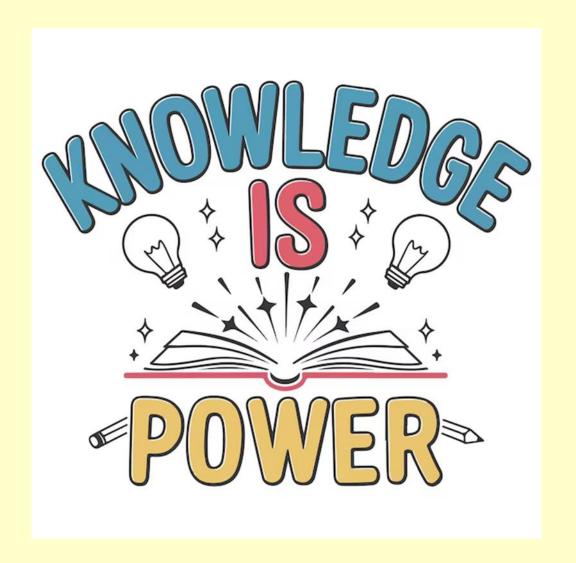
Open
Academy
Year 7
Knowledge
Organiser

Spring Term
1



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How to use your Knowledge Organiser: Step by step guide

	Look, Cover, Write, Check	Definitions of Key Words	Flash Cards	Self Quizzing	Mind Maps	Paired Retrieval
Step 1	Look at and study a specific area of your KO.	Write down the key words and definitions.	Use your KO to condense and write down key facts or information onto flash cards.	Use your KO to create a mini quiz. Write down your questions using your KO.	Create a mind map with all the information you can remember from your KO.	Ask a friend or family member to have the KO or flash cards in their hands.
Step 2	Cover or flip the KO over and write down everything you can remember.	Try not to use your KO to help you.	Add pictures to help support. Then self-quiz using the flash cards. You could write questions on one side, and answers on the other!	Answer the questions and remember to use full sentences.	Check your KO to see if there are any mistakes on your mind map.	They can test you by asking you questions on different sections of your KO.
Step 3	Check what you have written down. Correct any mistakes in green pen and add anything you have missed. Repeat.	Use your green pen to check your work.	Ask a friend or family member to quiz you on the knowledge.	Ask a friend or family member to quiz you using the questions.	Try to make connections, linking the information together.	Write down your answers,

Year 7 Art – Topic: The Greenman

Year 7 example Green Man Face in oil pastel

In the spring term Year 7 move on to study the myth of the Green man and how he has been represented in Art throughout history.

Students will learn about the proportions of the human face and create their own design of the Green Man using drawings of leaves.

https://www.youtube.com/watch?v=-YUKUcB9QxY

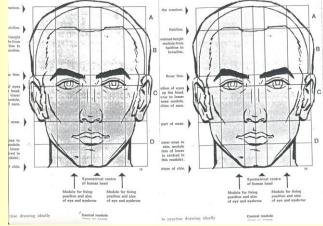
These are images of Leaves that you can draw from and try To arrange into the shape of a face.



You can also use this facial proportion guide to help you get the eyes, nose and mouth in the correct position.



Note the big contrast between colours of leaves. We use a variety of materials such as Watercolours and pastels to try to capture these different tones.



Year 7 Design and Technology - Topic: Textiles - Making a Monster Handwarmer

















Applique

These are the key principles of design we will be looking at this term when working in the Textiles Workshop. The project is to design and make a material hand warmer in the style of a Monster.

Exam Style Questions?

- Which natural fabrics are suitable for making a handwarmer which will need to be heated up to function?
- What key aesthetics do you need to consider when designing to achieve the Monster look?
- How will you turn it from a 2D product into a 3D product?

- Pleat, fold or twist your fabric.
- Write your initials in the top corner.

Sewing Machine

- Wrap and twist the rubber bands round the fabric.
- Dip in the dye bath then
- and leave to dry.

Method for Tie Dye

- leave to dry.
- Remove the elastic bands

Key Vocabulary Material properties **Aesthetics** Measurements Pattern Cutting **Batik** Tie Dye **Applique** Stitch Length Sewing Machine Pins

Method for Batik:

- Lay your fabric flat on the heat mat.
- Write your initials on the top corner of the fabric.
- Use the tjanting tool to draw the design in wax. 3.
- 4. When the wax is cool, put it in the dye bath and leave for 10 minutes.
- Remove and rinse until the water runs clear then leave to dry.
- Iron between paper to remove the wax.





bleaching, low impact/natural dyes with long term advantages to business and

Year 7 Drama – Topic: Silent Comedy

Key Terms

Exaggeration is when you make something bigger and over the top. In silent comedy you need to be able to exaggerate your movements.

Mime is where you act without talking, making the audience believe that you have items which aren't there, such as pretending to eat a meal without food or cutlery.

Slow Motion is where you move very slowly, this can add to a comedy effect. Especially if you then move very quickly!

Characterisation is how you use your face and body to show that you are someone other than yourself. Suspense is where you build to something and leave your audience wanting to know what is going to happen.

Audience Awareness is knowing where the audience is and performing to them.

Silent comedy is a style of acting which dates back to the silent movie era of the early 1900s. A time when film could only play pictures with music but did not have the technology to add speech as well.

The biggest stars of the silent movie era were **Buster Keaton** and **Charlie Chaplin**, who is considered one of the most important actors of all time.

Silent comedy is very visual and contains a lot of **physical humour** to tell story and entertain the audience. It often contains a form of comedy called **slapstick**, which is exaggerated violence such as slipping on a banana skin, being hit in the head by a ladder or a pie being thrown at one person but hitting someone else.





Key Questions:

What is happening in each picture?

What do you think has just happened? What do you think will happen next?

Year 7 English – Macbeth

Plot summary

Macbeth fights bravely for the Scottish King, Duncan. However, when told a prophecy by three witches, Macbeth becomes ambitious for power of his own. Encouraged by his manipulative and equally ambitious wife to do whatever it takes to become King, Macbeth commits regicide and seizes the throne, fulfilling the witches' prophecy.

Power comes with consequences for Macbeth. He cannot escape guilt, fears losing his new crown and his closest allies become increasingly suspicious. As Macbeth does whatever it takes to stay in power, rivals gather their forces and unite to confront him for good.

Key characters and research prompts:

<u>Macbeth:</u> Initially honourable, he becomes obsessed with power and changed by having it. What do you think power does to people? Can you think of examples of politicians/leaders who have been changed by power?

Lady Macbeth: Manipulates her husband into killing the King. Becomes gripped by guilt.

Research how Lady Macbeth challenges

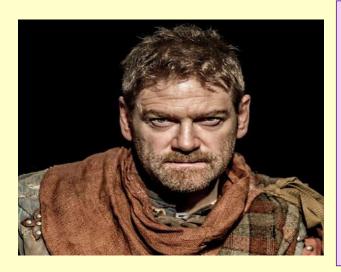
Jacobean views on women.

<u>Banquo:</u> Macbeth's friend, his family are also promised power. However, he chooses not to act on his opportunity and stays true to his morals. Research how Banquo is connected to the ruler James I of England. Why might Shakespeare have done this?

Context

After years of relative peace under Elizabeth I, England would have a new monarch. James I arrived from Scotland and quickly had to establish his claim to be ruler. In the early years of his reign, there would be attempts on his life. At this time, people believed that the monarch had been chosen to rule by God. Any challenge on the monarch's authority would be an act against religion.

Shakespeare's plays were often produced for the benefit of his monarchs, and James I had a particular interest in witchcraft and the supernatural.



Links

Macbeth is a **tragic hero**. His downfall teaches the audience the dangers of ambition and by the end of the play order is restored.

How does Macbeth's power differ from that of the powerful leaders we've studied so far: Odysseus and Beowulf? How might we use what we have learned about **psychoanalysis** to explain these differences?

Tip: When analysing characters and their quotations, consider whether this is demonstrating their ego, id or super-ego.

Links

Remember **context** is our background information about texts. It helps us understand what motivates authors. We learned that Greek **epics** helped establish 'ideal' traits and behaviours in one of the earliest civilisations. Centuries later, Shakespeare is teaching his audience a lesson about ambition and respecting the natural order of power. **Tip: Try to make links to this context in any of your reading analysis answers.**

Year 7 English – Macbeth

Study skills for this course:

Studying Shakespeare can be challenging, but if we overcome the language, we can enjoy his dramas as captivating stories.

- 1. Write down any vocabulary you don't recognise and use a dictionary to give it a definition. Can you then use it in a sentence yourself or think of a modern alternative?
- 2. If you're finding it hard to follow the plot storyboard or create a timeline! Draw a picture of each scene or place them on a timeline.

Example Progress Folder Tasks

How does Shakespeare present Macbeth as conflicted in Act 2 and the wider play?

(20 marks)

How is Lady Macbeth presented as manipulative in Act 2? (20 marks) Write a persuasive speech from Macduff's perspective, encouraging others to challenge Macbeth (20 marks)

Write a diary entry from Macbeth's perspective, as he explores his choices. Will he be remorseful or malevolent? (20 marks)

Success Criteria

Try to use the following structure in your answer:

Point – What do you understand about the question?

Evidence – What is going to prove this?

Technique – What methods is the author using in your quote?

Effects – How does the author's methods shape your understanding?

Refer to context – Why might Shakespeare have made this choice?

Ambitious Vocabulary

Betray – Expose to danger by giving up information.

Deception – The act of betraying someone.

Equivocal – Open to more than one interpretation, ambiguous.

Inevitable – Certain to happen. **Macabre –** Disturbing because concerned with or causing a fear of death.

Machiavellian – Cunning, scheming and unscrupulous, especially in politics.

Malevolent – Having or showing a wish to do evil to others.

Manipulate – Control or influence.

Nihilism – The rejection of religious ideas and the belief that life is meaningless.

Paranoia – Unjustified suspicion.

Remorse – Deep feeling of regret.

Treachery – Betrayal of trust or friendship.

<u>Dramatic / Linguistic</u> <u>Vocabulary</u>

Dramatic Irony – Where the audience knows something the characters do not.

Hamartia – A fatal flaw in a character's personality, causing their downfall.

Hubris – Excessive ego/self-confidence.

Meter – Rhythm in a line of poetry or verse.

Monologue – A long passage of speech spoken by a single character.

Soliloquy – speech in a play which reveals a character's thoughts.

Tragic Hero – A character who starts good and suffers a downfall throughout the play.

Tragedy – A play showing the downfall of its main character.

Tip: Use the ambitious vocabulary in your answers and the dramatic vocabulary to identify the methods the author is using.

Year 7 Food Technology - Topic: Macro nutrients

Nutrients

Macro nutrients

Needed in <u>large</u> quantities in the diet

- 1. Protein
- 2. Fats
- 3. Carbohydrates

Micronutrients

Needed in <u>small</u> quantities in the diet

- 1. Vitamins
- 2. Minerals

Carbohydrates

Function

Energy

Types

Starchy – long term energy, fill you up for longer Sugary – short term energy

Sources

Starchy – potatoes, bread, rice, pasta, noodles.
Sugary – Fruit and vegetables, sugar, fizzy drinks, sweets, honey.



