



BRISTOL
METROPOLITAN
ACADEMY

3 rd January 2021	Week B
10 th January 2021	Week A
17 th January 2021	Week B
24 th January 2021	Week A
31 st January 2021	Week B
7 th February 2021	Week A
14 th February 2021	Week B

Complete your homework on the night stated e.g. if it is a Monday week A you will complete DT and English homework.

Knowledge Organisers 2021-22 Year 8 – Term 3

	Week A	Week B
Monday	English/DT	Science/MFL
Tuesday	Maths/Drama	ICT/PE
Wednesday	Science	English
Thursday	RS/Music	Geography/Art
Friday	History	Maths

How to use your knowledge organiser



Look

What topic/subject are you focusing on?

What task have you been set?

Top tips:

1. Focus on the information you are most unsure of first
2. Follow the timetable in your homework book to make sure you are revisiting subjects equally
3. Don't panic if you don't remember all the information first time, keep revisiting it
4. You can ask your parents/carers to test you/check your work

Self quizzing

You need to create 5 questions (with their answers) about the content on the knowledge organisers.

Top tip! Use subject specific language e.g. function. If you aren't sure what they mean, look it up, ask an adult or ask your teacher.

What do we need carbohydrates for?

- Functions**
- Primary source of energy
 - Store energy for later
 - Build DNA
 - Prevent the body from using proteins as an energy source

What happens if we have too much or too little?

- Excess**
- Tooth decay
 - Type 2 diabetes
 - Weight gain and obesity
 - Hyperglycaemia
- Deficiency**
- Weight loss
 - Lack of energy, tiredness
 - Severe weakness
 - Hypoglycaemia

Questions you might consider:

1. What is a key function of carbohydrates?

It is our primary source of energy.



Write

Complete the task in your homework book.

Make sure to write the date, subject and topic you are focusing on (and underline them).

Revision

Here you are recording key facts/concepts to help you remember them.

Keyword/theme development

Here you are focusing on keywords/ themes and practising memorising them.

Key Events

1	5 th January 1066 - Edward the Confessor dies, leaving no heir to the English throne.
2	6 th January 1066 - Harold Godwinson is crowned King of England.
3	26 th September 1066 - Harold Godwinson, a Viking claiming the English throne, invades England with more than 10,000 men in 200 longships.
4	29 th September 1066 - The Battle of Stamford Bridge. Harold Godwinson, defeats and kills Harold Godwinson, but this takes Harold's army.
5	27 th September 1066 - William Duke of Normandy, invades the South of England.
6	14 th October 1066 - The Battle of Hastings. Harold marches south to meet William, where they battle at Hastings.
7	25 th December 1066 - William is crowned King of England at Westminster Abbey.

See Timeline

You might write these key events out like a timeline.

Key events

5th January 1066
Edward the Confessor dies, leaving no heir to the English throne.

6th January 1066
Harold Godwinson is crowned King of England



Check

Once you have finished go back and check your work against the knowledge organiser. Make any corrections crossing out mistakes with a single line.

Why not ask someone at home to check your work with you?

Key Terms	Definitions
State of matter	Matter is divided into three states: solid, liquid, and gas
Melting	Change of state from solid to liquid
Freezing	Change of state from liquid to solid
Evaporation	Change of state from liquid to gas
Condensation	Change of state from gas to liquid

Copying these words into your book can help you to remember them.

Contents:

Art Pg 2

ICT Pg 3

Drama – Pg 4

DT – Pg 5

English – Pg 6 - 7

Food – Pg 8

French – Pg 9-10

Geog – Pg 11

German - Pg 12

History – Pg 13

Maths – Pg 14-15

Music – Pg 16

PE – Pg 17

RS – Pg 18-19

Science – Pg 20-21

Spanish – Pg 22-23

Textiles - Pg 24

Year 8 Creature & Characters

Content: In this project you will

Knowledge—of different artists who create creatures and characters

Understand—What inspired artists to create their work and how to write about the work

Skills—drawing, collage, painting, clay and showing the influence of other artists in your own work and presentation

Outcome— a 3D monster and watercolour painting



Nicola L Robinson is an illustrator for children's books. She is interested in mythology, history and fairy tales. Her favourite media to work in is 'pen and ink.' She is still working around the UK.

Artists



Alex Lucas is a Bristol based artist, who creates illustrations in a range of media. He also creates murals on walls and garages around the city. Keep an eye out for his artwork!



Cressida Cowell

Keywords

Illustration—a decoration, interpretation or visual explanation of a text.

Texture—used to describe how an object would feel when touched

Complementary Colours—opposite each other on the colour wheel

Assessment

D	Demonstrate a deepening knowledge, understanding and skill
O	On Track—demonstrate some knowledge, understanding and skills
Y	Yet to be on track—developing some knowledge, understanding and skills
A	At an earlier stage—starting to develop some knowledge, understanding and skills

Analysis

All artist research pages should be annotated

Artwork-

- **Artist name**
- Describe the work-what does it look like?
- Use the formal elements i.e. colour, line etc.
- What techniques/materials were used?
- What is your opinion of the work?
- How is it relevant to your own idea?

Sentence starters

I like/dislike the way the artist has used...because

I think the colour scheme used is effective because...

I think the artist has been inspired by...because

Evaluation of Your Artwork-

- What inspired you to create the piece?
- What techniques did you use and why?
- What does it mean to you?
- How is it relevant to your idea?

Consider

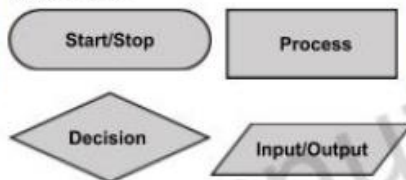
Mythology, Fantasy and Surrealism as sources of inspiration

Year 8 - Computational Thinking

Year 7 - Knowledge

Flowcharts

Using symbols to represent algorithms.



Computational Thinking

Algorithm

Step by step list of instructions to complete a task

Abstraction

Process of removing unnecessary details

Decomposition

Process of breaking down tasks into smaller sub tasks

Pattern Recognition

Finding the similarities or patterns among small, decomposed problems

Pseudocode

Representing algorithms using a common language.

1. Get name
2. IF name = "Mr Ahmed":
3. Display "You are cool"
4. ELSE:
5. Display "You are kind of cool"

Year 8 - Knowledge

Variables

Memory in code that changes

1. name ← USERINPUT
2. OUTPUT name

Programming Constructs

Sequence - More than 1 line of code outside Selection and Iteration structures.

1. age ← USERINPUT
2. age < 17 THEN
3. OUTPUT "You can not drive"

Selection - IF Statement (decisions)

1. age ← USERINPUT
2. IF age < 17 THEN
3. OUTPUT "You can not drive"
4. ELSE
5. OUTPUT "You can drive"

Iteration - Repetition in instructions

1. OUTPUT "Want to hear a joke?"
2. joke ← USERINPUT
3. WHILE joke != "Yes" THEN
4. OUTPUT "Want to hear a joke?"
5. joke ← USERINPUT
6. OUTPUT "A fish swam into a wall"
7. OUTPUT "Damn"

Data Types

Character - An individual letter e.g. "A"

String - A group of characters e.g. apple12

Integer - A whole number e.g. 58

Real/Float - A decimal number e.g. 4.58

Boolean - True or False

Operators

Operator	Meaning	Operator	Meaning
+	Addition	≠	Not Equal
-	Subtraction	<	Less Than
*	Multiplication	≤	Less/Equal
/	Divide	>	More Than
=	Equal	≥	More/Equal

Errors

Logic Error - Occurs when there is a fault in the logic or structure of the problem.

Syntax Error - Syntax is the spelling and grammar of a programming language. An error occurs when you type in the code incorrectly.

Debugging

The process of identifying errors (bugs) and fixing them



Romeo and Juliet - Plot summary

Romeo and Juliet is a play written by Shakespeare. It is a tragic love story where the two main characters, Romeo and Juliet, are supposed to be sworn enemies but fall in love. Due to their families' ongoing conflict, they cannot be together, so they kill themselves because they cannot cope with being separated from one another. Romeo and Juliet is a Shakespearean **tragedy**.



- Two wealthy families, the Montagues and the Capulets, have another brawl in the city of Verona. The Prince and the townspeople cannot cope with the constant fighting so the Prince declares that the next person to break the peace will be killed.
- Romeo Montague and his friends gatecrash a Capulet party and Romeo meets Juliet Capulet. He falls in love with her instantly. They are shocked to discover they are sworn enemies due to their feuding families. Friar Laurence marries Romeo and Juliet.
- Romeo goes to celebrate his marriage with his friends, Mercutio and Benvolio, but gets into a fight with Juliet's cousin, Tybalt. Tybalt kills Mercutio and Romeo avenges his death by killing Tybalt.
- The Prince banishes Romeo because he killed Tybalt. Both Romeo and Juliet are heartbroken.
- Capulet, Juliet's father, decides she should marry Paris. Juliet refuses and goes to Friar Laurence where they come up with a plan for Romeo and Juliet to be together.
- Juliet fakes her death and lies in a tomb waiting for Romeo to come so they can run away together. Romeo doesn't receive the message about the plan, so thinks Juliet has actually died. He goes to Verona and sees Juliet in her tomb, 'dead'.
- Romeo drinks poison so he can be with Juliet in death. She wakes up to discover Romeo is dead. Juliet kills herself with his dagger.
- The Capulet and Montague families vow never to argue again.

Key themes



The most obvious theme in *Romeo and Juliet* is that of love, but the play deals with many other important ideas too. Shakespeare invites us to examine the importance of fate, death, honour, friendship and duality. All of these themes are still relevant today, which is why the play is still popular after all these years.

The main themes in *Romeo and Juliet* are:

- love
- fate
- duality (or opposites)

The prologue introduces the theme of fate when the lovers are called "**star-crossed**" and "**death-marked**". This means that the events of their lives, and their deaths, are somehow already decided.

There are lots of incidences throughout the play when the main characters refer to omens that hint at their tragic ending. For example, before the Capulet party, Romeo feels worried that something bad is "**hanging in the stars**". Later when Juliet looks at Romeo from the balcony she is upset that she sees him "**as one dead in the bottom of a tomb**".

We know from the start of the play that the lovers will die, and the events all lead to this tragic end.

The very first word of this play is "**two**", and throughout the play we are presented again and again with pairs of people and concepts. In terms of people we have Capulets and Montagues, Romeo and Juliet, Tybalt and Benvolio. As you can see, sometimes the pairs are complementary and work together. Other times they are opposites. We also see duality in the main ideas the play deals with. For example, love and hate, war and peace, home and exile. Perhaps Shakespeare was trying to show us that everything is part of a whole.

The main theme of love is introduced at the very beginning by the Chorus who tells the audience that this is a play about "**star-crossed lovers**". When we first meet Romeo he is love-sick for Rosaline and talks to Benvolio about how painful love can be.

During the Capulet's party, we are presented with 'love at first sight' when Romeo and Juliet fall instantly for each other. The romantic love between the couple develops throughout the play and for them love ultimately leads to death.

We also see the strength of love between friends when Mercutio stands up to take Romeo's place in a fight with Tybalt.

Parental love is also explored when Capulet suggests that his daughter is too young to marry Paris. He is protective of Juliet. Later when Tybalt dies, Capulet brings the wedding between her and Paris forward, as he thinks this celebration will ease her grief.

Opposites and oxymorons



In this play, two families are at war, the Capulets and Montagues. These two sides can be seen as opposites. Throughout the play, Shakespeare highlights other opposites that we find in life:

- life and death
- love and hate
- light and dark

This emphasises the hate and the love that exists between the two families.

When words with contradictory meanings are placed side by side, it is called an oxymoron. Again, they highlight the contradiction between Romeo and Juliet's love against the backdrop of their warring families.

Imagery and metaphor



Imagery in *Romeo and Juliet* is vivid and often poetic. It adds to the feelings that the characters express and often makes the language of the play beautiful and romantic. For example, when Romeo spots Juliet on her balcony, instead of saying "Oh, she looks nice!" he says "**It is the east, and Juliet is the sun.**" This image of Juliet as the sun shows us how bright she appears to him. The sun is necessary for life, so perhaps Romeo is suggesting that Juliet is essential for his life.

