THE BOURNE ACADEMY
KNOWLEDGE ORGANISER

everyone is a learner, everyone is a teacher

Ambitious
Self Confident
Physically Literate
Independent
Resilient
Emotionally Literate

Year 8
Autumn Term 2024-25

Name: .....

House: .....

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The Bourne Academy
Knowledge Organiser: Year 8 Autumn Term

Excellence at The Boume Academy: Using your Knowledge Organisers'

'Don't just practise until you get it right practise until you can't get it *wrong.'* - Daniel Willingham

Routines for Excellence

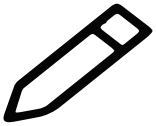
- You will get out your TBA Knowledge Organiser Booklet at the start of every lesson along with your Knowledge Organiser practise exercise book
- Your teacher will set you sections of the Knowledge Organiser to learn, off by heart, in every lesson.
- Your teacher will set you quizzes to test your knowledge every lesson.
- Your teacher will regularly set you questions that require you to APPLY your knowledge
- Your TBA Knowledge Organisers are saved on Show My Homework and on TBA website

How to revise with your Knowledge Organisers'
Self-quizzing

Look/read, cover, write and then green pen check your answers to show you where your 'knowledge gaps' are. Repeat until you have mastered the knowledge...until you can't get the knowledge wrong

Look/Read

Cover


Write

Check

Low-stakes testing
Your teachers will always have a **'Do now'** activity on the board at the start of lesson. Do as much as you can from memory. Use your Knowledge Organiser to green-pen check what you have accurately remembered. Then green pen correct. Repeat, each time checking and correcting until you have mastered your knowledge gaps.

HOW DO WE REVISE WITH OUR KNOWLEDGE ORGANISERS?

RECORD IT

Record yourself on your phone or tablet reading out the information. These can be listened to as many times as you want.

TEACH IT

Teach someone your key facts and then get them to test you, or even test them.

FLASH CARDS

Write the keyword/date on one side and the explanation on the other. Ask someone to quiz you on either side.

BACK 2 FRONT

Write down the answers and then write what the questions the teacher may ask to get those answers.

HIDE AND SEEK

Read through your Knowledge Organiser, put it down and try to write out as much as you can remember. Then keep adding to it until it is full.

SKETCH IT

Draw pictures to represent the facts or dates. It could be a simple drawing or something that reminds you of the answer,

POST ITS

Using a pack of post it notes, write out as many of the keywords or dates as you can remember in 1 minute.

PRACTICE

Some will remember knowledge by simply writing the facts, over and over again.

READ ALOUD

Simply speak the facts and dates out loud as you're reading the Knowledge Organiser. Even try to act out some of the facts - it really helps you remember.

A. The Pop Art Movement

Pop Art is an art movement that emerged in the United Kingdom and then the United States during the mid-to-late 1950s. Pop artists challenged traditions of fine art by including imagery from popular and mass culture, such as advertising, comic books and ordinary mass-produced objects.

B. Artists

1) Andy Warhol
2) Roy Lichtenstein
3) Keith Haring
4) Richard Hamilton
5) David Hockney
6) Claes Oldenburg
7) Yayoi Kusama
8) Tim Marrs
9) Peter Max
10) Jasper Johns

C. Origins of Pop Art

The 'Pop' in Pop Art stands for popular.

The Independent Group met in London in 1952 and included radical young artists who wanted to challenge attitudes and emphasise the impact of technology and mass culture on art.

Early Pop Art included collages and photomontages intended to recreate the barrage of mass media images experienced in everyday life.

Pop artists wanted to represent the everyday elements of mass culture and the optimism of post-war society.

D. Key Words

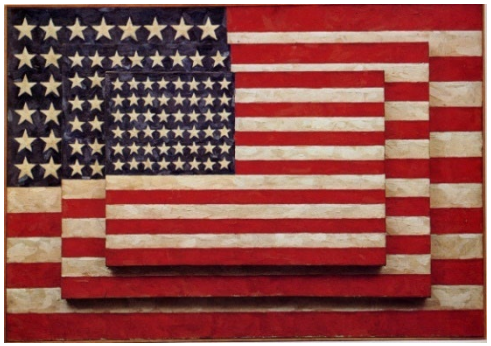
1) **Popular culture**: Music, TV and Cinema aimed at and enjoyed by ordinary young people.
2) **Vibrant colours**: radiant, bright and intense colours.
3) **Mass Media**: newspaper and magazine articles, published photographs, television and radio shows, music recorded for mass distribution, advertising, books, and magazines.
4) **Mass Production**: the manufacture of large quantities of a product by an automated mechanical process.
5) **Irony and satire**: Humour was one of the main features of Pop art.

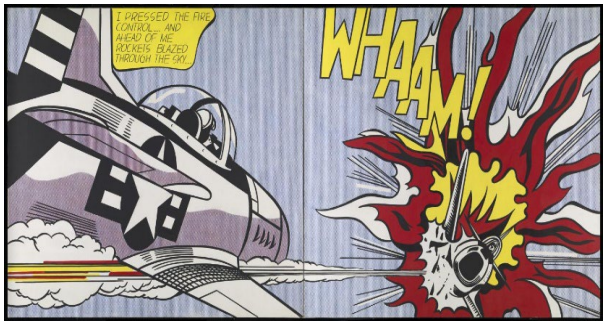
E. What were the aims of the Pop Artists?

By creating paintings or sculptures of mass culture objects and celebrities, the Pop Art movement aimed to blur the boundaries between 'high' art and 'low' culture. The idea that there is no ranking of culture, and that art may borrow from any source has been one of the most influential characteristics of Pop Art.

Pop Art aimed to employ images of popular culture in art, emphasizing the ordinary or tacky elements, most often using irony or sarcasm. Pop Art is colourful and is often associated with the artists' use of mechanical means of reproduction or rendering techniques, such as Silk-Screen printing.

These are some examples of famous Pop artworks:



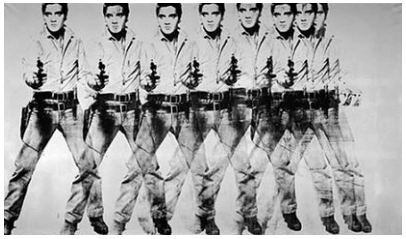


1. Pop Art:

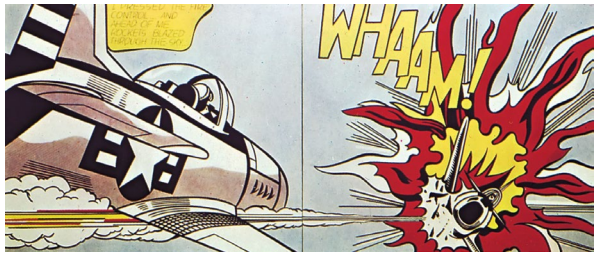
The booming post-war western economies of the mid-1950s meant prosperity for many, particularly in America. Ordinary people had more money to spend on luxuries and entertainment.

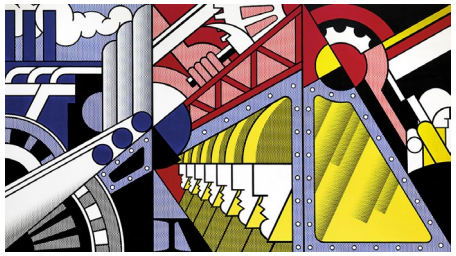
The media and big business promoted a glossy and colourful lifestyle through advertising in cinemas, magazines, TV and comics. New bold visual styles emerged in popular culture.

Andy Warhol (1928 – 1987) was an American artist, film director, and producer who was a leading figure in Pop Art. Warhol created art in many ways, including painting, silk-screen printing, photography, film and sculpture. Warhol's style has been imitated many times such as in this Google banner:



Roy Lichtenstein (1923 – 1997) was an American painter, musician and film producer who also served in the Army. His work was not well-received by critics initially. His work defined the premise of Pop Art through parody. He became famous for his distinctive comic book style incorporating benday dots.





Benday dots – the benday process named after illustrator and printer Benjamin Henry Day Jr. is a printing and photoengraving technique dating from 1879.

1. Data Types

a) Integers are whole numbers e.g. 1, 2, 3, 4

b) Float are decimal numbers e.g. 1.7, 3.25

c) Characters are any single character key you can type on the keyboard e.g. F, 5, %, #

d) String is a group of characters e.g. “hello”

e) Boolean is a data type with only two values, true or false e.g. 5 < 10 = TRUE

2. Boolean Operators

> greater than	< less than
= equal to	≠ not equal to

3. Mathematical Operators

+ addition	- subtraction
/ division	* multiplication

4. Computational Thinking

a) Decomposition is breaking down a complex problem into smaller more manageable parts

b) Abstraction making a complex problem simpler by hiding unnecessary details

c) Algorithm is a step-by-step solution

5. Programming Terms

a) Variable is a part of code storing information that can be changed

e.g.
```
name = input("Type your name:")
```

b) Selection is a decision in the program

e.g.
```
if want cream hot chocolate:
    then add cream
else:
    skip to next step
```

c) Iteration is repeating part of the code, usually in a loop

e.g.
```
while age < 18:
    attend school
next step
```

d) Sequence is a set of instructions in order

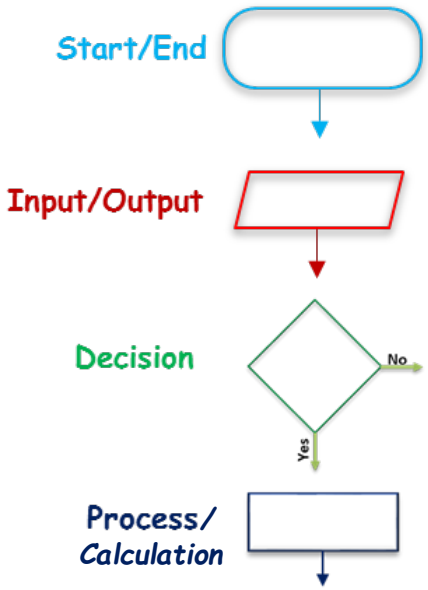
e) Syntax Errors are mistakes in the way the code is written

f) Logic Error occur when the program works but not the way it is expected to

g) Debugging is fixing errors in the code

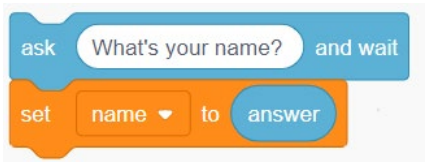
h) Python is a general-purpose text-based programming language for a variety of uses

i) Flow Chart is a clear and visual way to plan a program or how to logically solve a problem



j) Block-Based Code is a drag-and-drop coding learning environment such as Scratch

e.g.



k) Text-Based Code creates programs with coding commands, such as using Python

e.g.
```
name = input("Type your name:")
```

1. Programming Vocabulary

a) **Assignment** is setting the value of a variable in a computer program

b) **Constant** is a value in programming that does not change

c) Data is divided up and organised according to **data type**, e.g. numbers or characters

d) **Execute** a program means to run it

e) **High-level language** is a programming language, like Python, used to write programs

f) **Binary** is a base 2 number system only using 1's and 0's such as 11001100

g) **Machine code** is low-level code that represents how computer hardware and CPUs understand instructions using binary numbers

h) **Runtime** is when a computer program is executing or running

i) Python uses **indentation** (created by pressing the tab key) to identify blocks of code

j) **Syntax** is how you write code, such as using indents to identify blocks of code

k) **Computational thinking** is the ability to solve problems logically

2. Python Data Types

a) The code for an **integer** is **int**
e.g. age = int(12)

b) Code for **characters**, such as '#', '7', 'f', is **char** e.g. letter = char("g")

c) The code for **strings**, such as "Harry" is **str**
e.g. name = str("Harry")

d) The code for **Boolean**, such as "True", is **bool**
e.g. answer = bool("False")

e) To output text is **print** e.g. print("hello")

Challenge 1. Create Python code which uses a combination of all data types listed above (a-d). Go through each data type and come up with your own example in Python

Challenge 2. Create a password checker using the following steps:

1) Create a variable and make up a password e.g. password = 123.

2) Ask the user to input their password guess e.g. guess = input(…)

3) Using a while loop, if they get the password wrong (password != guess) it will keep looping a message that the password is wrong. Else, if they get a message the password is correct.

3. Python Turtle

a) **Module** is a pre-written chunk of code which can be loaded into your program from a library

Python has many modules in its built-in library, such as 'random', 'math', 'turtle'. The random module is used to generates random numbers and the turtle module is used to draw basic images

b) To use the turtle module in our program, we need to add **import turtle** at the start of our code

c) **Challenge** yourself by creating a range of shapes in Python using the turtle module. Ask for the "Turtle Challenge Sheet" which examples of code. Try to create the following shapes:

Challenge 3. Square (sides 100, line colour pink)

Challenge 4. Rectangle (longer sides 200, shorter sides 100, green fill)

Challenge 5. Triangle (sides 100, blue line colour, red fill)

Challenge 6. Using what you've learnt and the Turtle Snowman help sheet, create your own snowman in Python using Turtle code

Street Dance

1. Background

- Street dance evolved from popular culture and social dance in America during the 1970s and it has since spread internationally.
- People would dance anywhere that had an open available space: a park, a street or a party.
- An important feature of street dance is that this was not a style that was 'learned' it was improvised in an informal space.
- It involved interaction between the dancers and dancers/watchers and encouraged creativity in the making up and structuring of movement.

The significant feature of the history of Street Dance was that it was the dance of young people. It offered opportunities for creative expression, gave a sense of freedom and a 'voice' to unrepresented and often invisible communities through the means of music and dance.

2. Stylistic Features of Street Dance	
a. Strong, sharp movement.	Grounded legs.
b. Movement led by the torso.	Strong relationship with the music.
c. Isolated movement.	Frequent use of unison.
d. Lots of formations.	High energy.

3. Movement Examples	
a. Footwork -	A style of street dance involving fast movement of your feet with accompanying twists and turns, originating in Chicago.
b. Glides and slides	A group of foot movements that try to create the illusion that you are moving smoothly across the floor or that your legs are walking, while your body is moving in an unexpected direction.
c. Contractions	The movement of muscles that is required to move different parts of your body.
d. Knee Spin	A spin on one or both knees, typically in a kneeling position.

Dance Through the Decades

4. The Charleston

Charleston was a social jazz dance which became highly popular in the 1920s. It was based on a dance called the Juba, invented in Africa and popularized in the US in Charleston.

It was performed as a solo, with a partner or as a group.