Key Vocabulary

Animal Based
Carbohydrates
Fats
Function
Macro nutrients
Micro nutrients
Minerals
Nutrients
Plant
Protein
Saturated
Sources
Types
Unsaturated

Vitamins

Protein

Function

Grown and repair of muscles and cells

Food sources

<u>Animal</u> – meat, poultry, fish, dairy, eggs. <u>Plant</u> – beans, chickpeas, lentils, spinach, quorn.

Groups of people who need extra protein:

- Growing babies to young adults
- Pregnant people
- Athletes

Fat

Function

- Insulation (to keep us warm)
- Energy
- Protects vital organs and bones

Types

- Saturated (less healthy, usually animal fat)
- Unsaturated (healhty, usually plant based)

Food sources

Saturated – meat, dairy, processed meat such as bacon, sausage, pepperoni
Unsaturated – oil, fish, nuts, seeds, eggs.

Example exam questions

What is the function of sugary and starchy carbohydrates? (2 marks)

Why is protein especially important for children? (2 marks)

What are the functions of fat? (3 marks) List 5 food sources of plant-based protein (5 marks)

What is the macro nutrient found in the following ingredients – butter, sugar, flour, egg? (4 marks)

Year 7 Geography – Topic: Biomes and Ecosystems

Biomes

The world is divided into zonal areas with similar temperatures and rainfall (**precipitation**).

The biomes are spread (**distributed**) roughly from north to south to the equator.

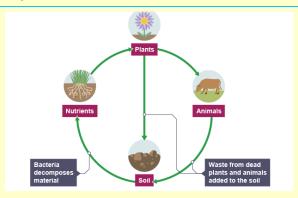
This is repeated from the equator to the south pole. Biomes distribution are affected by **latitude** and altitude.

Ecosystems

Natural environments where biological organisms interact with their **physical** environment.

An ecosystem is the way in which plants, animals, climate and soils all interconnect.

An ecosystem is of any size, small e,g, a tree or large scale e.g. a biome



Progress Folder Tasks

- 1. Write a persuasive letter
- 2. Complete an end of unit test

Deserts

Desert biomes are **arid** and located between 15degrees and 30 degrees north and south of the equator.

Plants and animals have **adaptations** to survive the harsh climate.

In some places humans have built in arid climates and must conserve water supplies.

Some deserts are expanding in size (desertification).

Rainforests

Rainforests are found between 10 degrees north and south of the equator. They are hot and **humid** climates. Rainforests are divided into vertical layers with the top layer of **'emergents'** containing the tallest trees. Light levels decrease as you descend to the forest floor. Plants and animals adapt to constant heat and rainfall. Rainforests are threatened by **deforestation** caused by the need for resources like land, fuels, timber and minerals

Rainforests can be protected by governments. People can buy products that are not from rainforests or those that try to use less or no palm oil.

Geographical Skills

- Recognising physical features from photos/images
- Describing geographical features from an image
- Describing a pattern or distribution on a world map
- Drawing a climate graph
- Research using ICT

Key Vocabulary

Biomes

Climate

Distribution

Adaptations

Precipitation

Lianas

Buttress Roots

Drip Tips

Biodiversity

Plantations

Sustainable

Biotic

Abiotic

Nutrients

Energy

Biodiversity

Flora

Fauna

Year 7 History – Topic: Black Death & Peasants Revolt

In many ways medieval Britain was similar to today. Humans have remained much the same for thousands of years! However, life in medieval Britain also had some key features that make it different to today:

- Britain was a Christian country, and most people were very religious it was illegal not to attend Church!
- · Hygiene was much less important than today.
- Particularly for peasants, life was very hard. Starvation and disease were very common.
- There was a small number of very rich people, but most of the population were very poor
- The vast majority of people worked on the land, growing food.

The Peasants' Revolt, 1381 – In 1381 the peasants of Britain rose up against the King. In the end they were defeated in London, but this was a significant example of people with very little power standing up for themselves! You have learnt about what caused it.

People at the time did not understand that the disease was actually caused by a bacteria, carried by fleas, rats and humans. As a consequence they had many of their own theories about what caused the plague based on their own understanding:

- The plague was caused by the positions of the planets
- The plague was a punishment from God
- The plague was caused by 'bad' or 'corrupt' air
- The plague was spread by Jewish people
 This led to many attempted cures, most of which did
 not prevent the disease from spreading at all:
- Rubbing a dead chicken on buboes
- People known as 'flagellants' whipped themselves to apologise to God
- Many Jewish people were killed as they were blamed for the plague

Key Vocabulary

Black Death
Symptoms
Cause
Consequence
Peasants
Revolt
Lollards
King John
Interpretation

Cause	Consequence	
The Black Death and	After the plague, so many peasants had died that there was a shortage. Survivors	
the Statute of Labourers	were able to demand higher wages. Wealthy people were angry, so they lowered	
	wages back to their previous levels. The peasants were angry about this!	
The Feudal System	Under the Feudal System peasants spent their life working for other people, and	
	were the 'property' of the nobles and barons. More and more people went to see	
	this as unfair.	
The Lollards	The Lollards were a radical Christian group who preached that all people were	
	born equal. This led many people to believe that life was unfair and not in line with	
	God's teachings.	
The Poll Tax	This was a tax that all people had to pay equally, regardless of how much money	
	they had. The peasants saw this as unfair as it hit them particularly hard.	
The war with France	England was losing the 'Hundred Years War' with France. As many English	
	people hated the French they were very angry about this	

Interpretations of King John

Many people, including historians and those alive during his reign, have disagreed over the reign of King John. Although he is often seen as 'bad King John', or even England's worst ever King, others argue that he was not all that bad. We call these competing points of view **interpretations**, because historians have used sources in order to **interpret** the past.



Year 7 Maths - Unit 6 -Addition and Subtraction

What do I need to be able to do?

- Use mental strategies for addition and subtraction.
- Use formal methods of addition and subtraction
- Solve problems with perimeter
- Solve problems with money
- Solve problems with frequency trees
- · Solve problems with bar charts

Vocabulary

Balance: in financial questions – the amount of money in a bank account.

Commutative: changing the order of operations does not change the result.

Credit: Money that goes in to a bank account.

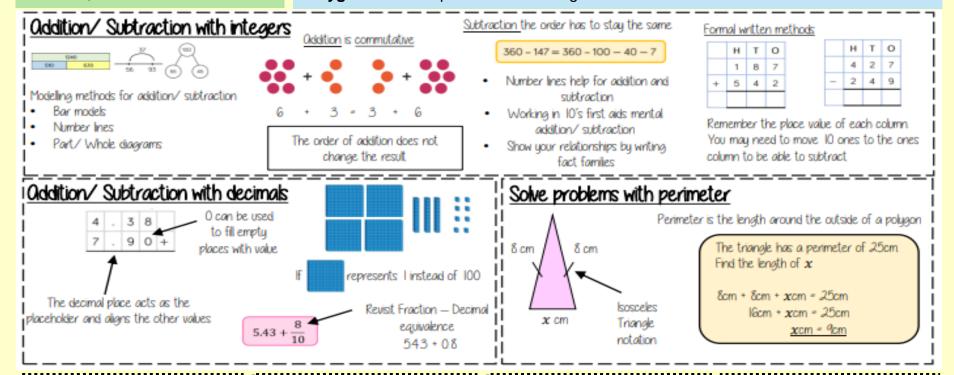
Debit Money that leave a bank account.

Inverse: the operation that undoes what was done by the previous operations.

Perimeter: the distance/length around a 2D object.

Placeholder: a number that occupies a position to give value.

Polygon: a 2D shape made with straight lines.







Column method for subtraction



Adding Decimals



Perimeter



Solve problems with finance

Profit - Income - Costs

Credit - Money coming into an account

Debit — Money leaving an account

Money uses a two decimal place system 14.2 on a calculator represents £14.20

Check the units of currency — work in the same | Glasgow and London.

Tables and timetables

Distance tables

London

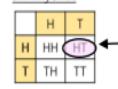
Cardiff	
493	Glasgow
392	177
	493 392

This shows the distance between Glasgow and London It is where their row and column intersects Bus/ Train timetables

Harton	1005	1045	1130
Bridge	1024	1106	1147
Aville	1051	1133	1205
Ware	1117	1202	1233

Each column represents a journey, each row represents the time the 'bus' arrives at that location

TIME COLCUOLTIONS — use a number line



Two-way tables

Belfast

Where rows and columns intersect is the outcome of that action.

Money



Timetables



<u>Frequency trees</u>

60 people visited the zoo one Saturday mornina

26 of them were adults 13 of the adult's favourite animal was an elephant, 24 of the children's favourite animal was an elephant.

> The overall total "60 people"

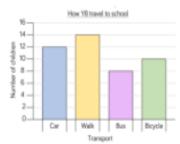
On frequency tree is made up from <u>part-whole</u> models. One piece of information leads to another

26 Office 13 Office 10 Off

Probabilities or statements can be taken from the completed trees

eg 34 children visited the zoo

Bar and line charts



Use addition/subtraction methods to extract information from bar charts

eg Difference between the number of students who waked and took the bus Walk frequency — bus frequency

When describing changes or making predictions.

- Extract information from your data source
- Make comparisons of difference or sum of values.
- Put into the context of the scenario

Frequency Trees



Bar Charts



A career involving number:

Financial Analyst



A financial analyst draws upon their financial modelling experience, analysis capabilities, and their knowledge of market conditions and trends to provide accurate information and advice upon which decisions can be made.

Year 7 Unit 7 – Multiplication and Division

What do I need to be able to do?

- · Understand and use factors
- Understand and use multiples
- Multiply and divide by powers of 10.
- · Use formal methods to multiply.
- · Use formal methods to divide.
- Understand and use BIDMAS for order of operations
- · Solve problems involving area
- · Solve problems using the mean

Vocabulary

Array: an arrangement of items to represents concepts in rows or columns

Convert: to change from one thing to another.

Dividend: the number being divided **Divisor:** the number we divide by

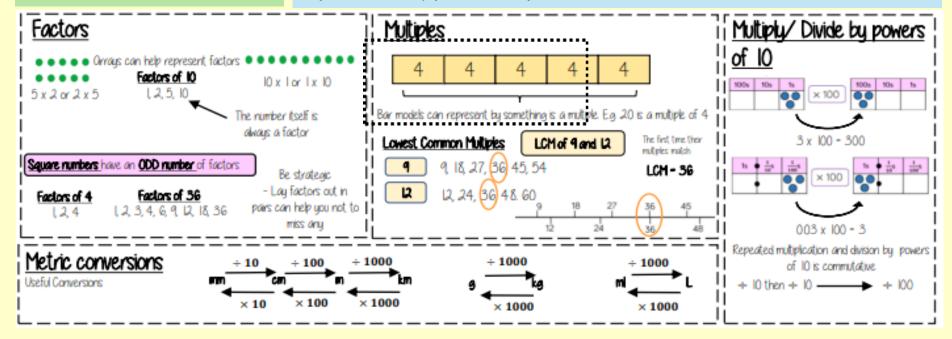
Factor: integers that multiply together to make another number.