Year 8 D&T – Night Light Project

A is for **Aesthetics**
C is for **Cost**
C is for **Customer**
E is for **Environment**
S is for **Size**
S is for **Safety**
F is for **Function**
M is for **Material**

Analyse the
Dinosaur Night
Light by using
ACCESS FM

You can use ACCESS FM to analyse existing products, write a specification, annotate designs and to evaluate the final outcome!

Remember to
consider the
sustainability of
your design – try
using the 6 R's!



Pillar Drill



File



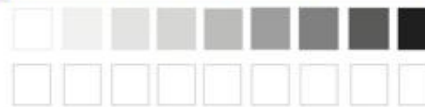
Fret Saw



Soldering Iron



Practice your tonal drawing skill here



Practice your isometric drawing here



Develop Ideas with Sketches

- 1) 'Freehand' means drawing without using any equipment (except a pencil or pen).
- 2) You can combine 2D and 3D sketches to explain details.
- 3) And you can annotate your sketches (add notes) to explain details further, e.g. describing the materials and processes you'd use.



Isometric Drawing Shows Objects at 30°

- 1) Isometric drawing can be used to show a 3D picture of an object.
- 2) It doesn't show perspective (things don't get smaller in the distance), but it's easy to get dimensions right.
- 3) There are three main rules when drawing in isometric:

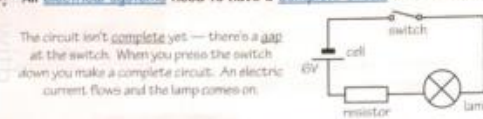
- Vertical edges are drawn as vertical lines.
- Horizontal edges are drawn at 30°.
- Parallel edges appear as parallel lines.

This drawing's been done on isometric dot paper. You could use plain paper and a 30°/60° set square instead.



Electrical Systems Involve Circuits

1) All electrical systems need to have a complete circuit to make them work. Here's a simple circuit:



You can draw diagrams of electrical circuits using symbols to represent the components.

- 2) The materials you use in a circuit have to be conductors — they need to let electricity flow through. E.g. copper is used for the wire that joins the components because it's a good conductor and is ductile.
- 3) Insulators (e.g. PVC) don't let electricity through, so they're used to coat the outside of wires.
- 4) Voltage from a power cell (a battery) or the mains pushes the electric current around a circuit.

- Mains power is used for non-portable products like fridges and televisions.
- Batteries are used in portable products. There are disposable batteries and rechargeable ones.
- Rechargeable batteries are more expensive than disposable batteries, but can be cheaper in the long run as you don't need to keep replacing them. They're built in to some products, e.g. mobile phones.

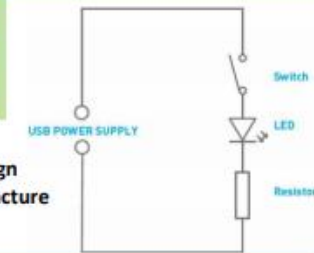
- 5) Resistors are used to reduce the current in a circuit so you don't damage delicate components (e.g. the lamp in the circuit above). Resistance is measured in ohms (Ω). A larger resistance means less current flows.



Acrylic

polymethyl methacrylate (PMMA) is available in a variety of colours. It is a hard, rigid material that weathers well.

Night Light Circuit Diagram



CAD = Computer Aided Design
CAM = Computer Aided Manufacture

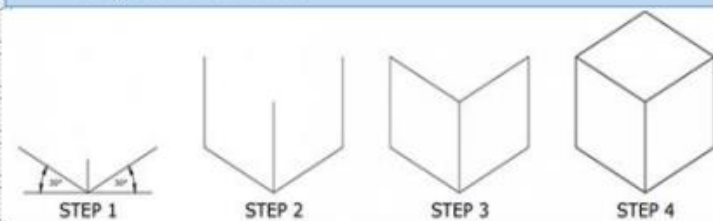
Use modelling to improve your design

Modelling is a good way to solve problems with your design. You can make models using card as it's cheap and easy to work with. When modelling, try out different aspects of your design. For example, you could model just one part of the product separately, to check it works, before going on to the rest.

Test and evaluate each model

After you've made each model, do some tests to check that it's how it should be. Get some potential customers to try it out and give you feedback too.

1. You'll probably find there are some things that don't work out quite how you'd hoped. Write down what the problem is, suggest how to fix it and try out another model.
2. Record how the design develops – take photos of your models.
3. You should evaluate each model, against the design by considering the strengths and weaknesses.





Romeo and Juliet

KNOWLEDGE ORGANISER

Context – The play was written by William Shakespeare, and was first performed around 1594.

Shakespeare's Time – Shakespeare wrote his plays at the time of two monarchs: **Queen Elizabeth I** and **James I**. *Romeo and Juliet* was written relatively early in Shakespeare's career (the bulk of his tragedies were written in the 17th century) yet was extremely popular in his lifetime, as it is now. Shakespeare borrowed heavily from two texts: *The Tragical History of Romeo and Juliet* (1562) and *Palace of Pleasure* (1567).



Religion – The heavy religious presence is evident across several parts of *Romeo and Juliet*. This is reflective of a society across Europe that was deeply religious (predominantly Catholic or Protestant). Several characters demonstrate their **commitment to the church**, such as Romeo and Juliet who choose to marry rather than fornicate, and the Capulets, who are quick to contemplate that Juliet is in a better place (heaven) after she is found 'dead.'



Astrology the Supernatural – At the time of Shakespeare, the belief in both astronomy and the supernatural was far more preeminent than in society today. The reference to **'star-cross'd lovers'** demonstrates the large role of horoscopes and planet positions in being used to predict fate. Also, Romeo and Juliet make reference to the fact that they feel they are being **guided by a supernatural force** (e.g. 'fortune's fool').



Elizabethan England and Italy – Shakespeare frequently engaged with Italy in his plays, leading many to believe that he travelled there between the late 1580s and early 1590s. Italy was a place that Shakespeare's contemporaries would have had a keen interest in; it was already an advanced and beautiful place for travel. Shakespeare's depictions of many areas of Italian life at the time are deemed largely accurate.



Patriarchal Society – Society throughout the Middle Ages and at Shakespeare's time was **patriarchal** – women were considered inferior to men. This was also the case in much of Europe, including Italy. Women belonged to their fathers (or brothers if their fathers had died) and then their husbands, so Juliet would be expected to obey her father. Women were not permitted to own land or enter most professions. They were instead expected to bear children, be gentle and womanly.



Healthcare and Medicine – Healthcare and medicine were not as advanced in Shakespeare's age as they are today – there were numerous ailments and diseases that were not yet understood. This makes it much more believable for both the Capulets and Romeo that Juliet could have died so suddenly and so young. The high death count in the play would seem slightly more common in those days!



Main Characters – Consider what Shakespeare intended through his characterisation of each of the below...

Romeo – The son and heir of Lord and Lady Montague. Romeo is **handsome and intelligent**, yet he is also **impulsive** and extremely **sensitive**. Romeo is a **peaceful** character, and is not interested in the violence that goes on around him, choosing instead to focus his energies on love. Although Romeo's love seems fickle (he loves Rosaline at the outset) his commitment can't be debated in the end!

Juliet – The daughter of Capulet and Lady Capulet. Juliet is a **beautiful** young girl (13 years old at the start of the play). Juliet is **caring, compassionate**, and at times demonstrates **courage** (she defies her parents in order to marry Romeo, and drinks the contents of the vial without fully trusting its effects). At times, she shows great **intelligence and wit**, particularly in conversations with her mother.

First Scene: Act I Scene II **Final Scene:** Act V Scene III

First Scene: Act I Scene III **Final Scene:** Act V Scene III

Prince Escalus – The most **powerful** character in the play, with the authority to govern the other characters and administer sentences. He is also a **hinsman** to Mercutio and Paris. As the **seat of Verona**, his main concern throughout most of his appearances are in relation to ensuring that the peace is kept. He is **merciful** in banishing Romeo for the death of Tybalt, as opposed to sentencing him to death.

Mercutio – A **kinsman** to the prince and one of Romeo's closest friends. Mercutio is an extraordinary character in that he has sparkling wit and a vivid imagination. Much of Mercutio's speeches deal in puns and word-play. He appears to see himself as being above the vices of love, choosing instead to view it as misplaced **sexual appetite**. His **hot-headedness** is eventually his downfall.

First Scene: Act I Scene I **Final Scene:** Act V Scene III

First Scene: Act I Scene IV **Final Scene:** Act III Scene I

Montague and Capulet – The **patriarchs** of the Montague and Capulet families, who have held a long and **violent feud** with one another from some time before the play begins. Both seem to deeply love their respective child, yet do not always seem appropriately aware of their emotional wellbeing. For example, Romeo chooses to walk the streets in melancholy rather than share his feelings with his father, and Capulet feels the best thing for Juliet would be a marriage with Paris.

Friar Laurence and the Nurse – Both Friar Laurence and the Nurse act as **guidance counsel** for Romeo and Juliet. They appear to be the two people that Romeo and Juliet **trust** more than any others in the world, as they are the two that they **confide** in. Friar Laurence is **kind and civic-minded** (believing the marriage may heal the feud), whilst the Nurse is **kind and sentimental** (yet at times vulgar). She seems as though she is more of a mother to Juliet than Lady Capulet has ever been.

Themes – A theme is an idea or message that runs throughout a text.

Love – In *Romeo and Juliet*, love is an extremely **overpowering** force that supersedes all other values, emotions, and loyalties. Through their love, Romeo and Juliet conspire to go against the forces of their entire social world. Romeo returns to visit Juliet at points, even though he is well aware of the threat of death. At times, love is presented as fickle (Mercutio's speeches, Romeo + Rosaline).



Individual vs Society – Romeo and Juliet are forced to undermine the **oppressive rules of society** at the time. For example, rules of the patriarchal family force Juliet to be subservient to her parents, rules of religion mean that they must marry in haste, and rules of masculinity force Romeo into conflict with Tybalt.

Violence – Extreme violence takes place sporadically throughout the play. The **feud** between the two families is so bitter that the mere sight of each other can be the cause of a fight to the death. Unchecked violence is personified through the character of Tybalt. The violence culminates in **Act 3 Scene 1**, in which both Mercutio and Tybalt are murdered.



Fate – In the first address to the audience, the Chorus states that Romeo and Juliet are 'star-cross'd' lovers, meaning that fate had intended for their paths to cross, and that fate **controls their actions**. A series of **unfortunate accidents** towards the end of the play thwart Friar Laurence's plan and eventually manifest in both Romeo and Juliet committing suicide, thus adding to the sense of fate.

Scene-by-Scene Summary – Take note of the key quotations from each scene.