Stylistic Features

- Quick footwork
- High energy
- Forwards and backwards kicks
- Animated facial expressions
- Swinging arm movements

5. Rock n Roll

Rock and Roll dance emerged in America in the 1950s.

Rock and Roll of the 1950s became popular with teenagers, Rock and Roll was thought to be both the result and the cause of youthful rebellion against the nation's social problems at the time. As a result of parents' complaints, the Rock and Roll industry was told to clean up its act and provide better role models for the youth of the time.

Stylistic Features

- Partner work
- Flicks and kicks
- Fast footwork
- High energy

6. Disco

Disco dancing is associated with the disco music and disco dance clubs of the 1970s. Disco dancing typically happens on the dance floor of a club, with flashing or strobing lights, huge sound systems, and a disco ball hanging from the ceiling. Disco dancing is usually freestyle, but some disco dances have a small amount of choreography.

Stylistic Features

- Side steps
- Hip movements
- Pointing fingers
- Pivot turns

Street Dance

1. Background

Street dance evolved from popular culture and social dance in America during the 1970s and it has since spread internationally. People would dance anywhere that had an open available space: a park, a street or a party. An important feature of street dance is that this was not a style that was 'learned' within a studio under formal tuition, but it was improvised in an informal space. As such, it involved interaction between the dancers and dancers/watchers and encouraged creativity in the making up and structuring of movement.

The significant feature of the history of Street Dance was that it was the dance of young people. It offered opportunities for creative expression, gave a sense of freedom and a 'voice' to unrepresented and often invisible communities through the means of music and dance.

a. How did hip-hop culture influence the development of hip hop?
b. What are some famous street dance crews and what impact did they have on street dance?
c. How was street dance used as a form of expression?
d. How has street dance evolved over the decades?

2. Stylistic Features of Street Dance	
a. Strong, sharp movement.	e. Grounded legs.
b. Movement led by the torso.	f. Strong relationship with the music.
c. Isolated movement.	g. Frequent use of unison.
d. Lots of formations.	h. High energy.

3. Movement Examples	
a. Footwork -	A style of street dance involving fast movement of your feet with accompanying twists and turns, originating in Chicago.
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Dance Through the Decades

4. The Charleston

Charleston was a social jazz dance which became highly popular in the 1920s. It was based on a dance called the Juba, invented in Africa and popularized in the US in Charleston.

Charleston music is in quick 4/4 time with syncopated rhythms.

Stylistic Features

- Quick footwork
- High energy
- Forwards and backwards kicks
- Animated facial expressions
- Swinging arm movements
- Crossing feet

a. What style of music is the Charleston performed to?
b. What kind of events would you see people dancing the Charleston?

5. Rock n Roll

Rock and Roll dance emerged in America from the Swing dance Lindy Hop in the 1950s.

Rock and Roll of the 1950s became popular with teenagers, much to the dismay of the parents, and it soon gained a 'bad boy' image that gave rise to Teddy Boys in Britain. Rock and Roll was thought to be both the result and the cause of youthful rebellion against the nation's social problems at the time. As a result of parents' complaints, the Rock and Roll industry was told to clean up its act and provide better role models for the youth of the time.

Stylistic Features

- Partner work
- Flicks and kicks
- Fast footwork
- High energy
- Acrobatic movements

a. Name two famous rock n roll musicians.
b. How did rock n roll influence other dance styles?

6. Disco

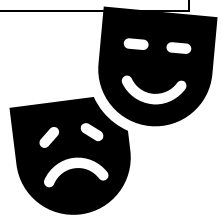
Disco dancing is associated with the disco music and disco dance clubs of the 1970s. Disco dancing typically happens on the dance floor of a club, with flashing or strobing lights, huge sound systems, and a disco ball hanging from the ceiling. Disco dancing is usually freestyle, but some disco dances have a small amount of choreography.

Stylistic Features

- Side steps
- Hip movements
- Pointing fingers
- Pivot turns
- Rolling arms
- Use of space

a. What kind of clothing would did people wear when dancing disco?
b. Why do you think disco became so popular in the 1970s?

1. Drama Technique	Definition
Still Image	Visual pictures created by performers to tell part of the story, illustrate narration, or emphasize a key moment in a play. Performers use facial expressions, body language and positioning onstage to show characters, relationships, and emotions.
Role Play	Actors take on the role of a character within a scene/performance.
Thought Tracking	The thoughts and feelings of a character being told directly to the audience during a still image.
Improvisation	Improvised drama is work that has not been scripted, the dialogue, characters and actions are made up as you go along. Spontaneous improvisation is created in the moment, a rehearsed role play is planned and prepared.
Narration	A character speaks directly to the audience to describe or narrate parts of his/her own story, or a narrator speaks objectively about the events happening onstage.
Direct Address	This narrative technique is when a character speaks directly to the audience about their thoughts and feelings. The other characters are unaware of what this character is saying.
Ensemble	a group of musicians, actors, or dancers who perform together.
Choral Speech	Choral speech is a group of actors that are speaking or narrating at the same time.
Choral Movement	Choral movement is a powerful technique to employ in both devised and scripted performance. A group of actors moving at the same time.
Split Screen	In drama and theatre, the term is used to describe two or more scenes which are performed on stage at the same time.
Physical Theatre	This is a style of theatre, where the cast make the scenery, set, and props out of their bodies to help tell the story on stage.



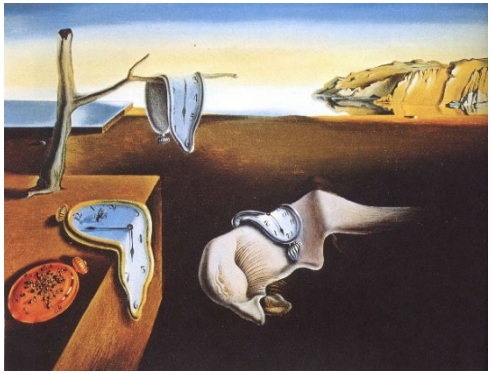
1. Style of Theatre	Definition
Style	Style is **a way of describing the author's artistic vision and intention** which brings together all the staging elements into a consistent dramatic experience.
Non-Naturalistic	Non-naturalistic theatre is **a broad term for all performance styles that are not dependent on the life-like representation of everyday life**
Bertolt Brecht	Bertolt Brecht was born in Germany in 1898 and died aged 58 in 1956. He was a **poet, playwright and theatre director**. His most famous plays include Life of Galileo, Mother Courage and Her Children and The Caucasian Chalk Circle.

2. Drama Skills	Definition
Facial Expressions	A facial expression **conveys an emotion that tells us about the character and the way they react to the situation.**
Body Language	Body language is **communication coming from movement or position, particularly facial expressions, gestures and the relative positions of a speaker and listener**. It may be the message being conveyed or it may add layers of meaning to the spoken words. Body language is also known as non-verbal communication.
Vocal Skills	There are a range of vocal skills and techniques for performers to utilise when performing. **Performers vocal skills convey an emotion that tells us more about the character and how they are feeling/react to certain situations.**

3. Definitions of Key Drama Skills			
Pitch	Pitch, in speech, the relative highness or lowness of a tone.	**Gesture**	A movement of part of the body, especially a hand or the head, to express an idea or meaning
Pace	How fast or slow you are moving or speaking	**Gait**	Gait is a person's pattern of walking
Tone	An individual way of speaking to express an emotion	**Posture**	Posture is the position in which you hold your body while standing, sitting, or lying down
Projection	Voice projection involves the use of a loud, clear voice.	**Character**	The character you create and perform using a range of skills.

1. Higher order thinking – How to devise from a stimulus.

You will devise a short piece based on the painting below.



Research

This painting is The Persistence of Memory by Salvador Dali. Complete extensive research around the painting to help you understand the Social, Historical, Cultural and Ethical aspects of the piece.

What style will your piece be?

1. Naturalistic
2. Non-Naturalistic

Creative Intentions.

What are your creative intentions for the piece? What do you want your audience to feel? Is there a specific message?

2. Problem Solving – The Design Aspect

When in the planning/design phase of your performance, both lighting and sound are important aspects.

Lighting Design – Design 5-10 different lighting states that will enhance your performance. Do you have a spotlight? Any colours? Red, Blue, Green, or White?

Sound Design – Would any specific sounds or music help to support your creative intentions?

Costume – Design the costumes for your main characters. What is your rationale behind the costumes? Why did you choose certain items? How much would the costumes cost? Add this to your budget.

What is your estimated total cost?

3. Describe and Explain how the following link to The Persistence of Memory.

Social

Historical

Cultural

Ethical

4. Analyse and Develop

Giving feedback to your actors as a director is a vital part of creating a performance.

How do you decide what is a good idea?

How do you select material that is of a high standard and how do you reject certain material?

1. Structural elements	Definition
a) Climax	The most intense, exciting or important point of a story.
b) Problem	A situation which is unwelcome and needs to be dealt with.
c) Resolution	The answer or end to a problem.
d) Suspense	A feeling of excited or anxious uncertainty about what may happen.
e) Foreshadowing	A hint at a future event.
f) Foreboding	A feeling that something bad will happen.

2. Speech marks	Rules
a) “ ”	**1.**Each new character’s speech starts on a new line. **2.**You need a piece of punctuation before the speech eg. a comma. **3.** Speech is opened and closed with speech marks. **4.** Each line of speech starts with a capital letter. **5.** The line of speech ends with a comma, exclamation mark or question mark inside the speech marks.

3. Conventions	Definition
a) Convention	The way in which something is usually done.
b) Detective	A person whose occupation is to investigate and solve crimes.
c) Villain	A character whose evil actions or motives are important to the plot.
d) Victim	A person harmed or injured in some way.
e) Motive	A reason for doing something.
f) Deduction	A conclusion that can be drawn from certain facts.
g) Suspect	A person who is believed to be guilty of committing a crime.
h)Clue	A piece of evidence or information used in the detection of a crime.
i) Red herring	A clue or piece of information which is intended to be misleading or distracting.

1. Key Concepts	Definition
a) Propaganda	Information, especially of a biased or misleading nature, used to promote a political cause or point of view.
b) Patriotism	Devotion to and vigorous support for one's country.
c) Conflict	Fighting between countries or groups of people
d) Jingoism	Extreme patriotism, especially in the form of aggressive or warlike foreign policy
e) Conscription	Compulsory enlistment for state service, typically into the armed forces

2. Key Terminology	Rules
Symbolism	The use of symbols to represent ideas or qualities.
Assonance	A repeated vowel sound for aural effect.
Anaphora	A repeated word or phrase at the start of successive lines in a poem.
Metaphor	A direct comparison of two ideas or objects.

3. Poems	Information
a) Who's for the Game (1915)	Written by Jessie Pope at the start of WWI-propaganda poem-persuasive extended metaphor of a game, trivialising the war itself and encouraging young men to join up.
b) In Flanders Field (1915)	Written by John McCrae a Canadian poet, soldier, and physician as a memorial to those who died in Ypres. Natural imagery, determined tone to show how valued these men were.
c) The Soldier (1914)	Written by Rupert Brook, a deeply patriotic and idealistic poem that expresses a **soldier**'s love for his homeland—in this case England, which is portrayed as a kind of nurturing paradise.
d) Joining the Colours (1914)	Written by Katharine Tynan depicting the jubilation as a village of young men join the war effort and are celebrated with a joyous parade.

4. Non-Fiction Types	Definition
Letter	Correspondence between two people in writing.
Memoir	Historical account written from personal knowledge.
Article	Written journalism found in a magazine or article.

Autumn Term 1 – Detective Writing

1. Extension Activities	Details
a) Detective authors	Research a famous detective author. Make a list and for each one provide an example of the detective novel they have written. Example authors: Agatha Christie / Arthur Conan Doyle.
b) Detective fiction	Write a recipe for a detective story, using typical recipe language. For example: Take a large spoonful of… add a pinch of... stir through...
c) Detective cases	Create your own case file including suspect profiles, details about the crime and witness statements.
2.Extended Vocabulary	**Definition**
a) Sleuth	Someone who looks for information to solve crimes.
b) Antagonistic	Acting closed off and frustrated towards something/someone.

Autumn Term 2 – World War 1

1. Extension Activities	Details
a) Attitudes towards 'The Great War'.	Research the public view of 'The Great War' both at its start, in 1914, and how this had changed by its culmination in 1918.
b) Correspondence from the front	Write a letter as a soldier on the front line to his parents/best friend explaining his experience of war. Remember to use your letter conventions i.e. Dear Father… Yours sincerely…
c) Armistice	Write a poem for Remembrance Day remembering the key ideas of sacrifice, struggle, resilience and victory.
2.Extended vocabulary	**Definition**
a) Oxymoron	Something (such as a concept) that is made up of contradictory or incongruous elements.
b) Cynicism	A general distrust of the motives of others.
c) Extended metaphor	A metaphor that unfolds across multiple lines, or paragraphs, making use of multiple related metaphors related to the same idea.

1. The Eatwell Guide
A guide to help us eat the right foods in the right amount for optimal health.

a) Fruits and vegetables (40%)
Eat 5 portions a day! Choose a variety.
Provides fibre for healthy digestion .
Provides vitamins and minerals for. healthy body functions and immune system.

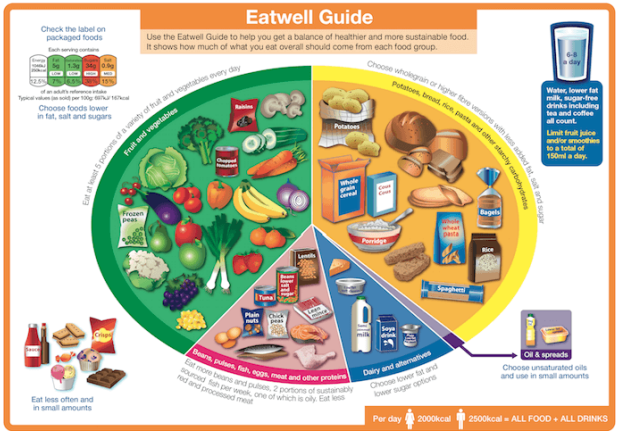
b) Beans, pulses, eggs, meat, fish (12%)
Provide protein for growth, repair and maintenance of body cells.
Choose a combination of plant proteins.
Avoid eating too much processed meat like bacon and sausages as these are linked with increased risk of bowel and stomach cancer.

c) Dairy foods (8%)
Provide calcium for healthy bones, teeth and nails.
The body needs Vitamin D to absorb calcium effectively.

d) Oils and spreads (Fats) (1%)
Provide fat soluble vitamins A, D, E & K.
Are high in calories & energy so keep use to a minimum. It is recommended to choose unsaturated oils like olive oil.

e) Fatty, salty, and sugary foods (0%)
These are the danger foods!
They are not part of a healthy diet.
Eat them only occasionally.
Eating too much fatty and sugary processed food is linked to increased risk of weight gain/obesity, diabetes, tooth decay and cardiovascular disease.

f) Starchy foods (38%)
Provide slow-release carbohydrate used by the body for energy.
Choose wholegrains for increased fibre (good digestion, reduced risk of heart disease).



g) Water
A balanced diet must include water, it is required for nearly all brain and other bodily functions.

