
</table>

RPE

26th Feb		**12th March**	
The Ontological Argument is a famous logical argument for the existence of God, developed by the philosopher and theologian St Anselm in the 11th century. The word ontology refers to the study of being, or existence, so Anselm's argument focuses not on science or observation but on reasoning alone. Anselm began by defining God as "the greatest thing that can be thought of." This means that nothing greater or more perfect can possibly be imagined. He then argued that existing in reality is greater than existing only in the mind. For example, imagining a treasure is good, but actually having the treasure is better. Applying this idea to God, Anselm said that if God existed only as an idea in the mind, then something greater could be imagined—namely, a real God. But this would contradict the definition of God as the greatest possible being. Therefore, Anselm concluded that God must exist in reality, because a God who exists is greater than a God who does not. His argument does not rely on physical evidence or observation but instead uses logic to suggest that God's existence is necessary. **Ontology** – The philosophical study of existence or being. **Ontological Argument** – A logical argument claiming that God must exist by definition.		**Define the following terms in your own words:** **Theist** **Atheist** **Agnostic** **Creationism** **Cosmological** **Teleological** **Moral** **Evil** **Suffering** **Ontology**	
Questions: 1. How did Anselm define God? 2. Why does Anselm believe existence in reality is better than existence only in the mind?	**Questions:** 1. How does the treasure example help explain his argument?		

CREATIVE ARTS

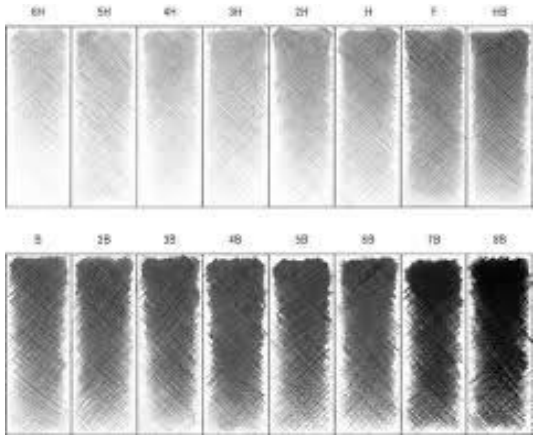
3D DESIGN – YR 7 – 3D SKULL

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.

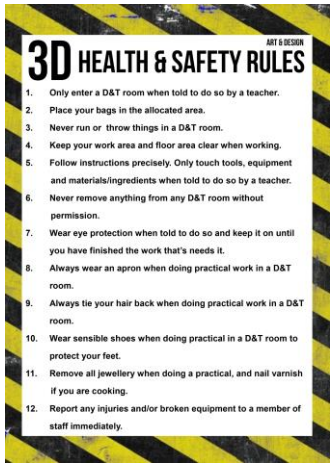
B. Key Knowledge 1: How to create a range of tone

- 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



C. Key Knowledge 2: HEALTH & SAFETY RULES

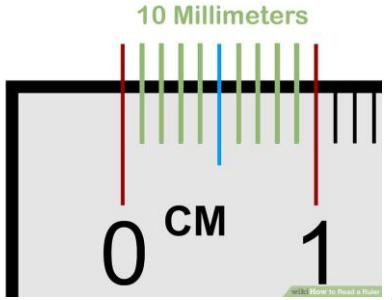
Refer to your booklet for a larger version of the H&S Rules



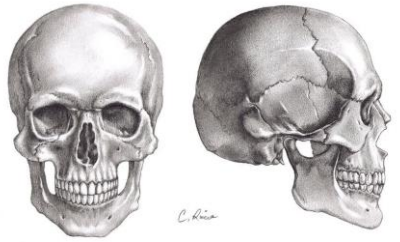
D. Key Knowledge 3: How to use a ruler

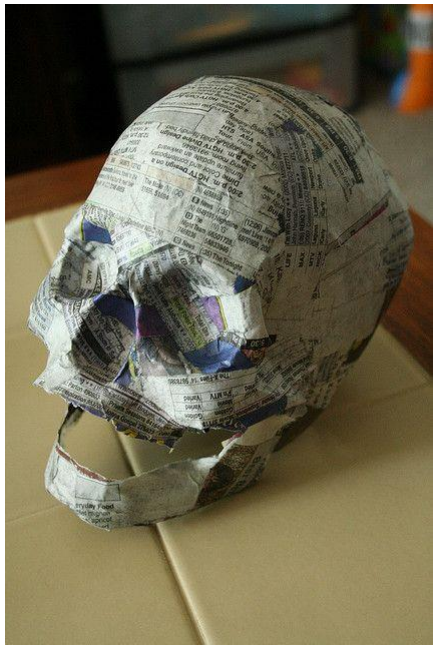
Lines on a ruler help you to measure and mark accurately. This is a very important **life skill.**

- 1cm
- 0.5cm
- 10 Lines per centimeter



E. Expert Modelling:





What Visual Elements can you see in this work?

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.
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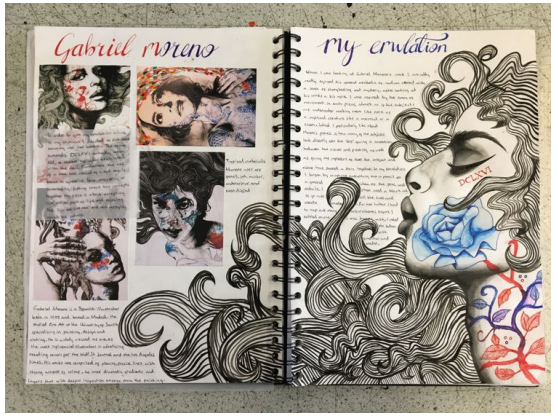
Pattern	A design that is created by repeating lines, shapes, tones or colours.
Colour	Red, yellow and blue are primary colours, which means they can't be mixed using any other colours.

B. Key Knowledge 1: How to write a critical study in Art & Design

Include the following in your critical studies

- Artist's name and images of their work
- Your own copy of the artist's work
- Written research about them, their life and work
- Your own personal opinions – use the 10 questions and vocab in your homework book to help you



D. Key Knowledge 3: GENRES in Art & Design

GENRE – A specific style or category of something. This could include art, music, fashion etc.

ABSTRACT – Abstract art is art that does not attempt to represent an accurate depiction of a visual reality but instead use shapes, colours, forms and gestural marks to achieve its effect.

STREET ART/GRAFFITI - artwork that is created in a public space, often without official permission. Street art can be text and/or imagery and often aims to give the viewer a message.

CUBISM - an early 20th-century style and movement in art, especially painting, in which perspective with a single viewpoint was abandoned and use was made of simple geometric shapes, interlocking planes, and, later, collage.

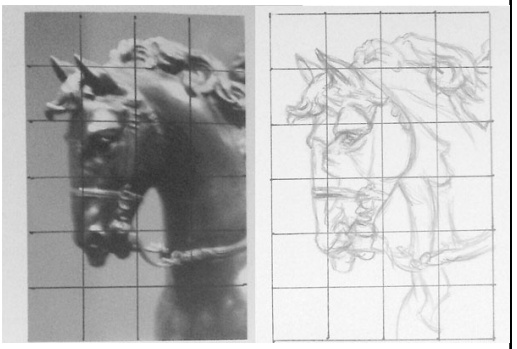
POP ART – An art movement in the UK and US in the 1950s. The movement presented a challenge to traditions of fine art by including imagery from popular and mass culture, such as advertising, comic books and mundane mass-produced cultural object.

ART & DESIGN Yr 7 Cycle 2 Project – Making Sense

Threshold Concept #2 Artists connect our senses & express ideas & emotions. Artists experiment & take risks.

C. Key Knowledge 2: The Grid Method

The grid method involves drawing a grid over your reference photo, and then drawing a grid of equal ratio on your work surface Then you draw the image on your grid, focusing on one square at a time, until the entire image has been transferred and is in accurate proportion



E. Expert Modelling: Can you match the genres in D to the images below?


Roy Lichtenstein


Yayoi Kusama


Pablo Picasso


Banksy

Andy Warhol


Wassily Kandinsky


Georges Braque


My Dog Sighs

F. Wider thinking / further reading: Watch this video to help you with the grid method
https://www.youtube.com/watch?v=HyaX2acsNmU

KS3 Knowledge Organiser

Cyber Security

What is Cyber Security

Is protecting networks, computers, programs and data from attack, damage or unauthorised access through the use of technologies, processes and practices.

The difference between Data and Information

Data is raw facts and figures. For example, a lists of test results for a class. Without any context or analysis, the data may be of limited use on its own.

Information is created when that data has been processed and becomes meaningful: For example, these are scores from a test where the pass mark was 35.

Social Engineering

Manipulating individuals so they give away personal information (e.g. bank account).

Blagging - inventing a scenario to target someone into divulging info. Companies can give employees security training.

Phishing - fraudulently obtaining personal info (using e.g. email or SMS). Beware of links in emails!

Pharming - Cyber-attack to redirect a website's traffic to another, fake site. Check the http address has http's'

Shouldering - observing a person's private info over their shoulder (e.g. ATM)

Name Generator Attacks

These are attacks in which the victim is asked in an app or a social media post to combine a few pieces of information or complete a short quiz to ***produce a name.*** Attackers do this to find out key pieces of information that can help them to answer the security questions that protect people's accounts.

Protection methods

Measures can used to make it more difficult for attackers.

Firewalls

A firewall checks incoming and outgoing network traffic. It scans the data to make sure it doesn't contain anything malicious and that it follows the rules set by the network.

Anti-malware

The anti-malware will have a list of **definitions** of sequences of code that they are aware are malicious. If the code in your files matches the definitions, the files are quarantined.

Auto-Updates

Software that automatically checks for available updates

Malicious code and attacks

Malware - umbrella term to describe a variety of hostile or intrusive software. **Six categories: Virus, Trojans, Worms, Adware, Spyware and Ransomware.**

- **Computer virus** - installed on your computer without your permission with the intention to do harm. Viruses spread through email attachments or IM services OR through files/programs downloaded
- **Trojan** - pretends to have a legitimate purpose. Spread by email
- **Spyware** - gathers info without user knowing (e.g. bank account details).
- **Adware** - internet usage analysed and then advertising targeted.
- **Hacking** – Gaining unauthorised access of a computer.
- **Script kiddie –** Are hackers who use tools downloaded from the internet that allow them to hack with little technical knowledge.
- **Denial of Service Attack (Dos)** – Floods a targeted computer or website with lots of requests and internet traffic in an attempt to overload the system.
- **Distributed Denial of Serve Attack. (DDos)–** This uses the same concept as a DoS attack but this time it is multiple computers making the attack at the same time.
- **Brute Force Attack** – This makes multiple attempts to discover something, for example a password.