Prologue	The Chorus speaks of an ancient grudge between two households, from which two 'star-crossed lovers' appear.	<i>From forth the fatal loins of these two foes A pair of star-crossed lovers take their life...</i>
Act 1 Scene 1	A street brawl breaks out between the Montagues and Capulets. The Prince intervenes. He threatens the death sentence for anyone who breaks the peace again.	<i>To old Fire-lovers, our common judgment-place, Once more, on pain of death, all men depart.</i>
Act 1 Scene 2	Paris speaks of his desire to marry Juliet to Capulet. They arrange a masquerade ball so that he can begin to woo her. Peter accidentally invites Romeo and Benvolio.	<i>One fairer than my love? The all-seeing sun Ne'er saw her match since first the world began.</i>
Act 1 Scene 3	Lady Capulet discusses the prospect of Juliet getting married to Paris. She dutifully says that she will look upon him.	<i>'Tis look to like if looking liking move! But no more deep will I endart mine eye! Than your consent gives strength to make it fly.</i>
Act 1 Scene 4	Before the ball, Mercutio mocks Romeo. He gives his 'Queen Mab' speech. Romeo fears the night will set fate in motion.	<i>O, then I see Queen Mab has been with you... She is the fairies' midwife...</i>
Act 1 Scene 5	Romeo and Juliet meet at the ball. They immediately fall for each other – Romeo uses metaphors to compare her to a pilgrim. Tybalt spots Romeo and wants to kill him, but Capulet stops him. Romeo and Juliet learn that they are from warring families.	<i>If I profane with my unworthiest hand This holy shrine, the gentle sin is this: My lips, two blushing pilgrims, ready stand To smooth that rough touch with a tender kiss.</i>
Act 2 Prologue	The chorus returns and delivers a sonnet about the new love.	<i>But passion lends them power, time means, to meet,</i>
Act 2 Scene 1	Benvolio and Mercutio search for Romeo, who has escaped them in the hope of re-finding Juliet.	<i>Go then, for 'tis in vain To seek him here that means not to be found.</i>
Act 2 Scene 2	The famous 'balky scene'. Romeo decides that he cannot go home without seeing Juliet again. He trespasses into her garden, where she appears at a window. They decide that they will wed.	<i>If that thy bent of love be honorable, Thy purpose marriage, send me word tomorrow; By one that I'll procure to come to thee.</i>
Act 2 Scene 3	Romeo visits Friar Laurence to ask if he will wed him to Juliet. Whilst shocked at how fickle Romeo's love is, he agrees.	<i>Thy love did read by rote that could not spell. But come, young waverer, come go with me.</i>
Act 2 Scene 4	Romeo arrives to meet Mercutio and Benvolio. The Nurse and Peter then arrive, and Mercutio makes fun of the Nurse. When Mercutio leaves, Romeo arranges with the Nurse for Juliet to meet him at Friar Laurence's chamber.	<i>The sovereignty will fall upon Macbeth. Bid her devise! Some means to come to shift this afternoon. And there she shall at Friar Laurence' cell Be shrived and married.</i>
Act 2 Scenes 5-6	The Nurse sends Juliet to Friar Laurence's cell, where they are married. The Nurse warns them to love moderately.	<i>But come what sorrow can, it cannot countervail the exchange of joy! That one short minute gives me in her sight.</i>
Act 3 Scene 1	Tybalts duels Mercutio. Romeo tries to make peace, but Tybalt stabs Mercutio dead under Romeo's arm. In rage, Romeo kills Tybalt. The Prince arrives and exiles Romeo.	<i>'A plague o' both your houses' 'A plague o' both your houses', and 'you shall find me a grave man'</i>
Act 3 Scene 2	The Nurse tells Juliet of the fight. Juliet is traumatised by the idea of an exiled Romeo. The Nurse says she knows where he is hiding.	<i>O nature, what hast thou to do in hell! When thou didst bow the spirit of a fiend! In mortal paradise of such sweet flesh?</i>
Act 3 Scenes 3-4	Romeo despairs at hearing of being banished. The Nurse makes a plan for him to visit Juliet before leaving. Elsewhere, Capulet contacts Paris and arranges for Juliet to marry him.	<i>There is no world without Verona walls But purgatory, torture, hell itself. Hence 'banished' is banished from the world.</i>
Act 3 Scene 5	Romeo reluctantly leaves Juliet. Her mother then tells of the marriage to Paris. She rejects it. Capulet threatens to disown her.	<i>Hang thee, young baggage! Disobedient wretch! I tell thee what: get thee to church o' Thursday.</i>
Act 4 Scenes 1-2	Juliet meets Friar Laurence, saying that she would rather kill herself than marry Paris. Friar Laurence proposes the sleeping potion plan. She agrees, returns to her parents, and repents.	<i>Take thou this vial, being then in bed, And this distilled liquor drink thou off.</i>
Act 4 Scene 3	Juliet is scared, but drinks the contents of the vial.	<i>Romeo, Romeo, Romeo! Here's drink, I drink to thee.</i>
Act 4 Scenes 4-5	The Nurse finds Juliet dead on her wedding morning. The family are distraught, but agree to make the funeral arrangements.	<i>O me, O me! My child, my only life, Revive, look up, or I will die with thee!</i>
Act 5 Scene 1	Romeo is told of the death by Balthasar. Romeo decides that he will return to Verona to kill himself. Before doing so, he purchases poison from an apothecary.	<i>Well, Juliet, I will lie with thee tonight. Let's see for means. O mischief, thou art swift!</i>
Act 5 Scene 2	Friar Laurence learns that Romeo has not received his letter informing him of the plan, and is worried. He doesn't know that Romeo now thinks that Juliet is dead.	<i>Unhappy fortune! By my brotherhood, The letter was not nice but full of charge.</i>
Act 5 Scene 3	Romeo finds Juliet's body and kills himself. She awakens and kills herself. Montague and Capulet commit to resolve.	<i>For never was a story of more woe Than this of Juliet and her Romeo.</i>

Dramatic Devices in Romeo and Juliet

Features of a Tragedy in Romeo and Juliet

Dramatic Irony	Mercutio and Benvolio think Romeo is still pining over Rosaline, but the audience knows he has moved on to Juliet. A2 S1	Tragic Hero – A main character cursed by fate and possessed of a tragic flaw (Romeo, and to an extent Juliet).	
Soliloquy	Juliet's opening speech in A3 S2 in which she pours her heart out over her love for Romeo.	Hamartia – The fatal character flaw of the tragic hero (his passion and impulsiveness).	
Aside	Juliet secretly hopes for the 'villain' Romeo: <i>Villain and he be many miles asunder God pardon him!</i> A3 S5.	Catharsis – The release of the audience's emotions through empathy with the characters.	
Foreshadowing	Friar Laurence: <i>These violent delights have violent ends. And in their triumph die, like fire and powder.</i> A2 S6	Internal Conflict – The struggle the hero engages in with his/her fatal flaw.	

Year 8 Knowledge Organiser: Poetry (Relationships)

Poems	Summary	Key Themes
Sonnet 43 - Elizabeth Barrett Browning	The speakers uses a traditional Petrarchan love sonnet form to list the ways in which she has unconditional love for her fiancé.	<ul style="list-style-type: none">• Romantic and idealistic love• Conventional love poem• Religion
Valentine - Carol Ann Duffy	The speaker presents their lover with the unconventional valentine gift of an onion and explains their reasoning behind this. They reject traditional displays of love and instead highlight the realities of an everyday relationship.	<ul style="list-style-type: none">• Realistic portrayal of love• Unconventional approach to love• Romance• Heartache
I Love Me Mudder - Benjamin Zephaniah	The speaker celebrates his mother and all that she has encouraged him to achieve when they moved to England from their home country. The speaker feels valued by his mother and, in turn, is inspired to value everyone.	<ul style="list-style-type: none">• Parental relationships• Maternal love• Cultural identity• Importance of family connection
My Father Thought It - Simon Armitage	Autobiographical poem in which the speaker reminisces about an incident in which he had his ear pierced as a teenager and his father's reaction to it. While at the time, the speaker thinks his father has outdated views, looking back as a 29 year old man, he now has more of an understanding of where his father was coming from.	<ul style="list-style-type: none">• Parental relationships• Paternal love• Identity• Coming of age
Alone - Maya Angelou	The speaker has an epiphany in which she realises that human suffering can be addressed through friendship and community. She believes that relationships and 'togetherness' are the key to the common good for all people.	<ul style="list-style-type: none">• Importance of community• Human suffering• Togetherness vs. being alone
Nuptials - John Agard	The speaker looks to nature as a source of inspiration for a long and successful marriage. He emphasizes the importance working together and not struggling to do things alone.	<ul style="list-style-type: none">• Romantic connection• Importance of togetherness vs. being alone

Year 8 Knowledge Organiser Poetry (Relationships)

Literary Terms and Devices	
Metaphor	A comparison where one thing is said to be another.
Personification	Giving human features to inanimate objects.
Alliteration	When the same consonant sound (not the same letter) is repeated at the beginning of words.
Assonance	When the same vowel sound is repeated throughout a line of poetry.
Rhyme	Words at the end of a line which sound the same.
Rhythm	The beat and pace of a poem.
Stanza	A group of lines forming a section (verse) in a poem.
Enjambment	The continuation of a sentence without a pause beyond the end of the line.
Caesura	A break between words in a line usually through punctuation.
Free verse	Poetry that does not have a regular rhyme or rhythm.
Sonnet	A poem of fourteen lines using any of a number of formal rhyme schemes, in English typically having ten syllables per line.
Phonetic spelling	When words are spelt in the way that they are pronounced.

Important Vocabulary			
Dialect	A form of language specific to a city or area.	Idealistic	An unrealistic and overly positive idea.
Maternal	Having the qualities of a mother.	Familial	Relating to family members.
Unconditional	The person doing or giving something does not require anything back in return.	Epiphany	A moment of sudden realisation and understanding.
Autobiographical	When an author writes about his or hers own life.	Devotion	Dedication something to a person or cause.
Reminisce	To talk or write about past events that you remember with pleasure.	Regret	To have a sense of sorrow about events in the past
Culture	The ideas and behaviours of a particular group in society.	Conventional	Based on what is generally done or believed.

Why do we cook food?

The application of heat in the preparation of a food or mixture may:

- improve digestibility;
- improve appearance, flavour, odour and texture;
- increase the availability of nutrients;
- prevent spoilage;
- increase keeping qualities.

Heat Exchange

As a food is heated, its molecules absorb energy and vibrate more vigorously. The faster they move, the more the temperature of the food rises. If heat is removed, the molecules become less active, reducing the food's temperature.

Heat can be exchanged in three ways:

- conduction;
- convection;
- radiation

Factors that affect food choice

Coeliac – cannot eat products containing gluten.

Lactose intolerance – the body can't digest the sugar lactose in dairy products.

Vegetarian: No meat in the diet

Vegan: No products from animals in the diet e.g. meat, milk or honey.

Religion:

Islam: Requires Halal meat, no alcohol, no pork

Judaism: Requires Kosher food, no meat and dairy together, no pork

Hinduism: No beef

Micro-nutrients

Vitamins and minerals are essential nutrients that your body needs in small amounts to work properly.

Fat-soluble vitamins

Fat-soluble vitamins (vitamin A, D, E and K) are mainly found in: animal fats, vegetable oils, dairy foods, liver and oily fish. While your body needs these vitamins to work properly, you don't need to eat foods containing them every day.

Water-soluble vitamins

Water-soluble vitamins (vitamin C, the B vitamins and folic acid) are mainly found in: fruit and vegetables, grains, milk and dairy foods. These vitamins aren't stored in the body, so you need to have them more frequently. If you have more than you need, your body gets rid of the extra vitamins when you urinate.

Minerals

Minerals include calcium and iron amongst many others and are found in: Meat, cereals, nuts, fish, milk and dairy foods, fruit and vegetables.

Minerals are necessary for 3 main reasons:

Building strong bones and teeth
Controlling body fluids inside and outside cells

Turning the food you eat into energy

Macros**Protein**

Build & Protects Muscle
Found in meat, dairy & some plants

**Fat**

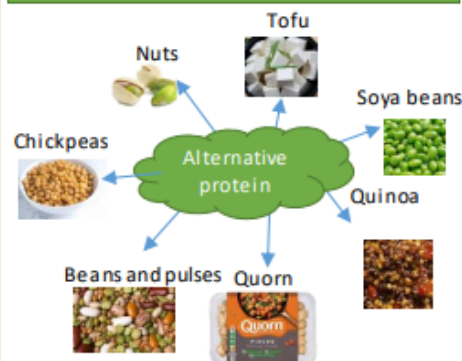
Provides Long Lasting Energy
Found in nuts, oils, dairy & meat

**Carbs**

Quickest Source of Energy
Found in fruits, veggies & grains

**Alternative protein**

Proteins are known as the building blocks of life. In the body, they break down into amino acids that promote cell growth and repair. (They also take longer to digest than carbohydrates, helping you feel fuller for longer and on fewer calories—a plus for anyone trying to lose weight.) You probably know that animal products—meat, eggs, and dairy—are a good source of protein.

**Food Poisoning**

Food poisoning is a disease caused by eating a spoiled or contaminated food. Such food may contain certain microorganisms, toxins or enzymes.