2. Deficiencies/Excess (lack of/too much)

a) Vitamin C
Deficiencies: Effects the absorption of iron.
Excess: Scurvy, bleeding gums, wounds not healing properly, tiredness.

b) Calcium/Vitamin D
Deficiency: Rickets (soft and deformed bones), osteoporosis (weak bones).
Excess: build-up of calcium, poor appetite, vomiting.

c) Iron
Deficiency: Anaemia (Tiredness, paleness).
Excess: Constipation, vomiting.

d) Protein
Deficiency: Muscle loss, slow growth in children.
Excess: Stored as fat, weight gain and obesity.

e) Carbohydrates
Deficiency: Ketosis which is very rare. The body switches to using protein as an energy source.
Excess: Type 2 diabetes, obesity, heart disease and high blood pressure.

f) Fats
Deficiency: Weight loss, lack of fat-soluble vitamins, feeling cold.
Excess: type 2 diabetes, obesity and heart disease and high blood pressure.

1.The Eatwell Guide

a) Fruits and Vegetables.
The main nutrients provided by this food group are vitamins and minerals. Research the following vitamins.

- Vitamin C,
- Vitamin D.

Why do we need them? What food provide them? Are there any other sources of these nutrients that are not in this food group?

b) Beans, pulses, meat, fish, and eggs.
The main nutrient provided by this food group is protein. Research this nutrient.Why do we need protein? Which foods provide protein? Are there any other sources of this nutrient that are not in this food group?

c) Dairy foods.
The main nutrient provided by this food group is a mineral called calcium. Research this nutrient. Why do we need calcium? Which foods provide calcium? Are there any other sources of this nutrient that are not in this food group?

d) Oils and spreads.
The main nutrient provided by this food group is fat. Research this nutrient. Why do we need fat? Which foods provide fat? Are there any other sources of this nutrient that are not in this food group?

e) Fatty, salty and sugary foods.
As we have already established, this food group is not needed in a healthy balanced diet. While it is ok to eat these foods occasionally, they should be limited to ensure we are not at risk of heart disease, diabetes, and obesity. Suggest ways a family could reduce their intake of these foods.

f) Starchy foods.
The main nutrient provided by this food group is carbohydrates. Research this nutrient.
Why do we need carbohydrates? Which foods provide carbohydrates? Are there any other sources of this nutrient that are not in this food group?

g) Water.
Water is crucial to our wellbeing and good health. However, most people struggle to drink the recommended 6-8 glasses of water a day. Suggest ways a family could increase their intake of water.

h) A healthy balance diet.
In order to achieve a healthy balanced diet, we need to eat the right proportions of each food group. We don't have to eat foods from all the food groups in every meal, but instead should be aiming to spread them over a day. Plan a menu that includes breakfast, lunch, dinner, and snacks, that provides the recommended proportions of each food group.

2. Excesses and deficiencies

For each of the following nutrients, describe what can happen if you have too much or too little of each.

Vitamin C, Vitamin D, Calcium, Iron, Protein, Carbohydrates, Fats.

3. Analyse and evaluate your diet

Making sure our diets are balanced is vital for a healthy lifestyle. Answer these questions to analyse and evaluate your diet.

a) Analyse
What do you usually eat for breakfast?

What kind of snacks do you eat during the day?

How often do you have fruit or vegetables with a meal or as a snack?

b) Evaluate
Compare your answers to the eat well guide. Are you having the right proportions of each food group?

Are there any food groups you do not eat at all?

Suggest ways that you could change your diet to make it more balanced.

1. Key Vocabulary

a. Earth's structure (layers)	1. inner core, outer core, mantle and crust
b. Tectonic plates	2. large portions of the earth's crust that move because of convection currents in the mantle
c. Convection currents	3. rivers of molten rock that move underneath the crust and slowly drag tectonic plates
d. Earthquake and volcano preparation	4. monitoring, prediction, protection, planning
e. Development	5. The process of change that affects people's lives.
f. Life Expectancy	6. The average age a person can expect to live to.
g. Literacy Rate	7. The % of people that can read and write beyond the age of 15.
h. Development Indicators	8. Ways of measuring a countries progress and development. For example literacy rate.
i. HIC	9. High Income Countries – Some of the most development countries in the world (UK, France , USA…)
J NEE	10.Newly Emerging Economy – Countries that rapidly becoming more developed (China, Brazil, Nigeria….)
k. LIC	11.Low Income Countries- Some of the least developed countries in the world (Ethiopia, Afghanistan…)

2. Where are Oceania and Southeast Asia located?

Oceania is a geographic region that includes Australasia, Melanesia, Micronesia and Polynesia. Southeast Asia is a subregion of the Asian Continent. Oceans that border the coastline of this continent include the Indian and Pacific Ocean. Several countries located in the region include Australia, Philippines, Indonesia and Kiribati. In the region you can find cities such Manila, Sydney, Auckland and Kuala Lumpur.

Human features	Physical Features
25 Capital Cities including: >Jakarta (Indonesia) >Manila (Philippines) >Kuala Lumpur (Malaysia) >Wellington (New Zealand)	>Indian Ocean >Pacific Ocean >Coral Sea >Volcanoes - Ring of Fire >Great Barrier Reef >Mariana Trench

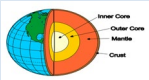
3. How developed is Oceania and Southeast Asia?

Country	Level of development	Evidence
New Zealand	**HIC**	Life Expectancy = 82 years Literacy Rate: 99.9%
Indonesia	**NEE**	Life Expectancy =70 years Literacy rate = 94%
Papua New Guinea	**LIC**	Life Expectancy = 64 years Literacy Rate: 62%
Evaluation of development indicators - Using individual indicators can be misleading because as a country develops, some aspects develop before others.		

4. Plate tectonics in Oceania and Southeast Asia: How do plates move?

The structure of the Earth

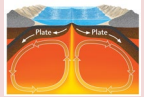
The Earth is separated into four layers:



The inner core: a ball of solid iron and nickel
The outer core: liquid iron and nickel
The mantle: semi-molten rock (magma) that moves slowly
The crust: thin, outer layer divided into slabs of rock called tectonic plates

Tectonic plates are moving because of convection currents in the mantle underneath the crust. The places where plates meet are called plate margins or plate boundaries. This is where tectonic activity (volcanoes and earthquakes) occurs.

Convection Currents



1. The core heats the molten rock.
2. The molten rock rises because it is light.
3. When the molten rock reaches the crust (the plate) it drags the plate with it in the direction it is going.
4. The molten rock will lose its heat when dragging the plate.
5. The molten rock becomes cool and heavy and falls back towards the core.

Plates either move towards each other (**destructive** or **collision** margin) away from each other (**constructive**) or slide past each other (**conservative**)

5. How can we prepare for earthquakes and volcanoes?

Monitoring

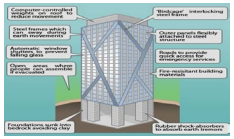
Seismometers measure earth movement and a seismograph records earthquakes.

Prediction

Scientists study historical records of earthquakes at plate margins and have identified locations that they believe are at most risk.

Protection

Reinforced buildings and making building foundations that absorb movement.
Automatic shut offs for gas and electricity

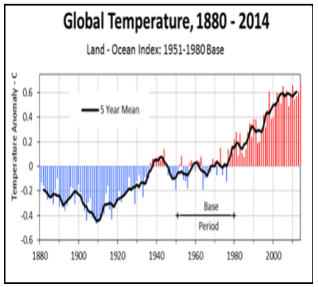


Planning

Avoid building in at risk areas
Training for emergency services and planned evacuation routes and drills.

6. Causes of human-made global warming

Evidence for climate change shows changes before humans were on the planet. So some of it must be natural but recent changes in the climate can be put down to human activity.



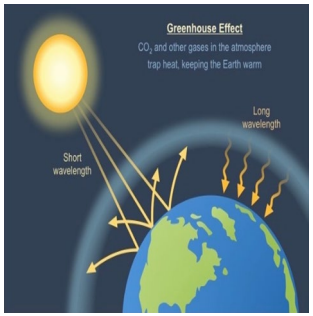
Human Causes

>Burning Fossil fuels – release carbon dioxide with accounts for 50% of greenhouse gases

>Deforestation – logging and clearing land for agriculture increases carbon dioxide in the atmosphere and reduces ability to planet to absorb carbon through photosynthesis.

>Agriculture – accounts for around 20% of greenhouse gases due to methane production from cows etc. Larger populations and growing demand for meat and rice increase contribution.

7. How does the release of greenhouse gases result in global warming?



>Step 1: Solar radiation reaches the Earth's atmosphere - some of this is reflected into space.
>Step 2: The rest of the sun's energy is absorbed by the land and the oceans, heating the Earth.
>Step 3: Heat radiates from Earth towards space.
>Step 4: Some of this heat is trapped by greenhouse gases in the atmosphere, keeping the Earth warm enough to sustain life.
>Step 5: Human activities such as burning fossil fuels, agriculture and land clearing are increasing the amount of greenhouse gases released into the atmosphere.
>Step 6: This is trapping extra heat and causing the Earth's temperature to rise.

Bourne Scholars Knowledge Organiser: Year 8 Autumn Term – Geography

Place - when you locate a place you need to discuss its **relationship to other places**. **Task:** Complete a CLOCC description of a city using the map in your planner.

C - Continent - Christchurch is in the continent of Oceania. **L** - Latitude - New Zealand exists at 40 degrees south of the equator. **O** - Oceans - Neighbouring oceans include the south Pacific. **C** - Country - Christchurch is in the country of New Zealand. **C** - Capital The capital of New Zealand is Wellington.

Inequality - this is experienced after hazards. **Question:** Why do LIC suffer more than a HIC after a hazard?

A.Christchurch Earthquake 2011
1. 185 killed
2. 3129 injured
3. 100,000 properties damaged
4. $28 billion of damages caused

B. Nepal Earthquake 2015
1.8632 killed
2.19,009 injured
3.Hundreds of thousands of people made homeless
4. Economic loss was 50% of GDP

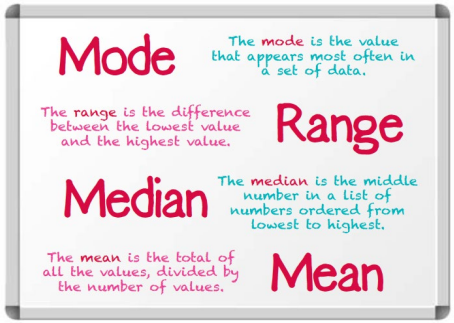
Time - when you look at any: graph, chart or the formation of a feature you need to consider how a factor has **changed over time.**

Month	Temp	Rainfall
January	8	120mm
February	9	125mm
March	11	140mm
April	12	105mm

Task: create a dataset and draw a graph to

Mathematical Skill - when we look at a data set, we can find patterns or meaning in it by calculating the following:

We can use the: mean, median, mode and range to look at data and **make decisions about it**



Task: write out strings of numbers and calculate the: mean, median, mode and range

Enquiry - there will be opportunities for you to carry out **enquiry**. **Task:** Choose a debate and back it up with evidence

1. The Taal eruption affected people more than it affected places
2. Christchurch is not vulnerable to earthquakes or volcanoes
3. Oceania is rich
4. Pollution of the Citarum doesn't matter - it is halfway across the world.
5. Cities are done changing.
6. We cannot prepare for earthquakes and volcanoes?
7. Overpopulation is going to happen.

Sustainability - "meeting our needs, without compromising needs of the future generations"

Question: Consider the sustainability of fast fashion brands along the Citarum River

Advantages
>Fast Fashion allows for more affordable clothing
>The textile industry provides jobs for people on manufacturing lines

Disadvantages
>Pollution causes ailments such as organ damage, itchiness,and impetigo
>Crop yields have reduced causing huge losses for farmers.
>Over 60% of the fish in the Citarum have died

A. Timeline

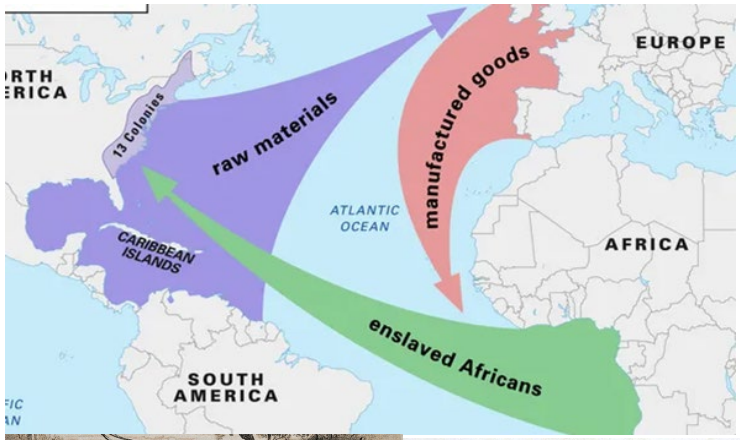
1	1562	First English slaving expedition by **Sir John Hawkins**.
2	1772	**Granville Sharp** wins court case ruling that no slave can be forcibly removed from Britain.
3	1789	**Olaudah Equiano** publishes book describing his experiences as a slave. 'The interesting narrative of the life of Olaudah Equiano.'
4	1792	House of Lords reject Abolition Bill passed by Commons.
5	1804	Successful slave rebellion on island of St Dominique (Haiti) drives out the French
6	1807	Abolition of the Slave Trade Act abolishes the buying and selling of slaves in the British Empire.
7	1833	The Slavery Abolition Act is passed in Britain.

B. Key Individuals

9	**Thomas Clarkson**	Formed first Abolition Committee.
10	**Olaudah Equiano**	Ex-slave who spoke out about his experiences.
11	**William Wilberforce**	Leading campaigner in Parliament for Abolition.
12	**Granville Sharp**	Anti-slavery activist. Worked with Wilberforce and Clarkson.