Key Vocabulary

Key Word	*Definition*
Botnet	A large collection of malware infected devices.
Hacking	This can be Ethical or Un-ethical hacking
User permissions	Users on a network can be put into groups, with each group having a unique set of privileges.
User Authentication	Secure passwords, maximum number of attempts, CAPTCHA, Biometrics, Two-factor identification.
Internet bot	Automated programs that perform tasks repeatedly. Bots ca have a malicious intent. .
Ransomware	Self-replicating virus – Locks a computer, encrypts files and demands a ransom paid before they decrypt the files and unlock the computer.
Viruses	Malicious from of self-replicating software.

Legislation

Data Protection Act 2018

All organisations and people using and storing personal data must abide by the following principles.

Your rights

As a **data subject**, you have the right to find out what information the government and other organisations store about you.

Computer Misuse Act 1990

Designed to make hacking into computer systems a criminal offence with a potential jail sentence of up to 10 years and an unlimited fine.

	Week 1	Week 2	Week 3	Week 4	Week 5
YEAR 7 DRAMA – CYCLE 2	**Drama Terminology** **Sound:** Recorded Music, Recorded sound, Live music, Singing, Soundscapes created by the actors, Vocalisation. **Atmosphere and Tension:** Sound, Pace, Pause, Silence, Physical movement, Entrances and Exits, eye contact, Vocalisation, Language, Text, Lighting, Set, Staging, techniques: direct address, slow motion, cross-cutting, Costume. **Stage Space:** How the stage space is used: Set design, lighting, actors movement and action in the space, Actors relationships, Levels, Breaking the forth wall, Proxemics. **Task**: Find a piece of music that you would use to enhance the drama of a plane crash. Why did you choose that music? Write the music and explanation in your homework books.	**COSTUME DESIGN** **Colours and symbolism** **Yellow:** Light, Joy, Youth, Energy **Grey:** Plain, oppression, Routine **Red:** Dancer, Blood, Passion, Love, Fear **Green**: Nature, Growth, Innocence, Progress, Jealously **Purple**: Royalty, High Status, Power, Wealth. **Task:** To draw a costume design of one of the characters from Lord of the Flies. Label the design and give reasons why you chose those colours.	**Drama Terminology** **Set:** Props, Stage Furniture, Design, Style, Texture, Colour, Fabric, Proxemics. **Costume Design:** Hand held props, Clothing Warn, Style, Colour, Texture, Fabric, Design, Fit, Make / Brand. **Lighting:** Colour, Shape, Shadows, Shallotte's, Spotlight, Stage Wash, Flood Light, Front Lit, Back Lit, elimination, Colour, Brightness, Fade, Snape, Flashes, Shade. **Basic block:** A pattern which is the starting block for a more detailed pattern based on a particular performer's measurements and reflecting specifics like historical period. **Task 1**: Design/draw a set for the deserted Island from Lord of the flies. Consider props, stage furniture, design, style, texture, colour, fabric and proxemics (how close these things are to each other).	**Stage positions** **Auditorium**: The part of the theatre accommodating the audience during the performance, also known as the "house". **Centre stage**: The centre point of the stage. **Down-stage**: The front of the stage, in the front of the centre stage area, close to the audience. **Fourth Wall**: The invisible wall of set through which the audience see's the action of the play. **Stage left**: The left side of the stage for an actor standing facing the audience. **Stage right:** The right side of the stage for an actor standing facing the audience. **Up-stage:** The back part of the stage, behind the centre stage area, further away from the audience. **Task**: Which stage type would you use for Lord of the Flies and why?	**Drama Terminology** **Chronological:** The logical order of events from beginning to middle to end. **Dramatic Irony:** When the audience or reader knows something important which the main character does not. **Epilogue:** The closing part of a speech, book of performance. The opposite of a prologue. **Flashback:** A scene enacting something that happened in the past; the enactment of a character's memory of a past event. **Foreboding:** A feeling or sign that things are about to change for the worse. **Task:** Write a flashback from either the perspective of Piggy or Ralph. Include what it would have been like to live in their homes and the things you think they would miss the most. Consider their emotions and how they would show them using facial expressions.

	Week 6	Week 7	Week 8	Week 9	Week 10
DRAMA	**Drama Terminology** **Monologue:** A speech by a single person, speaking alone, often revealing something about their past or personality. **Naturalistic:** A form of theatre designed to create the illusion of reality for an audience. Originated in the late 19th century. **Reiterate:** To repeat something for effect, impact or emphasis. **Suspension of disbelief:** To suspend your disbelief is to forget the performance and be drawn into the action as if it were real. **Symbolism:** The use of images or thing (usually physical, like a flag) that stand for or represent something else, usually something abstract like a nation. **Task:** Find a monologue of Macbeth's and copy it out into your books.	Exam practice Question: **LORD OF THE FLIES** **1. Analyse** how stage space was used to engage the audience during the opening moments of the performance. (6 Marks) 2. **Evaluate** how vocal skills were used at one key moment within the performance. (9 Marks) **Stage Space**: How did the group use proxemics (the space) to catch your attention? E.g. Did the group start centre stage to highlight the groups unity at the start. **Vocal Skills**: Did the group use choral speaking? What were they trying to communicate to the audience? E.g. the group used repetition on the line "segregated" to highlight the breakdown of the groups.	**COSTUME DESIGN** **Colours and symbolism** **Black:** Night, Evil, High Status, Mystery, Death. **White:** Purity, Innocence, Goodness, Faith. **Blue**: Opportunity, Depth, Strength, Truthfulness, Water, Cold. **Pink:** Compassion, Love, Femininity. **Brown:** Earth, Dirt, Nature, Hard-Working **Task:** To draw a costume design of one of the characters from Macbeth. Label the design and give reasons why you chose those colours.	**Revision for Knowledge Organiser test:** Pick three sections you feel you need revise. You may choose to look over one week in particular you feel you don't know as well. Use the following to support you with your revision: LOOK COVER WRITE CHECK Draw a picture to represent your chosen word/section. Create flash cards that include your words/sections and their definitions. Put your word/section into a scenario. For example, "I used a cross tone when I told my dog off for eating my homework".	**Key Vocabulary:** **Still image:** A single static image, as distinguished from a moving image. **Form:** Refers to the shape of each individual section. E.g. movement of mime based ensemble scene. **Hot Seating:** A strategy in which a character or characters, played by the teacher or a student, are interviewed by the rest of the group **Contrast:** A marked difference between two or more things placed side by side for dramatic effect **Metaphor:** A thing regarded as representative or symbolic of something else. **Ensemble**: A group of musicians, actors, or dancers who perform together. **Slow motion:** Slowing an action down, often used for dramatic effect.

wk	keyword	definition	example
Week 1	**noun**	A person, place or thing	Table, chair, door, Tom, Ben, London
	adjective	A word that describes a noun	**Big** table, **blue** door
	verb	A doing or being word	Dancing, singing, running
	adverb	How a verb is done	The man ran **quickly**.
Week 2	**Dense**	Closely packed together	The people in the room were **densely** packed.
	Grim	Unattractive or forbidding	The bathroom was **grim**.
	Spectral	Ghost-like	There was a **spectral** presence in the room.
	Grotesque	Very ugly	The front of the house was **grotesque.**
	Oppressive	Harsh and overwhelming	There was an **oppressive** atmosphere in the end.
Week 3	**Impulsively**	**Without forethought; on impulse**	I **impulsively** bought a new coat.
	Furtively	**In a way that attempts to avoid notice**	He spoke **furtively.**

Week 1

Chapter 1 - Christmas Eve

Kipps is a old man in his fifties. After refusing to tell his step sons a ghost story he feels compelled to write his own.

Stretch:

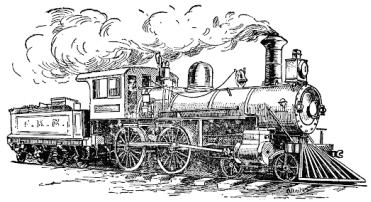
The old man sat at the table and began to write his story.

Find the adjectives, nouns and verbs in this sentence.

Week 2

Chapter 2 - A London Particular

Kipps is twenty-one. He is sent Crythin Gifford by his employer, Mr Bently. He is sent there to attend the funeral of Mrs Drablow

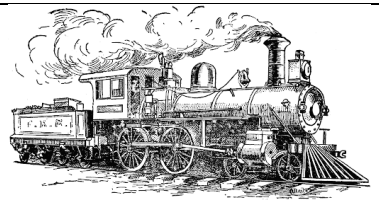


Stretch: **Use the week 2 words in your own writing. You could write individual sentences, or a longer piece using lots of them**

Week 3

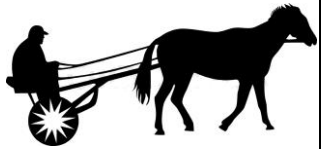
Chapter 3 - The Journey North

- Kipps travels by train from London to Kings Cross via Crewe and Homerby. This is where he first meets Samuel Daily who Kipps ignores as he goes on about the bleak countryside.

	Intensely	**To an extreme degree**	The boy stared at the chocolate bar **intensely.**			 **Stretch: Can you use these connectives to compare the characters we have met so far?**
	Ominously	**In a way that suggests that something bad is going to happen.**	The thunder rumbled **ominously.**			
	Eerily	**In a strange and frightening manner.**	The house was **eerily** quiet.			

Connectives:	**Equally**
Similarly	**Likewise**
Compared with	**Furthermore**

Week 4	**Christmas**	the annual Christian festival celebrating Christ's birth,	The book begins with the family celebrating **Christmas.**		**Week 4**	 Chapter 4 - The Funeral of Mrs. Drablow • Kipps encounters the Woman in Black for the first time at Slice Drablows funeral. He mistakes her for a fellow mourner until speaking to Mr Jerome who insists that he didn't see a woman at all. He later refuses to take Arthur to Eel Marsh House. • At a lunch with the locals, one gentleman says that no one will ever buy the house but wont explain why. **Stretch:** Use the week 4 words in your own writing. Use a thesaurus to find some alternative words.
	Traditional	produced, done, or used in accordance with tradition.	It is **traditional** to tell ghost stories on Christmas Eve.			
	Lethargy	a lack of energy and enthusiasm.	You may begin to feel **lethargy** before bed.			
	Atmosphere	the pervading tone or mood of a place, situation, or creative work.	The **atmosphere** created at the beginning of the book is a spooky one.			
	Idyllic	extremely happy, peaceful, or picturesque.	The areas surrounding Eel Marsh House could be described as **idyllic.**			