Kilo: A prefix meaning multiply by 1000.

Multiples: Found by multiplying any number by positive integers

Prime: A number with only two factors, 1 and itself

Quotient: The result of a division **Square:** To multiply a number by itself



Factors



Multiples

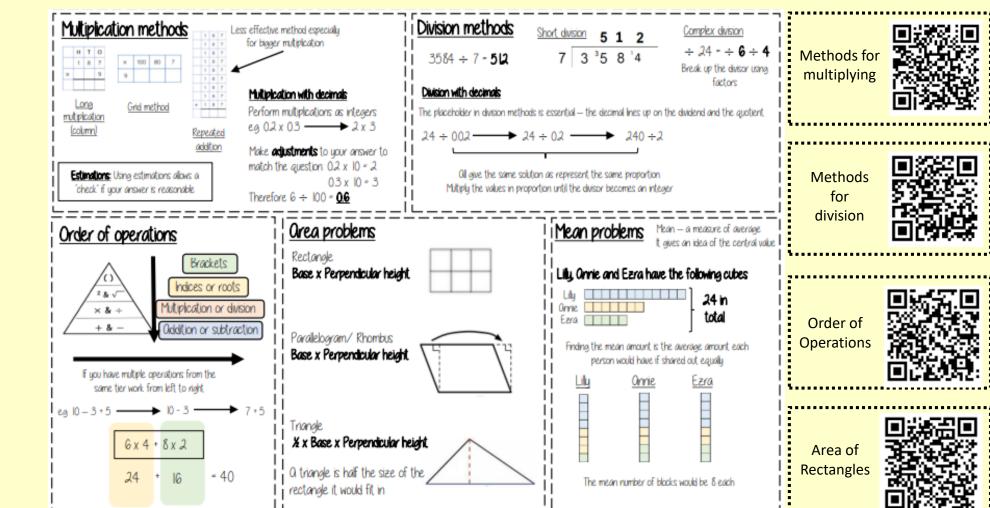


Powers of 10



Metric Conversion





A career involving number:

Physicist



Physicists study the natural universe and formulate mathematical models to stimulate physical behaviours. They then design controlled experiments to test these theories, leading to the development of technology for communication, efficient energy creation and space exploration.

Year 7 Unit 8 – Fractions and Percentages

What do I need to be able to do?

- Find a fraction of a given amount.
- Use a given fraction to find the whole number or other fractions.
- Find the percentage of an amount using mental methods.
- Find the percentage of an amount using a calculator.

Vocabulary

Convert: Change into an equivalent representation, often fraction to decimal or to a percentage.

Equivalent: To have equal value.

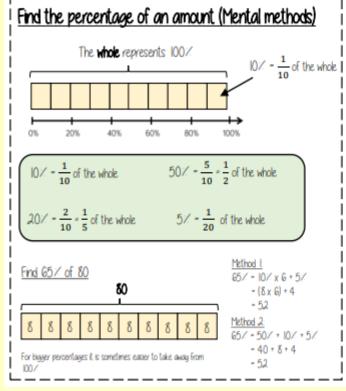
Fraction: How many parts of a whole we have

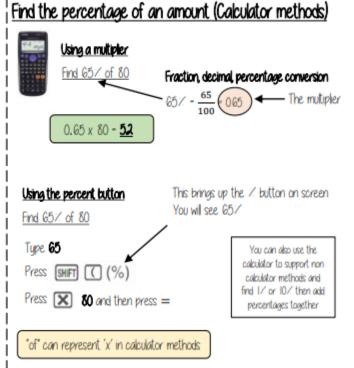
Percentage: parts per hundred (use the % symbol)

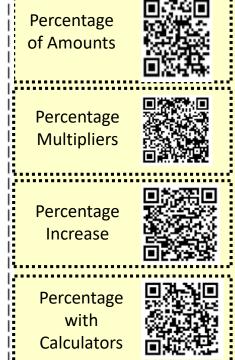
Place Value: The value of a digit depending on its place in a number. Each place is 10

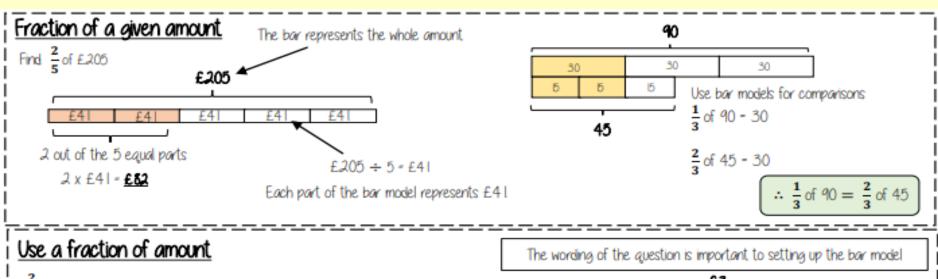
times bigger than the place to its right.

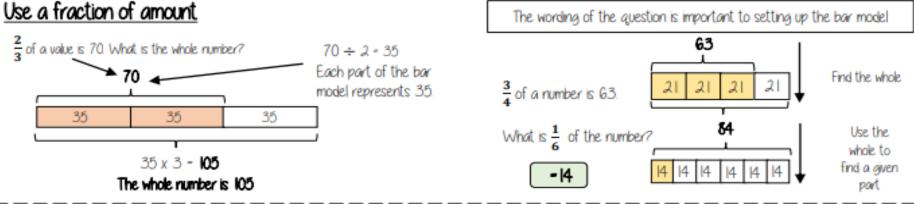
Whole: A number with no fractional or decimal part..











Percentage to fractions



Fractions of shapes



Fractions of an amount



Reverse Fractions



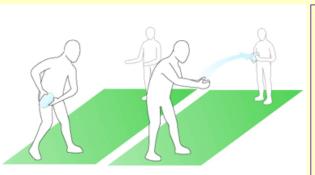
A career involving number:

Sports Scientist



Sports scientists use biomechanical maths to study how the human body moves in order to help both athletes and the public improve their health, sporting ability or recovery from injury. Statistics is also used to prove whether or not a sports product, regime or diet actually works.

Year 7 Physical Education – Topic – Rugby



Rugby Tackling Technique



Create 'lock' around the back of attacker's knees by clasping hands together to collapse opponent's legs Keep head to the side of the attacker's hip to avoid damage to neck, face or head

Drive the player backwards with power coming from legs, forcing them to the ground



Key skills

Ball Familiarisation –

Is being able to perform fundamental rugby handling skills and use these in a small-sided game to maintain ball possession & outwit opponents. It's also developing understanding and knowledge of the basic rules of rugby union.

Passing -

Is being able to outwit opponents using skills and techniques and to understand the importance of width in order to attack. This demonstrates an understanding of the basic rules such as no backwards pass & how to score a try.

Tackling -

Is developing understanding and knowledge of how to tackle safely in order to perform and accurately replicate the correct techniques for front and side tackles. To understand the rules regarding tackling within the game such as "no high tackling".

Attacking/Outwitting Opponents -

Is being able to outwit opponents using learnt skills and techniques by developing the decision making process in a game situation. You should be able to confidently describe most of the rules and laws of rugby union and to begin to recognize and identify strengths and weaknesses when playing small sided games.

Rules of The Game

Scoring

Try - 5 points

A try is scored when the ball is grounded over the opponents' goal-line in the ingoal area. A penalty try can be awarded if a player would have scored a try but for foul play by the opposition.

Penalty - 3 points

When awarded a penalty after an infringement by the opposition, a team may choose to kick at goal.

Conversion - 2 points

After scoring a try, that team can attempt to add two further points by kicking the ball over the crossbar and between the posts from a place in line with where the try was scored.

The conversion kick can be taken either as a place kick (from the ground) or a drop kick.

Key Vocabulary

Backwards Conversion Maul

Offside

Pass

Penalty Ruck

Tackle Tactical

Try

Year 7 Physical Education: Gymnastics

Health and Fitness

I perform an appropriate warm up including a pulse raiser, mobilisation and preparation stretches I can talk about the different components of fitness for gymnastics, balance (the ability to retain control over the distribution of weight or remain upright and steady) flexibility (A full range of motion at a joint) and muscular strength (The ability to exert a large amount of force in a single maximum effort) and how these can impact my performance

Key Vocabulary

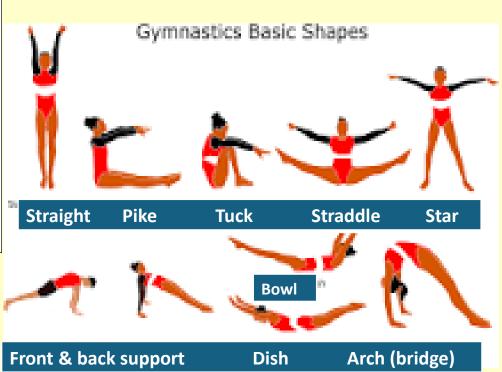
Travelling
Body tension and body extension
Control
Translons/linking
Tuck, Pike, Straddle
Straight, Star, Twist
Rolling
Jump
Balance, flexibility, muscular strength

Choreography

I can decide which basic shapes I should put in a sequence and perform with linking moves.

I can plan smooth linking and transition moves in an individual and pair/group routine.

I can evaluate my own and other performances.



Skills

I can perform basic shapes with body tension, extension and control (tuck, straddle, dish, pike, star, arch, front and back support)

I can perform different ways of travelling (rolls, jumps, turn, skip, hop)

I can demonstrate linking movements by changing the beginning or end of an agility or adding a dance move I can perform as part of a pair/ group to preform balances

Rules

Remove all jewellery, tie back long hair and have bare feet or grip socks Hold balances for 3 seconds

All routines should have a clear start and finish Always perform agilities on a mat

Always have good tension, extension, and control

Leadership

I bring correct kit for PE I can help set up and pack away equipment away.

I am able to coach and give feedback after a performance to help others improve their work.

I try my best in every lesson.

Year 7 Physical Education: Health Related Fitness

Aerobic Endurance:

The ability of the cardio-respiratory system to supply oxygen to working muscles during sustained physical activity lasting more than 30 minutes.



Cardiorespiratory
system =
HEART AND
LUNGS

Video links:







Sporting example:

Mo Farah – Marathon runner. A marathon is 26.2 miles. Mo Farah's fastest time was:

2 hours 5 minutes.

The current world record is: 2 hours.



Muscular Endurance:

The ability to use voluntary muscles, over long periods of time (greater than 30 minutes) without getting tired.

Voluntary muscles:

These are muscles that contract and relax under your control

Involuntary muscles:

Contract and relax automatically e.g Your heart.



Also known as **stamina** which means that the muscles keep working for a long time without getting tired.

Sporting example: Football – 90 Minute game, using leg muscles while running.

Flexibility:

The range of motion at a joint.





Sporting example:

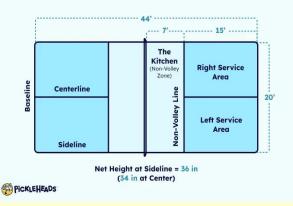
Gymnastics when participants complete the splits.