C. Key Words/Terms

13	**Empire**	A group of countries, people or land controlled and ruled by one single powerful country.
14	**Colony**	A country which is part of an Empire.
15	**Slavery**	A relationship where one person has absolute power over another. They control their life, freedom and wealth.
16	**Triangular Trade**	The name of the system for trading slaves across the world.
17	**Middle Passage**	The name used to describe the journey from Africa to America for slaves, it took up to 2 months.
18	**Auction**	An event where slaves are put up for sale and prospective owners bid for them.
19	**Plantation**	A large farm that slaves worked on to produce cotton, tobacco and sugar.
20	**Abolition**	The act of putting an end to something by law.
22	**Cash crops**	Sugar, cotton, tobacco and coffee grown for profit.
23	**Act**	A law passed by Parliament.
24	**Bill**	The name given to an Act before it is passed by Parliament.
25	**Prejudice**	Unfair opinions that are not based on facts.
26	**Reform**	To change something, making it better.



D. The Triangular Trade

The system in which slaves were traded across the world. Ships were loaded in England, in cities such as Bristol, Liverpool and Southampton, with goods such as guns, cloth and salt. This was taken to Africa and traded for enslaved humans. The ships then went on a 2-month journey known as the Middle Passage to the Caribbean. Here the enslaved humans were sold to work in the cotton plantations and farms. The ship was then loaded with sugar and cotton, also known as cash crops, to be taken back to England to be sold for huge profits.

E. The Middle Passage

The Middle Passage was the longest part of the journey for slaves from Africa to the Caribbean. They suffered through terrible conditions, and many died during the journey. Slaves were packed into the ship in very tight quarters and laid down for most of the journey. They were only given little bits of food to keep them going and were severely punished should they disobey orders. Slaves were chained up for the entire journey, meaning that diseases spread quickly and easily from slave to slave.

F. Reasons for the Abolition of the Slave Trade in 1807

Politics – **Granville Sharp** used the law courts to try and give slaves their freedom. He fought many court cases, e.g., the Zong ship. Slavery was becoming legally unacceptable. Slaves in Britain went to court to get their freedom. By the early 1800s most judges set these slaves free. The law of the land was turning against the idea of slavery.	**Economics** – Sugar plantations were closing as cheap sugar could be bought from Brazil and Cuba. People argued that slaves would work harder if they were freed and paid.	**Religion** – Christian groups, such as the Quakers, thought that slavery was a sin against God and religion	**Media – Thomas Clarkson** collected evidence against slavery. He spread his message all over the country by publishing posters, pamphlets and making public speeches. **Hannah More** was a member of the Abolition Society**.** She wrote poems and books about the horrors of the slave trade and convinced many of the need to ban it.	**Key Individuals** - **William Wilberforce MP** campaigned against the slave trade. The first time he introduced the idea he lost the debate by 163 votes to 88 but he never gave up.

AO1: Demonstrate knowledge and understanding of the <u>key features</u> of the periods studied.

1.1 Chronology
- Create an A3 timeline of England's involvement in the Transatlantic Slave Trade from 1562 to 1833.

1.2 Historical Terminology
- Define the following words: Branding, Caribbean, Corporal punishment, Dysentery, Enfranchisement, Royal African Company

1.3 Key Features (Historical Knowledge)
- Explain TWO English court-cases about the slave trade that may have influenced attitudes to slavery.

AO2: Explain and analyse historical events and periods studied using <u>historical concepts</u>.

2.1 Change & Continuity
- Research how the Quakers in England went from being deeply involved in the slave trade to leading a religious crusade against it.

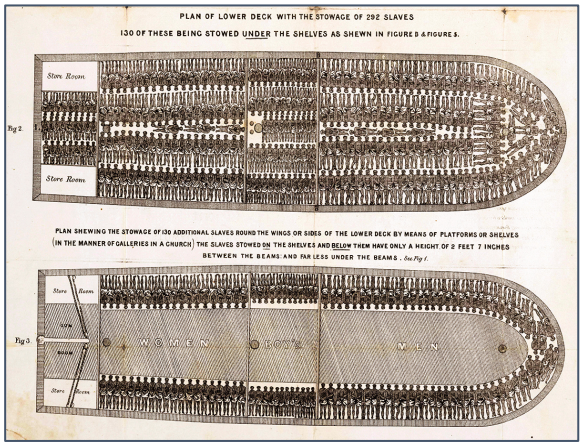
2.2 Cause and Consequence
- Record 3 arguments that would be used to defend the institution of slavery in the 17th and 18th centuries.

2.3 Significance
- Research and evaluate the impacts of <u>Thomas Clarkson</u> on the campaign for abolition in England. Was his work more significant that the work of Hannah More, William Wilberforce or Olaudah Equiano?

AO3: Analyse, evaluate and use <u>primary sources</u> to make judgements.

3.1 Valid inferences
- What can you infer from the diagram of the Slave Ship Brookes created in 1787

3.2 Nature, Origin, Audience, Purpose
- What is the nature, origin, audience and purpose of diagram of the Brookes?



3.3 Usefulness
- What might the limitations of the source be for a historian researching reasons for the Transatlantic Slave Trade?

AO4: Analyse, evaluate and make judgements about <u>interpretations</u>.

4.1 Identifying views
- What is the view given by Hochschild about the abolition movement?

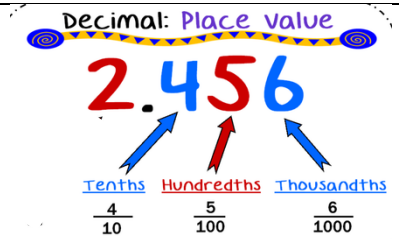
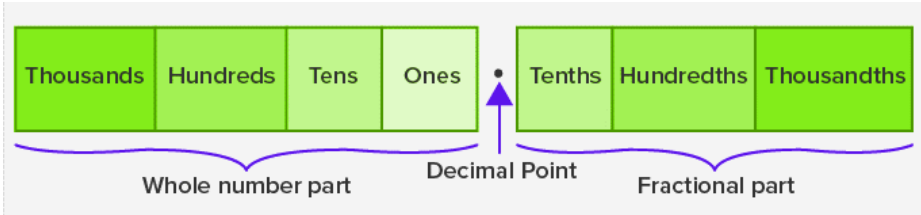
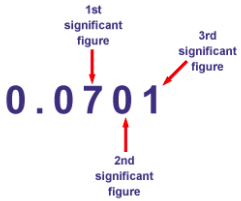
4.2 Analysing interpretations
- What evidence can you find to support the claim that Wilberforce was a 'key representative' for abolition?

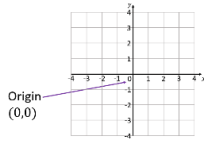
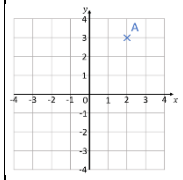
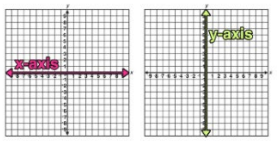
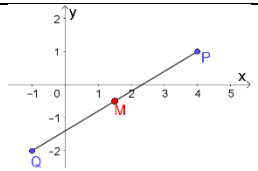
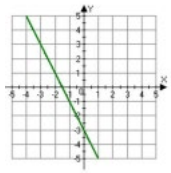
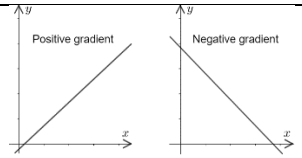
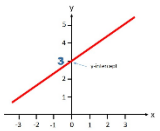
4.3 Evaluating Interpretations
- What other main interpretations could be used to counter the argument that Wilberforce was the real reason for the abolition?

William Wilberforce was a key representative of the anti-slave trade forces. A great orator who was beloved by almost everyone.

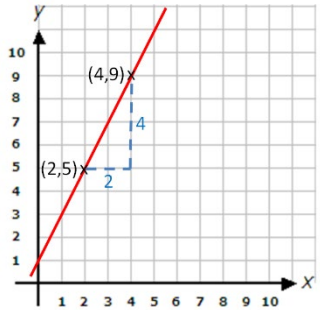
But was the abolition of the slave trade and slavery primarily the work of this likeable, saintly man and his circle of similarly religious friends? Today, most historians see the long struggle to end the slave trade as much more complex and unruly than simply being the work of Wilberforce alone.

BBC Article William Wilberforce: The Real Abolitionist? Adam Hochschild 2011

1. Keyword	Definition	Example	2. Decimal Place Value Chart
a. Decimal Place	The position of a digit to the right of a decimal point.		
b. Significant Figure	The digits in a number that make it meaningful in relation to its place value. Significant figures start from the first non-zero digit.		**3. Worked Examples** a. Round 14.582 to one decimal place 14.582 The digit 5 is the first decimal place The digit 5 is next to 8, meaning the 5 rounds up to 6. Answer = 14.6 b. Work out an estimate for the value of $\frac{48.7 \times 61.2}{11.3}$ $\frac{48.7 \times 61.2}{11.3} = \frac{50 \times 60}{10}$ i. Round the numbers to one significant figure, $\frac{3000}{10} = 300$ ii. Carry out the calculation.
c. Error Interval	The upper bound and lower bound of a number which provides a range of possible values that a number could have been before it was rounded.	A number rounded to 1 decimal place is 0.6 The error interval is: $0.55 \leq x < 0.65$	
d. Approximation	Roughly calculate or judge the value or number of something ≈ means approximately.	The approximate height of the man is 1.8 metres Height ≈ 1.8 m	
e. Estimate	Approximate an answer. Round each number in the calculation to one significant figure.	$63 + 38 \approx 60 + 40$ ≈ 100	**4. Sparx Independent Practice Codes** M111, M431, M994, M131, M878, M730

1. Keyword	Definition	Example
a. Origin	Where the x and y axis intersect (meet). The coordinate of the origin is $(0,0)$	
b. Co-ordinates	Co-ordinates are numbers giving the position of a point on a graph where they meet on the x and y axis. The order is always (x, y)	 The coordinate of point A is $(2,3)$
c. x axis and y axis	The horizontal axis or the line $y = 0$ The vertical axis or the line $x = 0$	
d. Midpoint	A coordinate point that is halfway between two other points on a line segment (part of a line)	 M is the midpoint of P and Q
e. Linear Graph	A graphical representation of a straight line. It is represented by a formula given in the format $y = mx + c$	
f. Gradient	The gradient of a line is a measure of how steep the line is. It is referred to as the letter m in the formula. $Gradient = \frac{change\ in\ y}{change\ in\ x}$	
g. y intercept	Where a line intercepts (crosses) the y axis. It is referred to as the letter c in the formula.	

2.Worked Examples



a. Calculate the gradient of the line

$$Gradient = \frac{change\ in\ y}{change\ in\ x} = \frac{4}{2}$$

$$Gradient = 2$$

b. State the coordinates of the y intercept of the line

The y intercept is at the point $(0,1)$

c. Write the equation of the line in the form of $y = mx + c$

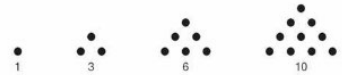
m means gradient $m = 2$

c means y intercept $c = 1$

The equation of the line is $y = 2x + 1$

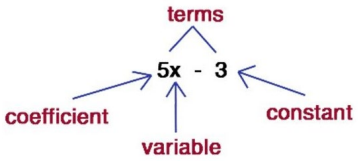
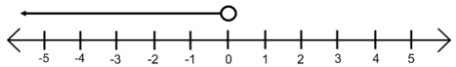
3.Sparx Independent Practice Codes:

M618, M622, M797, M932, M544, M888, M843, M771, M205

1.Keyword	Definition	Example	2. Worked Examples
a. Sequence	A list of numbers or objects in a special order		a. What is the term-to-term rule of this sequence? $\overset{\times 2}{1, 2}, \overset{\times 2}{4}, \overset{\times 2}{8}, \overset{\times 2}{16}, \overset{\times 2}{32}$ The term-to-term rule is multiplying the previous term by 2 b. Find the nth term of the following sequence: $\overset{+3}{3, 6}, \overset{+3}{9}, \overset{+3}{12}, \overset{+3}{15}$ The nth term is $3n$ c. Find the 5th term of the sequence with the rule $4n - 1$ 5th term means $n = 5$ $4 \times 5 - 1 = 19$ The 5th term is 19
b. Ascending	Increasing in size (smallest to largest)	$3, \xrightarrow{+4} 7, \xrightarrow{+4} 11, \xrightarrow{+4} 15, \xrightarrow{+4} 19, \xrightarrow{} \ldots$	
c. Descending	Decreasing in size (largest to smallest)	$6 \quad 2 \quad -2 \quad -6 \quad -10$ $-4 \quad -4 \quad -4 \quad -4$	
d. Term	A value within a sequence. The first term in the sequence is when $n = 1$	1, **3**, 5, 7, 9… 3 is the second term of the sequence	
e. Linear Sequence	A sequence going from one term to the next by adding or subtracting the same number. Also known as an arithmetic sequence	$1, \quad 5, \quad 9, \quad 13, \quad 17$ $+4 \quad +4 \quad +4 \quad +4$	
f. Geometric Sequence	A sequence going from one term to the next by multiplying or dividing by the same number.	**2, 4, 8, 16, 32** x2 x2 x2 x2	
g. nth term	The nth term is a formula used to find any term in a sequence. The 'n' stands for the term number. It is usually written as an expression in terms of n.	$4, 7, 10, 13, 17 \ldots$ The nth term of the sequence is $3n + 1$	**3. Sparx Independent Practice Codes:** M381, M241, M166, M991, M866, M418, M981

The Bourne Academy

Knowledge Organiser: Year 8 Autumn Term Mathematics - Forming and Solving Equations and Inequalities

Forming and Solving Equations and Inequalities					
1. Keyword	**Definition**	**Example**	**Keyword**	**Definition**	**Example**
a. Expression	A statement using numbers and letters.	$4x + 8$	**h. Integer**	A whole positive or negative number including 0.	$-5 \quad 100 \quad \frac{10}{2}$ These are all integers
b. Variable	A symbol or letter used to represent an unknown value		**i. Inequality**	A relationship between two expressions that are not equal	$<$ less than $\leq$ less than or equal to $>$ greater than $\geq$ greater than or equal to $\neq$ not equal to
c. Simplify Expression	Also known as collecting like terms, which are terms that have the same variable and power	$3y + 2x + 4x - y + 6$ Simplified expression is $2y + 6x + 6$	**j. Satisfy an Inequality**	Find the values that make the inequality true	$-3 < x \leq 2$ The integers that satisfy the inequality are: $-2, -1, 0, 1, 2$
d. Equation	A statement showing that two expressions are **equal**	$6y = 12$ $5x + 4 = 24$	**k. Inequality on a Number Line**	Use open or filled circles to show the values of an inequality ○ means $<$ or $>$ ● means $\leq$ or $\geq$	$x < 0$  $x \geq 2$
e. Solve	To find the value of a variable in an equation or inequality	$3y - 7 = 8$ (+7) $3y = 15$ (÷3) $y = 5$			
f. Inverse Operation	The opposite or reverse calculation	The inverse of addition is subtraction. The inverse of multiplication is division	**2. Sparx Independent Practice Codes:**		M813, M830, M175, M428, M417, M327, M208, M979, M795, M531, M949, M120, M237, M792, M960, M100, M908, M707, M509, M554, M957, M384, M118, M732
g. Substitution	Replace a letter with a value	Find the value of $2a$ when $a = 5$ so $2 \times 5 = 10$			

1. Mathematical vocabulary

Define each of the words given.
Give an example for each.

a. Fibonacci sequence
b. Triangular numbers
c. Geometric sequence

2. Mathematician Research

Who are they?
What are they famous for?
What contributions have they made to maths?

