Year 8 – Term 1



Knowledge Organiser

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Team:



Mathematics

Our students will:

- ➤ become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- > can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.



Academy Year 8 - Proportional Reasoning - Mathematical representations

Keyword 😱	Definition
Ratio	A statement of how two numbers compare.
Scale	The comparison of something drawn to its actual size.
Coordinate	A set of values to show an exact position usually in the form (x, y).
Origin	Point (0,0) on a graph, where the axes cross.
Parallel	Lines that never meet.
Gradient	The steepness of a line.
Intercept	Where lines cross.
Correlation	A mathematical definition for the type of relationship.
Line of best fit	A straight line on a graph that represents the data on a scatter graph.
Outlier	A point that lies outside the trend of a graph.
Frequency	The number of times particular data value occurs.
Probability/ chance	The likelihood a particular outcome.
Currency	The system of money used in a particular country.

Sparx Maths	
Topic	Video Numbers
Theoretical Probability	M655, M941, M938, M755, M206, M718, M829, M419, M834, M299, M572
Averages and Range	M328, M934, M841, M940, M127, M287, M440
Frequency Tables	M899, M441
Tally Charts and Pictograms	M587, M644
Bar Charts	M460, M738
Pie Charts	M574, M165
Line Graphs	M140, M183
Scatter Graphs	M769, M586
Stem-and-Leaf Diagrams	M648, M210

Topic Links

This topic links to:

- Similar shapes, enlargements, vector geometry.
- Best value, recipes
- Equivalent ratios & fractions, and percentages
- Scatter graphs, correlation

Career Focus - Where could this take you?





I'm a baker. I adjust ingredient ratios to create recipes and bake goods with the right taste and texture.

Challenge Activities



A line passes through the points (0, 7) and (3,19).

a) Work out the equation of the line.

b) Is the point (-4, -11) on the same line? Explain your answer.

Proportional Reasoning

The aims of the sequence of learning are to ensure that all students can:

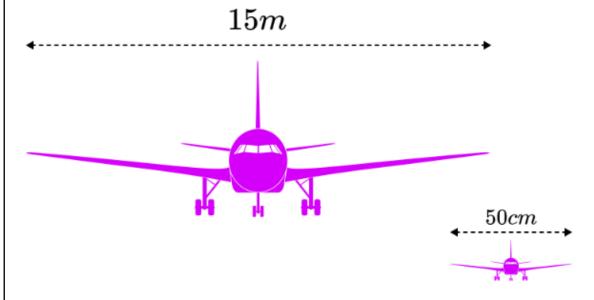
- · use ratio and scal
- multiply and divide fractions

Key Concepts



Ratio scale is a proportional relationship between two quantities. These quantities are usually **length**, **area**, and **volume** but can also include population, frequencies, temperature and money.

A **model** aircraft is created by taking the width of the real object and reducing the size of it using a **scale factor**. A scale factor is a number which is used to describe an enlargement.



We also have to consider the **units** for this example. Here, the original object is 15m wide, which is equal to 1500cm. The ratio of the model to the original (in centimetres) is 50:1500 which simplifies to 1:30.

So the ratio of the model to the real object would be 1:30 as the real object is 30 times larger than the model.

Multiplying and dividing fractions is the skill of carrying out a calculation involving multiplication and division where one or more of the values is written as a fraction.

To **multiply fractions**, we multiply the **numerators** together, and multiply the **denominators** together.

For example,

$$\frac{2}{5} \times \frac{3}{4} = \frac{2 \times 3}{5 \times 4} = \frac{6}{20} = \frac{3}{10}$$

To divide fractions, we first calculate the reciprocal of the dividing fraction and then multiply the numerators together, and multiply the denominators together.

For example,

$$\frac{2}{5} \div \frac{3}{4} = \frac{2}{5} \times \frac{4}{3} = \frac{2 \times 4}{5 \times 3} = \frac{8}{15}$$

Note that, unlike when we add and subtract fractions, we **do not** need a common denominator to multiply and divide fractions.