Wee 5	**Description**	**Detailed writing about a setting, person or events**	The **description** of Eel Marsh House makes it sound mysterious.		Wee 5	**Chapter 5 - Across the Causeway** • Kipps visits Eel Marsh house for the first time – it is its own little island and becomes separated from the town when the tide rises. He is taken there by Keckwick on a pony and trap. Keckwich is quiet and withdrawn but agrees to come back later with clothes and food so Kipps can stay the night. • While Kipps is exploring the burial ground, he sees the woman in black again. He tries to go over to her, but she disappears. • He returns to the house where there are piles of random papers to sort through. Rather than starting work, because he has freaked himself out in the big scary house, he goes for a walk towards Crythin Gifford. 
	Dialogue	**Speech between characters**	There is lots of **dialogue** between Arthur and Samuel Daily.			
	Foreboding	**To create a sinister atmosphere**	There is a **foreboding** atmosphere whenever the woman in black is present.			
	Narrative	**Story or plot**	There are lots of characters in the **narrative.**			
	genre	**A type of story with specific. Common elements**	'The Woman in Black' belongs to the gothic horror **genre.**			
Weeek 6	**Locomotive**	**A train with an engine**	Arthur travels to Crythin Gifford on a **locomotive.**		Week 6	**Chapter 6 - The Sound of a Pony and Trap** • As Kipps walks back along the causeway, the fog and the tide begin to roll in. Kipps hears the sound of a pony and trap sinking in the mashes. He also hears screams and strange noises. There is nothing he can do as he can't see. He assumes it must be Keckwick and the trap stuck. • He makes his way back to the house. Once there, he cries helplessly. Eventually, he pulls himself together and decides to explore the house. He finds a room with a locked door and is unable to get in. • After a while, he falls asleep on the sofa. He is woken up at 2 a.m. by Keckwick who has come to take him back to the hotel. When Kipps asks how he escaped, Keckwick doesn't reply. **Chapter 7 - Mr. Jerome is Afraid** • The next day, Arthur wakes up and decides that he is so done with this whole Drablow affair. He's going to pass the whole thing off to Mr. Jerome. • The landlord lends him a bicycle, and he pedals off to see Mr. Jerome, feeling pretty good about things. • His good mood vanishes when he gets to Mr. Jerome's office. Mr. Jerome is very squirrely about the whole thing and says no way, no how, and don't let the door hit you on the way out. • But he *does* say some vague things about stories and ghoulish things, without a lot of detail. • Time for plan B: Arthur writes a letter to Mr. Bentley explaining that Eel Marsh House is quite an undertaking and he'll have to be here for several days to sort it all out. • Then he goes on a nice long bike ride to clear his mind.
	Mystery	**Something unknown**	The events at Eel Marsh House create a sense of **mystery.**			
	Fiancée	**a woman to whom someone is engaged to be married.**	Stella is the **fiancée** of Arthur.			
	Particular	**To be exact or precise**	Arthur has to be **particular** with his timings so that he does not get cut off by the tide.			
	business	**A company or someone you have dealing with – often financial**	Arthur is in the **business** of the law.			

Week 7	**1st person narrator**	Where the narrative is told from the perspective of a character.	Part of the story is told in **1st person narrative.**
	Verb	A doing or being word.	Arthur goes **cycling.** I **am** sad today.
	Antagonist	The character that goes against the main character creating conflict.	Darth Vader is a very obvious **antagonist**.
	Solemn	Formal and dignified.	The funeral of Mrs Drablow is **solemn.**
Week 8	**Pungent**	having a sharply strong taste or smell	Parts of the house have a pungent smell.
	Sombre	dark or dull in colour or tone. having or conveying a feeling of deep seriousness and sadness	The funeral has a sombre atmosphere.
	Conviction	a firmly held belief or opinion.	The villagers have a firm **conviction** that Alice Drablow is the reason for so many deaths.
	tangible	clear and definite; real.	The apparition of the woman is tangible.
	omen	an event regarded as a portent of good or evil.	The woman is an omen of death.

Week 7

Chapter 8 - Spider

- After a refreshing 30-mile ride, Arthur has dinner with Sam Daily.
- He also decides to spend the next two nights at Eel Marsh House to get through all that paperwork.
- Mr. Daily doesn't think this is such a good idea. Nonetheless, Arthur insists, so Mr. Daily lends out his dog, Spider. Okay, Spider is kind of small, but hey—any company is good company, right?

Week 8

Chapter 9 - In the Nursery

- Mr Bentley okays the plan and Kipps returns to Eel marsh house with Spider. Kipps does some work, goes for another look at the graves and then goes off to bed for a restful night's sleep.
- However, he wakes up to Spider standing at the bedroom door growling. He follows Spider down the hallway to the locked door. He hears a noise behind him. He rushes back to him room but it's empty and Spider has calmed down.
- The next morning, he goes back to town and grabs a bunch of food before bicycling back. He also has a letter from Stella.
- Back to Eel Marsh House it is, and back to more organizing. As he's sorting, he finds a packet of letters to Alice Drablow from someone named Jennet. It seems she's a relative of Mrs Drablow who had a child out of wedlock and gave him up to the Drablows to raise.
- Arthur starts to get a real bad feeling about this whole thing.
- Apparently Spider does too, because he starts to growl again. They run outside, where Arthur again hears the horrifying sound of a pony and trap getting stuck and a child drowning.
- But this time, he realizes that the sound isn't real. It's a ghost sound.
- They scamper back inside. Spider growls and runs off, leading Arthur up the stairs and to the locked room.
- Now, the door is wide open.
- He realizes that the sound he was hearing was the rocking chair. Because the chair is rocking by itself, but there's no one else in the room.
- Arthur looks at the toys and contents of the room for a while, trying to figure out a rational explanation—but there isn't one.

Giving up, he returns to his room and goes to sleep.

Week 9	**Acquaintance**	**slight knowledge of or friendship with someone or familiarity with a topic**	Arthur and Samuel Daily quickly become acquaintances.		Week 9
	Perilous	**Full of danger or risk**	The journeys across the marsh are **perilous.**		
	Staid	**respectable, and unadventurous.**	Mr Jerome has a **staid** nature.		
	Lurid	**Unpleasant and unnaturally bright in colour**	The sunlight was **lurid.**		
	Semi colon ;	**;** to join two main clauses	'The moon shone**;** it was bright.		
Week 10	**inextricable**	**impossible to disentangle or separate**	The villagers find the deaths of the children and the woman **inextricable.**		Week 10
	Fact	Something can be proved to be true.	'80% of students believe that homework is a waste of time'.		
	Opinion	A point of view about something that can differ across individuals.	'I think that homework is waste of time'.		
	Rhetorical Question	A question that is asked for dramatic effect, rather than requiring an answer.	Will you help me? Will you do the right thing?		
	Hyperbole	Exaggerated claims or statements not meant to b taken literally.	I died with laughter earlier.		

Chapter 10 - Whistle and I'll Come to You

- It's windy and dark when Arthur wakes up. He tries to find his way to the light, but it's been broken.
- Spider rouses him and they walk through the house. Arthur is filled with an inexplicable sense of despair.
- It feels as though someone has died.
- That's probably because someone *has* died.
- They go outside, and Spider is agitated. So agitated that she somehow gets stuck in the marsh and Arthur has to work hard to get her out of there.
- As he's walking back to the house with poor Spider, he looks up and sees the woman in black watching him from the window of the nursery. Creepy.

Chapter 11 - A Packet of Letters

- When he wakes up in the morning (seriously, how does the guy keep falling asleep under these conditions?), Sam Daily is at the house.
- Arthur explains all the scary things that happened to him, and they pack up his stuff to head back to Crythin Gifford.
- In his room at the inn, Arthur looks through the letters, where he finds a death certificate for Nathaniel, Jennet's son, who apparently died in the marsh.
- Somehow, this is enough for him to put it together. He checks with Sam Daily.
- Here's the story: Jennet Humfrye got pregnant when she was unmarried, and her married sister Mrs. Drablow convinced her to give the child up. The Drablows raised the child as their own, and Jennet convinced them to let her live with them so she could see Nathaniel.
- One day, when the boy was in the pony and trap with his nursemaid and Keckwick's father, it became stuck in the marsh and they all drowned. (This is obviously the pony and trap that Arthur keeps hearing again and again.)
- Jennet was watching this whole time from the nursery window. Seeing her child die before her eyes drove her insane. When she finally died, she kept right on haunting the town.
- Daily warns Arthur that every time the Jennet's ghost has been spotted, a child has died in mysterious circumstances.
- Arthur is taking all of this in—and freaking out a little—when Stella arrives out of nowhere. Yay, reunion! Is it time for our happy ending now?

Chapter 12 - The Woman in Black

- Arthur lets us know that we're almost at the end of the story. He leaves Crythin Gifford, marries Stella, and they have a baby named Joseph.
- One day, they go to a fair outside of London and Joseph insists on riding the pony and trap.
- There's only room for two, so Arthur waits behind while Stella and Joseph go.
- Can you guess where this is going?
- While Arthur's waiting, he sees the woman in black watching him.
- Uh-oh? Uh-oh is right. As the pony and trap comes back, she steps in front of it and causes a huge accident.
- And that is the true and horrifying end of *The Woman in Black*.

Key Characters

(pick 1) ☐ Create a main character mindmap for each text, complete with key quotes

☐ Plot their activities and actions

☐ Draw their picture using evidence from the book

☐ Write a diary entry describing Arthur's feelings about his experience at the house

Arthur * Stella * Woman in Black * Samuel Daily * Mr Jerome

CHARACTERS AND PLACES IN THE TEXTS:

Use your mindmaps to help you write some WHAT, HOW, WHY paragraphs:

WHAT: How is the character/setting presented? Use some evidence to support your opinion.

HOW: Name any relevant writer's methods.

WHY: Say why you think the writer has chosen to write what they have, in the way they have done it. What is you own opinion?

EXTENSION: Practise writing your own Gothic! Use the text as inspiration.

Ideas: A spooky house, a lake late at night.

Dual Coding:

Consolidation Task: Create your own graphic novel of the story. Make a list of the 10 key scenes in the story and decide on how you will show these in your own comic strip.

Make the comic strip by drawing 10 boxes and drawing a key scene in each one!

Year 7 Food & Nutrition Knowledge organiser - Macronutrients

Week 1 & 2
Why we need food & the Eatwell guide

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

Week 3 & 4
Protein

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?

Year 7 Food & Nutrition Knowledge organiser - Macronutrients

Week 5 & 6
Fat

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

P I E

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:

1. What are 3 of the main functions of fat in the body?
2. Name 3 sources of animal fat & 3 sources of vegetable fat
3. Which type of fat should we be eating less of and which should we eat more of?

Week 7 & 8
Carbohydrate

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:

1. What is the main function of carbohydrate in the body?
2. What are the 3 main groups of carbohydrate?
3. What percentage of our energy should come from carbohydrates?
4. What problems do you think eating too many free sugars could cause in the body?

Week 1 & 2
What are macronutrients and why do we eat food?

Balanced diet definition:

This means eating a wide variety of foods in the right proportions, and consuming the right amount of food and drink to achieve and maintain a healthy body weight.

The Eatwell guide shows how eating different foods can make a healthy and balanced diet. It divides food into groups and shows how much of each food group is needed for a healthy diet.