Srinivasa Ramanujan Iyengar

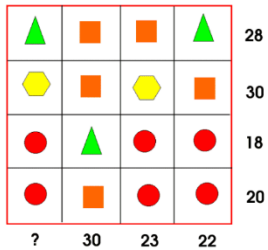
3. Watch

BBC Magic Numbers Mysterious World of Maths 1of3 720p HDTV x264 AAC MVGroup org - YouTube (58 mins 45 Secs)

4. Thinking Mathematically

a. What's it worth?

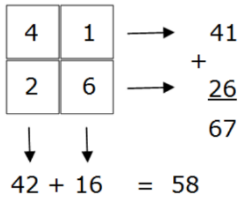
Each symbol has a numerical value. The total for the symbols is written at the end of each row and column.



i. Can you find the missing total that should go where the question mark has been put?
ii. Can you find any other ways of solving the problem?
iii. Can you create your own mild, medium, hot version?
iv. Watch this webinar for students. https://youtu.be/G-r8MzmlqSU

b. Add to 200

Choose any four digits (from 0, 1, 2, ... , 9) and place them in the cells below (you can repeat digits).
Read the vertically add them together. Read them horizontally and add them together.



i. Is there a quick way to tell if the total is going to be even or odd?
ii. Can you make a total of 200?
iii. How many ways are there of doing this?
iv. Which numbers between 0 and 396 is it possible to make?
v. What if we used 3 digits?

58 + 67 = 125

c. The Simple life

i. True or false, when you simplify all the expressions below they all give the same solution?

$$3(x+6y)+2(x-5y)$$
$$4(2x-y)-3(x-4y)$$
$$-2(5x-y)+3(5x+2y)$$

ii. Here are 5 expressions

$(x+y)$ $(x+2y)$ $(x-2y)$ $(x+4y)$ $(2x+3y)$

Choose any pair of expressions and add together multiples of each like in part i.

iii. Can you create your own set of expression for this to work?
iv. What about with 3 variables?

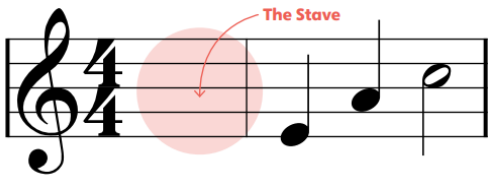
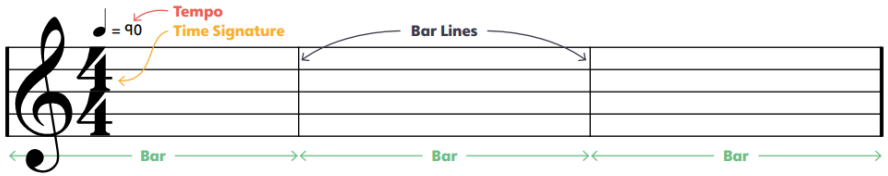
5. Short Problems

a. Jane made a mistake when writing down a multiplication, and she multiplied by 54 instead of 45. Her answer was 198 more than it should have been.
What number did she multiply 54 by?

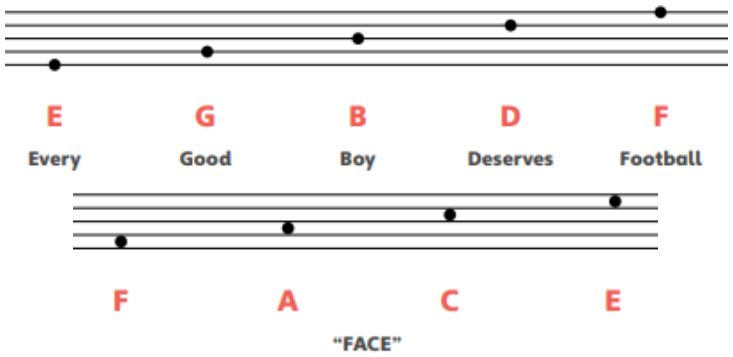
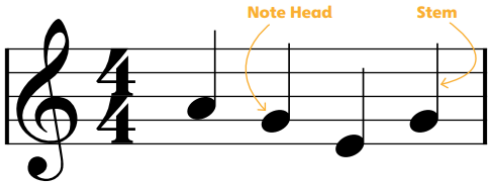
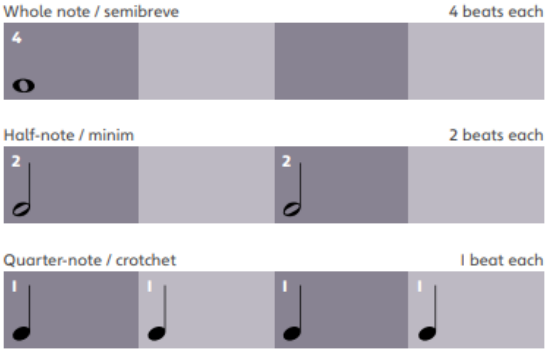
b. A book has 89 pages, but the page numbers are printed incorrectly. Every third page number has been omitted, so that the pages are numbered 1,2,4,5,7,8,... and so on.
What is the number on the last printed page?

c. Granny's watch gains 30 minutes every hour, whilst Grandpa's watch loses 30 minutes every hour. At midnight, they both set their watches to the correct time of 12 o'clock. What is the correct time when their two watches next agree?

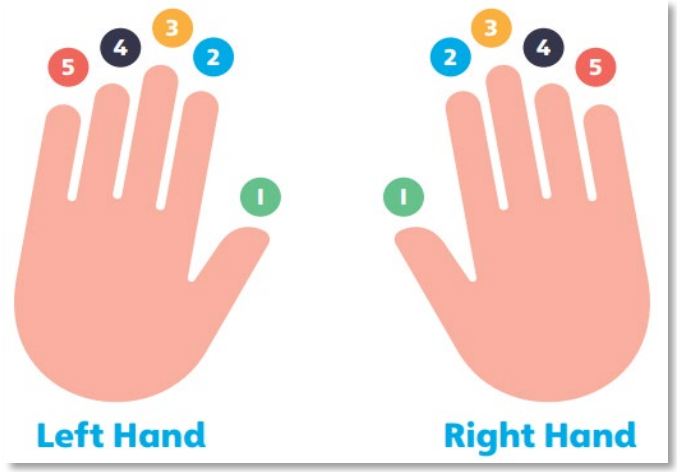
1. Keywords and Definitions

Keyword	Definition	Example
a) Stave	The stave consists of five lines. Notes can be placed on any of these lines or any space between the lines.	
b) Bars	Music is divided into groups of beats called bars. Vertical lines on the stave are called bar lines. They show where each bar begins and ends.	
c) Tempo	The tempo of a piece tells us how fast or slow it is.	
d) Time Signature	The time signature tells us how many beats there are in every bar, and what kind of beat it is.	
e) Clef	This is the treble clef. It tells you which note each line and space of the stave represents. There are lots of different kinds of clefs which place the notes on different lines and spaces. The piano uses two – the treble clef and the bass clef.	
f) Musical Alphabet	Each note in music has a letter, from A to G. We call this the 'musical alphabet' and you will find this on the white keys of the piano.	

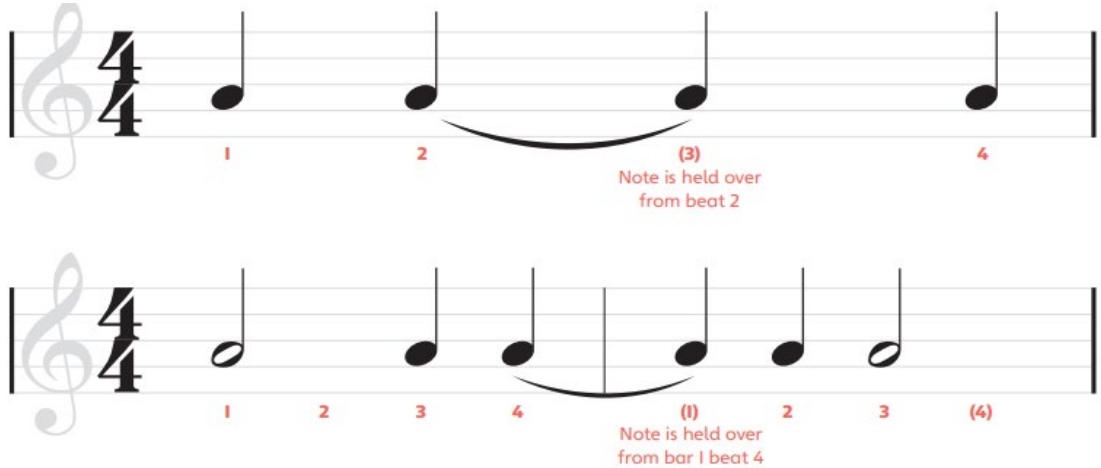
2. Keywords and Definitions

Keyword	Definition	Example
a) Notes	The notes that fall on the lines of the stave can be remembered by the phrase 'Every Good Boy Deserves Football' – or you could make up your own. The spaces between the lines can be remembered easily because they spell the word 'FACE'. If you get stuck, remember 'FACE in the space!'	
b) Rhythm	The rhythms in musical notation are described on the stave by different note heads and stems. These tell you where in the music each note should be played and how long it should be played for.	
c) Duration	Musical notes last for different lengths of musical time, called beats. Beats can be fast, slow, or anything in between, depending on the tempo (speed) of the music. • A note that lasts for four counts, or beats, is called a whole note or semibreve • A note that lasts for two counts, or beats, is called a half note or minim. • A note that lasts for one count, or beat, is called a quarter note or crotchet.	

1. Finger positions on the keyboard

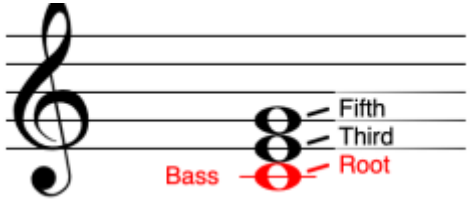


2. Ties in written music

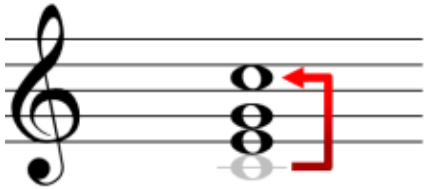


3. Inverted chords – When you shuffle the order of the notes in the chord. These are all C major chords because they all have C, E and G in.

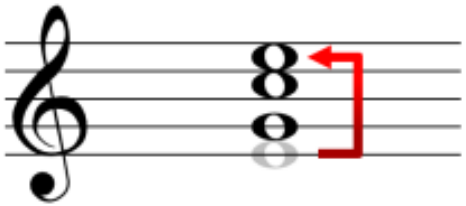
C Major in root position is called this because the note of C is at the bottom of the chord



C Major in 1st position is called this because the note of C is at the top of the chord



C Major in 2nd position is called this because the note of C is in the middle of the chord

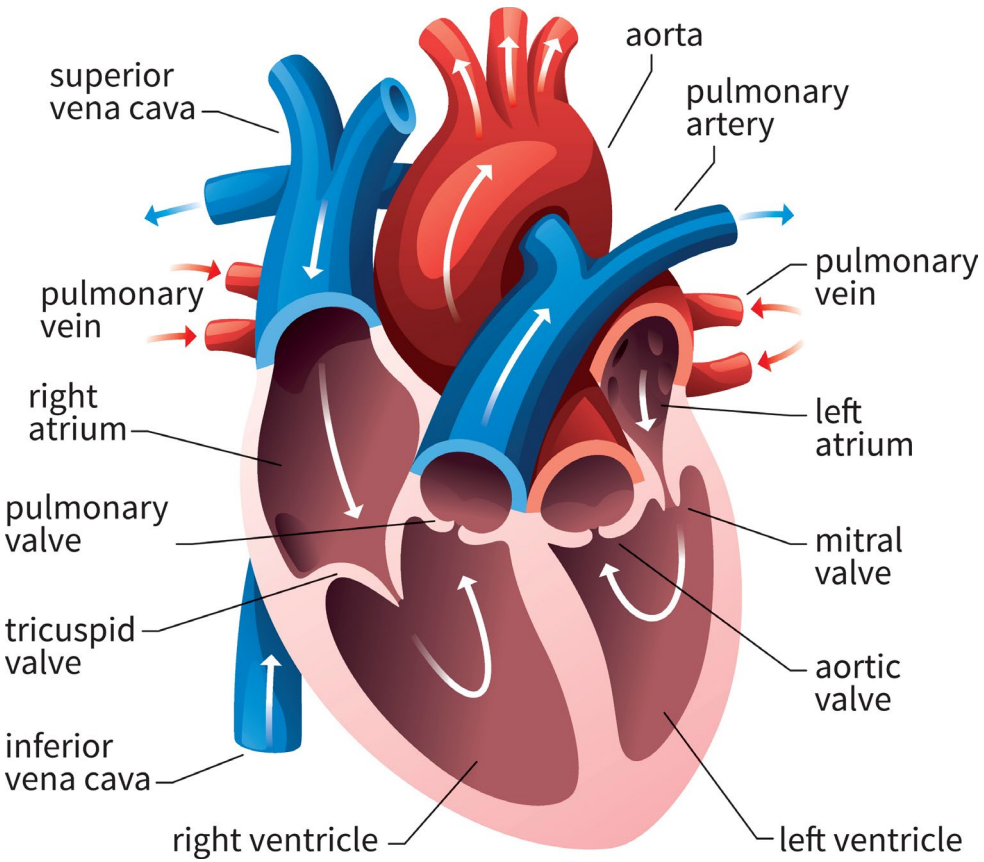


[1] Types of Blood Vessels	
Veins	• Thin walls • Wide lumen (cavity/space) • Contain valves to ensure blood flows in one direction • Carry blood to the heart • Carry blood under low pressure
Arteries	• Thick, muscular walls • Narrow lumen (cavity/space) • Carry blood away from the heart to the body • Carry blood under high pressure
Capillaries	• The smallest blood vessels • Very thin walls • Assist with gaseous exchange with/at the alveoli in the lungs

[2] Cardiovascular Measurements

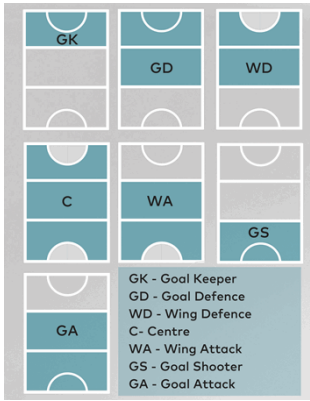
- **Heart rate (HR)** - the number of times the heart beats per minute
- **Maximum Heart Rate (MHR)** = 220 – age
- **Stroke volume (SV) -** the amount of blood pumped out per beat.
- **Cardiac output (CO) -** the amount of blood pumped out per minute.