Symptoms of food poisoning:

- Stomach pains and cramps
- Nausea and vomiting
- Diarrhoea
- Fever
- Shivers



Vegetarians and vegans don't consume meat so instead they use protein alternative products which are manufactured in order to provide protein in a diet and protein rich foods.

Protein complementation is when two **LBV proteins** are eaten together. Examples of protein complementation's are: hummus with pitta bread; nut roast made from a variety of nuts and seeds; vegetable curry and rice; lentil soup and wholemeal bread; baked beans on toast.

LBV proteins - Foods that are deficient in one or more of the essential amino acids are said to have a **low biological value (LBV)**. Foods originating from plants (cereals, nuts, seeds, lentils, beans, pulses)

Setting and thickening (coagulation): Eggs will set when cooked. This is shown when you make a quiche or an egg custard.

Enriching: Eggs add nutritional value to a dish. This is shown when you make egg fried rice.

Raising agent: When whisked, eggs can hold air and become a raising agent. They can make a mixture light in texture, e.g. Chocolate éclairs.

As a glaze and to add colour: Beaten egg can be used as a glaze which turns golden brown on heating. An example is glazing sausage rolls with egg before cooking to give a golden brown finish.

Aeration: Eggs can be whisked to hold air and form a foam. The protein in the egg white becomes stretched and holds the air bubbles. This is shown in making meringues or a whisked sponge. When the meringues or whisked sponge are cooked the protein sets and hardens.

Functions of Eggs

Food Spoilage**Cross-contamination**

Cross-contamination means that bacteria, toxins or food particles were transferred to a food product.

Cross-contamination can cause food poisoning and allergic reactions.

Anaphylactic shock is a life-threatening reaction of the immune system to an allergen.

Food can become contaminated from:

- Waste food and rubbish
- Pest and rodents
- The cook's hand
- Work surfaces and equipment
- Other contaminated foods, including high-risk foods.






Most common allergens:

- Nuts
- Fish and seafood
- Milk
- Eggs



Signs of Food Spoilage- Many species of microorganism and some enzymes can cause food spoilage.

	Bacteria	Yeast	Mould	Enzymes
Food Spoilage	The bacteria <i>Clostridium botulinum</i> produces a toxin which causes meat preserves to bulge. Bacteria can also make meat products look slimy and green in colour.	Ferments sugar in juices and beverages, making them sour, fizzy and foamy. 	Create green, white or black coat on food products such as bread, grapes, tomatoes and jams. 	Turns bananas, apples, potatoes and other foods brown. 

Key words

Microorganism- a very small living bacteria.

Toxins- poison of plant or animal origin, especially one produced by or derived from microorganisms

Preserves – something in its original state

Ferments – The process in which yeast produces the gas carbon dioxide and alcohol.

Micros**Vitamins**

Made by Plants & Animals
Found in meat, dairy & plants

**Minerals**

Consumed by Plants & Animals
Found in meat, dairy & plants

Où habites-tu ? J'habite... dans une maison dans un appartement dans une caravane à la campagne à la montagne au bord de la mer en ville en banlieue dans un village dans le nord dans le sud dans l'ouest dans l'est	Where do you live? I live... In a house In a flat In a caravan In the countryside In the mountains By the sea In a city/town In the suburbs In a village In the north In the south In the west In the east	My home! Year 8 French ARE 8.6 vocab. list		Qu'est-ce qu'il ya dans ta ville? Il y a... La plage La jetée La piscine La patinoire La boucherie La boulangerie La gare La gare routière La librairie La pâtisserie La poste Le centre-ville Le cinéma Le musée Le théâtre Le syndicat d'initiative Le centre commercial Le centre de loisirs Le commissariat Le marché Le supermarché Le stade Le parc d'attractions Le tabac L'hôpital Les monuments Les magasins Les cafés Les restaurants	What is there in your town? There is... The beach The pier The swimming pool The ice rink The butchers The bakery The train station The bus station The book shop The cake shop The post office The town centre The cinema The museum The theatre The tourist information office The shopping centre The leisure centre The police station The market The supermarket The stadium The theme park The newsagent's The hospital The monuments The shops The cafés The restaurants
Où est...? sur sous devant dans derrière entre à côté de en face de près de	Where is...? on under in front of in behind between next to opposite to near to	Qu'est-ce qu'il y a dans ta maison ? Il y a ... il n'y a pas de... Un jardin Un grenier Un bureau Un garage Un salon Une entrée Une cuisine Une chambre Une salle à manger Une salle de bains Une terrasse Des toilettes La chambre de mes parents Au premier étage Au deuxième étage Au rez-de-chaussée	What is there in your house? There is / are... There isn't... A garden An attic An office/study A garage A living room A hall A kitchen A bedroom A dining room A bathroom A terrace Some toilets My parents' bedroom On the first floor On the second floor On the ground floor	 Cabot Learning Federation	
¿Qu'est-ce qu'on peut faire? ¿Qu'est-ce que tu vas faire? On peut... Je vais ... faire de la promenade visiter des musées manger dans un restaurant relaxer sur la plage sortir avec les amis	What can you do? What are you going to do? You can... I am going to... Go for a walk Visit museums Eat in a restaurant Rest on the beach To go out with friends	Qu'est-ce qu'il y a dans ta chambre ? Un lit Un mur Un bureau Un ordinateur Une armoire De la moquette Une étagère Une lampe Une porte Une chaise Une fenêtre Une commode Des posters	What is there in your bedroom? A bed A wall A desk A computer A wardrobe Some carpet A shelf/shelves A lamp A door A chair A window A chest of drawers Some posters		

Year 8 French Knowledge Organiser 8.6

Where I live geographically, Places in town, Phrases that use infinitives.

Opinion starters:

Je pense que	I think that
Je crois que	I believe that
À mon avis	In my opinion
Pour moi	For me
Il me semble	It seems to me

Je pense que Bristol est historique - I think that Bristol is historic

Je crois que Londres est assez industriel – I think that London is quite industrial

Je préfère Bath parce que c'est moins touristique que Liverpool – I prefer Bath because it is less touristy than Liverpool.

Phrases that use infinitives.

An infinitive is the basic form of the verb. In English it starts with to_ to run, to jump, to swim.

In French the verb ends in –re, -er, -ir.

e.g. I like to run – J'aime courir.

On peut – One can

Je vais – I am going to

J'aime – I like

These are followed by an infinitive.

On peut **aller** au centre-ville – One can go to the city centre.

Je vais **manger** dans un restaurant – I am going to eat in a restaurant.

J'aime **jouer** dans le parc - I like to play football in the park.

Aller – to go

I	Je vais – I go / I am going
you	Tu vas – You go / you are going
he/she/it	Il/elle/on va – he goes / he is going
we	Nous allons – we go / we are going
you (pl)	Vous allez – you (pl) go / are going
they	Ils/ells vont – they go / are going



Il y a (there is) and il n'y a pas (there is not) – these phrases are very important to allow us to say what is in our town or city.

Remember! When using il y a, we use a 'de', but no article

e.g. **Il y a** un parc but **il n'y a pas de** parc

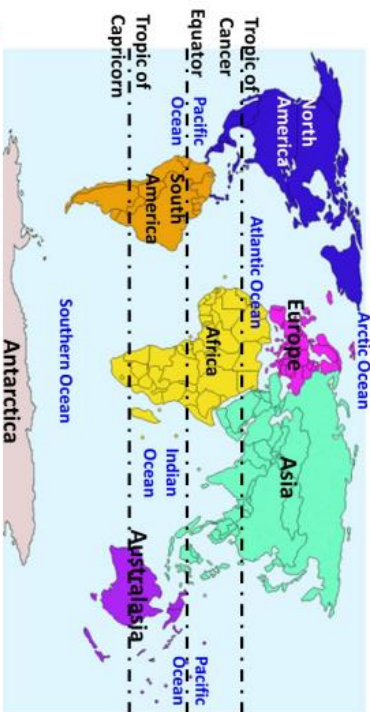
It is important to use the correct **article** in front of a noun. This will depend on if we want to say 'a' (indefinite article) or 'the' (definite article), and also in French if the noun is **masculine, feminine, singular or plural**.

Articles	A/some	The
Masculine	Un	Le
Feminine	Une	La
Plural	Des	Les

KNOWLEDGE ORGANISER

Year 8 Term 3 Geography

Why do people want to live in Europe?



Europe is made up of 44 countries!

It borders the continent of Asia and is surrounded by the Atlantic ocean to the west and the Arctic Ocean up north!

Why is Europe important?

- It is considered the birthplace of Western civilisation.
- About 10% of the worlds population live in Europe.
- It is the worlds second smallest continent.
- There are more than 60 indigenous languages, with 53% of Europeans being able to speak a second language.
- Five out of the top ten tourist destinations in the world are located in Europe.

Key Word	Definition
Physical Geography	The study of all natural forms and processes in an environment.
Human Geography	The study of people and places - the relations between policies, cultures, social behaviours, economics and environments.
Population	All the inhabitants of a particular place.
Migration	The movement of people from one place to another.
Natural Increase	When birth rates overtake death rates.
Immigration	To action of coming to live permanently in a foreign country.
Emigration	To act of leaving one's own country to settle permanently in another.
Net Migration	The difference between immigration and emigration from an area during the year.
Refugee	A person who has been forced to leave their country to escape war, persecution or a natural disaster.
Multiculturalism	The presence of several distinct cultural or ethnic groups within a society.
Push Factor	A factor that pushes someone away from a country.
Pull Factor	A factor that attracts someone to a country.

KNOWLEDGE ORGANISER

Year 8 Term 3 Geography

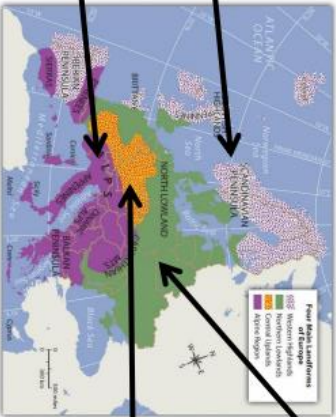
Europe's physical geography

Western Highlands

- Define by hard, ancient rock shaped by glaciation.
- As the glaciers receded, they left a number of distinct physical features such as marshlands, lakes and fjords.

Alpine Region

- A very mountainous region, including Europe's largest mountain range: the Alps.
- There are also many active volcanoes in this region: Mount Etna and Mount Vesuvius in Italy.



Northern Lowlands

- It is the most densely populated region of Europe.
- It is home to many rivers (which many boats sail down) such as the Rhine, Elbe and Weser.

Central Uplands

- Are less lower in altitude in comparison to the Alpine region.
- Extends east-west across central Europe and includes western France, and Belgium, with some parts of northern Switzerland and Austria.

Migration in Europe

Opportunities – a positive or benefit:

- The NHS has skilled doctors and nurses from all around the world.
- Over 100 languages are spoken in London
- Young people are used to a wide range of religions, fashions and foods.
- Events such as Notting Hill Carnival in London and St Pauls Carnival in Bristol occur.



Challenges – a problem or difficulty:

- Violent race riots have occurred since the 1940's
- Older members of society may find living in a multicultural society difficult.
- Clashes of religion and culture sometimes lead to terrorist attacks.

Why Britain?