The groups of the Eatwell Guide are:

1. Fruit and vegetables
2. Starchy carbohydrates
3. Protein
4. Dairy and alternatives
5. Oils and spreads

8 tips for a healthy diet

1. Base your meals on higher fibre starchy carbohydrates.
2. Eat lots of fruit and veg.
3. Eat more fish, including a portion of oily fish.
4. Cut down on saturated fat and sugar.
5. Eat less salt: no more than 6g a day for adults.
6. Get active and be a healthy weight.
7. Do not get thirsty.
8. Do not skip breakfast.

The 3 main macronutrients needed by the body are:

- Carbohydrate = Energy
- Protein = GERM
- Fat = PIE

Questions:

1. What colour is each section of the Eatwell guide?
2. What should we cut down on eating too much of?
3. What do the letters GERM stand for in proteins function in the body?
4. What do the letter PIE stand for in fats functions in the body?

Week 3 & 4
Micronutrients

Macro vs micronutrient:

- Macronutrients are nutrients needed in large amounts in the body
- Micronutrients are nutrients that we need in the diet in smaller amounts

We need macronutrients and micronutrients in the diet. They are equally important the only thing that is different is the amount of each that we need.

VITAMINS AND THEIR FUNCTIONS

	Function (what does it do?)	Source (foods found in)
A	• Healthy skin • Helps us see in the dark	• Animals – liver and milk • Plants – carrots and red peppers
B	• Releases energy from food	• Bread, fish, broccoli, liver, milk, peas, rice
C	• Keeps connective tissue healthy • Helps absorb iron	• Oranges, blackcurrants, broccoli, red and green peppers •
D	• Helps the body absorb calcium	• Butter, eggs, milk, oily fish •

MINERALS AND THEIR FUNCTIONS

	Function (what does it do?)	Source (foods found in)
Calcium	• Build strong bones and teeth	• Yoghurt, cheese, milk, tofu
Sodium (salt)	• Keeps the correct water balance in the body	• Cheese, ready meals, salted nuts, bacon
Iron	• Keeps red blood cells healthy	• Dark green vegetables, beans, fish, egg yolk, red meat

Questions:

1. Explain the difference between a macronutrient and micronutrient?
2. Are macronutrients more important than micronutrients in the body?
3. Which vitamin helps the body absorb calcium?
4. Which vitamin helps the body absorb iron?

Week 5 & 6
Nutritional needs of different groups

Nutritional needs depend on: Gender, Age, Lifestyle, Activity level, Health condition(s), Weight

People can be classified into:

BABIES

Special diet needs: milk for the 1st 6 months. High energy needs. No added salt or sugar.

Need more: Food high in iron & vitamin C 6 months+

CHILDREN

Special diet needs: regular, smaller meals and snacks. High energy needs. Reduced salt and sugar. Eatwell Guide between 2-5 years

Need more: Calcium and Vitamin D. Iron and Vitamin C

TEENAGERS

Special diet needs: Eatwell Guide. Teenagers have growth spurts and high energy needs. Increased appetites mean larger portions.

Need more: Protein, Calcium & Vitamin D, C & Iron

ADULTS

Special diet needs: Lower energy needs. Eatwell guide. Avoid foods high in sugar and fat.

Need more: Calcium and Vitamin D, Iron and Vitamin C

PREGNANT AND LACTATING WOMEN

Special diet needs: Healthy balanced diet. Plenty of watery drinks. Higher energy needs for last 3 months of pregnancy

Need more: Folic acid, Protein, Calcium and Vitamin D, C & Iron

THE ELDERLY

Special diet needs: Bodies typically slow down, so less energy is needed. Don't absorb nutrients as easily. Plenty of watery drinks

Need more: Fibre, Calcium, Vitamin D & C, Iron

Questions:

1. Why do teenagers need extra protein in their diets?
2. Which foods should adults avoid to prevent weight gain?
3. What type of drinks are suitable for pregnant women?
4. Why do the elderly need less energy than younger adults?

Week 7 & 8
Energy Balance

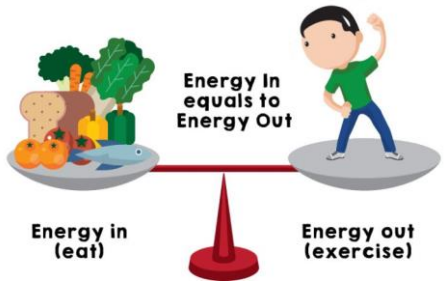
We need energy in the body for:

- Breathing
- Keeping organs working
- Digesting food that we eat
- Doing activities like walking, running and even sitting down

Basil metabolic rate (BMR) is the rate that a person uses energy for basic functions e.g. breathing, keeping the heart beating and blood circulation.

Types of energy balance –

- Positive – If we eat more food than we use up by exercising, any energy left is changed to fat and we gain weight.
- Negative – If we eat less food than we need and use it up then we will also need to use energy from fat stores in the body and loose weight
- Balanced – If we eat the same amount of energy that we use up through exercise then our body weight remains the same



Energy in our food is measured in kilocalories (KCAL). Adult men should eat 2500kcal per day and women 2000kcal

Energy can come from:

Carbohydrates - Bread, rice, potatoes, pasta, breakfast cereals

Fats - Vegetable oils, nuts, seeds, avocados, oily fish, butter, cream

Proteins - Meat, fish, eggs, milk, cheese, nuts, lentils, Quorn

Questions:

1. How much energy does an adult male and female need per day?
2. Complete the equations below to show types of energy balance.

\+ = Weight Gain

\+ = Weight loss

\+ = Remain the same weight

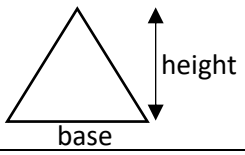
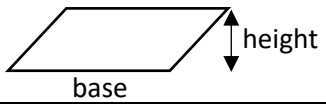
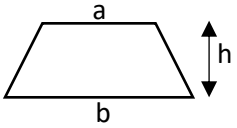
Life Skills Knowledge Organiser Year 7 Cycle 2

Lesson 1 and 2– Types of Relationships	Lesson 3 and 4 – Empathy
Where to access support https://www.brook.org.uk/topics/relationships/ https://www.healthforteens.co.uk/relationships/	**Where to access support** https://www.bbc.co.uk/bitesize/articles/z2gh3qt SSO Support Team
Content: Relationship- the way in which things are connected or work together **Types of relationships:** **Platonic Relationship-** A friendship or relationship where there is no romantic, intimate or sexual feelings i.e Friends and colleagues. **Intimate Relationship-** A relationship which can include a sexual attraction and sexual activity i.e boyfriend, girlfriend, married couples **Familial Relationship-** A relationship with someone who has a blood, kinship or legal tie to you i.e Parents, siblings etc. **Toxic Relationship-** A relationship that has a negative impact on your mental health and self- esteem.	**Content:** **What makes a good friend?** **Good friends make you feel good**- Good friends say and do things that make you feel good, giving compliments and congratulations and being happy for you. **Good friends listen**- A good friend allows you to talk and doesn't interrupt you. They're interested in what you have to say. **Good friends support each other**- If you're feeling down, a good friend will support you. If you need help, a good friend will try to help you out. **Good friends are trustworthy**- If you tell a good friend something private, they won't share it. You can trust a good friend not to be judgmental. **Good friends handle conflict respectfully and respect boundaries**- 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. What is the definition of a relationship? 2. What is the difference between a platonic and intimate relationship? 3. Give an example of a familial relationship 4. What is the definition of a toxic relationship? 5. What might a toxic relationship look like?	**Questions** 1. Would you consider yourself to be a good friend and why? 2. Give two qualities of a good friend. 3. Why is it important to be trustworthy? 4. If you tell a good friend that they have hurt your feelings, what is an appropriate way for them to react? 5. Who might you talk to in school about friendship problems?

Lesson 5 and 6 – Bullying	Lesson 7 and 8 – Peer Pressure
Where to access support Parents and trusted family, school staff and SSO team, directly to the police. Childline - Helpline: 0800 1111 (24 hours) https://www.bullying.co.uk	**Where to access support** https://www.childline.org.uk
Content: Bullying is the repeated and intentional behaviours which cause harm to another person, either physically, emotionally or psychologically. **Physical**- The victim is physically and violently assaulted by the bully. This can include being beaten up, pushed and shoved or the physical taking of items from the victim. This sort of bullying is against the law and should be reported to the police. **Verbal**- This can include name calling, snide comments and the spreading of rumours; it can also constitute harassment in some cases which is illegal and should be reported to the police. **Emotional**- Psychological and emotional bullying is difficult to see but can include the ostracization of the victim from a particular group, tormenting and humiliating the victim. **Cyberbullying** is the use of electronic communication to bully a person, typically by sending messages of an intimidating or threatening nature but can also include setting up of malicious websites or posting personal and embarrassing images and videos without the persons permission.	**Content:** **Peer Pressure**- The pressure that you feel to behave in a certain way because your friends or people in your group expect it **Coercion**- Ture or something they don't want to do by using force or threats. **Assertiveness**- The quality of being confident and not frightened to say what you want or believe. **Boundary**- are the physical, emotional and mental limits we establish to protect ourselves from being hurt, taken advantage of/ manipulated by others **Say it with confidence- Be assertive**. Practise saying 'no' so that it's easier when someone asks. Avoid situations which feel unsafe or uncomfortable. You could explain that you're going to pay for something instead of stealing it. **Try not to judge them-** By respecting their choices, they should respect yours. **Spend time with friends who can say 'no'-** It takes confidence to say no to your friends. You could try seeing how your other friends stand up to peer pressure and you can try this too. **Suggest something else to do-** If you don't feel comfortable doing what your friends are doing, why not suggest something you could do instead.
Questions 1. What is the phone number for Childline? 2. What is the definition of bullying? 3. How are physical and verbal bullying different? 4. Give an example of cyberbullying. 5. Who would you report cyber bullying to in school?	**Questions** 1. What is peer pressure? 2. Give an example of peer pressure. 3. What is the definition of coercion? 4. Give two strategies for being assertive 5. Create a short response to this request, 'Hey, go into that shop and steal some sweets for us'.

Lesson 9 and 10– Consent	
Where to access support https://www.brook.org.uk	
Content: **Boundary-** are the physical, emotional and mental limits we establish to protect ourselves from being hurt, taken advantage of/ manipulated by others **Personal Space-** the physical space immediately surrounding someone, into which encroachment can feel threatening or uncomfortable. **Assertiveness is a healthy way of communicating. It's the ability to speak up for ourselves in a way that is honest and respectful.** **UDEAL strategy to being assertive** **Use a reasonable voice** **Describe the problem** **Express how you feel** **Ask for a specific change** **List the improvements** (Aggressive behaviour is forceful and confrontational, it disregards other peoples opinions.)	
Questions 1. What is the definition of a boundary? 2. Why do we need boundaries? 3. Explain the UDEAL strategy for assertiveness. 4. Why is it important to be assertive and not aggressive? 5. Give an example of a situation where you might need to be assertive.	