[3]



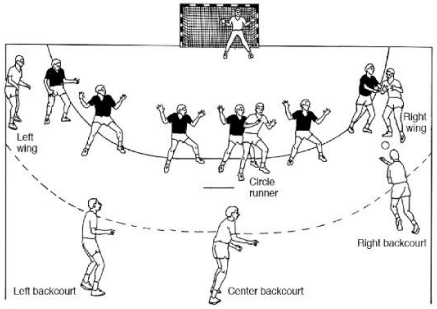
[4] Positions

Netball

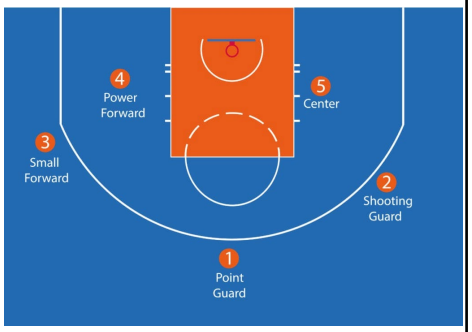


Football

Handball



Basketball



[5] Key Rules

Netball

1. Players cannot run with the ball.
2. Players must land 1 foot 2 foot keeping landing foot 1 on the floor.
3. Players must release the ball within three seconds of having possession.
4. Player may mark the ball with a distance of three feet with their arms up.
5. Contact or pushing is not allowed.

Football

1. Only the goalkeeper is allowed to use their hands and only within their goal area.
2. A player must have both feet on in contact with the ground when they take a throw-in.
3. An indirect free kick means the ball must make contact with at least one other player before scoring a goal.
4. A player is offside if they are in the attacking half and closer to the opposing team's goal-line than both the ball and the second-last opponent.

Handball

1. Players can touch the ball with any part of their body that is above the knee.
2. Only the goalkeeper is allowed to touch the ball inside the D.
3. A player can continuously dribble, providing they bounce the ball with one hand.
4. A player can take three steps maximum before and after dribbling (no 'double dribble').
5. A player can hold a ball for up to three seconds maximum.

Basketball

1. Double dribble: A player can no longer dribble once they put two hands back on the ball.
2. Shot clock: Teams are allowed 30 seconds of possession before they must shoot.
3. Travelling: A player can take no more than two steps without dribbling the ball.
4. Contact: Players can incur personal fouls by pushing, blocking, or striking another player in the act of shooting.

1. Challenging Vocabulary:
Describe & explain

What? How? When? Who? Example?

a) Long bone
b) Short bone
c) Flat bone
d) Irregular bone
e) Sesamoid bone

2. Challenging Vocabulary:
Describe & explain

What? How? When? Who? Example?

a) Cardiac muscle
b) Skeletal muscle
c) Smooth muscle

3. Application of knowledge:
Explain your answer

- What does the skeletal system do?
- Describe its functions….

4. Apply and Analyse:
Higher order thinking

- Choose a position in any of the sports shown in the main knowledge organiser and describe the role of a player in that position.
- Why is teamwork important to a successful fielding team? Can you give an example from a sport you play or watch?

5. Application of knowledge within specific sporting contexts:

a) Mike is 46 year old man who takes part in lots of football. He is a midfield player. Explain muscles used when playing his sport?

b) Jamie is 31 year old lorry driver. He does not lead an active life and has a bad back, which core muscles can he train and make stronger to help?

c) Emma is a 30 year old women, she plays hockey on a Saturday. Emma is an attacking player. Explain how the skeletal system helps her play?

d) Jack is a 32 year old man who loves cycling long distances. Explain which are his main cycling muscles? What exercise could he do to train them?

e) Katy is a rounders umpire for a local under 16 team. Explain her role and the scoring system for rounders?

The Bourne Academy
Knowledge Organiser: Year 8 Autumn - Religious Studies

1. Key Words

a. **Human Rights** – basic entitlements of all humans because they are humans
b. **Prejudice** – prejudging someone as inferior or superior without cause
c. **Discrimination**– acts of treating groups or individuals differently, based on prejudice
d. **Extremism** – Believing in and supporting ideas far away from what most consider correct
e. **Personal conviction** – Something a person feels strongly or believes in
f. **Social justice** – promoting a fair society but challenging injustice and valuing

2. Christian Attitudes towards human rights

- All people are created in God's image – characteristics of God are reflected in human beings so human life should be valued and not destroyed.
- Agape love – selfless, unconditional love – foundations of all the principles of Christian social teachings
- Liberation Theology – Jesus' example was to help liberate those in need, he could be seen as a 'robin hood' like figure supporting the vulnerable.

3. Muslim Attitudes towards human rights

- Every human has worth and should have their dignity protected as an absolute right. Life is given by God and cannot be taken away.
- Muslims are expected to oppose injustice and oppression.
- The Qur'an teaches of equality for all humans, who have special duties in creating a just and far society.

4. Case Study: Oscar Romero

- A Christian Archbishop of San Salvador
- His friend and fellow priest Rutilio Grande was murdered
- He used his position to speak out against the inequality and human rights violations occurring against the people of El Salvador
- He was assassinated in 1980

5. Case Study: Suffragettes

- Victorian women had few rights
- Until 1884 wives were listed as property of their husbands
- 1903 – The Suffragettes movement was formed
- Women fought & campaigned for their rights
- 1918 - Women over 30 had the right to vote

Martin Luther King

- A charismatic Christian Baptist Minister, who fought against racism and inspired many others to join him
- He used non-violent methods of protests to support civil rights for black Americans.
- People of all races and religions joined his protests.
- He staged sit ins, marches and speeches.
- He followed his religious beliefs and the example of Jesus so 'turned the other cheek' when violence was used against him and his supporters.
- He gave a number of inspirational speeches, include 'I have a dream in 1963.
- He won the Noble Peace Prize in 1964.
- He was assassinated in 1968.

Malcolm X

- His original surname was 'Little' which highlighted his family roots being linked to slavery
- He had a tough upbringing, after his father's death, mother's hospitalisation and being placed into many care-homes
- He was written off as a failure even though he was a very bright and capable student
- He was arrested and imprisoned.
- He became a Muslim and found his calling in life as a human rights activist.
- He was a vocal spokesman supporting civil rights for black Americans but was prepared to use force to have his message heard.
- He criticised Martin Luther King's emphasis on non-violence

Rosa Parks

- A quiet Christian middle aged woman, who was an American activist in the civil rights movement
- In 1955, in Montgomery, Alabama she refused to leave her seat to allow a white woman to sit in it
- She was arrested and charged with disorderly conduct
- This act of defiance lead to the Montgomery Bus Boycotts, where people refused to ride on the buses because of Rosa Parks arrest and the inequality that faced people in America at that time
- Martin Luther King helped lead the boycott which lasted for over a year
- But the Supreme Court eventually ruled that segregation

Malala Yousafzai

- A young Muslim girl, who believed and stood up for equality at all costs.
- She campaigned for the rights of girls to be educated
- Started when she was 11 using an online blog highlighting her views on promoting the right for girls to be educated which brought media attention to the issue
- She was issued with death threats for this from the Taliban
- She was shot in the head on her way home from school by the Taliban to silence her
- She survived and despite suffering severe injuries.
- Continues to campaign for issues of social justice

A) Challenge Tasks

1. Create 10 true or false statements on today's topic
2. Transform your learning into a series of images using up to 5 words
3. Plan an alternative lesson about what we have learnt today
4. Construct a timeline showing your learning through today's lesson
5. Produce a summary of today's lesson – then reduce the number of words used to a single sentence or three bullet points
6. Turn today's learning outcomes into questions
7. Select 5 key terms that you have used today and create a summary using all of the terms
8. Create 5 questions your teacher might ask about today's learning
9. Use a thesaurus to add more ambitious vocabulary into your work
10. If today's lesson were an album, what would it be called? What songs would be on it?
11. Include three quotations / arguments to support your answer
12. Add a justified conclusion to your evaluative writing

B) Research Challenge

Human Right Individuals

A. Research Elizabeth Fry (Christianity)
B. Research C.S. Lewis (Christianity)
C. Research Shirin Ebadi (Islam)
D. Research Fahma Mohammed (Islam)
E. Research Mahatma Gandi (Hinduism)
F. Research Emmeline Pankhurst (suffragettes)
G. Research Greta Thunberg (suffragettes)
H. Research your own role model that you think has made a positive different, e.g. Marcus Rashford, etc.

Human Right Groups

I. Research Christian Aid
J. Research the salvation army
K. Research Islamic Relief
L. Research and find quotations that support why Christian's campaign for human rights
M. Research and find quotations that support why Muslim's campaign for human rights

C) Wider Links Challenge

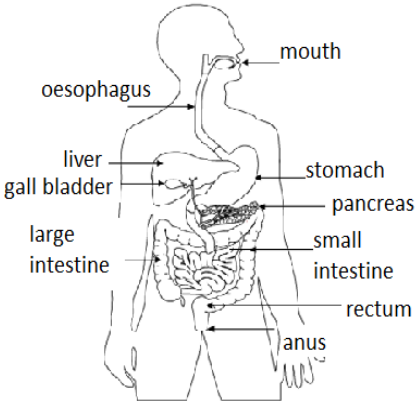
I. Use the internet to find any examples of human rights being broken / issues
II. Evaluate why human rights abuses still occur? Is there any solution?
III. Describe the impact of today's learning on your wider outlook
IV. Explain how you might use today's learning outside of school
V. Describe how today's learning relates to another of your subjects

(1) Key Word	Definition
a) Alveoli	Tiny air sacs in the lings, where gas is exchanged during breathing.
b) Bile	A substance produced in the liver. It emulsifies fats to prepare them for digestion.
c) Bronchi	The plural of 'bronchus'. The bronchi are the two major air tubes in the lungs.
d) Bronchioles	The many small, branching tubules into which the bronchi subdivide.
e) Diaphragm	A large sheet of muscle that separates the lungs from the abdominal cavity.
f) Digestion	The breakdown of large insoluble food molecules to smaller soluble ones.
g) Enzyme	A protein which catalyses or speeds up a chemical reaction.
h) Lungs	The organs responsible for gas exchange in mammals, birds, reptiles, and amphibians.
i) Respiratory System	The organ system where the air is taken into and out of the body, and gas exchange happens.
j) Trachea	The windpipe, the tube that leads from the mouth towards the lungs.

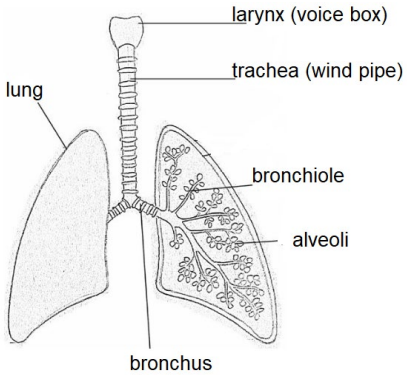
(2) Digestion

The organs of the digestive system are adapted to break large food molecules down into smaller ones which can travel in the blood to cells, and are used for life processes. This is known as

(3) The Digestive System



(4) The Respiratory System

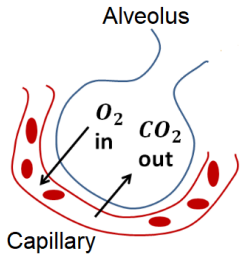


(5) Gas Exchange

The diffusion of oxygen from the air into the blood and the diffusion of carbon dioxide from the blood into the air.

The alveoli are adapted to for gas exchange:

- Alveoli increase the surface area of the lungs.
- Alveoli have very thin cell walls to allow substances to easily pass through.
- Alveoli are surrounded by lots of blood capillaries, which allow the gases to be transported through the body.



(6) Enzymes are proteins that break food down into smaller molecules. Different enzymes break down different food types.

- **Amylase** breaks starch into sugar
- **Protease** breaks down proteins into amino acids
- **Lipase** breaks down lipids (fats) into fatty acids

The Bourne Academy

Knowledge Organiser: Year 8 Autumn Term - Science C4 Elements, Matter and the Periodic Table

(1) Key Word	Definition
a) Atom	The smallest particle of an element that can exist.
b) Chemical formula	Shows how many of each type of atom in a compound.
c) Chemical Properties	Describes how an element, or group of elements behaves in a chemical reaction.
d) Compound	Two or more **different** elements that have been chemically joined.
e) Element	A substance that is made up of only one type of atom.
f) Group	Columns on the Periodic table.
g) Mixture	Two or more substances that are not chemically joined (can be the same elements).
h) Molecule	Two or more atoms that have been chemically joined (can be the same type of atom).
i) Period	Rows on the Periodic table.
Periodic Table	A table that shows all of the elements arranged in rows and columns.

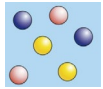
(3) Elements, Compounds and Mixtures

Element

An element is made of one type of atom only.

Compound

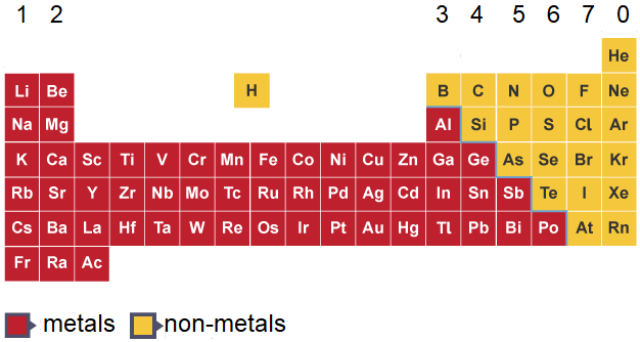
Two or more elements that have been chemically joined.