- Ancient migrants such as the Romans were interested in Britain's resources, such as wool, copper and farmland.
- These days, many people migrate to and from Europe due to many different reasons:

Push Factors:

- Climate
- High cost of Living
- High taxes
- Natural disasters
- Political
- indifferences
- Unemployment

Pull Factors:

- Job opportunities
- Better Medical care
- Education
- Political Rights
- Better quality of life
- and standard of living



My home! Year 8 German Term 3 vocab. list

Wo wohnst du ? Ich wohne... In einem Haus in einer Wohnung in einem Wohnwagen auf dem Land in den Bergen an der Küste in der Stadt am Stadtrand in einem Dorf im Norden im Süden im Westen im Osten	Where do you live? I live... In a house In a flat In a caravan In the countryside In the mountains On the coast In a city/town In the suburbs In a village In the north In the south In the west In the east
Extending our sentences Opinion phrases Meiner Meinung nach Ich denke, dass Ich glaube, dass Ich finde Intensifiers wirklich sehr ziemlich ein bisschen Connectives weil or denn auch aber obwohl	Extending our sentences Opinion phrases In my opinion I think that I believe that I find Intensifiers Really Very Quite A little Connectives Because Also But However

Was hast du in deinem Haus ? Es gibt ... Es gibt keinen,keine,kein einen Garten einen Dachboden ein Büro eine Garage ein Wohnzimmer einen Eingang eine Küche ein Schlafzimmer ein Esszimmer ein Badezimmer eine Terrasse die Toiletten einen Balkon im ersten Stock im zweiten Stock im Erdgeschoss	What is there in your house? There is / are... There isn't... A garden An attic An office/study A garage A living room A hall A kitchen A bedroom A dining room A bathroom A terrace The toilets A balcony On the first floor On the second floor On the ground floor
Was hast du in deinem Schlafzimmer ? ein Bett eine Wand einen Schreibtisch einen Computer einen Kleiderschrank einen Teppich ein Regal eine Lampe eine Tür einen Stuhl ein Fenster eine Kommode die Poster	What is there in your bedroom? A bed A wall A desk A computer A wardrobe A carpet A shelf/shelves A lamp A door A chair A window A chest of drawers Some posters

Wo ist...? auf unter vor in hinter zwischen neben gegenüber In der Nähe	Where is...? on under in front of in behind between next to opposite to near to
Beschreib dein Dorf/ deine Stadt Es ist... groß klein historisch ruhig touristisch industriell kulturell wichtig lebendig/lebhaft laut (e) verschmutzt modern schön hässlich neu alt bequem Es ist kleiner als... Es ist weniger ... als... Ich bevorzuge... weil Es ist mehr/weniger...	Describe your village/town It's... big small historic peaceful appealing to tourists industrial cultural important lively noisy polluted modern pretty ugly new old comfortable It's smaller ... than... It's less ... than... I prefer... because it is It's more/less...

Enquiry: What was the impact of the Transatlantic Slave Trade at the time?

The **transatlantic slave trade** involved the transportation by slave traders of enslaved African people, mainly to the Americas. The **slave trade** regularly used the **triangular trade** route and its Middle Passage, and existed from the 16th to the 19th centuries.

Key Impacts of the Slave Trade

1	The Human Impact – The impact the slave trade had on people, including: displacement, dehumanization, death, separation of families, suffering, oppression, economic prospects and racism.
2	The Economic Impact – How the slave trade had an impact economically, including: money for industry, the industrial revolution, empire, how Bristol's merchants got very wealthy and money helped build Bristol as a city further.
3	The Global Impact – Laid the foundations for empire. Through trade, empire and globalisation.

The Triangular Trade System

Historians have estimated that around 11 million Black people were forcibly taken from Africa to the Americas. Also that about 1 million died during the Middle Passage.



History – Year 8 Knowledge Organiser Topic 3



Key Historical Skills

4	Impact	To have a marked effect or influence.
5	Significance	The impact at the time and how we judge importance through legacy.
6	Historical Evidence	Sources that we use as Historians to make sense of the past.

Further your learning

Find out more about the impact of the Transatlantic Slave Trade on Bristol here:

<https://www.bristolmuseums.org.uk/stories/bristol-transatlantic-slave-trade/>

Key People

						
Mansa Musa	Olaudah Equino	Toussaint Louverture	Harriett Tubman	Romaine-la-Prophesesse	Marie-Jeanne Lamartinière	Samuel Sharpe

Key Terms

7	Human Rights	The basics rights and freedoms that belong to all humans.
8	legislation	An act/law.
9	racism	Prejudice or discrimination directed against someone of a different race based on the belief that one's own race is superior.
10	slavery	The system where people are owned by other people.
11	slaver	Somebody who owns or keeps enslaved people.
12	trade	The action of buying and selling services.
13	empire	When one country rules over others.
14	colonies	Countries that are controlled by another country.
15	auction	Where enslaved people were sold off to the highest bidder.
16	Plantation	Large farms forced enslaved people to harvest cotton, rice, sugar, tobacco and other farm produce for trade.
17	resistance	Passive: using peaceful methods to oppose. Active: using violent or illegal methods to oppose.
18	revolt	To take violent action against an establishment.
19	Underground Railroad	The system used to help enslaved people escape.
20	emancipation	Freedom from enslavement.

Straight Line Graphs

What do I need to be able to do?

By the end of this unit you should be able to:

- Compare gradients
- Compare intercepts
- Understand and use $y = mx + c$
- Find the equation of a line from a graph
- Interpret gradient and intercepts of real life graphs

Keywords

Gradient: the steepness of a line

Intercept: where two lines cross. The y-intercept: where the line meets the y-axis

Parallel: two lines that never meet with the same gradient

Co-ordinate: a set of values that show an exact position on a graph

Linear: linear graphs (straight line) — linear common difference by addition/subtraction

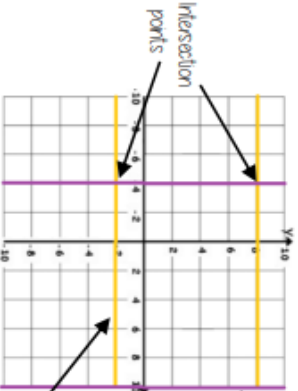
Asymptote: a straight line that a graph will never meet

Reciprocal: a pair of numbers that multiply together to give 1

Perpendicular: two lines that meet at a right angle

Lines parallel to the axes

R



All the points on this line have a x coordinate of 10

Lines parallel to the y axis take the form x - a and are vertical

Lines parallel to the x axis take the form y - a and are horizontal

All the points on this line have a y coordinate of -2

Compare Gradients

$$y = mx + c$$

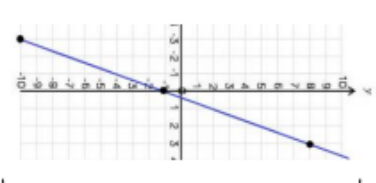
The coefficient of x (the number in front of x) tells us the gradient of the line



The greater the gradient - the steeper the line

Parallel lines have the same gradient

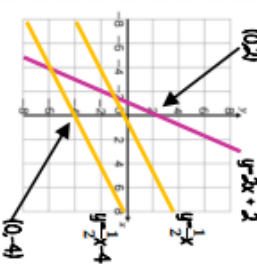
Positive gradients
Negative gradients



You only need two points to form a straight line
Plotting more points helps you decide if your calculations are correct (if they do make a straight line)
Remember to join the points to make a line

Compare Intercepts

$y = mx + c$ The value of c is the point at which the line crosses the y-axis. Y intercept



The coordinate of a y intercept will always be (0,c)

Lines with the same y-intercept cross in the same place

$$y = mx + c$$

The coefficient of x (the number in front of x) tells us the gradient of the line

$y = mx + c$ The value of c is the point at which the line crosses the y-axis. Y intercept

y and x are coordinates

The equation of a line can be rearranged. Eg
 $y = c + mx$
 $c = y - mx$
Identify which coefficient you are identifying or comparing

Real life graphs

A plumber charges a £25 callout fee, and then £12.50 for every hour. Complete the table of values to show the cost of hiring the plumber.

Time (h)	0	1	2	3	8
Cost (£)	£25				£125

In real life graphs like this values will always be positive because they measure distances or depicts which cannot be negative.

The y-intercept shows the minimum charge. The gradient represents the price per mile

Direct Proportion graphs

To represent direct proportion the graph must start at the origin

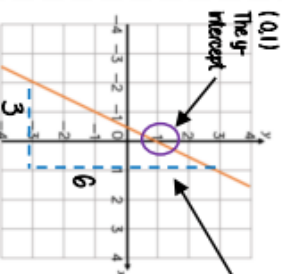
A box of pens costs £2.50

When you have 0 pens this has 0 cost

The gradient shows the price per pen

Boxes	0	1	2	3	8
Cost (£)		£2.50			

Find the equation from a graph



The Gradient $\frac{6}{3} = 2$

$$y = 2x + 1$$

The direction of the line indicates a positive gradient

Positive gradients
Negative gradients

Fractions and percentages of amounts

@whisto_maths

What do I need to be able to do?

- By the end of this unit you should be able to:
- Find a fraction of a given amount.
- Use a given fraction to find the whole or other fractions
- Find the percentage of an amount using mental methods
- Find the percentage of a given amount using a calculator

Keywords

Fraction: how many parts of a whole we have

Equivalent: of equal value

Whole: a number with no fractional or decimal part

Percentage: parts per 100 (uses the / symbol)

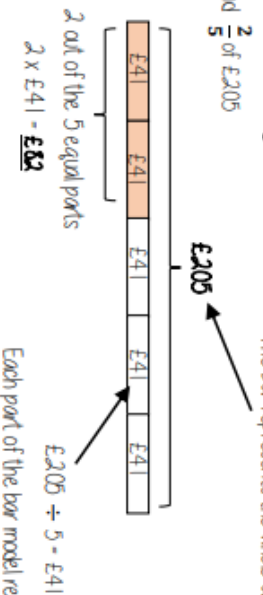
Place Value: the value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right

Convert: change into an equivalent representation, often fraction to decimal to a percentage cycle

Fraction of a given amount

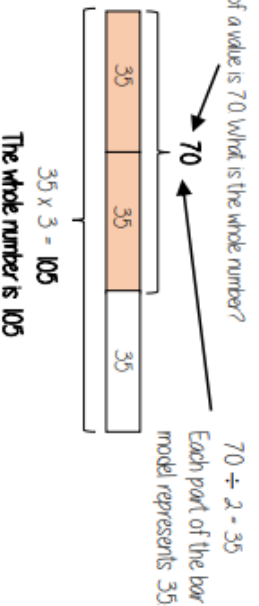
Find $\frac{2}{5}$ of £205

The bar represents the whole amount



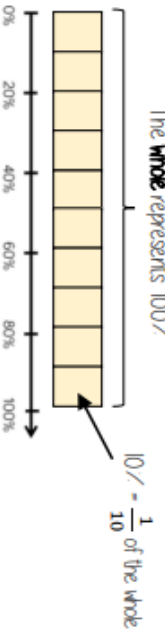
Use a fraction of amount

$\frac{2}{3}$ of a value is 70 What is the whole number?