Your Maths Homework is to complete your sparx

Item	Description
Perimeter	The total length of all the sides of a 2D shape.
Area	A measurement of the space inside a 2D shape. Measured in squares. Often confused with perimeter.
Compound shape	a shape formed by joining other shapes.
Circumference	The outline of a circle.
Chord	A straight line joining two points on the circle.
Diameter	A chord that passes through the centre of a circle.
Radius	A line from the centre to the circumference of a circle.
Sector	Part of a circle formed by two radii(plural of radius) and an arc. The shape of a slice of pizza.
Segment	A chord divides a circle into two segments.
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.
Equation	An algebraic object that contains an equals sign. There are always two sides to an equation.
Sides of an equation	The right and left hand sides of the equals sign are referred to as the sides of the equation.
Balancing	Performing the same operation to both sides of an equation
Area of a rectangle	$Area\ of\ rectangle = base \times height$
Area of a triangle	$Area\ of\ triangle = \frac{1}{2} base \times height$ 
Area of a parallelogram	$Area\ of\ parallelogram = base \times height$ 
Area of a trapezium	$Area\ of\ trapezium = \frac{1}{2}(a+b) \times h$ 

YEAR 7

KNOWLEDGE ORGANISER – 12 Bar Blues

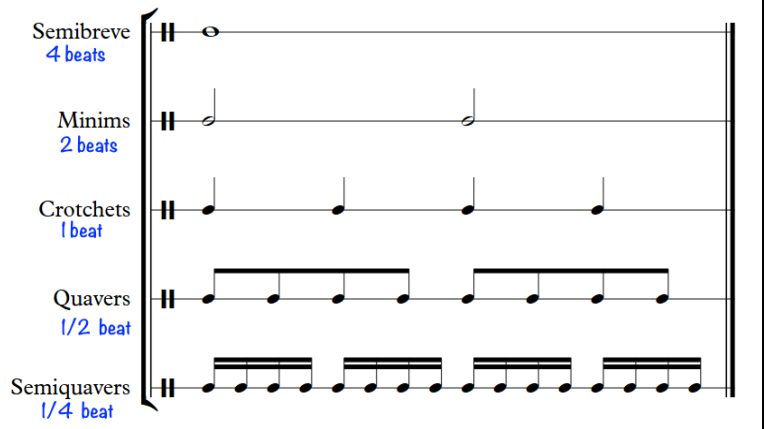
Click on the QR code for a short video explaining the history of Blues music

SCAN ME

HISTORICAL CONTEXT

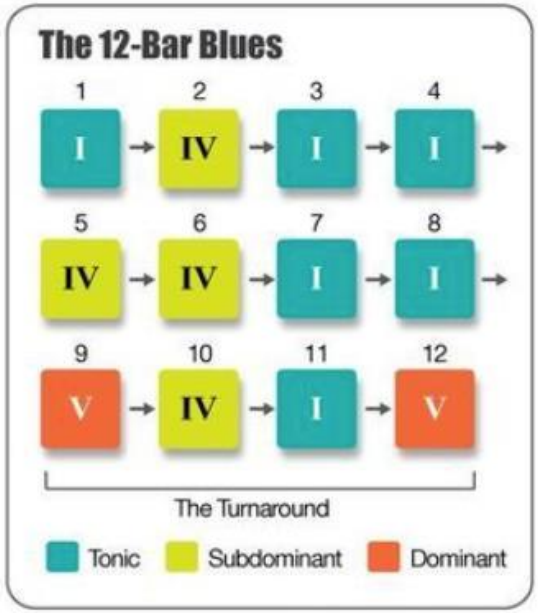
In the **1600s** & **1700s**, millions of Africans were captured and sold as **slaves**. Many were taken to **North America**.
To take their minds off their work, which was often brutally hard, they sang **work songs**, using their tools to give the music a **beat**.
Over the years, **African musical styles**, such as **call & response** singing, blended with **chords** was the beginning of **The Blues**.
When slavery was abolished in the **1860**s, life remained hard for ex-slaves in the southern states. The lyrics and tone of their songs continued to be **sad** and '**blue**'.
By the **1920s,** blues was popular all over America.
In the **1940s** & **50s** a style called **rhythm & blues** was developed (a speeded up version of the blues with electric instruments).

NOTE VALUES



The 12-BAR CHOOSE STRUCTURE

There are lots of different types of blues, but the most popular song structure is the 12-bar blues.
The 12-bar blues uses a set **chord pattern** that is **12 bars long**.
The only chords are I, IV and V (**Primary Chords**).
The 12-bar pattern is **repeated** throughout the song.



KEYWORDS

Walking Bass - the bass part in the Blues 'walks' up the notes of a chord creating a 'walking bass' part.

12-Bar Blues - traditional style of music, using 3 chords over a 12-bar cycle.

Syncopation - when music is played on the **offbeat** (i.e. not played on the main beat of the bar). This creates a disjointed feel.

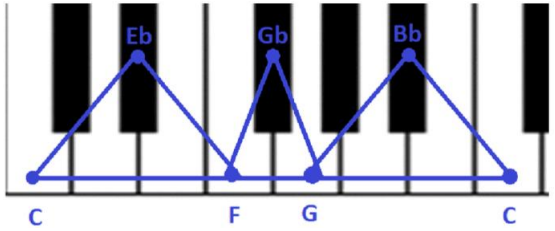
Improvisation - music that is made up on the spot by a performer, often based on a given chord progression or set of notes.

Accompaniment – the accompaniment is the background music that supports a melody. This is provided by the chords, played either on Piano or Guitar

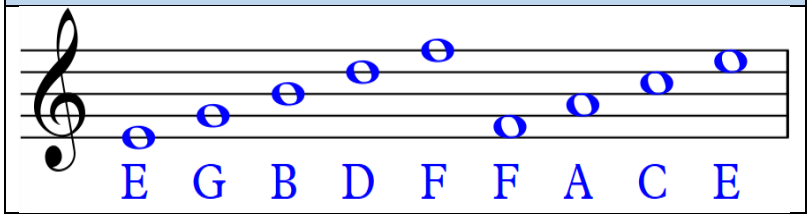
Chord – A chord is 3 notes played at the same time. This type of chord is called a ***triad***. Only certain notes sound nice as a chord. The notes have to have a space of 1 keyboard key between them. There are 2 types of chord: Major and Minor. Major chords sound happy, Minor chords sound sad.

THE BLUES SCALE IN C

The melody of a Blues piece uses a special scale - The Blues scale is built using the **flattened 3rd, 5th and 7th notes**.



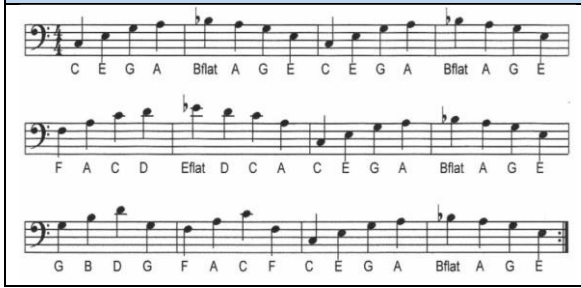
NOTE NAMES IN THE TREBLE CLEF



The Blues in C, this would be as follows:

C / / / C+E+G	C / / / C+E+G	C / / / C+E+G	C / / / C+E+G
F / / / F+A+C	F / / / F+A+C	C / / / C+E+G	C / / / C+E+G
G / / / G+B+D	F / / / F+A+C	C / / / C+E+G	C / / / C+E+G

THE WALKING BASS



YEAR 7

KNOWLEDGE ORGANISER – SAMBA MUSIC

WHAT IS SAMBA MUSIC?

Samba is a musical genre and dance style with its roots in Africa via the West African slave trade and African religious traditions. Samba is an expression of Brazilian cultural expression and is a symbol of carnival. Samba schools formed and compete bringing people together.
Samba has become popular as a Latin-American ballroom dance on TV shows such as Strictly Come Dancing and Dancing with the Stars. Samba has also been mixed/fused with Drum 'n' Bass in a musical fusion creating "Sambass" and artists and groups of popular music have used sounds and rhythms of Samba in their music e.g. Gloria Estefan and Jamiroquai.

HISTORY OF SAMBA

Both abroad and in Brazil, samba has become a symbol of the Brazilian nation and its people. Samba, as we know it today, is an urban music style that arose in the early 1900s in the slums (favelas) of Rio de Janeiro. A samba band normally consists of Tamborims , **Snare drums** (Caixa), Agogo bells, surdos, Ganzás / Chocalho (shakers). The Apito is often used by the leader to signal breaks and calls.

KEYWORDS

Polyrhythm – Multiple rhythms played at the same time.

Sambista – The name of a performer who plays samba music.

Call and Response – When a musical phrase is directly answered by another phrase.

Ostinato – A repeated musical pattern

Improvisation – When music is made up on the spot

Syncopation – Notes played against the beat

Cross Rhythms – Effect when two conflicting rhythms are heard together

Call & Response – When a musical phrase is directly answered

Oral Tradition – Music that is not written down but instead passed down by word of mouth

TRADITIONAL SAMBA INSTRUMENTS

The instruments of Samba have been influenced by Portuguese colonies who imported slaves from Africa, while the rhythms of Samba are of African origin.
Instruments include:


SURDO


AGOGO BELLS


CLAVE


GANZA


REPINIQUE


TAMBORIM


CAIXA


APITO

SAMBA

SCAN ME

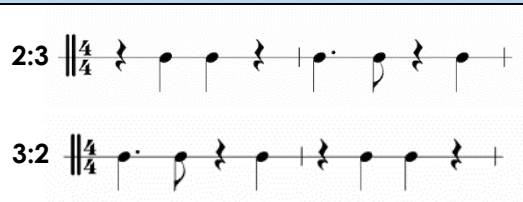
NOTATION

- **Quaver (1/2 beat)**
- **Crotchet (1 beat)**
- **Minim (2 beats)**
- **Semibreve (4 beats)**
- **Crotchet rest (1 beat)**
- **Quaver rest (1/2 beat)**

TEXTURE

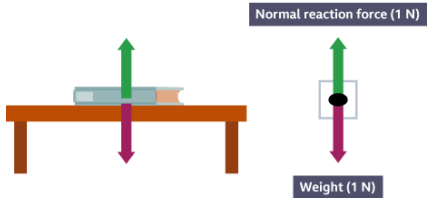
Texture varies in Samba music, often **MONOPHONIC** where a single rhythm is heard as in **CALL AND RESPONSE** sections, sometimes **POLYPHONIC** where sections of the Samba band play different rhythms **(OSTINATOS)** creating **CROSS-RHYTHMS** (when two rhythmic patterns that "conflict" with each other occur simultaneously) creating a thick texture of interweaving and interlocking rhythms.