Mixture

Two or more substances that are not chemically joined

(2) The Periodic Table of Elements



The vertical columns are called **groups**. Elements in a group all react in a similar way.

The horizontal rows are called **periods**.

All elements have **symbols** and **names.**

(4) Metals and Non-metals

Metals are found on the left of the periodic table and non-metals are found on the right. **Properties of metals and non-metals are below.**

Metals	Non-metals
Solid at room temperature (except mercury)	Solid, or gas at room temperature (except bromine).
Good conductors of electricity and heat	Poor conductor (good insulators)
Shiny, strong, malleable (can be bent)	Dull, soft, brittle (they can shatter)

(5) Facts to Learn

Group 1 contains reactive metals called the **alkali metals**.

Group 7 contains reactive non-metals called the **halogens**.

Group 0 contains unreactive non-metals known as the **noble gases**.

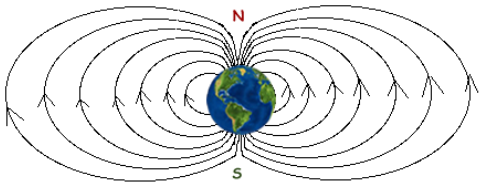
(6) Chemical Formula: how many of each type of atom in a compound?

H_2O: the chemical formula for water.

There are **2 hydrogen** atoms and **1 water atom**

(1) Key Word	Definition
a) Electromagnets	A non-permanent magnet which can be turned off and on by controlling the current through it.
b) Magnetic pole	The area at either end of a magnet where the magnetic field is strongest. We call them (N) and (S).
c) Magnets	A material that produces a magnetic field. Iron, cobalt and nickel are magnetic materials.
d) Permanent magnet	A magnet made from a magnetic material (iron, cobalt, or nickel). It cannot be turned off like an electromagnet.
e) Solenoid	A long piece of wire that has been wrapped into a coil. A solenoid is part of an electromagnet.

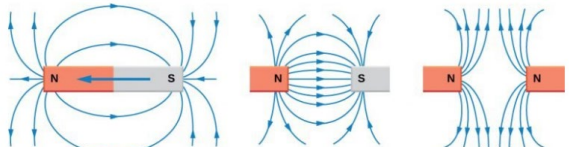
(2) The Earth's magnetic field



The Earth behaves like a huge magnet. It produces a magnetic field which runs from north to south. The field lines are most concentrated at the poles.

The north-seeking pole of a compass is attracted to the Earth's north pole. This allows us to navigate with a map.

(3) Magnets

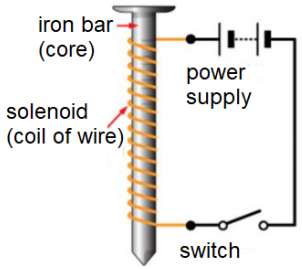


Like poles **repel** each other and **unlike** poles **attract** each other.

The field lines run from north to south. The stronger the magnet, the more field lines it will have.

The magnet is strongest at the poles. The magnetic field is strongest closer to the magnet and decrease with distance.

(4) Electromagnets



When a current flows through a wire, it causes a magnetic field. An electromagnet is a length of wire wrapped into a coil and attached to a power supply. An iron core inside the coil makes the electromagnet stronger. If the current is turned off, the electromagnet will no longer work.

(5) We can change the strength of an electromagnet in three ways:

- Increasing the number of coils in an electromagnet will increase the strength of the electromagnet.
- Adding an iron core to the solenoid (the coil of wire) will increase the strength of the electromagnet.
- Increasing the current flowing through the solenoid will increase the strength of the electromagnet.

The Bourne Academy

Bourne Scholars Knowledge Organiser: Year 8 Autumn Term - Science B4 Breathing and Digestion

(1) Key Word	Match the Definition
a) Alveoli	The plural of 'bronchus'. The bronchi are the two major air tubes in the lungs.
b) Bile	The windpipe, the tube that leads from the mouth towards the lungs.
c) Bronchi	The organs responsible for gas exchange in mammals, birds, reptiles, and amphibians.
d) Bronchioles	A large sheet of muscle that separates the lungs from the abdominal cavity.
e) Diaphragm	Tiny air sacs in the lings, where gas is exchanged during breathing.
f) Digestion	The organ system where the air is taken into and out of the body, and gas exchange happens.
g) Enzyme	The many small, branching tubules into which the bronchi subdivide.
h) Lungs	A substance produced in the liver. It emulsifies fats to prepare them for digestion.
i) Respiratory System	The breakdown of large insoluble food molecules to smaller soluble ones.
j) Trachea	A protein which catalyses or speeds up a chemical reaction.

(2) The Digestive System

a) Describe the movement of food through the digestive system.

b) Explain the function of the gall bladder in the digestive system.

c) How is the small intestine specialised to aid in nutrient absorption?

(3) The Respiratory System

a) Describe the movement of air through the respiratory system

b) Explan why the trachea contains cartillage.

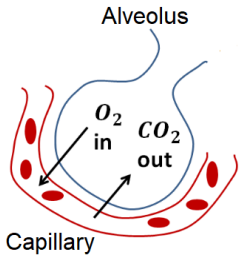
c) Explain what happens during an asthma attack and what can trigger it.

(4) Gas Exchange

a) Describe 3 ways the alveoli are specialised to aid in rapid gas exchange and justify how these specialisms help.

b) Give the name of the blood vessel that surrounds the alveoli. Why are other types blood vessels not found there?

c) State the component of blood that carries the oxygen away from the alveoli and explain how it is specialised.



(5) Digestion

a) How is the digestive system adapted to break down large food molecules?

(6) Enzymes

a) Research the lock and key theory. How can this theory be used to explain how substances are broken down?

(1) Key Word	Match The Definitions to Key Words
a) Atom	Rows on the Periodic table.
b) Chemical formula	A substance that is made up of only one type of atom.
c) Chemical Properties	A table that shows all of the elements arranged in rows and columns.
d) Compound	Two or more atoms that have been chemically joined (can be the same type of atom).
e) Element	Columns on the Periodic table.
f) Group	Shows how many of each type of atom in a compound.
g) Mixture	Two or more **different** elements that have been chemically joined.
h) Molecule	The smallest particle of an element that can exist.
i) Period	Describes how an element, or group of elements behaves in a chemical reaction.
J) Periodic Table	Two or more substances that are not chemically joined (can be the same elements).

(2) Elements, Compounds and Mixtures

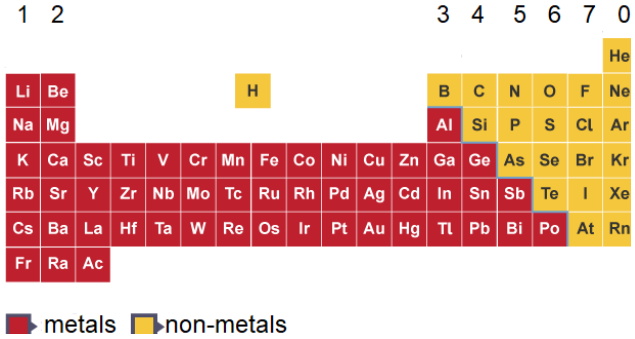
Element

Compound

Mixture

2) A mixture was made between sand, water, the element Iron, and the compound sodium chloride (table salt). Explain how you would separate the substances in this mixture.

(3) The Periodic Table of Elements



1) Lithium reacts with water to produce an alkaline solution. How would you expect potassium to react with water? What will the pH of the solution be?

(4) Metals and Non-metals

3) Some metals are quite soft. What can be done to make a soft metal harder? What is this substance called?

4) Research why metals are generally hard and why metals can conduct electricity.

5) Research why non-metals are mostly gases at room temperature and why they do not conduct electricity.

6) Graphite is made of the non-metal carbon. Why can it conduct

(5) Facts to Learn

7) Research how the reactivity of the elements change:

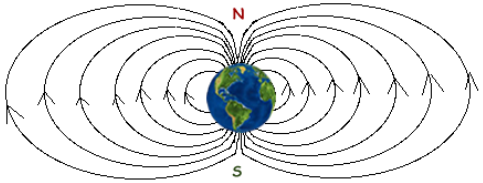
- Down group 7
- Down Group 1

(6) Chemical Formula

8) Work out the chemical formula for sodium chloride, magnesium chloride and aluminium chloride. Why does the ratio of atoms change?

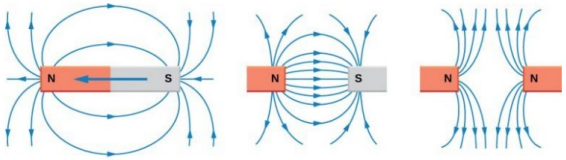
(1) Key Word	Match The Definitions to Key Words
a) Electromagnets	A magnet made from a magnetic material (iron, cobalt, or nickel). It cannot be turned off like an electromagnet.
b) Magnetic pole	A material that produces a magnetic field. Iron, cobalt and nickel are magnetic materials.
c) Magnets	A non-permanent magnet which can be turned off and on by controlling the current through it.
d) Permanent magnet	A long piece of wire that has been wrapped into a coil. A solenoid is part of an electromagnet.
e) Solenoid	The area at either end of a magnet where the magnetic field is strongest. We call them (N) and (S).

(2) The Earth's magnetic field



a) How can compasses be used to navigate around the world?
b) Explain what generates the magnetic field around the earth.
c) What other benefit, other than navigation, is there of the earth having a magnetic field?

(3) Magnets

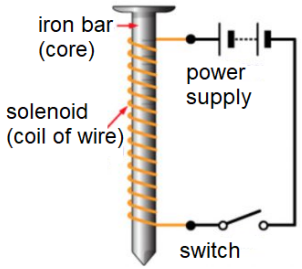


Like poles **repel** each other and **unlike** poles **attract** each other.

a) State the metals which are magnetic.

b) Explain how you could separate a magnetic metal from a mixture of other non-magnetic metals.

(4) Electromagnets



a) Research what the right-hand grip rule is. How does this explain how a magnetic field is generated around a wire?
b) Using gold instead of iron would not increase the strength of the electromagnet. Explain why.

(5) We can change the strength of an electromagnet in three ways:

a) Devise an experiment which you would be able to investigate how to increase the strength of an electromagnet. Think of the control, dependent and independent variable.

b) What would happen to the direction of a magnetic field if the current in the electromagnet was reversed?

The Bourne Academy

Knowledge Organiser: Year 8 – Autumn Term - Spanish

	Unit 1: Talking about weather and free time		aa	al tenis	*tennis*
a	¿Qué haces en tu tiempo libre?	*What do you do in your free time?*	ab	con mis amigos	*with my friends*
b	¿Qué haces cuando hace buen/mal tiempo?	*What do you do when it's good/bad weather?*	ac	con sus amigos	*with his/her friends*
c	¿Qué hace tu amigo en su tiempo libre?	*What does your friend do in his/her free time?*	ad	hago	*I do*
d	¿Adónde vas los fines de semana?	*Where do you go at the weekend?*	ae	mi amigo Lionel hace	*my friend Lionel does*
e	A veces	*Sometimes*	af	ciclismo	*cycling*
f	Entre semana	*During the week*	ag	deporte	*sport*
g	Los fines de semana	*On weekends*	ah	equitación	*horse riding*
h	Cuando tengo tiempo	*When I have time*	ai	escalada	*climbing*
i	Cuando está despejado	*When the sky is clear*	aj	esquí	*skiing*
j	Cuando está nublado	*When the sky is cloudy*	ak	footing	*jogging*
k	Cuando hace buen tiempo	*When the weather is good*	al	los deberes	*homework*
l	Cuando hace mal tiempo	*When the weather is bad*	am	natación	*swimming*
m	Cuando hace calor	*When it is hot*	an	senderismo	*hiking*
n	Cuando hace frío	*When it is cold*	ao	vela	*sailing*
o	Cuando hace sol	*When it is sunny*	ap	voy	*I go*
p	Cuando hace viento	*When it is windy*	aq	mi amigo/a va	*my friend goes*
q	Cuando hay niebla	*When it is foggy*	ar	a casa de mi amigo	*to my friend's house*
r	Cuando hay tormenta	*When it istormy*	as	a casa de su amigo	*to his friend's house*
s	Cuando llueve	*When it rains*	at	a la montaña	*to the mountain*
t	Cuando nieva	*When it snows*	au	a la piscina	*to the swimming pool*
u	juego	*I play*	av	a la playa	*to the beach*
v	mi amiga María juega	*my friend Maria plays*	aw	al campo	*to the countryside*
w	al ajedrez	*chess*	ax	al centro comercial	*to the shopping centre*
x	a las cartas	*cards*	ay	al gimnasio	*to the gym*
y	al baloncesto	*basketball*	az	al parque	*to the park*
z	al fútbol	*football*	ba	al polideportivo	*to the leisure centre*

bb	de marcha	*clubbing*
bc	de paseo	*for a walk*
bd	de pesca	*fishing*
be	en bici	*on a bike ride*
bf	me quedo	*I stay*
bg	en mi casa	*in my house*
bh	en mi dormitorio	*in my bedroom*
bi	Felipe se queda	*Felipe stays*
bj	en su su casa	*in his/her house*
bk	en su dormitorio	*in his/her bedroom*