- work in the cartesian plane
 - represent data

Key Concepts



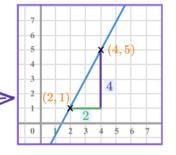
The **gradient of a line** shows how steep the straight line is. In the general equation of straight line, y = mx + c, the gradient is denoted by the letter m.

To calculate the gradient of a straight line through two coordinates (x_1, y_1) and (x_2, y_2) :

$$m=rac{y_2-y_1}{x_2-x_1}$$



$$n = \frac{5-1}{4-2} = \frac{4}{2} = 2$$



It can be helpful to think about this formula as: "change in y divided by change in x" or "rise over run".

A **straight line graph** is a visual representation of a linear function.

A straight line has a general equation of

$$y = mx + c$$
gradient y-intercept

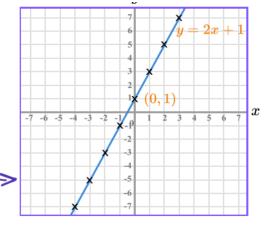


points.

$$y=2x+1$$

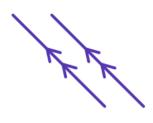
 $m=2$, and $c=1$

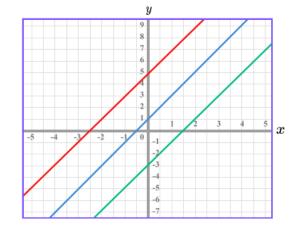
The graph of this equation looks like this:



Parallel lines are straight lines with a constant distance between them. They share the **same gradient.**

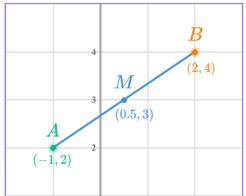






y = 2x + 5 y = 2x + 1

$$y=2x-3$$



The midpoint of a line segment is a point that lies exactly halfway between two

Example

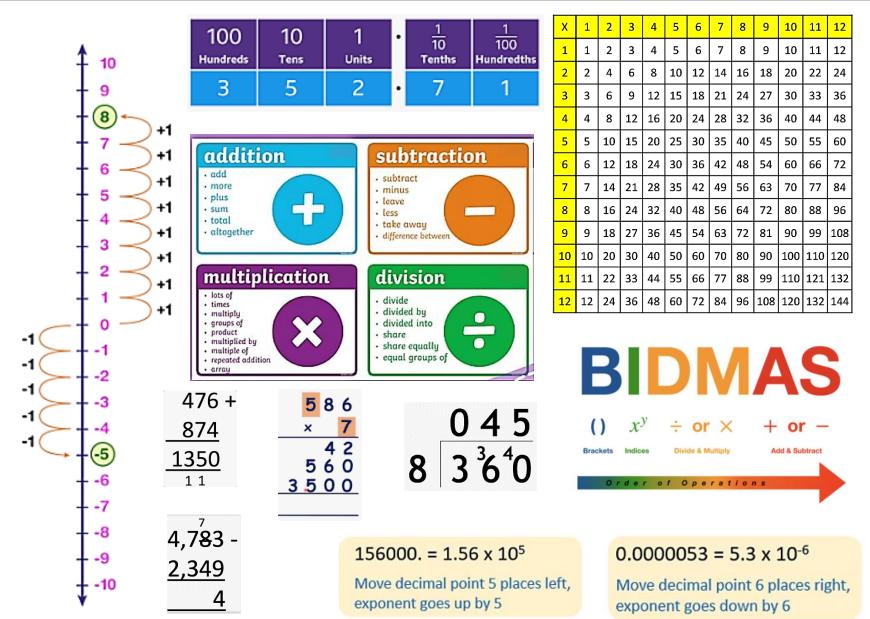
Average of the x coordinates is $\frac{-1+2}{2}=\frac{1}{2}=0.5$

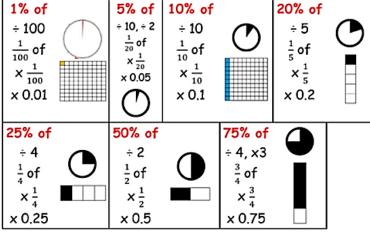
Average of the y coordinates is $\frac{2+4}{2}=\frac{6}{2}=3$