Key Vocabulary
Aerobic Endurance
Flexibility
Heart
Lungs
Muscular Endurance
Muscles
Oxygen

Year 7 Physical Education – Topic: Pickleball

The pickleball court:

The size of the pickleball court is the same court as the badminton court. It is separated into two sides with a line down the middle.



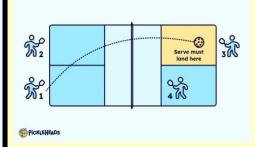
The non volley zone (Kitchen):

This zone is in the middle of the court, on either side of the net. As the name suggests, you can never hit a volley while any part of your body is in the kitchen (or even on the kitchen line). You can't let your momentum carry you into the kitchen after a volley either.

The serve:

The pickleball game starts with a serve. The player on the right side of their court always starts the serve. You serve diagonally to your opponent.

The serve in pickleball is underarm.

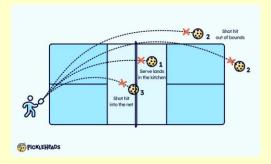


In pickleball, there are four basic serving faults:

- 1. The serve lands in the kitchen
- 2. The ball lands out of the court
- 3. The ball hits the net and falls on your side.
- 4. The ball bounces twice on one side before the player can return it.

You must stand behind the baseline when serving in pickleball. Your feet cannot touch the baseline or sideline during your serve.

Your serve must completely clear the kitchen line, and land between the sideline and baseline to count. The serve can land "on the line" for the baseline and sideline, but *not* on the kitchen line.



Starting position:



first team to 11 points wins—but you must win by 2.

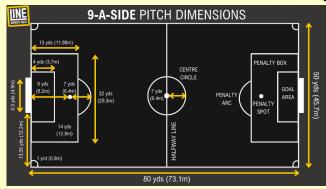
Key words:

Non-Volley Kitchen Serve Fault Sideline Underarm

Year 7 Physical Education – Topic: Football

Rules of The Game 9-a-side

- A match consists of 60 minutes, 30 minutes a half.
- Each team can have a maximum off 9 players
- Each team can name as many substitute players as they want, and be made whenever throughout the game
- Each game must include one referee and two assistant referee's (linesmen). It is the job of the referee to act as timekeeper and make any decisions which may need to be made such as fouls, free kicks, throw ins, penalties and added on time at the end of each half.
- If teams are still level after extra time, then a penalty shootout must take place.
- The whole ball must cross the goal line for it to constitute as a goal.
- For fouls committed a player could receive either a yellow or red card depending on the severity of the foul; this comes down to the referee's discretion.
- If a ball goes out of play off an opponent in either of the side lines, then it is given as a throw in. If it goes out of play off an attacking player on the base line, then it is a goal kick. If it comes off a defending player, it is a corner kick.



Key skills

Passing - To be able to perform the basic Football skills of passing and receiving. To be able to perform these in a small, sided game. To understand and know where passing is used in football. To be able to outwit opponents with passes.

Dribbling - To be able to perform the basic dribbling with control. To be able to outwit opponents with the use of these techniques.

Shooting - To understand and know the benefits of types of shot on goal. To develop their understanding and knowledge of how to execute a successful shot on goal.

Attack - To develop their understanding and knowledge of how to outwit an opponent using the skills learnt.

Defence - To be able to perform basic defensive skills i.e. Tackling To understand when to defend and how to stop opponents from advancing.

Scoring

To score the ball must go into your opponent's goal. The whole ball needs to be over the line for it to be a legitimate goal. A goal can be scored with any part of the body apart from the hand or arm up to the shoulder. The goal itself consists of a frame measuring 8 feet high and 8 yards wide.

A team is awarded 3 points for a win (more goals scored than the opposition), 1 point for a draw (equal number of goals scored for each team), and 0 points for a loss (less goals scored than the opposition).

Key Vocabulary

Corner Kick
Hand-ball
Indirect Free Kick
Mark
Offside
Penalty Kick
Slide Tackle
Throw-In
Volley
Wall

Year 7 Religious Studies – Topic: Does the existence of evil prove that God doesn't exist?

The Problem of EVIL

How do Christians respond to the problem of evil?

Christians respond to the problem of evil in several ways. For example:

Free will: God has given people free will – the ability to choose between right and wrong for themselves. God has shown people how they should live (e.g. the Ten Commandments), but it is up to them to decide whether or not to follow God's instructions. Suffering comes from humans misusing their freewill. Spiritual growth: Some Christians point out that experiencing suffering ourselves or seeing other people suffer can teach us humility or help us develop compassion for others. Christians believe that God shares in our suffering (e.g. Jesus suffered on the cross).

The existence of evil and suffering is one of the commonest reasons people give for not believing in God, or for losing their faith in God:

- •If God is all-loving, surely he would not want people to suffer?
- God is all-powerful, surely he could prevent people from suffering?
- •The fact that evil and suffering do continue to exist in the world makes some people question whether the all-powerful, all-loving God of Christianity actually exists. We call this the problem of evil.

They feel that God is using suffering to test the faith of his followers (like the story of Job) They also believe that suffering is a part of God's plan- he know why everything is happening, but humans cannot understand. Christians feel that evil is necessary for us to know what good is. Evil exists, we can be aware of what is good and choose to do good so that we can grow into the image of God. Some Christians believe that evil is the sole responsibility of humans for making wrong choices eg: Adam and Eve brought evil into the world by disobeying God.

JESUS HIMSELF SUFFERED – Christians believe that God can understand the suffering that they go through because Jesus himself suffered on the cross. The Bible teaches Christians to share in the suffering of Jesus and in times of suffering Christians will look to God for strength and support.

Coping with Suffering

- 1. PRAYER Christians pray to God when they are suffering, hoping that God will listen and comfort and strengthen them in dealing with their suffering. They may also pray for God's help in ridding them of the suffering e.g. curing them/someone else from an illness.
- 2. IT IS PART OF GOD'S PLAN Even though humans may not understand or be aware of the plan, Christians believe that God does have a plan and purpose for everything that happens and this includes suffering. God works through all situations to bring about good, even if this may result in someone dying. It is comforting for Christians to think that a greater good will come out of the suffering they are feeling.

Key Vocabulary

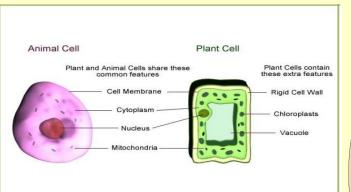
Free Will
Moral Evil
Natural Evil
Omnipotent
Omnibenevolent
Omniscient
Prayer
Meditation
Compassion
Choice
Support
Faith
Trust
Original Sin
Eternal Life

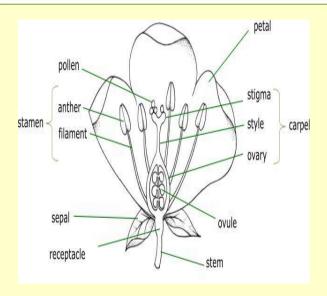
Heaven

Exam questions

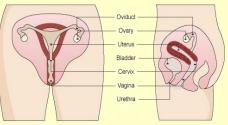
- 1. What is Original Sin? (2 marks)
- 2. Explain using examples of how Christians can avoid committing sins in their daily lives? (4 marks)
- 3. List 3 examples of Moral Evil (3 marks)
- 4. What is Natural Evil? (2 marks)
- 5. List 3 examples of Natural Evil. (3 marks)
- 6. What did Job learn about suffering? Explain your answer using examples. (4 marks)

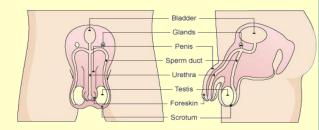
Year 7 Science – Topic: Cells and Reproduction





<u>Fertilisation</u> happens if the egg cell meets and joins with a sperm cell in the oviduct. The fertilised egg attaches to the lining of the uterus. The woman becomes pregnant, the lining of the uterus does not break down and menstruation does not happen.





Pollination

Pollination is the transfer of pollen from the anthers of one flower to the stigma of another flower (of the same species).

In wind pollination, the wind carries the pollen from the anthers of one flower to the stigma of another

In insect pollination, insects carry the pollen from anthers to stigmas. They go to flowers to get nectar for food (e.g. bees), and the pollen sticks to them so they carry it onwards

<u>Key</u> Vocabulary

Penis Vagina Cell Membrane Cell Wall Cvtoplasm Chloroplast Vacuole **Nucleus** Mitochondria Ovary Ovule Stamen Anther Sepal Uterus **Embryo**

The menstrual cycle

The female reproductive system includes a cycle of events called the **menstrual cycle**. It lasts about 28 days, but it can be slightly less or more than this. The cycle stops while a woman is pregnant. These are the main features of the menstrual cycle:

Example exam questions

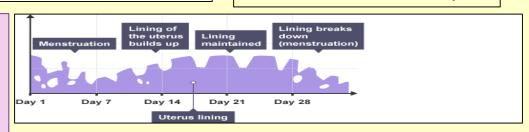
What is the function of chloroplasts and why don't animal cells have them? (2 marks)

What is the female and male sex cell in animals? (2 marks)

What are the functions of petals? (3 marks)

List 5 adaptions plants or animals may have? (5 marks)

What are the function of the following cell organelles – Cell Wall, Nucleus, Mitochondria, Vacuole? (4 marks)



Year 7 Spanish – Topic: Mi Insti

Opiniones Opinions

¿Te gusta el dibujo? Do you like art? Sí, me gusta (mucho) el dibujo. Yes, I like art (a lot).

No, no me gusta (nada) el dibujo. No, I don't like art (at all).

¿Te gustan las ciencias? Do you like science?

Sí, me encantan las ciencias. Yes, I love science.

aburrido/a boring difícil difficult divertido/a funny fácil easy importante important

interesante interesting práctico/a practical útil useful

¿Qué estudias? What do you study?

Estudio... I study...
ciencias science
dibujo art
educación física PE
español Spanish
francés French
geografía geography
historia history
informática ICT
inglés English
matemáticas maths
música music
religion RE
teatro drama
tecnología technology

Los profesores Teachers

El profesor/La profesora es... The teacher is... paciente patient raro/a odd severo/a strict

VIP
VERBS:
hacer – to
do
Haber- to
be
Aprender
– to learn
Estudiar –
to study

¿Cómo es tu insti? What's your school like?

Es... It's...
antiguo/a old
bonito/a nice
bueno/a good
feo/a ugly
grande big
horrible horrible
moderno/a modern
pequeño/a small

¿Qué haces durante el recreo? What do you do during breaks?

Como... I eat... un bocadillo a sandwich unos caramelos some sweets chicle chewing gum una chocolatina a chocolate bar fruta fruit unas patatas fritas some crisps Bebo I drink agua water un refresco a fizzy drink un zumo a juice Leo mis SMS. I read my text messages. Escribo SMS. I write text messages. Nunca hago los deberes. I never do homework

¿Cuál es tu día favorito? What is your favourite day?

Mi día favorito es el lunes/ My favourite day is Monday/

el martes. Tuesday.