Find the percentage of an amount (Mental methods)

The whole represents 100%



$$10\% = \frac{1}{10} \text{ of the whole} \quad 50\% = \frac{5}{10} = \frac{1}{2} \text{ of the whole}$$

$$20\% = \frac{2}{10} = \frac{1}{5} \text{ of the whole} \quad 5\% = \frac{1}{20} \text{ of the whole}$$

Find 65% of 80



For bigger percentages it is sometimes easier to take away from 100%

Method 1

$$65\% = 10\% \times 6 + 5\%$$

$$= 16 \times 6 + 4$$

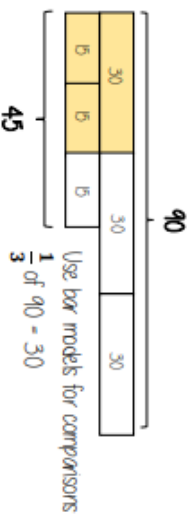
$$= 52$$

Method 2

$$65\% = 50\% + 10\% + 5\%$$

$$= 40 + 8 + 4$$

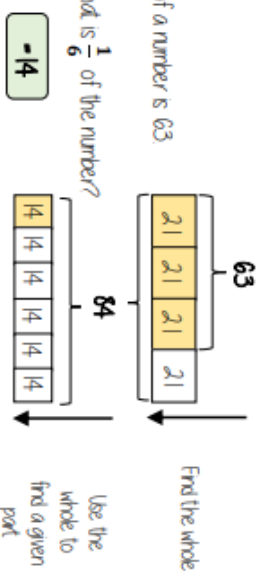
$$= 52$$



$$\therefore \frac{1}{3} \text{ of } 90 = \frac{2}{3} \text{ of } 45$$

The wording of the question is important to setting up the bar model

$\frac{3}{4}$ of a number is 63



Find the percentage of an amount (Calculator methods)

Using a multiplier

Find 65% of 80

$$0.65 \times 80 = 52$$

Fraction decimal percentage conversion

$$65\% = \frac{65}{100} = 0.65$$

→ The multiplier

Using the percent button

Find 65% of 80

This brings up the / button on screen
You will see 65%

Type 65

Press **SHIFT** **(%)**

Press **X** 80 and then press =

You can also use the calculator to support non calculator methods and find 1/ or 10% then add percentages together

*of can represent 'x' in calculator methods

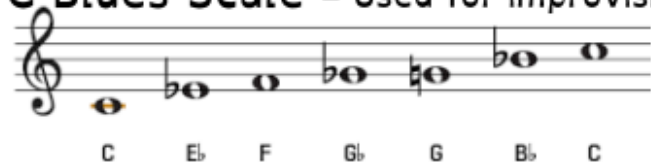
The Blues – A genre of music that was born in America in the 1930s
Year 8 – Topic 2

12 Bar Blues – A chord sequence used in most blues Music

Improvisation – Making up music on the spot

Walking Bassline – A bass line that moves up and down in pitch taking small, regular steps

C Blues Scale – Used for improvising



Acoustic Guitar
Used for Chords

Walking Bassline

Upright Bass
Used for basslines



'AAB' Lyrics

'A' lines are the same, 'B' line is different but rhymes with 'A'

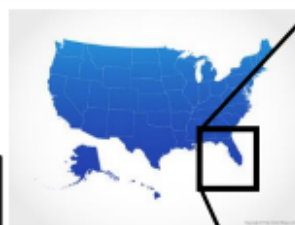
A

A

B



C D E F G A B C



Harmonica
Used for improvising



The Deep South

The Blues was created in an area of America called the Deep South where there was a large population of African Slaves working on cotton, tobacco and sugar plantations.

Chord Sequence

Play each chord 4 times per box. The order of your notes in your chords doesn't matter, just the combination of correct pitches.



F

C

C D E F G A B C



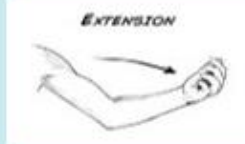





C D E F G A B C



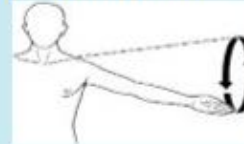





12 Bar Blues

C	C	C	C
F	F	C	C
G	F	C	C

Knowledge Organiser

PE Term 3: Movement at joints

Anatomical Movements		
1	Flexion 	Decreasing the angle at the joint. 
2	Extension 	Increasing the angle at the joint. 
3	Adduction 	Limb moves towards the mid-line of the body. 
4	Abduction 	Limb moves away from the mid-line of the body. 

5	Rotation 	A circular movement around a fixed joint. 
6	Circumduction 	When the limb moves in a circle. 
7	Dorsi Flexion 	Bending the foot up towards the shin. 
8	Plantar Flexion 	Bending the foot downward towards the ground. 



Knowledge Organiser: Christianity Practices Part 1

Key Words

Worship: Act of religious honour or devotion

Liturgical worship: service which follows a set pattern

Non-liturgical worship: service which does not follow a text or set pattern

Informal Worship: a type of non-liturgical worship which is spontaneous

Private Worship: Someone praises or honours God on their own

Prayer: Communicating with God

Set Prayers: Prayers that have been written down and said more than once. E.g. The Lords Prayer

Informal prayer: Made up prayer using your own words

The Lords Prayer: The prayer taught to the disciples by Jesus. Example of set prayer.

Sacrament: Rites and rituals through which the believer receives a special gift of grace. 'An outward sign of an inward grace'

Baptism: A sacrament in which believers are washed with water to remove sin and become part of the church community

Believers Baptism: Where a person is old enough to choose to follow God and choose that they want to be baptised

Infant Baptism: A child Baptism in which they are not old enough to choose but promises are made on their behalf. It welcomes them to the church community and washes away original sin.

Holy Communion: A service of thanksgiving where bread and wine are consumed to remember Jesus' death and resurrection.

Pilgrimage: A special religious journey to a holy site. Also an act of worship

Festival – celebration for religious reasons

Christmas – celebration of Jesus' birth

Easter – celebration of Jesus death and resurrection

Worship

It is a way for Christians to show love and respect for God. It shows Christians how important God is to them. They worship in different ways but the public worship takes place at church on Sunday. Christians pray to ask for forgiveness, to say thanks, to ask for help or for comfort and strength. There are different types. Liturgical, non-liturgical, informal and private.

Prayer

Prayer is all about communication with God. Christians ask God for help for themselves or others, ask for forgiveness, to be provided with strength or comfort or to say sorry, confess sin and ask for forgiveness or to praise God. People pray in different ways, which might include standing, kneeling or using rosary beads – for Catholics and Orthodox Christians use Icons. Christians do believe God answers prayers, but because he is transcendent (beyond our understanding) we cannot understand when or how he does it and perhaps not in the way we would want or expect. For example when Jesus is praying in the Garden of Gethsemane he asks God to "remove this cup from me". He is asking God to help him not have to go through the crucifixion. God doesn't stop this as there is a purpose to Jesus' suffering.

The Lords Prayer

This is the prayer which Jesus taught his disciples to pray. "Our father who art in heaven....". This is an example of set prayer and is important as it sets out how to live, for example to show forgiveness to others. It also reminds how God is part of the whole community and is said out loud together.

The Sacrament of Baptism

This is important as it is the initiation ceremony to become a Christian and part of the church and therefore receives the grace of God. Sins are forgiven and they start a new life in Christ. Jesus was baptised by John in the river Jordan, here is received the Holy Spirit and sets an example for Christians to do the same. "Therefore go and make disciples of many nations, baptising them in the name of the father, son and Holy Spirit. Infant Baptism – Catholic, Orthodox, Anglican Methodist practice this. Everyone is a descendent of Adam and Eve and therefore carries Original Sin and so baptism washes this away. It also welcomes them to the church community. Believer's Baptism – Baptist and Pentecostal's think children are too young to understand the meaning and therefore don't baptise infants. They have believers baptisms when a person is old enough to understand the meaning behind what they are doing. This includes a full immersion in a pool to wash away sin and start a new life in Jesus.

The Sacrament of Holy Communion

Also known as Mass, Eucharist, The Lord's supper, The Divine Liturgy or the breaking of bread. Remembers Jesus' last supper, "This is my body which is for you, do this in remembrance of me", with his disciples and therefore the death and resurrection of him. Christians celebrate communion to give thanks to God for sending Jesus to save us from sin. Catholics and Orthodox – Believe in transubstantiation where the bread and body actually turn in the body and blood of Jesus. Other Christian – it is a reminder of Jesus at the last supper. The bread and wine are just symbols. It impacts Christians today as they receive God's grace, brings them into a community of believers strengthening their faith, it can provide support and encouragement to those who are struggling. It is a shared meal so it encourages everyone to share and make everyone welcome. It reminds people that others are starving around the world and money is collected to help the poor around the world.

Different ways to celebrate Holy Communion

Orthodox – Divine Liturgy – Hymns, prayers, readings from Bible. Priest comes through royal door to chant the gospel. Lords prayer offered, behind royal doors words of Jesus said, bread divided into four – three consecrated as body and blood and fourth broken into small pieces. Priest gives bread and wine together on a spoon. Prayers of thanksgiving said afterwards.

Catholic – Mass – Three readings from the bible –OT, Paul's letter and Gospel, prayers said, offerings of bread and wine brought to the altar, Priest says words of Jesus at the last supper, prays over wine, lords prayer said, sign of peace shown between each other, congregation come to altar to receive communion, Priest blesses them.

Anglican – Holy Communion – almost identical to Catholic, sign of peace is shared at a different point, Community meal being shared with all.

Non-conformist Churches – Holy Communion – Begins with a hymn, bible readings, sermons, congregation prays for the world, minister reminds people of Jesus' actions and words at the last supper, 'open table' for anyone who wishes to take bread and wine can, pieces are broken by the congregation and then passed around to others and prayers of thanksgiving are said at the end with people commanded to go out and serve God.

Festivals

Festivals remember important events in a religions calendar, for Christians this is Christmas and Easter. They are centered around Jesus who is the most important person in their religion.

Christmas – Remembers the birth of Jesus – his incarnation. It is celebrated on the 25th December. Trees and homes are decorated with nativity scenes. Lights remember Jesus is the light of the world. Carol services happen in Churches with readings from the bible. Children act out nativity plays and midnight mass takes place on Christmas Eve. "I bring you glad tidings that today a king is born"

Easter – It is the most important festival which celebrates Jesus' resurrection from the dead leading up from holy week. Jesus was crucified on Good Friday and rose on Easter Sunday. Special services take place and processions led by someone carrying a cross. On Easter Sunday special services take place with hymns which celebrate the resurrection. Eggs are used as a reminder of new life. "Christ is risen from the dead".

Pilgrimage

A pilgrimage is a special religious journey and can be seen as an act of worship in itself. For Christians the Holy Land, where Jesus lived and died is particularly important. Pilgrimage is important as it allows people to get closer to God, strengthen faith, ask for forgiveness, pray, ask for a cure, help others and meet others who share your faith. Two important places are Lourdes and Iona.

Lourdes – In France dedicated to Mary as Bernadette believed to have seen visions of Mary in the 19th Century. A spring of water was discovered which had healing powers. Now millions of people have been to drink from the spring of water in the hope of being healed. Many sick or disabled people go to Lourdes.

Iona – An Island off the west coast of Scotland. In the 6th Century St. Columba, an Irish missionary brought Christianity to Scotland and set up a small monastic community there. Pilgrimages happen there in dedication to the virgin Mary. The community in Iona hold daily services in the Church leading a seven mile hike to holy spots.

Teachings

Prayer – "And prayer on the spirit on occasions with all kinds of prayers"

"call on me and come and pray to me, and I will listen to you"

"This is how you should pray, 'Our father who art in heaven...'"

"Pray continually"

"But when you pray, go into your room, close the door and pray to your Father, who is unseen. Then your Father, who sees what is done in secret, will reward you."

Baptism – "Get up, be baptised and wash away your sins"

"Whoever will be baptised will be saved"

"Jesus was baptised too"

Communion – "When he was at the table with them, he broke bread, gave thanks, broke it and gave it to them"

"This is my body, do this in remembrance of me"

Easter – "He said 'it is finished', with this he bowed his head and gave up his spirit"

"He is not here, he is risen!"

Christmas – "The word was made flesh and made his dwelling among us"



Knowledge Organiser: Christianity Practices Part 2

Key Words

Church: The holy people of God, the body of Christ or a building where Christians worship

Agape: unconditional, unselfish love

Mission: A calling where an individual or group go out and spread the word of God.

The Great Commission: Jesus instruction to his followers to go and spread his message "Go and make disciples of many nations"

Missionary: A person sent on a religious mission to promote Christianity in a different country through preaching or charity work

Evangelism: Spreading the Christian message through preaching the Christian gospels

Alpha course: An example of evangelism - trying to tell others about Christianity

Convert: Someone who has decided to become committed to a religion and change his or her religious belief.

Reconciliation: A sacrament in the catholic faith, also making up after an argument or disagreement

Persecution: hostility or ill-treatment, because of race or religious or political beliefs.

Poverty: When people live without having basic human rights such as having enough food, water or shelter

The Church

Church means a gathering of people and originally the church didn't have special buildings but met at peoples homes. The church therefore is about people who meet to worship Christ. "And God placed all things under his (Jesus') feet and appointed him to be head over everything for the church, which is his body". The church as a building provides a place where Christians in the local community can meet, socialise, worship and gain spiritual guidance. Christians meet at church on a Sunday, but many churches have events happening throughout the week. Traditionally the role of the church helped with schooling, medical needs and other services. In modern times the church has projects in the community to help others following the teachings of Jesus to help those who need it. "Love your neighbour" and "I was hungry and you gave me something to eat, I was thirsty and you gave me something to drink..."