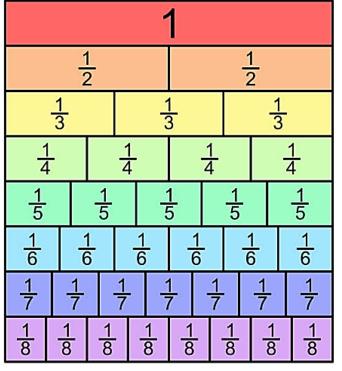
The midpoint of the line AB is $M=\left(0.5,3\right)$



Maths Quick Reference: Number Skills

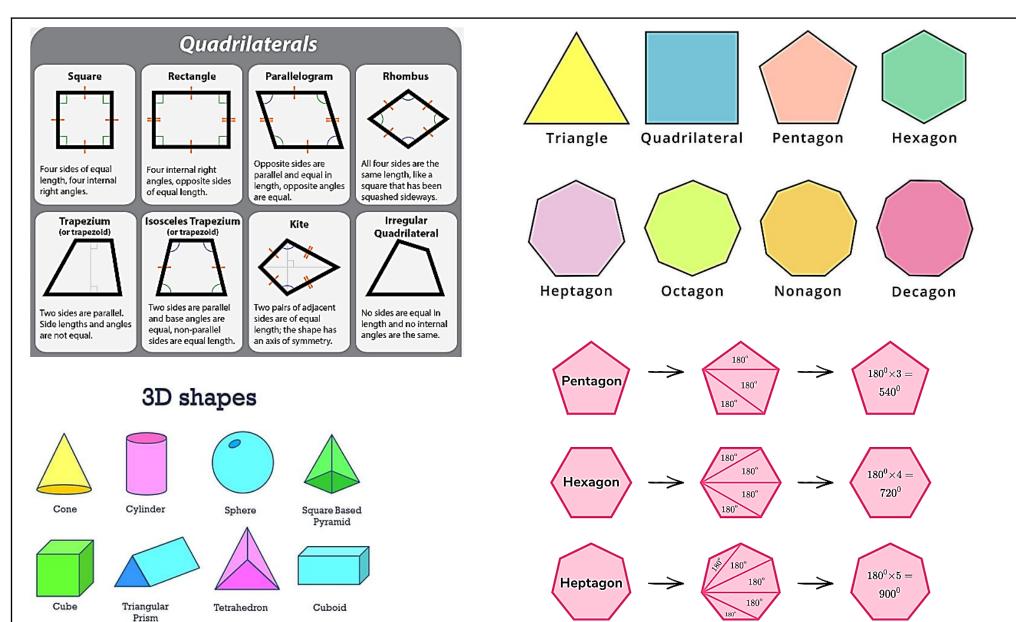


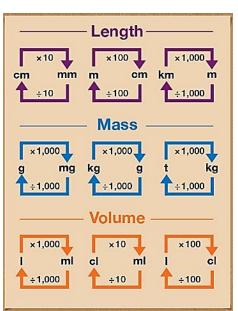






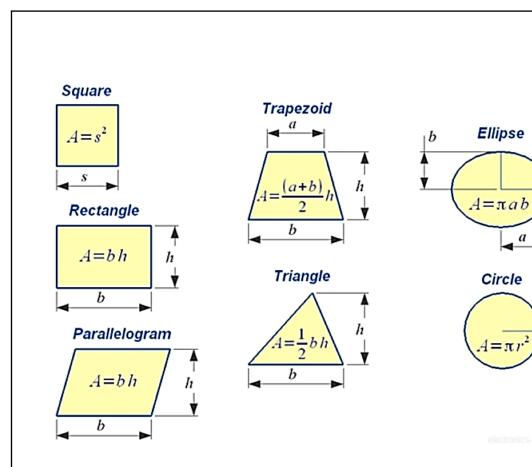
Maths Quick Reference: Geometry & Measures







Maths Quick Reference: Geometry (Areas & Volumes)