Los lunes/martes estudio... On Mondays/Tuesdays I study...

¿Por qué? Why?

Porque... Because...

por la mañana in the morning

por la tarde in the afternoon

estudiamos we study

no estudio I don't study

¿Qué hay en tu insti? What is there in your school?

En mi insti hay... In my school, there is...

un campo de fútbol a football field un comedor a dining hall un gimnasio a gymnasium un patio a playground una biblioteca a library una clase de informática an ICT room una piscina a swimming pool unos laboratorios some laboratories unas clases some classrooms No hay piscina. There isn't a swimming pool.

To listen

https://www.activeteachonlin e.com/default/player/audio/id /930431/external/0

Year 7 Wellbeing – Topic: Meditation

Mindfulness and Meditation can help most people at times!

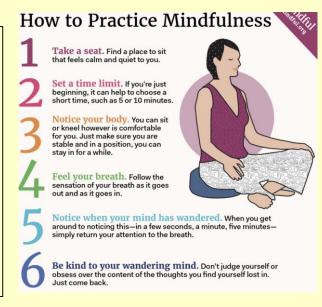
Our 'everyday mind' can end up full of worries about things which are no longer true or happening or fretting about what MIGHT happen in the future – even though we know it may not! The idea is that we are more than these conscious thoughts.

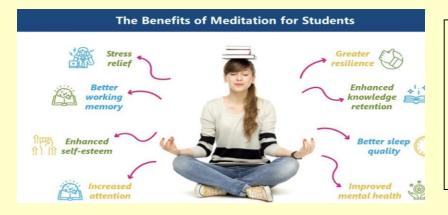
Challenging things happen, we cannot avoid that, but what we think about those challenges is very much up to us

To worry and repeatedly think about difficult things can become suffering - a habit it is all too easy to fall in. The good news however is that we can avoid it! How?

When we notice that we are worrying about things - playing through possible futures like a film in our heads or imagining something going wrong, or even remembering difficult things, unpleasant experiences, we can simply choose to bring ourselves back to the present moment, by thinking about our breathing.

This practice comes with lots of benefits...





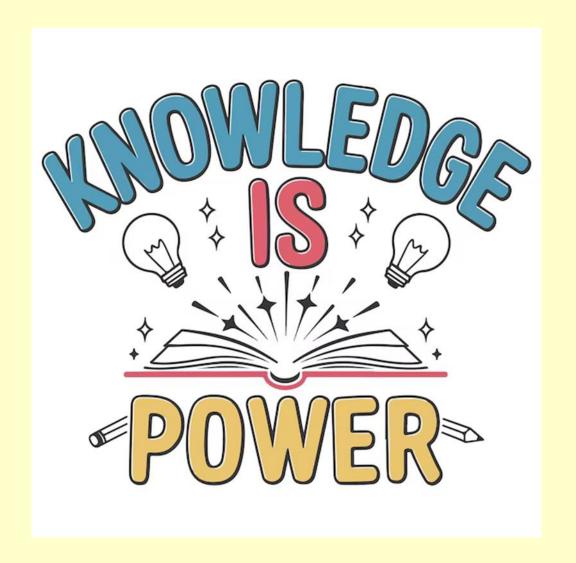
I know it seems way too simple! But this is an ancient practice with traditions in all major religions – including Islam and Christianity! I know that it will seem odd at first. That is your worrying mind trying to stop you taking control over it!

But stick with ii – it will help! Regularly practicing will really help!

If you are struggling with worries regularly you might want to get some support – you can start with Kooth – go to their website and sign up – it is easy, and they will help! If you need help on a specific aspect of Mental Health you can always start at the excellent FYI website here: https://www.fyinorfolk.nhs.uk/ - it costs nothing to sign up and set help!

Open Academy Year 7 Knowledge Organiser

Spring Term 2



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Year 7 Art – Topic: The Greenman

Year 7 example Green Man Face in oil pastel

In the spring term Year 7 move on to study the myth of the Green man and how he has been represented in Art throughout history.

Students will learn about the proportions of the human face and create their own design of the Green Man using drawings of leaves.

https://www.youtube.com/watch?v=-YUKUcB9QxY

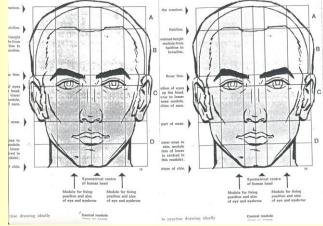
These are images of Leaves that you can draw from and try To arrange into the shape of a face.



You can also use this facial proportion guide to help you get the eyes, nose and mouth in the correct position.



Note the big contrast between colours of leaves. We use a variety of materials such as Watercolours and pastels to try to capture these different tones.



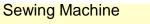
Year 7 Design and Technology - Topic: Textiles - Making a Monster Handwarmer

















Tie Dye **Applique**

These are the key principles of design we will be looking at this term when working in the Textiles Workshop. The project is to design and make a material hand warmer in the style of a Monster.

Exam Style Questions?

- Which natural fabrics are suitable for making a handwarmer which will need to be heated up to function?
- What key aesthetics do you need to consider when designing to achieve the Monster look?
- How will you turn it from a 2D product into a 3D product?

Method for Tie Dye

- Pleat, fold or twist your fabric.
- Write your initials in the top corner.
- Wrap and twist the rubber bands round the fabric.
- Dip in the dye bath then leave to dry.
- and leave to dry.

Remove the elastic bands

Key Vocabulary Material properties **Aesthetics** Measurements Pattern Cutting **Batik** Tie Dye **Applique** Stitch Length Sewing Machine Pins

Method for Batik:

- Lay your fabric flat on the heat mat.
- Write your initials on the top corner of the fabric.
- Use the tjanting tool to draw the design in wax. 3.
- 4. When the wax is cool, put it in the dye bath and leave for 10 minutes.
- Remove and rinse until the water runs clear then leave to dry.
- Iron between paper to remove the wax.



Year 7 Drama – Topic: Silent Comedy

Key Terms

Exaggeration is when you make something bigger and over the top. In silent comedy you need to be able to exaggerate your movements.

Mime is where you act without talking, making the audience believe that you have items which aren't there, such as pretending to eat a meal without food or cutlery.

Slow Motion is where you move very slowly, this can add to a comedy effect. Especially if you then move very quickly!

Characterisation is how you use your face and body to show that you are someone other than yourself. Suspense is where you build to something and leave your audience wanting to know what is going to happen.

Audience Awareness is knowing where the audience is and performing to them.

Silent comedy is a style of acting which dates back to the silent movie era of the early 1900s. A time when film could only play pictures with music but did not have the technology to add speech as well.

The biggest stars of the silent movie era were **Buster Keaton** and **Charlie Chaplin**, who is considered one of the most important actors of all time.

Silent comedy is very visual and contains a lot of **physical humour** to tell story and entertain the audience. It often contains a form of comedy called **slapstick**, which is exaggerated violence such as slipping on a banana skin, being hit in the head by a ladder or a pie being thrown at one person but hitting someone else.





Key Questions:

What is happening in each picture?

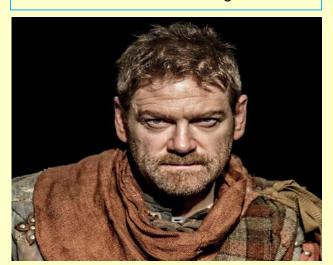
What do you think has just happend? What do you think will happen next?

Year 7 English – Macbeth

Plot summary

Macbeth fights bravely for the Scottish King, Duncan. However, when told a prophecy by three witches, Macbeth becomes ambitious for power of his own. Encouraged by his manipulative and equally ambitious wife to do whatever it takes to become King, Macbeth commits regicide and seizes the throne, fulfilling the witches' prophecy.

Power comes with consequences for Macbeth. He cannot escape guilt, fears losing his new crown and his closest allies become increasingly suspicious. As Macbeth does whatever it takes to stay in power, rivals gather their forces and unite to confront him for good.



Key characters and research prompts:

<u>Macbeth:</u> Initially honourable, he becomes obsessed with power and changed by having it. What do you think power does to people? Can you think of examples of politicians/leaders who have been changed by power?

Lady Macbeth: Manipulates her husband into killing the King. Becomes gripped by guilt.

Research how Lady Macbeth challenges

Jacobean views on women.

Banquo: Macbeth's friend, his family are also promised power. However, he chooses not to act on his opportunity and stays true to his morals. Research how Banquo is connected to the ruler James I of England. Why might Shakespeare have done this?

Context

After years of relative peace under Elizabeth I, England would have a new monarch. James I arrived from Scotland and quickly had to establish his claim to be ruler. In the early years of his reign, there would be attempts on his life. At this time, people believed that the monarch had been chosen to rule by God. Any challenge on the monarch's authority would be an act against religion.

Shakespeare's plays were often produced for the benefit of his monarchs, and James I had a particular interest in witchcraft and the supernatural.

Links

Macbeth is a **tragic hero**. His downfall teaches the audience the dangers of ambition and by the end of the play order is restored.

How does Macbeth's power differ from that of the powerful leaders we've studied so far: Odysseus and Beowulf? How might we use what we have learned about **psychoanalysis** to explain these differences?

Tip: When analysing characters and their quotations, consider whether this is demonstrating their ego, id or super-ego.

Links

Remember **context** is our background information about texts. It helps us understand what motivates authors. We learned that Greek **epics** helped establish 'ideal' traits and behaviours in one of the earliest civilisations. Centuries later, Shakespeare is teaching his audience a lesson about ambition and respecting the natural order of power. **Tip: Try to make links to this context in any of your reading analysis answers.**

Year 7 English – Macbeth

Study skills for this course:

Studying Shakespeare can be challenging, but if we overcome the language, we can enjoy his dramas as captivating stories.

- 1. Write down any vocabulary you don't recognise and use a dictionary to give it a definition. Can you then use it in a sentence yourself or think of a modern alternative?
- 2. If you're finding it hard to follow the plot storyboard or create a timeline! Draw a picture of each scene or place them on a timeline.

Example Progress Folder Tasks

How does Shakespeare present Macbeth as conflicted in Act 2 and the wider play?

(20 marks)

How is Lady Macbeth presented as manipulative in Act 2? (20 marks) Write a persuasive speech from Macduff's perspective, encouraging others to challenge Macbeth (20 marks)

Write a diary entry from Macbeth's perspective, as he explores his choices. Will he be remorseful or malevolent? (20 marks)

Success Criteria

Try to use the following structure in your answer:

Point – What do you understand about the question?

Evidence – What is going to prove this?

Technique – What methods is the author using in your quote?

Effects – How does the author's methods shape your understanding?

Refer to context – Why might Shakespeare have made this choice?

Ambitious Vocabulary

Betray – Expose to danger by giving up information.

Deception – The act of betraying someone.

Equivocal – Open to more than one interpretation, ambiguous. **Inevitable** – Certain to happen. **Macabre** – Disturbing because concerned with or causing a fear of death.

Machiavellian – Cunning, scheming and unscrupulous, especially in politics.