The role of the church in the local community: Food Banks

The Trussell Trust: Founded in 1997 it provides emergency food help and support to people in the UK. Based on the **parable of the sheep and goats** to aim to end poverty and relieve hunger of people. Due to rising prices, cut in benefits, redundancy and other family issues people need help with food to survive. Food is donated by churches, supermarkets, schools and business and care professionals identify people in need and give vouchers so that they can get food to help them in the short term.

The Oasis Project: Part of Plymouth Methodist Church which is a community hub with an internet café, creative courses, job club, training opportunities and a base for meetings. 200 people use the centre each week. It supports people with disabilities, ill-health, learning needs, domestic violence, substance abuse, low income and housing problems.

The role of church in the local community: Street Pastors

The parable of the sheep and goats shows how Christians should help others and show agape. Street pastors started in 2003 in London with volunteers to work on the streets to patrol areas to provide a reassuring presence to people at night. They try to focus on responding to anti-social behaviour, drunkenness and fear of crime. They want to help people in practical ways working with the council and the police. They wear blue reflective uniforms to be seen so they can be spotted for people to come to them if they need help. They go out to listen to people, giving advice about where they can go, or to offer flip flops to girls whose shoes have broken or space blankets to help keep people warm. They do not actively go out to preach but work off the basis of the teachings of Jesus to offer help to people who need it.

The place of mission and evangelism

Christians believe they should spread the news of Jesus to non-believers. Matthews gospel ends with the Great Commission and the order of Jesus to, "Make disciples of many nations..." These were the last words given to the disciples before his ascension. At the day of Pentecost the disciples were given the gifts to carry out the Great Commission. Christians have the responsibility to spread the news of Jesus to others. Some believe they are called to do this in other countries and become missionaries, which involves evangelism. The aim to persuade people Jesus is the saviour of the world. The Alpha course is an example evangelism. They take place around the country with the aim to introduce Christianity to people and convert others to Christianity.

Church Growth

It is estimated that there are up to 2.5 billion Christians in the world. The church has grown rapidly since the time of Jesus and still is in South America, Africa and Asia, although not the case in the USA and Europe. There are approximately 1.1 billion Catholics in the world and it is estimated soon there will be more Christians in China than any other country in the world, despite it being a communist country. In Africa it is estimated that churches are growing at 34,000 people a day. Worldwide 80,000 people become Christians everyday and over 500 new churches are formed. Christians are taught to teach others about Jesus and so converts are trained to spread the news to others as well as a way of following Jesus. This can be done through sharing testimonies (how God has affected their lives), inviting people to meetings, prayer, advertising, using the media, fellowship meals and social events.

The importance of the world wide church

The importance of the church is also to work for reconciliation. This is get others to put differences behind them and come together. Jesus came to restore the relationship between humans and God and so Christians should work to restore or reconcile issues between others. One of the seven sacraments of the Catholic church is reconciliation and this is because in the bible it teaches Christians should work to not only be reconciled with God but with each other. There have been examples where even parts of the Church have fallen out, for example Protestants and Catholics in Ireland and Northern Ireland. The Irish Churches Peace Project (ICPP) was set up to bring together Christians from all over Northern Ireland to discuss initiatives to develop peace and understanding. Despite reconciliation work it is estimated that 80% of religious discrimination is directed towards Christians. Persecution ranges from Christians having to pay more tax to not giving them jobs, attack on homes or not allowing them to build Churches. The Corrymeela Community in Ireland was set up to promote peace making and healing racial, political and religious divisions. It is to get all sorts of different people to come together and talk about their differences to work together.

Church persecution

Persecution doesn't always have a negative effect as Christians believe it can develop and strengthen their faith. It also allows people to understand the suffering that Jesus went through in his life and death. "Blessed are those who are persecuted because of righteousness." Christians are encouraged to show love even when being persecuted or ill-treated, "overcome evil with good". In the bible St. Paul says that the members of the church are like different parts of the body, "If one part suffers, every part suffers with it". The Barnabus fund sends financial support to projects that help Christians who are being persecuted because of their faith. The Christian Solidarity Worldwide is a Christian human rights organisation that campaigns for religious freedom for all.

The church's response to world poverty

The teachings of Jesus are all about helping others and showing agape (unconditional love) to everyone no matter who they are, "Love your neighbour as you love yourself". In the parable of the Rich man and Lazarus Jesus taught about the rich man who ended up in hell as he didn't help a beggar. The Good Samaritan teaches about helping others and Jesus helped all kinds of people even lepers, tax collectors, sinners and people who were mentally ill. In the book of John it says, "If anyone has material possessions and see a brother or sister in need but has no pity on them, how can the love of God be in that person?"

There are different Christian organisations who help to respond to poverty in the world.

Catholic Agency for Overseas Development (CAFOD):

Started in 1960 it is the official aid agency in England and Wales. It works to help poor communities in Africa, Asia, South America and the Middle East. It helps to give access to clean water, education and healthcare. It encourages Catholic schools and parishes to give and campaign to help disadvantaged communities.

Christian Aid: It is the official relief and development agency for 41 church denominations in Britain and Ireland. Started in 1945 they aim to encourage sustainable development, stop poverty and provide emergency relief in Africa, Asia, the Middle East, South America and the Caribbean. They aim to end poverty by campaigning with Fairtrade, stop climate chaos and trade justice movement.

Tearfund: In 1968 there was a terrible famine in Biafra, Nigeria, and Churches in the UK wanted to do something about it and in response the Evangelical Alliance Relief Fund was set up (TEARFUND). They continue today to raise money in the UK so that Tearfund can work with churches in 50 countries to help people to work their way out of poverty. Tearfund works with 90,522 churches worldwide and have helped tens of millions of people out of poverty.

Year 8 Block 3 Biology Knowledge Organiser Evolution

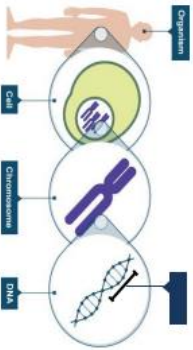
Revision guide Pgs: 26-29

<https://www.bbc.com/bitesize/subjects/z4882hv>

KPI 9.1: Identify variation between individuals of a species and state the differences between species, describing the difference between continuous and discontinuous variation.

DNA

- All the instructions to make organisms are kept in coded form on a very long molecule called DNA.
- DNA is kept in the nucleus of every cell.
- The molecule is so long it is twisted and folded into tiny structures called chromosomes so it can fit inside the nucleus.
- It has a ladder like structure and is a double helix.
- A short length of chromosome which codes for a characteristic is called a gene.
- There are four bases in DNA: A, T, C, G. A only pair with T, C only pair with G.
- As the sequence of the bases differ, the protein produced differ. This account for many variations.



Variation

- The differences between living things of the same species is known as variation.
- Variation can be caused by differences in genes or differences in the environment.
- Some variation is caused by a mixture of both genes and environment.

Year 8 Block 3 Biology Knowledge Organiser Evolution

Revision guide Pgs: 26-29

<https://www.bbc.com/bitesize/subjects/z4882hv>

KPI 8.2: Explain how variation allow organisms to compete, and the way this drives natural selection

Organisms compete for resources like food, water, mates, space, light, and minerals.
There are 2 types of competition. Interspecific competition is between individuals of different species and Intraspecific competition is between individuals of the same species.



Organisms have special features known as adaptations to help them survive in their environment. For example polar bears are white so they are camouflaged in the snow.

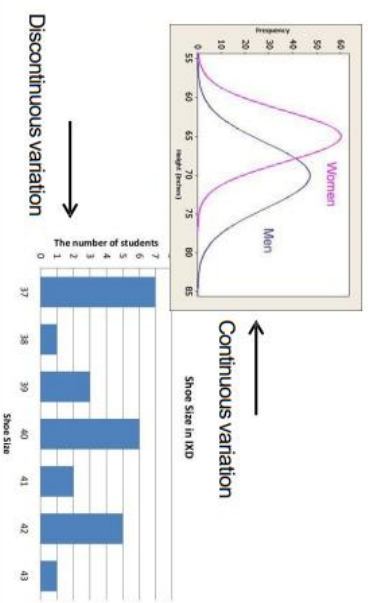
Variation

Variation can be caused by genes e.g. eye colour and your blood group. It can also be caused by environment which means the food you eat, the chemicals you're exposed to, the way you're brought up. Often variation is a combination of genes and environment e.g. intelligence and weight. Genetic variation always gives rise to discontinuous data where there is a limited set of data e.g. tongue roller or non roller. Continuous data can be of any value and is caused by genetic and environmental factors.

Key Terms	Definition
DNA	Molecule that carries all the instructions needed for an organism
Gene	A short length of DNA that has the information for a characteristic
Chromosome	A structure containing DNA found inside the nucleus of a cell
Variation	Differences between living organisms of the same species
Continuous variation	Differences that can take any value, e.g. height
Discontinuous variation	Differences that can only take set values, e.g. blood groups

Measuring variation

- Continuous variation is variation that can take any value (e.g. height or weight).
- Continuous variation should always be shown on a line graph.
- Discontinuous variation is variation that can only take set values (e.g. shoe size or blood group).
- Discontinuous variation should always be shown on a bar chart.

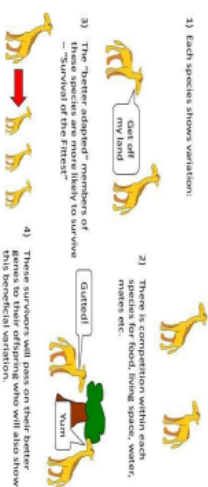


Natural selection

Natural selection states that there is variation within a species. Some adaptations are better than others. Those with the best adaptations survive, and the others die.

The survivors can reproduce and have offspring. Their offspring inherit the genes for the best adaptations, so the organisms' population changes over time. This is survival of the fittest. Charles Darwin came up with this theory in the 1800's.

Natural Selection



Key Terms	Definition
Adaptation	Something which helps an organism to survive in their environment, e.g. humps for storing water
Habitat	The environment that an organism lives in

Adaptation

- Every animal has evolved gradually over millions of years to become well suited, or adapted, to its habitat.
- These adaptations are specific to the environment of the animal and are essential for survival.
- An animal must be able to find food, breed and navigate its way around its habitat if it is to survive.

Year 8 Block 3 Knowledge Organiser Chemical reactions

[Revision guide Pgs: 45-48 + 51-54 \(48-51 + 54-57 higher\)](#)

<https://www.bbc.com/bitesize/topics/znxkyrd>

Acid & metal Reactions

When an acid and a metal react together we form a metal salt and hydrogen.

Metal + acid → metal salt + hydrogen

Magnesium + hydrochloric acid → magnesium chloride + hydrogen

Metal carbonate & acid reactions

When an acid and metal carbonate are reacted together they form

metal salt, water and carbon dioxide

Metal carbonate + acid → metal salt + water + carbon dioxide

Copper carbonate + hydrochloric acid → copper chloride + water + carbon dioxide

Tests for carbon dioxide and hydrogen

CO₂ – Carbon Dioxide

1. Lit splint is extinguished (goes out) in the presence of CO₂ gas.
2. lime water turns from colourless to cloudy.

H₂ – Hydrogen

Squeaky pop test - a lit splint, in the presence of hydrogen makes a squeak pop sound.

Thermite reaction:



Iron oxide + Aluminium → Aluminium Oxide + Iron

Aluminium is higher than Iron in the reactivity series so it displaces iron from iron oxide.

Thermite is used to weld train rails together.



Year 8 Block 3 Knowledge Organiser Chemical reactions

[Revision guide Pgs: 45-48 + 51-54 \(48-51 + 54-57 higher\)](#)

<https://www.bbc.com/bitesize/topics/znxkyrd>

Chemical and physical properties

Elements in different groups have their own properties. Physical properties refer to physical characteristics such as how their colour and their states. Chemical properties refer to how the elements react when they form new bonds.

Reactivity Series:

The reactivity series is the order of metals based on their reactions with water, air and acid. We can use this to predict the products in a reaction.