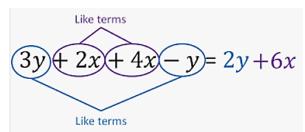
Area and volume of 3d figures

		<u>Area ana volume</u>			
S.No	<u>Name</u>	Figure	Curved Surface Area	Total Surface Area	Volume
1)	<u>Cube</u>	a = side	4a ²	6a ²	a ³
2)	<u>Cuboid</u>	l= length b = breadth h h= height	2h(+b)	2(lb+ bh+ lh)	lxbxh
3)	<u>Sphere</u>	r = radius	4πr²	4π r ²	$\frac{4}{3}\pi r^3$
4)	Solid Hemisphere	r = radius	2πτ²	3πr²	$\frac{2}{3}\pi r^3$
5)	<u>Right circular</u> <u>cylinder</u>	r = radius h h = height	2πrh	2πr(h+r)	πr²h
6)	Right circular cone	r = radius h = height l= slant height	πrl	πr(l+r)	$\frac{1}{3}\pi r^2 h$
7)	Frustum of a cone	r = top radius R = base radius h = height l= slant height	πl(R+r)	$\pi I(R+r) + \pi r^2 + \pi R^2$	$\frac{1}{3}\pi h(R^2+r^2+Rr)$



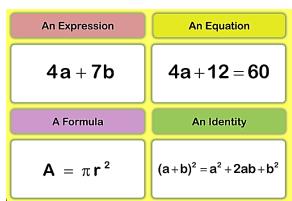
Maths Quick Reference: Algebra Skills

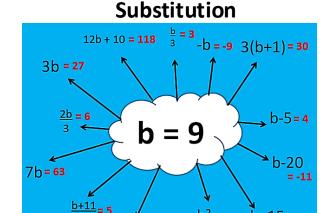
Simplifying Expressions



$$C \times C \times C \times C = C^4$$

$$C + C + C + C = 4C$$





Expanding Brackets



7x + 14

5a(b-4)

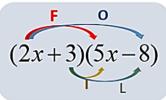
5ab - 20a

Expand & Simplify...

5x + 15 + 6x - 24

11x - 9

FOIL Method



First: $(2x)(5x) = 10x^2$

Outer: (2x)(-8) = -16x

Inner: (3)(5x) = 15x

Last: (3)(-8) = -24

$$(2x+3)(5x-8)$$
= 10x² - 16x + 15x - 24
= 10x² - x - 24

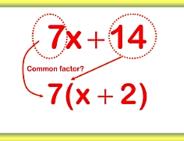
Grid Method

(2r+3)(5r-8)

(23.13)(33.10)				
	2 <i>x</i>	+ 3		
5x	10x ²	+ 15x		
- 8	- 16x	- 24		

 $10x^2 + 15x - 16x - 24$ $= 10x^2 - x - 24$

Factorising Brackets



5ab - 20a 5a(b - 4)

Solving Equations

 $b^2 = 81$ b+15 = 24

$$6x - 5 = 7$$

$$+5$$

$$6x = 12$$

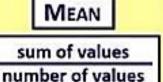
$$\div 6$$

$$x = 2$$



Maths Quick Reference: Statistics





MEDIAN middle value

RANGE

largest value - smallest value

Mean

7, 3, 4, 1, 7, 6

Sum of numbers divided by the total numbers

= 28/6 = 4.66

Mode

7, 3, 4, 1, 7, 6

Most common number

73, 4, 1, 76

Mode = 7

Median

7, 3, 4, 1, 7, 6

Arrange in order and pick the middle value

1, 3, 4, 6, 7, 7

Median = (4+6)/2 = 5

Range

7, 3, 4, 1, 7, 6

Difference between highest and lowest

Range = 7 - 1 = 6

Mean from the Frequency Table

Discrete Data Frequency Table

 $Mean = \frac{Sum of (value \times frequency)}{Total frequency}$

Grouped Data Frequency Table

Mean of grouped data = $\frac{\text{Sum of (interval midpoint} \times \text{frequency})}{\text{Total frequency}}$