Malevolent – Having or showing a wish to do evil to others.

Manipulate – Control or influence.

Nihilism – The rejection of religious ideas and the belief that life is meaningless.

Paranoia – Unjustified suspicion.

Remorse – Deep feeling of regret.

Treachery – Betrayal of trust or friendship.

<u>Dramatic / Linguistic</u> Vocabulary

Dramatic Irony – Where the audience knows something the characters do not.

Hamartia – A fatal flaw in a character's personality, causing their downfall.

Hubris – Excessive ego/self-confidence.

Meter – Rhythm in a line of poetry or verse.

Monologue – A long passage of speech spoken by a single character.

Soliloquy – speech in a play which reveals a character's thoughts.

Tragic Hero – A character who starts good and suffers a downfall throughout the play. **Tragedy** – A play showing the

downfall of its main character.

Tip: Use the ambitious vocabulary in your answers and the dramatic vocabulary to identify the methods the author is using.

Year 7 Food Technology – Topic: The Eatwell Guide and Energy

The Eatwell guide

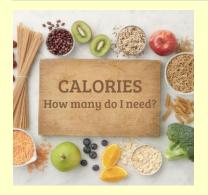
The Eatwell guide is a government guide designed to show you the proportions of different foods groups you should eat over a day or more.

The Guide is made up of 5 sections:

- · Fruit and vegetables:
- Potatoes, bread, rice, pasta and other starchy carbohydrates:
- · Oils and spreads:
- Dairy and alternatives:
- Beans, pulses, fish, eggs, meat and other proteins:
- Top tips on how to have a healthy diet:
- Eat lots of fruit and vegetables at least 5 a day!
- Base your meals on starchy cabohydrates because they fill you up for longer.
- Choose oils to cook with over butter.
- Choose lower fat dairy options like skimmed milk and low fat cheese.
- Choose plant based proteins such as beans and lentils over meat. Cut the visible fat off meat and choose low fat % meat.

Energy

- Energy is food in measured in CALORIES!
- Foods high in fat are high in calories like cheese and some meats.
- Foods high in water are low in calories, like fruit and vegetables.
- We use up energy from thinking, sitting and even sleeping!



It is recommended we don't exceed 2000 calories per day!



Example exam questions:

How can I make healthy choices when choosing foods from the 'beans, pulses, fish, eggs meat and other proteins' section of the guide? (3 marks) How many portions of fruit and vegetables should you eat a day? (1 mark) How is energy measured? Which foods are high in energy?

Key Vocabulary

Calories
Carbohydrates
Energy
Fat
Healthy
Portions
Protein
The Eatwell Guide

Year 7 Geography – Topic: Settlements

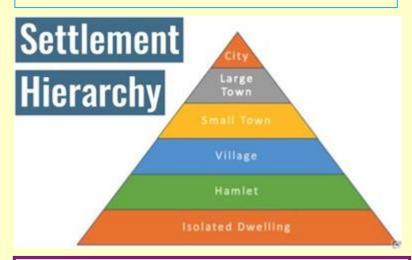
Site Factors

Early settlements were chosen according to their 'site factors'.

There are natural site factors such as good growing soils (fertile soils) and modern man-made factors such as internet connections that affect the growth of settlements.

Settlement Hierarchy

Settlements can be ordered according to their size and importance. Large settlements have larger populations and provide more **goods** and **services**.



Progress Folder Tasks

- Complete a settlement site DME
- 2. Complete an end of unit test
- 3. Create a leaflet for saving water

Settlement structure and patterns

Larger settlements have **land use** that is divided into zones. City centres contain **commerce** such as shops, offices and public buildings like town halls.

The outer zones of cities are dominated by **residential** land uses.

Small settlements in **rural areas** are often spread out in patterns across the landscape. There are 3 main patterns, **clustered** (in circles), **linear** (in lines) and **dispersed** (spread out).

Squatter settlements

In developing countries settlements are growing in size and area rapidly.

When settlements grow too fast people are forced to build their own homes on land that they do not own. These settlements are self-built and homes to millions of people in the world.

The number of cities in the world that exceed 10 million people in population is increasing. Most of the most recently growing cities are located in Asia, South America and Africa.

Impossible places

Some settlements lack most of the best site factors. Human technology enables these settlements to exist. Irrigation and groundwater 'aquifers' can supply water. Modern transport links supply food.

Geographical Skills

Recognising/describing physical/ human features from photos/images

Key Vocabulary

Site factors

Aspect

Raw materials

Population

Terrain

Bridging point

Route centre

Services

Residential

Industrial

Migration

Employment

Conurbation

Slums/shanty towns

Resources

Aquifers

Developing countries

Sustainable

Hamlet

Capital City

Year 7 History – Topic: Power in Medieval England

MAGNA CARTA

The barons were angry with John and no compromise could be agreed. In April/May the barons took up arms against the King, led by Robert FitzWalter. They marched on London, Lincoln and Exeter, which fell to the barons and the rebellion grew in size.

The barons issued a royal charter of demands which John was forced to accept on the field of Runnymeade on 15th June 1215. This became known as the MAGNA CARTA.

Some of the key terms of this were:

- It promised the protection of church rights
- The King could not sell justice.
- Protection from illegal imprisonments
- · All people were to be tried by jury.
- New taxation only with the consent of the barons
- · The King could not sell justice
- A council of 25 barons would be set up to ensure that the King was respecting the rights and the laws of the charter.

The charter defined that a formal relationship should exist between the monarch and barons. The king was now subject to the law. These were radical ideas.

The Catholic Church

- Christianity existed in England before the Norman invasion in 1066. However, the Normans cemented the power of the Catholic Church in England.
- By 1100, most countries in Europe followed Roman Catholicism(they were Catholic).
- Other major religions during this period were Muslims (Islam) and Jews (Judaism).
- The Catholic Church worked across countries and it had a very clear hierarchy, starting with the Pope and ending with priests in villages and towns.
- · There were also Catholic monks and nuns.
- These were people who lived apart from other people and who dedicated their lives to God and Catholicism.
- The Pope was seen as God's representative on earth. As a result he could not be questioned.
- The Catholic Church was extremely rich. It owned a huge amount of land and received money through the tithe.

Key Vocabulary

Thomas Becket
Tithe
Penance
Guilt
Christianity
Purgatory
Magna Carta
Hierarchy
Control
Patronage
Archbishop of
Canterbury

The conflict between King and Church: Henry II vs. Thomas Becket.

1154	King Henry II appointed Thomas Beckett as his Chancellor. His job was to look after the church and the King's law courts. During this time Henry and Thomas became good friends.		
1161	Henry asked Thomas to become the new Archbishop of Canterbury. Beckett was asked to make the church courts fairer. Beckett refused and made Henry very angry.		
1164	Henry announced that he would be in charge of the church court, and Beckett agreed but then changed his mind. Sensing danger, Beckett fled to France.		
June 1170	Henry ordered the Archbishop of York to crown the next king. This was usually the job of the Archbishop of Canterbury. Beckett was furious!!		
November 1170	Despite making up, Beckett removed Henry's supporters from the church		
December 1170	Henry found out that Beckett had removed his supporters from the church. Henry was furious and shouted: "Will no one rid me of this troublesome priest?!?!?!"		
29th Dec 1170	Four knights heard Henry's shout and went to Canterbury Cathedral. They found Beckett and tried to force him to change his mind. Beckett refused and the four knights stabbed him to death in the church.		

Year 7 Maths: Unit 9 – Directed Number

What do I need to be able to do?

- Perform calculations that cross zero.
- Add/Subtract Directed Numbers
- Multiply/Divide Directed Numbers
- Substitute negative numbers.
- Solve two-step equations
- Use order of operations (BIDMAS) with directed numbers

Vocabulary

Commutative: Changing the order of operations does not change the result.

Directed Number: A negative number.

Expression: A maths sentence with algebra involved but no equals sign.

Inverse: The opposite function to undo the previous calculation.

Negative: a value less than zero.

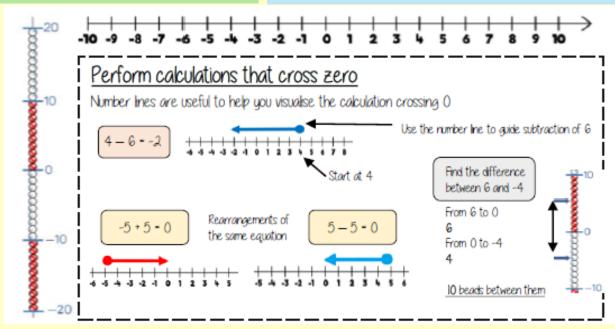
Product: the result when two or more numbers are multiplied.

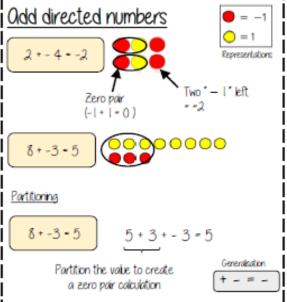
Square: a term multiplied by itself

Square Root: a square root of a number is a number when multiplied by itself give the

value.

Subtract: taking one number away from another number.





Directed Numbers in Real Life



Directed Numbers (Ordering)

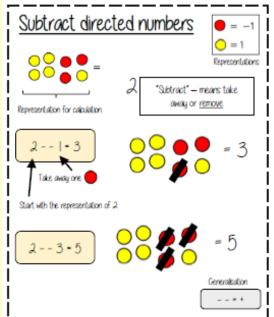


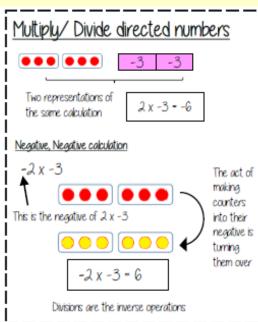
Adding and Subtracting Directed Numbers

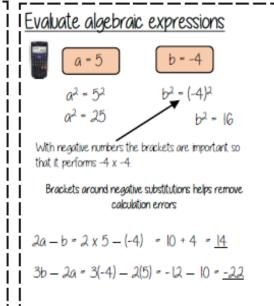


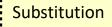
Multiplying and Dividing Directed Numbers













Equations

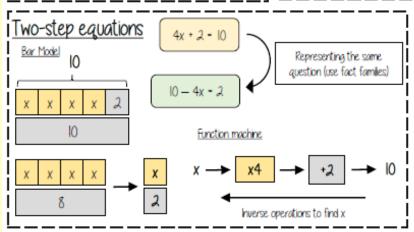


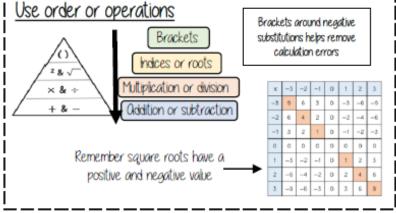
BIDMAS



Two-Sided Equations







A career involving number:

Accountant



An accountant is someone who studies and keeps track of financial information. Businesses and other organisations need accounting systems to know if they are making money. Sometimes, individuals also need accountants to help them manage their money. Accountants prepare financial statements, study costs, calculate taxes, and provide other information to help make decisions about how to spend and save money.