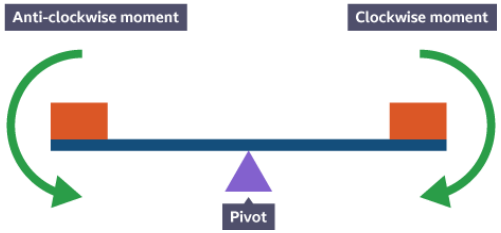
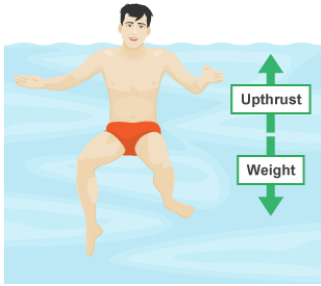
SON CLAVE RHYTHMS

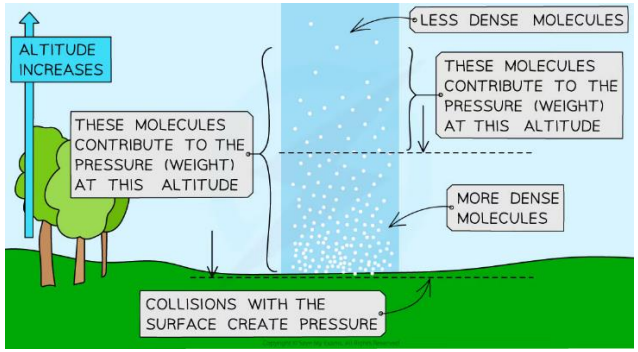
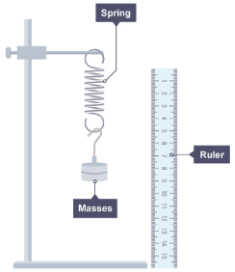
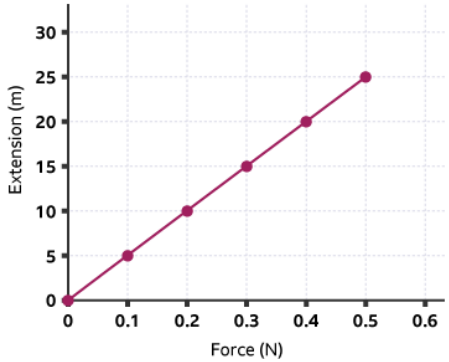


Year 7 Cycle 2 – Immediate, Short- and Long-Term Effects of Exercise

Week 1 and 2	Week 3 and 4	Week 5 and 6	Week 7 and 8	Week 9 and 10	Week 11 and 12
Immediate Effects	Short Term Effects	Long Term Effects	Physical health & well-being	Mental (emotional) health & well-being	Social health & well-being
The immediate effects of exercise begin as soon as you start to exercise. **Immediate effect 1** – Heart rate increases. Your heart begins to work harder as it needs to deliver oxygen to the working muscles. **Immediate effect 2** – Temperature increases. As you begin to exercise you will begin to feel hotter. **Immediate effect 3** – Your breathing rate increases deepens. This is because you need to get more oxygen to the working muscles. **Immediate effect 4** – Sweating and red skin. These 2 things happen because it's how the body deals with temperature control. 	The short-term effects of exercise can occur any time between 24-36 hours after you finish exercising. - **Muscle cramps** - **Fatigue** - **Light headed** - **Nauseous** - **Muscle aches**  **DOMS:** if your exercise with high intensity. DOMS stands for Delayed onset Muscle Soreness. Some of the **negative short-term effects** – such as feeling fatigued, light headed and nauseous – are quite common until you establish a regular exercising routine. **Once you have this routine they are likely to disappear**.	**Change 1 – Improved body shape.** This can be in lower body weight or improved muscle tone. **Change 2 – Improved components of fitness.** Increase your strength, muscular endurance, flexibility and cardiovascular fitness. . **Change 3 – Your cardiovascular endurance will improve.** This means you will be able to exercise for longer. **Change 4 – Your muscles will increase in size and produce greater strength.** When muscles are trained small tears are created. As these tears heal, they become thicker. This process is called hypertrophy. **Change 5 – Your heart will increase in size.** This is called cardiac hypertrophy. This will enable the heart to deliver more oxygen to the working muscles. **Change 6 – Your resting heart rate will be lower**. Bradycardia is the name given to a low resting heart rate. A resting heart rate below 60 BPM is bradycardic	To have good **physical health & well-being** means: •All your body systems are working well •You are free from illness & injury •You are able to carry out every-day tasks  Regular exercise can make improvements to your **physical health & wellbeing** in the following ways: 1.**Improves heart function** –reduces chances of a heart attack. 2.**Reduces the risk of some illness** –reduces chances of heart disease & strokes. 3.**Avoidance of obesity** – reduces the chances of diabetes linked by being obese.	The World health organisation (WHO) defines mental health & well-being as: **a state of well-being where individuals:** 1.Realise their own potential 2.Cope with the stresses of life 3.Can work productively & fruitfully **The benefits of exercise to mental health & well-being are:** 1.Reduce stress/tension –help prevent illnesses such as depression. 2.Increase in serotonin –when release makes you feel good. 3.Greater ability to control emotions – increase confidence & self-esteem.	**Social health & well-being** is when: •Basic human needs are met (food, shelter & clothing) •Individuals have friendships, support & some value in society •Is socially active & has little stress in social circumstances.  **Regular exercise** or joining a team or club is a great way to achieve the **social benefits** as: •Meeting new friends or existing friends •Improves cooperation skills •Increases social activities therefore reducing engaging in anti-social behaviour. 

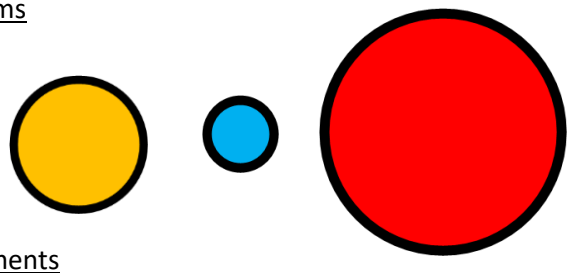
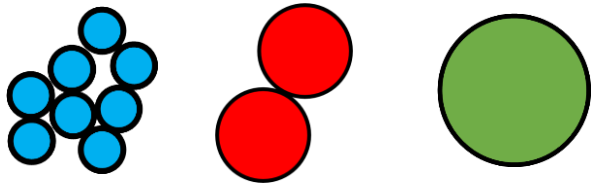
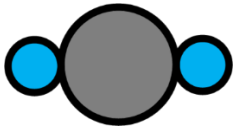
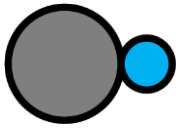
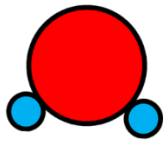
Lesson 1 Contact and non-contact forces	Lesson 2 Mass and weight	Lesson 3 Balanced and unbalanced forces
A force is a push or a pull that acts on an object. We cannot see forces, but we can see their effects. **Contact forces** act between objects that are touching and **non-contact** forces act between objects that are not touching. Contact forces include • tension, • friction, • air resistance, • upthrust, • thrust • and normal reaction force. Non-contact forces include • magnetic forces, • electrostatic forces • and gravitational forces. Forces have a size (**magnitude**) and a **direction**. The unit of force is the newton (N) A device for measuring forces is called a force meter or newton meter.	**Mass** is the amount of matter and is measured in kilograms (kg) and is the same everywhere in the Universe. There are 1000 grams in 1 kilogram. To covert grams to kilograms, divide by 1000. Mass is measured using a **top-pan balance**  **Weight** is the force due to gravity. It is measured in Newtons (N) and changes throughout the Universe. $$\text{weight} = \text{mass} \times \text{gravitational field strength}$$ The gravitational field strength on Earth is approximately 10 N/kg. Weight can be measured with a newton meter. 	Multiple forces can act on an object. The forces acting on an object can be shown with a free body diagram.  The **resultant force** is the overall force acting on an object. When forces act in the same direction, the resultant force is equal to the forces added together. When forces act in opposite directions, the resultant force is equal to the difference between the forces. When the forces are balanced (equal to each other) the resultant force is 0 N. The object will not change speed or direction. If the resultant force is not zero, the forces are unbalanced and the object could speed up, slow down or change direction.

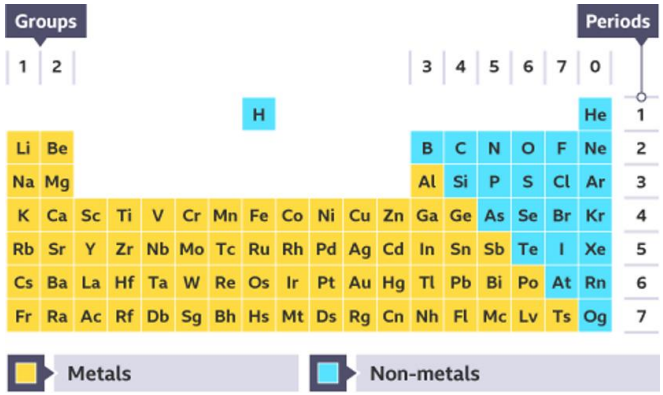
Lessons 4 and 5 Moments and the principle of moments	Lesson 6 Pressure on a solid surface	Lesson 7 Pressure in liquids
A **moment** is the turning effect of a force around a pivot. The pivot is the point around which an object can turn. Moment of a force = force × perpendicular distance from the pivot The units for moment are newton metres (Nm). The **principle of moments** states that for an object to be **balanced** the total clockwise moment must be equal to the total anti-clockwise moment.  Levers act as **force multipliers**. A spanner with a long handle increases the distance from the pivot and so a smaller force is needed to undo a nut from a bolt. The handle of a door is far from the hinges so that a smaller force is needed to open or close the door.	**Pressure** is a measure of how concentrated a force is. It depends on the size of the force and the surface area it is spread over. pressure = force ÷ area The units for pressure are pascals (Pa). One pascal is equal to one newton per square metre (1 N/m^2). Pressure can also be measured in N/cm^2. It is easier to cut things with a sharp knife than with a blunt knife because the sharp knife has a smaller surface area and will exert a larger pressure on the object being cut. A snowboard has a large surface area which spreads the snowboarder's weight out and reduces the pressure exerted on the snow. This will stop them sinking into soft snow.	Pressure in a liquid increases with depth due to the increased mass of liquid above that point. The pressure will also depend on the density of the liquid. A partially (or totally) submerged object experiences a greater pressure on the bottom surface than on the top surface. This creates a resultant force upwards. This force is called the upthrust. An object floats when its weight is equal to the upthrust. 