Electrolysis	Potassium Sodium Calcium Magnesium	most reactive
Reduction	Aluminium Carbon Iron Tin Lead Hydrogen Copper Silver Platinum	least reactive
Native	Gold	

In displacement reactions the metal that is higher up the reactivity series will form a salt.

For example:

Magnesium + copper sulphate → magnesium sulphate + copper

The magnesium is higher up the reactivity series so it displaces copper and takes its place.

Zinc sulphate + copper → no reaction.

Copper is lower down the reactivity series so it does not displace zinc.

Naming compounds

When naming compounds the Periodic Table shows the different elements that are in a compound.

In metal and acid reactions the compound made is called a salt and it has 2 parts to its name: 1st from the metal, 2nd from the acid.

Eg

Hydrochloric acid → chloride salts

Sodium chloride

Nitric acid → nitrate salts

Sodium nitrate

Sulphuric acid → sulphate salts

Sodium sulphate

Group 1 – Alkali Metals reactivity

Reactivity increases going down group 1.

Element	Observations
Lithium, Li	Fizzes steadily, slowly becomes smaller until it disappears
Sodium, Na	Melts to form a ball, fizzes rapidly, quickly becomes smaller until it disappears
Potassium, K	Quickly melts to form a ball, burns violently with sparks and a lilac flame, disappears rapidly, often with a small explosion

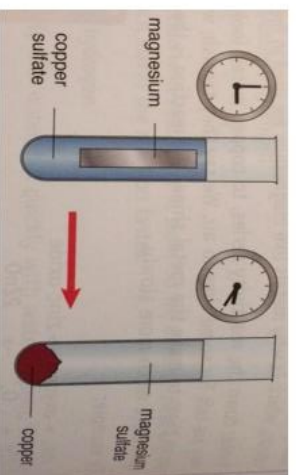
Key Word	Definition
Displacement	A reaction where a more reactive metal take the place of a less reactive metal.
Reactivity	A description of how quickly or vigorously a material reacts.
Reactivity series	A list with metals that shows how reactive they are

Displacement Reactions

Eg. Magnesium + copper sulphate → magnesium sulphate + copper

We use displacement reactions to determine the reactivity series.

The more reactive metal displaces the less reactive metal.



Metal Extraction

We use the reactivity series to help us decide how to extract metals from their ores.

Anything below hydrogen is found on its own (native) eg gold


Anything below carbon is reduced using carbon eg zinc

Anything above carbon is extracted using electrolysis eg sodium

My home! Spanish Year 8 - 8.6

¿Dónde vives? Vivo ... en una casa en un apartamento en el campo en las montañas en la costa en la ciudad en las afueras en un pueblo en el norte en el sur en el oeste en el este		Where do you live? I live In a house In a flat In the countryside In the mountains On the coast In the city/town In the suburbs In a village In the north In the south In the west In the east	
¿Dónde está? en debajo de delante de detrás (de) entre al lado de enfrente cerca de		Where is...? On/in under in front of behind between next to opposite near to	
¿Qué se puede hacer? ¿Qué vas a hacer? Se puede... Voy a ... ir de paseo visitar museos comer en un restaurante descansar en la playa quedar con amigos		What can you do? What are you going to do? You can... I am going to... Go for a walk Visit museums Eat in a restaurant Rest on the beach Hang out with friends	

My home! Spanish Year 8 - 8.6	
¿Qué hay en tu casa? Hay.... No hay... Un jardín Un garaje Un salón Un pasillo Un dormitorio Un comedor Un cuarto de baño Una cocina Una terraza Una oficina/un despacho Los baños El dormitorio de mis padres En la primera planta En la planta baja Arriba	What is there in your house? There is / are... There isn't... A garden A garage A living room A hall A bedroom A dining room A bathroom A kitchen A terrace An office/study Toilets My parents' bedroom On the first floor On the ground floor Upstairs
¿Qué hay en tu dormitorio? Una cama Un escritorio Un ordenador Un armario Un estante Una lámpara Una mesa Una puerta Una silla Una televisión Una ventana Una cómoda Una moqueta Unos pósteres	What is there in your bedroom? A bed A desk A computer A wardrobe A shelf A lamp A table A door A chair A television A window A chest of drawers A carpet Some posters

¿Qué hay en tu ciudad? En mi ciudad hay... la playa la piscina la pista de hielo la biblioteca la carnicería la comisaria la mezquita la iglesia la librería el centro el cine el museo el teatro el centro comercial el polideportivo el mercado el supermercado el estadio el parque de atracciones el hospital el puerto los monumentos las tiendas los cafés los restaurantes la oficina de turismo	What is there in your town? In my city there is... The beach The swimming pool The ice rink The library The butchers The police station The mosque The church The book shop The town centre The cinema The museum The theatre The shopping centre The leisure centre The market The supermarket The stadium The theme park The hospital The port The monuments The shops The cafés The restaurants The tourist information office
	

Year 8 Spanish Knowledge Organiser 8.6

Where I live geographically, Places in town, Phrases that use infinitives.

Opinion starters:

Pienso que	I think that
Creo que	I believe that
En mi opinión	In my opinion
Para mí	For me
Me parece que	It seems to me
Encuentro	I find

Pienso que Bristol es histórico - I think that Bristol is historic
 Encuentro Londres bastante industrial – I find London quite industrial.

Prefiero Bath porque es menos turístico que Liverpool – I prefer Bath because it is less touristy than Liverpool.

Phrases that use **infinitives**.

An infinitive is the basic form of the verb. In English it starts with to_ to run, to jump, to swim.

In Spanish the verb ends in –ar, –er, –ir.

e.g. I like to run – Me gusta correr.

Se puede	– One can	} These are followed by an infinitive.
Voy a	- I am going to	
Me gusta	- I like	

Se puede ir al centro – One can go to the city centre.

Voy a comer en un restaurante – I am going to eat in a restaurant.

Me gusta jugar al fútbol en el parque - I like to play football in the park.

	Ir – to go
I	Voy – I go / I am going
you	Vas – You go / you are going
he/she/it	Va – he goes / he is going
we	Vamos – we go / we are going
you (pl)	Vais – you (pl) go / are going
they	Van – they go / are going



Hay (there is) and no hay (there is not) – these phrases are very important to allow us to say what is in our town or city. Remember! When using no hay there is no un/una e.g. **Hay un** parque but **no hay** parque

It is important to use the correct **article** in front of a noun. This will depend on if we want to say 'a' (indefinite article) or 'the' (definite article), and also in Spanish if the noun is **masculine, feminine, singular or plural**.

Articles	A/some	The
Masculine	Un	El
Feminine	Una	La
Masc Plural	Unos	Los
Fem Plurl	Unas	Las

REMEMBER!

Any practical work you do at home, take photos and this can be classed as homework if there is evidence in your homework book!

Decorative Textile Techniques

Applique is the method of sewing pieces of fabric onto other fabric bases in beautiful designs. You can stitch the applique pieces by hand as well as by sewing machine.



Spray dyeing creates a speckled, graffiti effect on fabric. Try not to spray too close as it will not have the same effect on the fabric.



Dyeing involves adding colour to the fabric by way of soaking it in a solution of dye. You can dye a fabric fully or partially; Batik, tie and dye, shibori dyeing are all variations of dyeing fabric to bring about beautiful patterns on fabric surface.



Rubbings use natural textures to create interesting designs on to fabric, layer different colours to make your design more original.

Shaving foam marbling is a method of creating a marble effect, using shaving foam and acrylic paints. You can mix colours together to create a colourful design. Be careful not to overmix as this could result in to getting an all over brown colour.



Decorative stitches are created by selecting different stitch settings on a sewing machine, these are good to use in different colours to match your creative work. They can be sewn in a curved line as well as just sewing straight.

**Year 8 Textiles Knowledge Organiser****The 4 Rs of sustainability**

The UK wastes around £1 billion of clothing each year, which effects the environment we live in. A way to support the environment is to follow the four Rs of sustainability at home.

Recycle – Making unwanted clothing in to something new i.e. Jeans in to shorts.

Reduce – Buy high quality clothing which will last for longer.

Repair – If there is a rip or hole in your clothing, fix it by hand sewing it or adding a patch.

Reuse – If you no long want your clothing, donate it to a sibling or local charity shop.

Textiles Hierarchy of Key words

Tier 3 Academic keywords.	analyse	embellishment	Woven/ bonded/ knitted	Free machine embroidery	Plain seam	sustainable	function develop
	contrast	compare	context	effect	Complementary colours	environment	fastening
	colour	pattern	theme	thread	iron	embroidery equipment	appliqué improve
Tier 2 Valuable keywords used in most lessons every lesson.	design	machine	line	tone	shape	Texture	sew
	shape	Texture	tone	Fabric	sew		
Tier 1 Basic keywords used in almost every lesson.							

Questions and activities – hints and tips

Summarising a lesson:

Answer the following questions to help you summarise your learning in a lesson. This will help you recap and think again about your learning, and will be useful to look back on in the future.

- What key words did you use in the lesson?
- Can you define those key words and use them in a sentence?
- What new content did you cover?
- How does this link to your previous learning?
- Can you summarise your learning into one sentence?

Revision:

If you have an MCQ approaching, you could create some revision material based on your knowledge organiser.

Can you get down the key information in a spider diagram?

Can you use diagrams, pictures, symbols etc to recall your knowledge?

Knowledge quizzes:

Create a set of questions using the information from your knowledge organiser, or from your lesson.

You could make them about key words, and maybe even give multiple choice answers.

Go over the questions you keep getting wrong.

Try the questions out with those at home, or maybe your teacher could use them for their starter quiz in class.

Keyword Development:

Practise the spellings of key words. Use the look-cover-write-check method to help you.

Can you explain what the key words mean?

Can you link the key words together?

Copy out the key words with their definitions.

What might it look like?

Geography

Topic: Our Place in the World

Thursday 1st October

Lesson Summary:

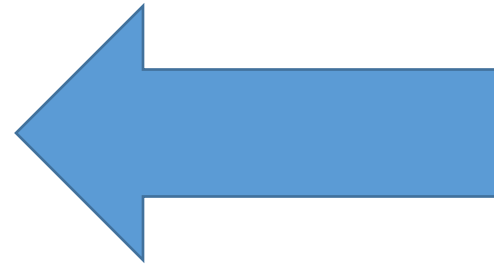
Longitude - the distance, in degrees, E or W of the Prime Meridian.

Latitude - the distance, in degrees, N or S of the Equator.

Today we learnt about how the world is divided up using lines of latitude + longitude. The Equator is an 0° latitude, and the poles are 90° N + S.

This links to our previous learning because now I can say where the continents are using longitude + latitude to find them on a map.

Knowledge Quiz:



Lesson summary:

Science

Topic: Cells

Monday 28th September

Knowledge Quiz:

1.) What is the name of the part of the microscope where the specimen is placed?

A = Stage

2.) How many cells are there in a 'unicellular' organism?

A = one

3.) What does the 'cell membrane' do?

A = controls movement of substances in + out of the cell

4.) Where does photosynthesis take place in a cell?

A = Chloroplast

5.) What is the function of the red blood cells?

A = to carry oxygen



How to present your homework:

Subject written on the left-hand side of the page and underlined.
For example: Food

Topic written on the centre of the page and underlined.
For example: Sugars

One single straight line between both pieces of homework.

Subject: Food Tuesday 25th June 2019

Topic: Sugars

Keyword	Definition
Monosaccharides	
Disaccharides	
Intinsic sugars	
Polysaccharides	

Subject: English Topic: Macbeth

1. Who are the four most important characters in Macbeth?
Macbeth, Lady Macbeth, Banquo and Macduff.

2. What are three character traits of Banquo?
Gullible, superstitious and ambitious.

3. How would you describe Lady Macbeth?
She is manipulative, cold-blooded and cruel.

4. How is Lady Macbeth two-faced?
She is warm and welcoming to Duncan, and then manipulates her husband to kill him.

5. What is the name of Banquo's son?
Fleance

Date written fully on the right hand side of the page and underlined – this should be the day you complete the homework.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.