Unit 2: Talking about my daily routine and activities

a	¿A qué hora te levantas entre semana?	*What time do you get up during the week?*
b	¿Qué haces antes del colegio?	*What do you do before school?*
c	¿Qué haces cuando vuelves a casa?	*What do you do when you return home?*
d	¿Qué haces para ayudar en casa?	*What do you do to help at home?*
e	Entre semana	*During the week*
f	Antes del colegio	*Before school*
g	Por la mañana	*In the morning*
h	Por la tarde	*In the afternoon/ evening*
i	Por la noche	*At night*
j	me acuesto	*I go to bed*
k	me ducho	*I shower*
l	me lavo los dientes	*I clean my teeth*
m	me levanto	*I get up*
n	me meto en internet	*I go on the internet*
o	me peino	*I brush my hair*
p	me pongo el uniforme	*I put on my uniform*
q	me visto	*I get dressed*
r	almuerzo	*I have lunch*
s	ceno	*I have dinner*
t	descanso	*I rest*
u	desayuno cereales	*I have cereal for breakfast*
v	hago pesas	*I lift weights*
w	leo un libro	*I read a book*
x	mirar escaparates	*I go window shopping*
y	preparo mi mochila	*I get my bag ready*
z	salgo de casa	*I leave the house*
aa	tomo el desayuno	*I have breakfast*
ab	voy al colegio	*I go to school*
ac	veo la tele	*I watch TV*
ad	vuelvo a casa	*I return home*
ae	a la una	*at one o clock*
af	a las dos	*at two o clock*
ag	a las tres y media	*at half past three*
ah	a las tres y cuarto	*at quarter past three*
ai	a las cuatro menos cuarto	*at quarter to four*
aj	a mediodía	*at midday*
ak	a medianoche	*at midnight*
al	pero	*but*
am	sin embargo	*however*
an	y	*and*
ao	hoy	*today*
ap	esta tarde	*this afternoon*
aq	(no) debo	*I must (not)*

ar	puedo	*I can*	p	descanso	*I rest*
as	quiero	*I want to*	q	escucho música	*I listen to music*
at	tengo que	*I have to*	r	hago mis deberes	*I do my homework*
au	voy a	*I am going to*	s	juego a la Play	*I play on the PlayStation*
av	ayudar en casa	*help at home*	t	leo revistas	*I read magazines*
aw	hacer la cama	*make the bed*	u	leo tebeos	*I read comics*
ax	hacer las tareas domésticas	*do the chores*	v	me ducho	*I shower*
ay	hacer mis deberes	*do my homework*	w	me lavo los dientes	*I brush my teeth*
az	ir al colegio	*go to school*	x	me meto en internet	*I go on the internet*
ba	levantarme temprano	*get up early*	y	me visto	*I get dressed*
bb	salir con mi amigo/a	*go out with my friend*	z	monto en bici	*I ride my bike*
Unit 3: Saying what I do at home			aa	preparo la comida	*I prepare food*
a	¿Qué haces en tu tiempo libre?	*What do you do in your free time?*	ab	salgo de casa	*I leave the house*
b	¿Qué haces en tu dormitorio?	*What do you do in your bedroom?*	ac	subo fotos a Instagram	*I upload pics to Instagram*
c	¿Con qué frecuencia (lo haces)?	*How frequently (do you do it)?*	ad	veo la tele	*I watch television*
d	A eso de las seis de la mañana	*At around 6 a.m.*	ae	veo películas	*I watch films/movies*
e	A menudo	*Often*	af	veo series en Netflix	*I watch series on Netflix*
f	A veces	*Sometimes*	ag	en la cocina	*in the kitchen*
g	Cuando tengo tiempo	*When I have time*	ah	en el comedor	*in the dining room*
h	Dos veces a la semana	*Twice a week*	ai	en el cuarto de baño	*in the bathroom*
i	Nunca	*Never*	aj	en la habitación de mi hermano	*in my brother's room*
j	Por lo general	*Usually*	ak	en el dormitorio de mis padres	*in my parents' bedroom*
k	Siempre	*Always*	al	en mi dormitorio	*in my bedroom*
l	Todos los días	*Every day*	am	en el garaje	*in the garage*
m	charlo con mi madre	*I chat with my mum*	an	en el jardín	*in the garden*
n	*chateo por Whatsapp	*I chat on Whatsapp*	ao	en la sala de juegos	*in the games room*
o	desayuno	*I have breakfast*	ap	en el salón	*in the living room*

aq	en la terraza	*on the terrace*	z	un reloj	*a watch*
Unit 4: Talking about clothes and the weather			aa	un sombrero	*a hat*
a	¿Qué ropa llevas en casa?	*What clothes do you wear at home?*	ab	un traje	*a suit*
b	¿Qué ropa llevas cuando hace frío/calor?	*What do you wear when it's cold/hot?*	ac	un uniforme	*a uniform*
c	Describe tu uniforme escolar		ad	un vestido	*a dress*
d	Cuando	*Describe your school uniform*	ae	una bufanda	*a scarf*
e	hace calor/hace frío	*When*	af	una camisa	*a shirt*
f	salgo con mi novio/novia	*it's hot/it's cold*	ag	una camiseta sin mangas	*a t-shirt*
g	salgo con mis padres	*I go out with my boyfriend/girlfriend*	ah	una camiseta sin mangas	*a vest/tank top*
h	En casa	*I go out with my parents*	ai	una chaqueta	*a jacket*
i	En la discoteca	*At home*	aj	una chaqueta deportiva	*a sports jacket*
j	En la playa	*At the nightclub*	ak	una corbata	*a tie*
k	En el colegio	*At the beach*	al	una falda	*a skirt*
l	En el gimnasio	*At school*	am	una gorra	*a cap*
m	Nunca	*At the gym*	an	botas	*boots*
n	Por lo general	*Never*	ao	calcetines	*socks*
o	Siempre	*Usually*	ap	chanclas	*flip-flops*
p	llevo	*Always*	aq	pantalones	*trousers*
q	lleva	*I wear*	ar	pantalones cortos	*shorts*
r	un abrigo	*he/she wears*	as	pantuflas	*slippers*
s	un bañador	*a coat*	at	pendientes	*earrings*
t	un chaleco	*a swimsuit*	au	sandalias	*sandals*
u	un chándal	*a waistcoat*	av	vaqueros	*jeans*
v	un cinturón	*a tracksuit*	aw	zapatos	*shoes*
w	un collar	a necklace	ax	zapatos de tacón	*high heels*
x	un jersey	a jumper	ay	zapatillas (de deporte)	*trainers*

The Bourne Academy

Bourne Scholars Knowledge Organiser: Year 8 Autumn Term - Spanish

1. Grammatical vocabulary	**2. Spanish Cultural Research**	
i. What is the stem of the verb? ii. What is an infinitive? iii. What are the three endings of infinitives in Spanish?	i. Who is she? ii. What is she famous for? iii. Where did she come from?	Rigoberta Menchú

3. Dictionary corner	Look up 5 adjectives that are different to the ones that we have studied in the lesson to describe free time activities. 1_____ 2_____ 3_____ 4_____ 5_____			
4. Key Verbs	What are the verb endings for the three different kinds of verbs in Spanish? Write them out below.			
	Personal pronoun	AR verbs – e.g. hablar	ER verbs – e.g. Comer	IR verbs – e.g. Vivir
	Yo (I)	hablo I talk	_____ _____	_____ _____
	Tu (you sing)	_____ _____	comes you eat	_____ _____
	él/ella (he/she)	_____ _____	_____ _____	vive he/she/it lives
	nosotros (we)	_____ _____	_____ _____	_____ _____
	vosotros (you pl)	_____ _____	_____ _____	_____ _____
	ellos/ellas (they)	_____ _____	_____ _____	_____ _____
5. Understanding grammar	Find the answers to the following questions a. Why is the following sentence incorrect? Me gusta juego a videojuegos b. Research how to give someone else's opinion and then change the above to "He likes videogames".			
6. Idioms	Find out the meanings of these idioms. 1) Llover a cántaros _____ 2) Hacer frío que pela _____ 3) Estarse asando _____			

1. Ergonomics and Anthropometrics

Ergonomics relates to how people comfortably and effectively use products, the 'fit' between the users and products they use.

An ergonomic phone would be easy to hold, have buttons shaped to be comfortable and easy to press, its edges will be rounded, and the ear and mouth pieces will be at suitable distances from your ear and mouths.

Anthropometrics are human body measurements. We use average measurements such as height, finger lengths and hand spans to ensure products are the correct size and safe to use. Anthropometric data is different for different ages, user groups and cultures.

2. Usability

Products must be designed to provide a workable solution to the primary user. It is important designs consider all of the primary user needs and provide a solution that is accessible.

The primary user is the person who will use your product most.

A stakeholder is someone who provides, sells or helps control the use of the product. This could include a teacher, a shop keeper, a sports coach or a parent.

3. New Technologies

These technologies often disrupt current design and manufacturing techniques and force industry to change.

These include:

Laser cutter

3D Printer

CAD Software

CNC Lathe

Robotics

Automated Manufacture

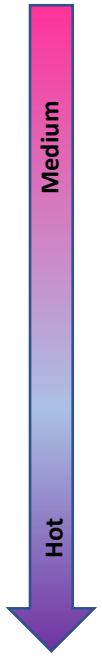
4. Life-cycle Assessment (LCA)

LCA evaluates the environmental impact of a product from 'cradle to grave': from the extraction of raw materials required to manufacture the product to end of use and disposal. It allows change to be instigated.

5. Product Analysis

A product analysis looks at current products and assesses whether they are successful or require improving.

When carrying out a successful product analysis you always ask yourself the following questions in relation to the product you are looking at….



1. Who is the product designed for? How do you know this?
2. How has the designer made the product easy to use?
3. What features does the product have which makes it a good product?
4. What features does the product have which could make it hard to use?
5. What materials have been used and why? Why Are their properties suitable for the product?
6. How would you improve the product? What would you develop further? Why would you make that change?

6. Sustainability

Sustainability is the measure of how much manufacturing, materials and use of energy damages the environment.

Sustainable Materials can be recycled, reused and disposed of with minimal impact on the environment.

Sustainable Energy is energy that is created and used without a big negative impact on the environment.

Sustainable Design and Manufacturing is the planning for products to be manufactured to have a minimal negative effect on the environment.

Sustainability aims to reduce the impact products have on the environment. Designers and manufacturers can do this by following the rules of the **6 R's**:

Reduce, Reuse, Recycle, Repair, Rethink, Refuse.

7. Electronic Components

Different components have different functions:

Input Components: sets an electrical circuit in action. (Switch, LDR, Sensor)

Process Components: work together to ensure current and signals are sent between input components and output components. (Transistor, PIC Chip, Resistor)

Output components: is what the circuit results in and ultimately does. (LED, Motor, Buzzer, Speaker)

8. Material Properties

Material properties are the characteristics of materials and the way they perform.

Durable: Withstands wear and tear over time.

Hard: Withstands scratching.

Tough: Withstands sudden impact.

Strength to Weight ratio: Strong but still lightweight.

Ductile: Can be stretched.

Conductor: Allows heat or electricity to pass through.

Insulator: Does not conduct heat or electricity.

Corrosion resistance: Resistance to rust, chemicals and UV light.

Malleable: Can be shaped, bent and pressed into shape under pressure/force.

9. Risk Assessments

A **risk assessment** helps you work safely in the workshop. It evaluates how safe a task is.

Hazards are accidents that can occur.

Risk is how likely the hazard will happen.

Control measures are what you can do to avoid being injured.

10. Forces

Force is when pressure is applied to an object. A force can be a push or a pull.

We need to understand how forces work to design structures.

Shear A good example of shear force is seen with a simple scissors. The two handles put force in different directions.

Tension is a pulling force.

Compression is a force that presses against an object from opposite directions.

Torsion is a twisting force.

11. A **prototype** is an early sample, model, or release of a product built to test a concept or process or to act as a thing to be replicated or learned from. These can be 2D or 3D and use a range of materials from cardboard to styrofoam and foam board.

12. A **technical specification** is a set list of criteria and requirements that a product must meet. **Primary User Needs** are a list of requirements the primary user wants for the product to be successful for them.

13. PPE

PPE stands for Personal Protective Equipment. This equipment keeps you safe during practical work. PPE includes:

Goggles	**Aprons**
Protective footwear	**Visors**

14. CAD/CAM

CAD stands for **C**omputer **A**ided **D**esign, it is used in lots of different industries such as construction, engineering and product design.

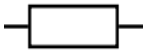
It is used because it is accurate, give realistic 3D views of designs, is easy to correct mistakes without having to draw a drawing all again, and CAD drawings can be sent all over the world via email.

CAM stands for **C**omputer **A**ided **M**anufacturing, it is when machines are controlled by computers to make/produce/manufacture products.

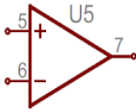
It is used because it is quicker, more accurate, reduces waste, never needs a break and can produce thousands of the same identical product per hour day in day out.

15. Electronic Circuit symbols

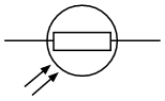
Resistors control the flow of current within a circuit. They stop high rates of current damaging electronic components.



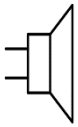
PIC Chips are programmed to send signals. Between inputs and outputs. They control circuits.



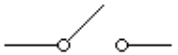
An **LDR** is a resistor which senses light. It allows current to run through it when it is dark.



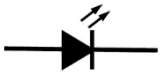
Speakers turn electrical signals into sound waves.



Switches are used to turn circuits on and off. They control when power enters a circuit and either complete or break the flow of current.



An **LED** is a type of bulb and emits light when current runs through it. LED stand for Light Emitting Diode.



16. Biomimicry

This is where designs mimic naturally occurring designs found in nature.

Divers use flippers inspired by animals with webbed feet.

Kayak oars are designed to be aerodynamic like the fins on dolphins.

There are many ways products are inspired by nature.

17. Design Iteration

Iteration means to develop. When we iterate a design we develop it to become better.

Every time we iterate an idea we will improve it. Iteration creates products that are developed to be better for the primary user, easier to use and perform better.

To successfully iterate we need to evaluate and gather feedback on ideas. This feedback informs which parts of the ideas are strong and should be kept or improved.

1. Knowledge and Understanding recall task.

Manufacturing processes

- Create a step by step production log that talk through your current TED workshop project.
- Discuss the tools you are using and how you are using them.
- Discuss quality control checks you are making.
- Discuss how you are assessing hazards, controlling risks and implementing good health and safety measures.
- Give some top tips to students to ensure they do things correctly.

2. Describe and Explain

Pick a manufacturing process to discuss. Research and describe the process step by step. Support the description with a diagram.

Brazing	Wood Lathe
Welding	Sand Casting
Metal Lathe	Press Moulding
Milling Machine	Fabric heat press transfer

3. Iterate and develop

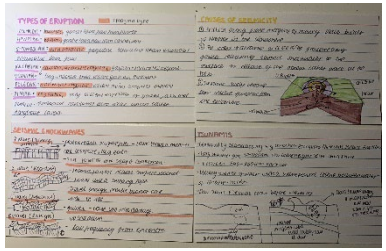
Create a range of sketched design developments for the following products.

You must annotate your changes and explain why they are good for the primary user.

4. Assessment Ready

Flash cards are incredibly useful revision tools. Create a set of flashcards which cover all the theory in your other Knowledge Organiser.

A good flash card will have questions as heading and include short snippets of easy to recall information. You should underline and highlight key words.



5. Visit, Watch, Do.

Visit this link to a sketch-a-day YouTube channel. Pick a video tutorial and develop your drawing skills by following the instructions and demos.

https://www.youtube.com/channel/UCBtSgEZk914z5InEs_U2J3w

6. Analyse and Develop

Gaming Chair

Child's learner keyboard

1. Who is the product designed for? How do you know this?
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