Accountants need to be very good at math, have strong organizational skills, 38 and pay close attention to details.

Year 7 Maths: Unit 10 -Adding and Subtracting Fractions

What do I need to be able to do?

- · Convert between mixed numbers and fractions.
- Add and Subtract fractions with the same denominator.
- · Add and subtract fractions with different denominators.
- Use equivalent fractions
- Add and subtract improper fractions and mixed numbers
- Use fractions with algebra

Vocabulary

Common Denominator: The same value for the denominator

Denominator: The bottom number of a fraction.

Equivalent: of equal value

Improper Fraction: a fraction with a bigger numerator than denominator

Mixed Number: a number with an integer and a proper fraction. **Multiple:** a number belonging to the timetable of that number

Proper Fraction: a fraction with a small numerator than denominator

Numerator: The top number of a fraction.

Substitute: replace an algebraic term with a numerical value

Unit Fraction: a fraction with 1 as the numerator.

Fraction of shapes



Mixed Numbers and Improper



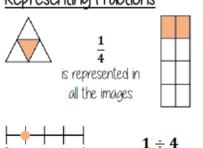
Equivalent Fractions



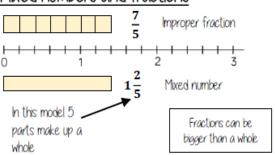
Simplifying Fractions



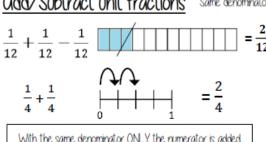
Representing Fractions



Mixed numbers and fractions



Odd/Subtract unit fractions Same denominator



With the same denominator ONLY the numerator is added

Equivalent fractions

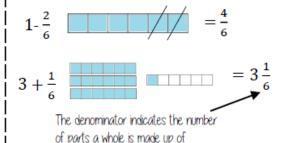
Odd/Subtract fractions

Sequences

 $\frac{1}{3}$, 1, $1\frac{2}{3}$, $2\frac{1}{3}$, 3,... Represent this on a

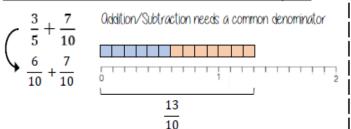
number line to help

Same denominator | Odd/Subtract from integers

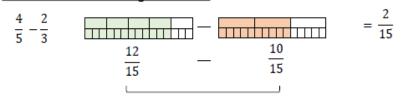


Numerator and denominator have the same multiplier

Odd/Subtraction fractions (common multiples)



Odd/Subtraction any fractions

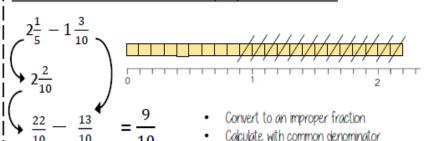


Use equivalent fractions to find a common multiple for both denominators

Adding Fractions (Same Denominator)



Odd/Subtraction fractions (improper and mixed)



Fractions in algebraic contexts

$$p = 5 \quad m = 2$$

$$k - \frac{5}{8} = 2$$

$$p = 5 \quad m = 2$$

$$\frac{p}{8} + \frac{1}{m}$$
Opply inverse operations Form expressions with fractions
$$k = 2 + \frac{5}{8}$$

$$b + \frac{7}{9} \longrightarrow b + \frac{7}{9}$$
Substitution
$$\frac{5}{8} + \frac{1}{2}$$

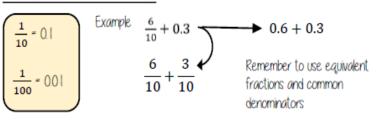
Adding Fractions (Different Denominator)



Partitioning method

$$2\frac{1}{5} - 1\frac{3}{10} = 2\frac{2}{10} - 1\frac{3}{10} = 2\frac{2}{10} - 1 - \frac{3}{10} = 1\frac{2}{10} - \frac{3}{10} = \frac{9}{10}$$

Fractions and decimals



Fractions and Decimals



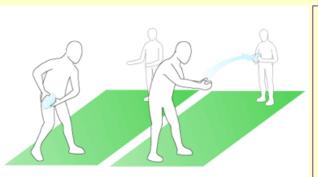
A career involving number:

Pharmacist



Pharmacy students must perform calculations that involve measurements, fractions, conversions, decimals, and ratios. There is little room for error in this field. That means that pharmacists" calculations must be accurate and reliable. Pharmacist must correctly measure ingredient proportions so they can mix together rare medications. A pharmacist might need to convert metric measurements to household measurements.

Year 7 Physical Education – Topic – Rugby



Rugby Tackling Technique



Create 'lock' around the

back of attacker's knees

by clasping hands

opponent's legs

together to collapse



Keep head to the side of the attacker's hip to avoid damage to neck, face or head

Drive the player backwards with power coming from legs, forcing them to the ground



Key skills

Ball Familiarisation –

Is being able to perform fundamental rugby handling skills and use these in a small-sided game to maintain ball possession & outwit opponents. It's also developing understanding and knowledge of the basic rules of rugby union.

Passing -

Is being able to outwit opponents using skills and techniques and to understand the importance of width in order to attack. This demonstrates an understanding of the basic rules such as no backwards pass & how to score a try.

Tackling -

Is developing understanding and knowledge of how to tackle safely in order to perform and accurately replicate the correct techniques for front and side tackles. To understand the rules regarding tackling within the game such as "no high tackling".

Attacking/Outwitting Opponents -

Is being able to outwit opponents using learnt skills and techniques by developing the decision making process in a game situation. You should be able to confidently describe most of the rules and laws of rugby union and to begin to recognize and identify strengths and weaknesses when playing small sided games.

Rules of The Game



Scoring

Try - 5 points

A try is scored when the ball is grounded over the opponents' goal-line in the ingoal area. A penalty try can be awarded if a player would have scored a try but for foul play by the opposition.

Penalty - 3 points

When awarded a penalty after an infringement by the opposition, a team may choose to kick at goal.

Conversion - 2 points

After scoring a try, that team can attempt to add two further points by kicking the ball over the crossbar and between the posts from a place in line with where the try was scored.

The conversion kick can be taken either as a place kick (from the ground) or a drop kick.

Key Vocabulary

Backwards Conversion Maul

Offside Pass

Penalty

Ruck

Tackle Tactical

Try

Year 7 Physical Education: Gymnastics

Health and Fitness

I perform an appropriate warm up including a pulse raiser, mobilisation and preparation stretches I can talk about the different components of fitness for gymnastics, balance (the ability to retain control over the distribution of weight or remain upright and steady) flexibility (A full range of motion at a joint) and muscular strength (The ability to exert a large amount of force in a single maximum effort) and how these can impact my performance

Key Vocabulary

Travelling
Body tension and body extension
Control
Translons/linking
Tuck, Pike, Straddle
Straight, Star, Twist
Rolling
Jump

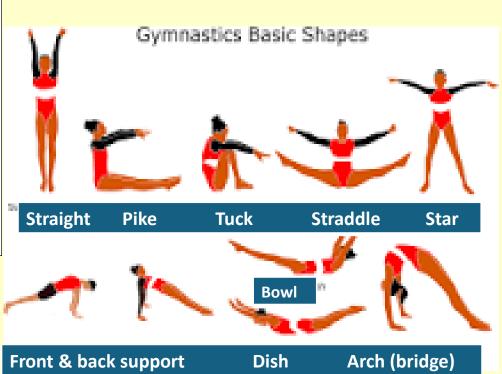
Balance, flexibility, muscular strength

Choreography

I can decide which basic shapes I should put in a sequence and perform with linking moves.

I can plan smooth linking and transition moves in an individual and pair/group routine.

I can evaluate my own and other performances.



Skills

I can perform basic shapes with body tension, extension and control (tuck, straddle, dish, pike, star, arch, front and back support)

I can perform different ways of travelling (rolls, jumps, turn, skip, hop)

I can demonstrate linking movements by changing the beginning or end of an agility or adding a dance move I can perform as part of a pair/ group to preform balances

Rules

Remove all jewellery, tie back long hair and have bare feet or grip socks Hold balances for 3 seconds

All routines should have a clear start and finish Always perform agilities on a mat

Always have good tension, extension, and control

Leadership

I bring correct kit for PE I can help set up and pack away equipment away.

I am able to coach and give feedback after a performance to help others improve their work.

I try my best in every lesson.

Year 7 Physical Education: Health Related Fitness

Aerobic Endurance:

The ability of the cardio-respiratory system to supply oxygen to working muscles during sustained physical activity lasting more than 30 minutes.



Cardiorespiratory
system =
HEART AND
LUNGS

Video links:







Sporting example:

Mo Farah – Marathon runner. A marathon is 26.2 miles. Mo Farah's fastest time was:

2 hours 5 minutes.

The current world record is: 2 hours.



Muscular Endurance:

The ability to use voluntary muscles, over long periods of time (greater than 30 minutes) without getting tired.

Voluntary muscles:

These are muscles that contract and relax under your control

Involuntary muscles:

Contract and relax automatically e.g Your heart.



Also known as **stamina** which means that the muscles keep working for a long time without getting tired.

Sporting example: Football – 90 Minute game, using leg muscles while running.

Flexibility:

The range of motion at a joint.





Sporting example:

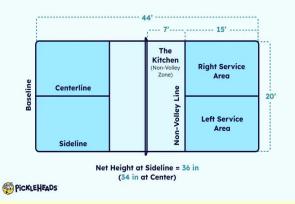
Gymnastics when participants complete the splits.

Key Vocabulary
Aerobic Endurance
Flexibility
Heart
Lungs
Muscular Endurance
Muscles
Oxygen

Year 7 Physical Education – Topic: Pickleball

The pickleball court:

The size of the pickleball court is the same court as the badminton court. It is separated into two sides with a line down the middle.



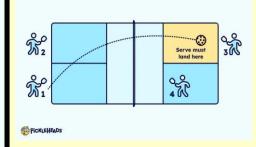
The non volley zone (Kitchen):

This zone is in the middle of the court, on either side of the net. As the name suggests, you can never hit a volley while any part of your body is in the kitchen (or even on the kitchen line). You can't let your momentum carry you into the kitchen after a volley either.

The serve:

The pickleball game starts with a serve. The player on the right side of their court always starts the serve. You serve diagonally to your opponent.

The serve in pickleball is underarm.

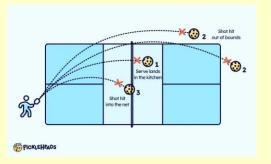


In pickleball, there are four basic serving faults:

- 1. The serve lands in the kitchen
- 2. The ball lands out of the court
- 3. The ball hits the net and falls on your side.
- 4. The ball bounces twice on one side before the player can return it.

You must stand behind the baseline when serving in pickleball. Your feet cannot touch the baseline or sideline during your serve.

Your serve must completely clear the kitchen line, and land between the sideline and baseline to count. The serve can land "on the line" for the baseline and sideline, but *not* on the kitchen line.



Starting position:



first team to 11 points wins—but you must win by 2.