Lesson 8 Atmospheric pressure	Lesson 9 Forces and stretching	Lesson 10 Force-extension graphs
The atmosphere is a thin layer of air round the Earth. The atmosphere gets less dense with increasing altitude (height above sea level). Atmospheric pressure decreases as the height of a surface above ground level increases. This is because, as the altitude increases: • the number of air molecules decreases • the weight of the air decreases • there is less air above a surface  	When a force is applied to an object it can change its size or shape. We call this **deformation**. Deformation can either **stretch** (increase the length of) or **compress** (decrease the length of) objects. **Elastic** materials will return to their original shape when the force is removed. **Inelastic** materials will change shape permanently. This is called **plastic deformation**. When you apply a force to a material it can extend. The **extension** is the amount the length has increased by.  The **independent variable** is the weight applied to the spring. The **dependent variable** is the extension. **Control variables** include using the same spring for all the measurements.	A graph of force against extension can be used to show if an object has undergone elastic or inelastic deformation.  Most elastic objects follow **Hooke's Law** which states that the extension is **directly proportional** to the force applied. This means a graph of force against extension is a straight line through the origin. Some materials will reach their **elastic limit** which is the point at which so much force is applied that the material will not return to its original shape and is **permanently deformed**.

Revision Questions

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
1. Name 3 contact forces 2. Name 3 non-contact forces 3. What is the unit of Force? 4. Which device would be used to measure the size of a force? 5. What other property do forces have as well as size?	1. Define mass 2. What is the unit of mass? 3. Which device would be used to measure mass? 4. Define weight 5. What is the difference between mass and weight?	1. Draw a free body diagram showing a book resting on a shelf 2. What is a resultant force? 3. What is the size of the resultant force on an object when the forces are balanced? 4. What are the 3 possible outcomes of unbalanced forces acting on an object?	1. What is a pivot? 2. What is a moment? 3. What is the equation for calculating the size of a moment? 4. What are the units of a moment? 5. How is a clockwise moment different to an anti-clockwise moment?	1. What is the principle of moments? 2. Why is it easier to undo a nut from a bolt with a longer spanner? 3. Why are door handles on the edge furthest from the hinges?
Lesson 6	**Lesson 7**	**Lesson 8**	**Lesson 9**	**Lesson 10**
1. Which two quantities does pressure depends on? 2. What is the equation for pressure? 3. Give 3 units for pressure 4. Calculate the pressure exerted by a force of 5N spread over an area of $0.1m^2$ 5. Explain why it is easier to cut things with a sharp knife than a blunt one	1. Why does pressure underwater increase the deeper you go? 2. What is upthrust? 3. What causes upthrust? 4. What will happen to an object when the upthrust on it is equal in size to its weight?	1. What is the atmosphere? 2. As you go higher in the atmosphere, how does the density change? 3. Give 3 reasons why the atmospheric pressure decreases as altitude increases	1. Define deformation 2. What is the difference between stretching and compressing? 3. What is the difference between elastic and inelastic materials? 4. Describe an experiment to see how the extension of a spring changes as more weight is applied to it	1. What is Hooke's law? 2. Sketch a graph of force against extension for a spring being stretched 3. What is the elastic limit of a material?

Lesson 1 **Atoms & Elements**	**Lesson 2** **Compounds & Making Compounds**	**Lesson 3** **Formula**
An atom is the smallest particle of an element. An element is a pure substance made from just one type of atom. <u>Atoms</u>  <u>Elements</u>  <u>Element symbols</u> Oxygen = O Sodium = Na Chlorine = Cl Carbon = C Sulfur = S Hydrogen = H Iron = Fe	A compound is a pure substance that is made from more than one element. In a compound, elements are chemically bonded together, which makes it very difficult to separate them. Compounds are not found on the periodic table. For example, water isn't on the periodic table because it is a compound, not an element. Elements in a compound have different properties to the pure elements on their own. Carbon Dioxide CO_2  Carbon Monoxide CO  Water H_2O 	sodium + chlorine → sodium chlor***ide*** copper + sulfur → copper sulf***ide*** RULE: If two elements combine the product will end in ***'ide'*** copper + sulfur + oxygen → copper sulf***ate*** RULE: If there are more than two elements and one is oxygen, the product will end in ***'ate'*** When a compound is made, the atoms of the elements bond together in a fixed ratio. This means that each compound can be represented by a chemical formula. For example, the formula of water is H_2O and the formula of carbon dioxide is CO_2. CO_2 1 atom of carbon bonds to 2 atoms of oxygen CO 1 atom of carbon bonds to 1 atom of oxygen NaCl 1 atom of sodium bonds to 1 atoms of chlorine $CaCO_3$ 1 atom of calcium bonds to 1 atoms of carbon and 3 atoms of oxygen

Lessons 4 Periodic Table & Development	Lesson 5 Group 1	Lesson 6 Group 7
There are 118 chemical elements. They are listed on the periodic table in a specific order.  Elements in vertical columns are known as **groups**. Horizontal rows are called **periods**. Our modern Periodic Table was developed by a Russian scientist called Dimitri Mendeleev	**Group 1** are very reactive metals. They are called the **Alkali metals**. lithium - Li sodium - Na potassium - K rubidium - Rb caesium - Cs francium - Fr **Physical properties** are the features of a substance which can be observed without changing the substance itself. Examples: • Melting point • Boiling point • Electrical conductivity Going down the group melting and boiling point of the Alkali Metals decreases. **Chemical properties** are the features of the way a substance reacts with other substances. Elements in the same group have similar chemical properties. Going down the group the **Alkali Metals** become **more reactive**.	**Group 7** are reactive non-metals. They are called the **Halogens**. fluorine - F chlorine - Cl bromine - Br iodine - I astatine – At Going down the group melting and boiling point of the Halogens increases. **Displacement** reaction - The more reactive element will displace a less reactive element from its compounds. **fluorine + potassium chloride → potassium fluoride + chlorine** chlorine is displaced because it is less reactive than fluorine Going down the group the **Halogens** become **less reactive**.

Lesson 7 Group 0	Lesson 8 Metals & Non-Metals	Lesson 9 Properties of Metals
Group 0 are unreactive gases. They are called the **Noble gases**. helium – He neon – Ne argon – Ar krypton – Kr xenon – Xe radon – Rn Going down the group melting and boiling point of the **Noble gases increases.** **Noble gases** are unreactive because they have a full outer shell of electrons. helium is used in balloons as it is **less dense** than air. neon is used in advertising lights. argon and krypton are used in double glazed windows.	The majority of elements are metals and they are found on the left and in the middle of the periodic table. Most metals share a lot of properties: • They have high melting and boiling points meaning they are solid at room temperature • They are good conductors of heat and electricity • They are shiny in their appearance • They are malleable Other common properties of metals are: • They are hard and strong • Have a high density • They are sonorous **Conductor**: A material which allows heat or electricity to move easily through it. **Malleable**: Capable of being hammered or pressed into a new shape without breaking **Sonorous:** Able to make a ringing sound when hit. Non-metals have properties in common with each other. • Poor conductors of heat and electricity • Dull in their appearance • Weak and brittle Some other common properties of non-metals are: • Generally low melting and boiling points, meaning they are gases and liquids at room temperature • Not sonorous **Brittle**: Something which is brittle is easily broken or shattered. An element doesn't have to have every property of metals for you to classify it as a metal! As long as it has most metal properties, you can be confident that it is a metal.	

Revision Questions

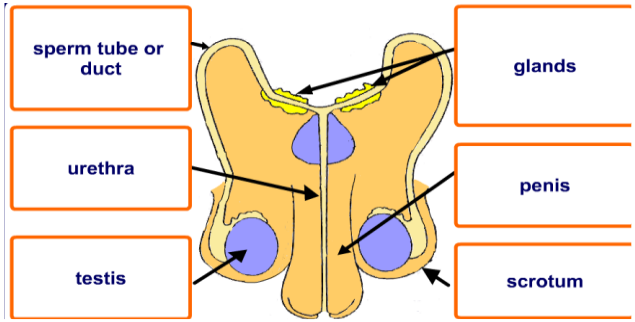
Lesson 1 1. What is an atom? 2. Draw a particle diagram for an atom. 3. What is an element? 4. Draw a particle diagram showing an element. 5. What is the symbol for chlorine?	Lesson 2 1. What is a compound? 2. Why is carbon dioxide not found on the periodic table? 3. True or False: compounds have different properties to the elements that they are made from? 4. Draw a diagram for H_2O. 5. How does the diagram link support H_2O being the formula?	Lesson 3 1. Copper + sulfur → 2. Sodium + chlorine + oxygen → 3. How many oxygen atoms are in $CaCO_3$? 4. What elements make up lithium sulfate? 5. What is the formula for calcium chloride, (1 atom of calcium bonds to 2 atoms of chlorine)?	Lesson 4 1. How many elements on the periodic table? 2. What are groups? 3. What are periods? 4. Who developed the modern periodic table? 5. Where would I find metals on the periodic table?
Lesson 5 1. What is the name of the group 1 metals? 2. List the group 1 metals. 3. What is a physical property? 4. What is a chemical property? 5. State the trend in reactivity of the group 1 metals.	Lesson 6 1. What is the name of group 7? 2. List the elements in group 7. 3. What is a displacement reaction? 4. What is the trend in boiling point of group 7? 5. State the trend in reactivity of group 7.	Lesson 7 1. What is the name of group 0? 2. List the elements in group 0. 3. What is the trend in boiling point of group 0? 4. Why are elements in group 0 unreactive? 5. Which gases are used in double glazing?	Lesson 8/9 1. State a property of metals 2. State a property of non-metals 3. What does malleable mean? 4. What does conductor mean? 5. What does brittle mean?

Lesson 1 Puberty

Adolescence is the time in your life when both physical and emotional changes occur

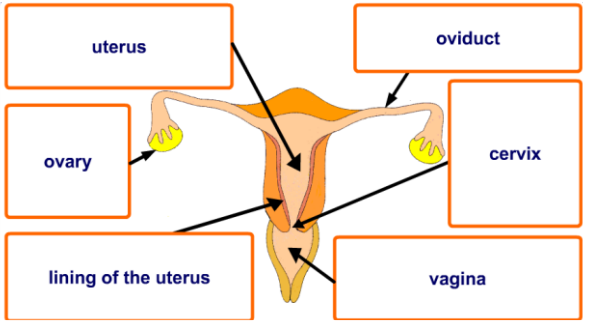
Puberty is the physical changes that occur during adolescence

Lesson 2 Male Reproductive System

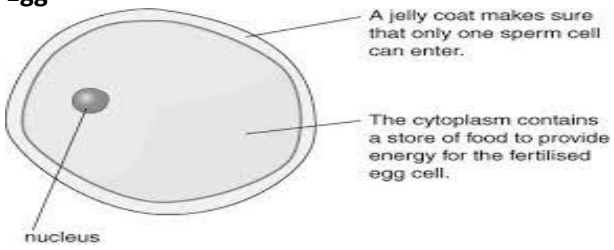
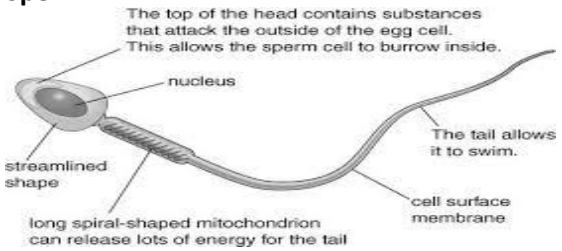
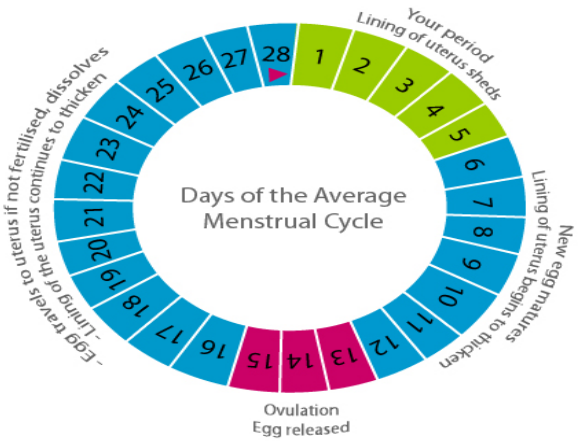


Part	Function
Testis	Produce sperm and male hormone testosterone
Scrotum	Sac of skin outside body that contains the testes
Glands	Produce fluids to nourish the sperm
Sperm duct	Tube that carries sperm and fluids (semen) form testes to urethra
Urethra	Tube inside the penis that can carry urine or semen.
Penis	Allows a man to pee or to place semen into vagina of women during sex.

Lesson 2 Female Reproductive System

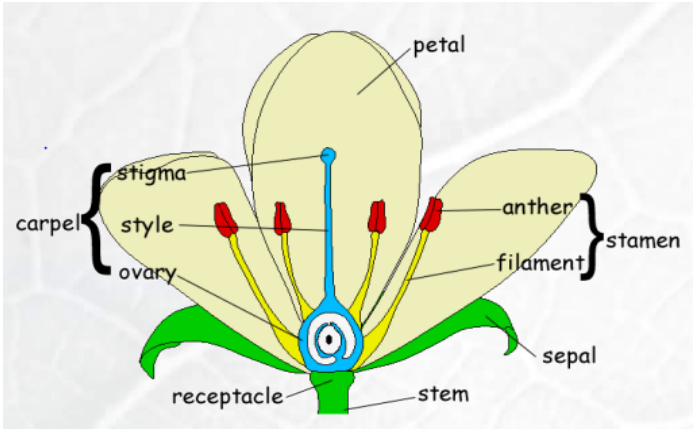


Part	Function
Ovaries	Produce eggs (ova)and female hormones oestrogen and progesterone
Oviduct	Tubes that connect ovary to uterus. Where sperm fertilises the egg. Contain cilia which waft to move the egg along.
Uterus	Muscular bag, where baby develops. Lining thickens every month.
Cervix	Ring of muscle at entrance of uterus
Vagina	Where sperm are placed during sex.

Lesson 3 Fertilization & Implantation	Lesson 4 Fetal Development	Lesson 5 The Menstrual Cycle
Ovulation: Once a month one of the ovaries releases a mature egg (ovum) into the oviduct. **Fertilisation**: When a sperm and egg join together and the genes from the mother and father combine to form a new life. It occurs in the Oviduct. The sperm has to dissolve the membrane of the egg. The nucleus of the sperm then fuses with the nucleus of the egg. **Implantation**: The fertilised egg sinks into the soft lining of the uterus. It develops a placenta and develops into a fetus. **Egg**  **Sperm**  	**Embryo** – One week after fertilisation the ball of cells is called an embryo. **Placenta** - Attached to the uterus wall, takes oxygen and nutrients from the mother's blood for the foetus and puts waste material in to the mother blood from foetus **Umbilical Cord**- Connects developing baby to its placenta. Carries food, oxygen, and waste between the placenta and growing foetus **Amniotic Fluid** - Liquid surrounding the embryo protecting it inside a sac called the **Amnion.** **Foetus** - After 10 weeks an embryo has grown all of its organs so it is called a foetus Other substances can also pass through the placenta. **Drugs** can affect the fetus - slowing the growth of the fetus, reducing the amount of oxygen and causing bleeding - which can be life threatening. **Drinking alcohol or smoking** while pregnant are also dangerous and can increase the risk of stillbirth, premature birth and long-term health conditions.	**The Menstrual Cycle** starts at puberty in girls. Each cycle lasts about 28 days. The uterus lining thickens so that it is able to receive a fertilized egg. If an egg is fertilized, it can implant itself in the prepared uterus lining. If it is not fertilized, the lining of the uterus breaks down and is lost from the body. This is called **menstruation** or a period. 

Lesson 6
Flower structure and Pollination

Parts of a Flower



Petal	Coloured, flag-like structures which attract insects
Stamen	The male sex organ – made of the filament and the anther
Anther	Part of the male sex organ – makes pollen
Filament	A thin stalk that supports the anther
Carpel	The female sex organs – made of the stigma, the style and the ovary
Stigma	Collects pollen
Style	Connects the stigma to the ovary
Ovary	Found inside the ovary; contains the egg cell

Pollination is the act of transferring pollen grains from the male anther of a flower to the female stigma. There are two types of pollination:

Self-pollination: The pollen grain lands on the same flower it originated from

Cross-pollination: The pollen grain lands on a different flower to the one it originated from

Bees, butterflies, beetles, moths and flies are all pollinators. Without them, food security would be threatened and there would be a worldwide shortage of fruit; especially apples, plums and pears.

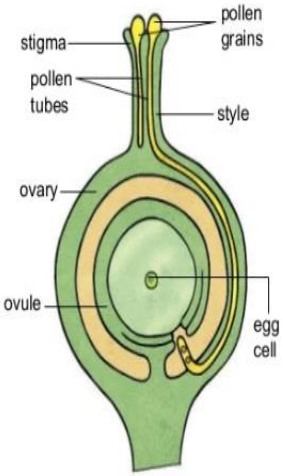
Many plant species could also decline or become extinct along with the organisms that directly or indirectly depend on them. Bees are facing many threats globally. These include habitat loss, climate change, toxic pesticides and disease.

Lesson 7
Fertilisation and Germination

Fertilisation is the joining of gametes.

Pollen is the male sex cell in a plant.

- When a pollen grain lands on the surface of a stigma, it produces a tube.
- The inside of the tip of the tube contains the male cells of the flower.
- These tubes grow down the style to reach the ovules in the ovary.
- Inside each ovule is an egg cell.



The nucleus from the male sex cell (pollen) then moves down the tube to join with a female sex cell (an ovule) in the ovary.

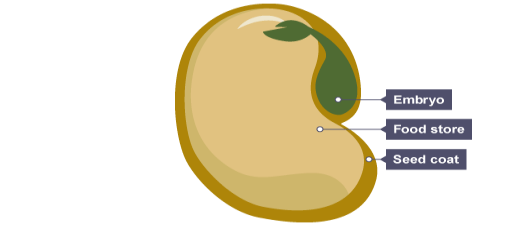
Fertilisation is when the two nuclei join

Lesson 8
Seeds and Fruit

Most fruits have seeds, which make them capable of developing into new plants. The ovary develops into a fruit. Each fertilised ovule forms a seed.

A seed has three main parts:

An embryo: the young root and shoot that will become the adult plant
Food store: starch for the young plant to use until it is able to carry out photosynthesis
Seed coat: a tough protective outer covering



A cross-section of a seed

Seeds will often lie dormant until the conditions around it are just right for germination. Factors such as temperature, concentration of oxygen in the air and water will affect germination

Lesson 9
Seed Dispersal

Seed dispersal is the transport of seeds from the plant to another area in order to grow. These are the main ways in which seeds can be dispersed: Animals, Explosion, Wind and Water

Seeds must be dispersed or spread away from each other and from their parent plant. This is to reduce competition between one another and increase their chances of survival

Dispersal method	Description	Example
Animal	Some plants use hooks on their fruits. These attach themselves to the fur of mammals or feathers of birds and get carried from one place to another.	Cocklebur, goose grass, burdock
Animal	Fleshy fruits are eaten by animals. The seeds are then dispersed after passing through the digestive system of animals that have eaten the fleshy fruits.	Tomato, raspberry, grape
Animal	Animals such as squirrels may store nuts to eat later and forget to go back to get them, giving them a chance to germinate.	Acorns
Explosion/self-propelled	Have a pod that bursts open when ripe, throwing the seeds away	Pea pod
Wind	Some plants have seeds that act as parachutes, which are carried away by the wind	Dandelions
Wind (spinning)	Some seeds are winged. They spin like helicopters as they fall from the tree, providing a longer time for dispersal by wind.	Maple fruits, sycamore
Water	Some plants grow near rivers, lakes, streams or oceans. Their fruits or seeds fall from the plant and are carried away by the water.	Coconut, silver birch, willow

Year 7 Science
Reproduction

Revision Questions

<table>
<tr>
<td>Lesson 1
1. What is adolescence?
2. Puberty is the……. changes that occur during adolescence.
3. List 2 changes during puberty, that happen in boys only
4. List 2 changes during puberty, that happen in girls only
5. List 2 changes during puberty, that happen in both boys and girls.</td>
<td>Lesson 2
Fill the gaps.

The male reproductive system has two ……1…..These are contained in a bag of skin called the ……2…….The testes have two functions: to produce millions of ……3…….and to make male sex hormones. During ejaculation the sperm pass through the sperm ……4….and mix with fluids produced by the……5…….</td>
<td>Lesson 3
1. How often is an ovum released?
2. Which 2 cells join together during fertilisation?
3. Where does the fertilised egg implant?
4. Why does an egg contain lots of cytoplasm?
5. Why does a sperm cell have many mitochondria?</td>
<td>Lesson 4
1. How old is an embryo?
2. What does the placenta take to the baby?
3. What connects the baby to the placenta?
4. What fluid protects the baby inside the uterus?
5. When does an embryo become a fetus?</td>
<td>Lesson 5
1. How long does a menstrual cycle last?
In an average cycle…
2. How many days does the period last?
3. How many days does it take for the uterus lining to thicken?
4. Which days could ovulation happen?
5. How many days after ovulation, does it take before the next period starts?</td>
</tr>
<tr>
<td>Lesson 6
1. Why do flowers have petals?
2. Which part of a flower makes pollen?
3. What is the female part of the plant called?
4. Where is the egg cell found?
5. How is self-pollination different to cross-pollination?</td>
<td>Lesson 7
1. What is the male sex cell in a plant?
2. What is the female sex cell in a plant?
3. Where does the pollen land?
4. How does the pollen nucleus get to the egg cell?
5. What happens when the egg and pollen nuclei join?</td>
<td>Lesson 8

1. Why do plants need seeds?
2. Why do seeds need a coat?
3. Where does a seed get its energy from?
4. List 2 things a seed needs in order to germinate.</td>
<td colspan="2">Lesson 9

Name a plant which spreads it seeds by..
1. Wind
2. Pods exploding
3. Animals storing their nuts
4. Carried on fur or feathers
5. Water</td>
</tr>
</table>