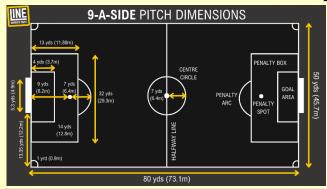
Key words:

Non-Volley Kitchen Serve Fault Sideline Underarm

Year 7 Physical Education – Topic: Football

Rules of The Game 9-a-side

- A match consists of 60 minutes, 30 minutes a half.
- Each team can have a maximum off 9 players
- Each team can name as many substitute players as they want, and be made whenever throughout the game
- Each game must include one referee and two assistant referee's (linesmen). It is the job of the referee to act as timekeeper and make any decisions which may need to be made such as fouls, free kicks, throw ins, penalties and added on time at the end of each half.
- If teams are still level after extra time, then a penalty shootout must take place.
- The whole ball must cross the goal line for it to constitute as a goal.
- For fouls committed a player could receive either a yellow or red card depending on the severity of the foul; this comes down to the referee's discretion.
- If a ball goes out of play off an opponent in either of the side lines, then it is given as a throw in. If it goes out of play off an attacking player on the base line, then it is a goal kick. If it comes off a defending player, it is a corner kick.



Key skills

Passing - To be able to perform the basic Football skills of passing and receiving. To be able to perform these in a small, sided game. To understand and know where passing is used in football. To be able to outwit opponents with passes.

Dribbling - To be able to perform the basic dribbling with control. To be able to outwit opponents with the use of these techniques.

Shooting - To understand and know the benefits of types of shot on goal. To develop their understanding and knowledge of how to execute a successful shot on goal.

Attack - To develop their understanding and knowledge of how to outwit an opponent using the skills learnt.

Defence - To be able to perform basic defensive skills i.e. Tackling To understand when to defend and how to stop opponents from advancing.

Scoring

To score the ball must go into your opponent's goal. The whole ball needs to be over the line for it to be a legitimate goal. A goal can be scored with any part of the body apart from the hand or arm up to the shoulder. The goal itself consists of a frame measuring 8 feet high and 8 yards wide.

A team is awarded 3 points for a win (more goals scored than the opposition), 1 point for a draw (equal number of goals scored for each team), and 0 points for a loss (less goals scored than the opposition).

Key Vocabulary

Corner Kick
Hand-ball
Indirect Free Kick
Mark
Offside
Penalty Kick
Slide Tackle
Throw-In
Volley
Wall

Year 7 Religious Studies – Topic: What does it mean to say God became human?

What do Christians believe about Jesus?

- •Christians believe that the son of GOD became flesh in order to be the saviour of MANKIND
- •Jesus was conceived and born with a mother called MARY. He also experienced AGEING, he grew up.
- •Jesus had to be human in order to shed BLOOD for the forgiveness of human SINS. Jesus was sacrificed and needed to DIE as part of God's plan. A blood sacrifice requires a body of FLESH & blood. In Hebrews 9:22 it states that 'without the shedding of blood, there is no FORGIVENESS of sins'.
- •We don't know whether people who lived at the time of Jesus, even many of those who followed him and believed that he was teaching the truth, knew anything about the circumstances of his birth.
- •He is often to referred to as Jesus of Nazareth but there is little mention of Bethlehem, where he was born, apart from in stories of his birth.
- •For Christians, the belief that Jesus was God in human form is more important than he details of his birth.
- did not conceive Jesus sexually. In both cases the angel explains that the conception was no ordinary conception and that the child would be no ordinary child.
- •Mark and John did not include any information about the birth of Jesus. Maybe they did not think the story important, but they are both clear that Jesus is the Son of God.

Instead of telling the story of Jesus' conception and birth in his gospel, John is more interested in the meaning of it:

This gives clear support to the Christian belief that Jesus was God incarnate, in the flesh as man.

The belief that God is incarnate makes it easier for Christians to explain and accept as truth some of his actions on earth, including his miracles and resurrection.

When Jesus was baptised, a voice from the heavens said "You are my son". On one occasion the disciple Peter referred to Jesus as The Christ. During this conversation at Ceasera Phillipi, Jesus immediately warned the disciples that they should not use this term on him, possibly because his opponents would have him arrested for blasphemy.

According to one of the Gospel accounts, Jesus later accepted it's use for himself at his trial when he was asked a direct question.

"Again the high priest asked him, 'Are you the Christ the Son of the Blessed One?' 'I am,' said Jesus." Mark 1:61b-62a [NIV]



Exam questions

- 1.What does the word monotheistic mean? (2 marks)
- 2. What is a Parable?(2 marks)
- 3. List 3 examples of Parables that Jesus told from the Bible. (3 marks)
- 4. What does the word forgiveness mean? (2 marks)
- 5. Why is it important to forgive others? Explain your reasons. (4 marks)
- 6. What message can Christians learn for the Parable of the Sheep and Goats? Explain your answer using examples. (4 marks)

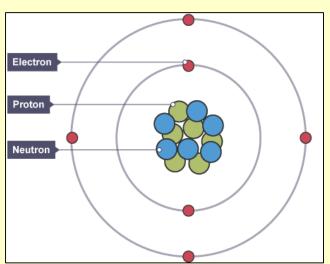
Quotes from the BibleShowing evidence of Jesus' humanity

- And as they sailed he fell asleep. And a windstorm came down on the lake, and they were filling with water and were in danger.
- 2.And after fasting forty days and forty nights, he was hungry.
- 3.And there appeared to him an angel from heaven, strengthening him. And being in an agony he prayed more earnestly; and his sweat became like great drops of blood falling down to the ground.
- 4.But one of the soldiers pierced his side with a spear, and at once there came out blood and water
- 5.These things I have spoken to you, that my joy may be in you, and that your joy may be full.

<u>Key</u> Vocabulary

Incarnation Blasphemy Resurrection Agape Redemption Salvation **Parables** Atonement **Forgiveness Trinity Baptism** Miracles Mercy **Disciples** Messiah Reconciliation

Year 7 Science – Topic: Chemical Reactions



Structure of the Atom

An atom is made up of three subatomic particles: protons, electrons and neutrons.

Protons and neutrons are found in the nucleus of the atom (in the centre).

Electrons are found orbiting the nucleus in shells (also known as energy levels).

Protons have a positive charge.

Electrons have a negative charge.

Neutrons have a no charge.

Vocabulary

Element Reactants

Products

Temperature Conservation of Concentration Mass

Pressure Catalyst Surface Area

Molecule

Atom

Compound

Chemical Reactions

Chemical reactions occur when particles collide with enough ENERGY. The minimum amount of energy particles need to react when colliding is called the **ACTIVATION ENERGY.**

Five things effect the rate of reaction:

- 1 Temperature
- 2 Surface Area
- 3 Pressure
- 4 Concentration
- 5 Presence of a Catalyst

Example exam questions

How do you work out the number of neutrons in an atom? (2 marks)

What is the difference between a compound and an element? (2 marks)

List 5 properties of metals or non-metals? (5 marks) Which of these are metals or non-metals

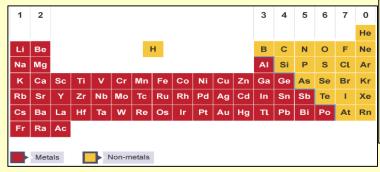
Lithium, Copper, Carbon, Oxygen? (4 marks)

Collision Theory: chemical reactions occur when reactant particles collide with enough energy to react.

The rate of a reaction depends on two things:

- Number of collision The more collisions the more likely the particles will react.
- How much energy the particles have -The more energy the more likely the particles will react

Modern Periodic Table



Compounds

A **compound** is a substance that contains atoms of two or more different elements, and these atoms are chemically joined together. For example, water is a compound of hydrogen and oxygen. Each of its molecules contains two hydrogen atoms and one oxygen atom. There are very many different compounds.

Chemical reactions

Atoms are rearranged in a chemical reaction. The substances that: react together are called the

reactants

are formed in the reaction are called the products

No atoms are created or destroyed in a chemical reaction. This means that the total mass of the reactants is the same as the total mass of the products. We say that mass is conserved in a chemical reaction.

Year 7 Spanish – Topic: Mi familia y mis amigos

¿Cuántas personas hay How many people are there in your en tu familia? family?

En mi familia hay... *In my family, there are...*

personas. people.
mis padres my parents
mi madre my mother
mi padre my father
mi abuelo my grandfather
mi abuela my grandmother
mi bisabuela my great-grandmother
mi tío my uncle
mi tía my aunt
mis primos my cousins

Palabras muy frecuentes *High-frequency words*

además also, in addition bastante quite porque because muy very ¿Quien...? Who? un poco a bit mi/mis my tu/tus your su/sus his/her

¿De qué color tienes los ojos? What colour are your eyes?

Tengo los ojos... I have... eyes. azules blue grises grey marrones brown verdes green Llevo gafas. I wear glasses

¿Cómo tienes el pelo? What's your hair like?

Tengo el pelo... I have... hair. castaño brown negro black rubio blond azul blue liso straight rizado curly largo long

corto short

Soy pelirrojo/a. I am a redhead.

Soy calvo. I am bald.

To listen:

https://www.activeteachonline.com/defau lt/player/audio/id/930431/external/0

¿Cómo es? What is he/she like?

Es... He/She is... No es muy... He/She isn't very... alto/a tall bajo/a short

delgado/a slim gordo/a fat guapo/a good-looking inteligente intelligent joven young viejo/a old

Tiene pecas. He/She has freckles. Tiene barba. He has a beard.

mis amigos *my friends* mi mejor amigo/a *my best friend*

su mejor amigo/a his/her best friend



Year 7 Wellbeing – Topic: Meditation

Mindfulness and Meditation can help most people at times!

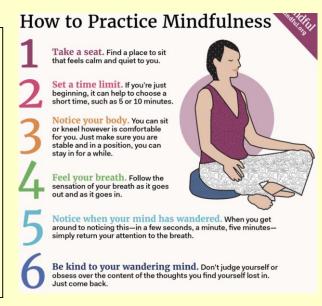
Our 'everyday mind' can end up full of worries about things which are no longer true or happening or fretting about what MIGHT happen in the future – even though we know it may not! The idea is that we are more than these conscious thoughts.

Challenging things happen, we cannot avoid that, but what we think about those challenges is very much up to us

To worry and repeatedly think about difficult things can become suffering - a habit it is all too easy to fall in. The good news however is that we can avoid it! How?

When we notice that we are worrying about things - playing through possible futures like a film in our heads or imagining something going wrong, or even remembering difficult things, unpleasant experiences, we can simply choose to bring ourselves back to the present moment, by thinking about our breathing.

This practice comes with lots of benefits...





I know it seems way too simple! But this is an ancient practice with traditions in all major religions – including Islam and Christianity! I know that it will seem odd at first. That is your worrying mind trying to stop you taking control over it!

But stick with ii – it will help! Regularly practicing will really help!

If you are struggling with worries regularly you might want to get some support – you can start with Kooth – go to their website and sign up – it is easy, and they will help! If you need help on a specific aspect of Mental Health you can always start at the excellent FYI website here: https://www.fyinorfolk.nhs.uk/ - it costs nothing to sign up and set help!