Length (x cm)	Frequency	Midpoint	Midpoint × frequency
$0 < x \le 10$	4	× 5	= 20
10 < <i>x</i> ≤ 20	10	× 15	= 150
20 < <i>x</i> ≤ 30	7	× 25	= 175
30 < <i>x</i> ≤ 40	4	× 35	= 140
	25		485

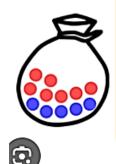
estimated mean = $485 \div 25 = 19.4$ cm



Maths Quick Reference: Probability

Simple Probability

Probabilty =
$$\frac{\text{Favorable outcomes}}{\text{Total outcomes}}$$



Example:

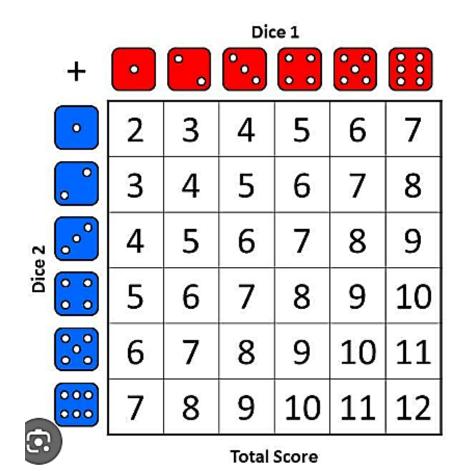
$$P(red) = \frac{7}{12}$$
 Number of red marbles

Total number of marbles (sample space)

$$P(blue) = \frac{5}{12}$$
 Number of blue marbles (sample space)

In words:	Impossible	Very unlikely	Unlikely	Even chances	Likely	Very likely	Certain
As decimal fractions:	0	0,2	0,4	0,5	0,6	0,8	1
As fractions:	0	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{1}{2}$	$\frac{3}{5}$	$\frac{4}{5}$	1
As percentages	s: 0%	20%	40%	50%	60%	80%	100%

Sample Space Diagrams





English

Our students will:

- read easily, fluently and with good understanding
- > develop the habit of reading widely and often, for both pleasure and information
- > acquire a wide vocabulary, an understanding of grammar and knowledge of linguistic conventions for reading, writing and spoken language
- > appreciate our rich and varied literary heritage
- write clearly, accurately and coherently, adapting their language and style in and for a
- range of contexts, purposes and audiences
- > use discussion in order to learn; they should be able to elaborate and explain clearly their understanding and ideas
- > are competent in the arts of speaking and listening, making formal presentations, demonstrating to others and participating in debate.



Year 8 – Reading Analysis Scaffold

Writing about texts

oint = The idea you are starting.

Evidence = The part of the text which proves your idea.

echnique = Identify a key word or phrase from your evidence.



The idea of is seen.....

because the text says '......'

The technique x suggests...

ffect = Explain what this means and how it impacts the characters/reader in the text.

This makes the reader / audience think that...



Newsome Academy Year 8 - Romeo and Juliet

The aims of the sequence of learning are to ensure that all students can:

- Identify and interpret ideas in a text.
- Explain and analyse how writer's use language and structure.
- Use quotes to support their views.



Knowledge



Shakespeare's Romeo and Juliet

Very Brief Plot Summary:

Act 1: Set in Verona, we find two warring families – the Montagues and the Capulets. There is a ball and two young people meet and fall in love – Romeo Montague and Juliet Capulet. Their families will never allow this.

Act 2: Romeo and Juliet continue to see each other secretly. Romeo wishes he was not a Montague and they decide that they will secretly marry.

Act 3: Tybalt (Juliet's cousin) tries to argue with Romeo, who refuses. Mercutio (Romeo's friend) goads Tybalt into a fight but is killed by him when Romeo attempts to stop them. Romeo then murders Tybalt in anger.

Act 4: Juliet asks for help from Friar Lawrence. He gives her a sleeping potion that will make her appear dead so that on her supposed wedding day to Paris she will be carried to the family vault. Romeo will then find her and whisk her away as he should know about the plan.

Act 5: Romeo doesn't receive the letter about the plan. He hears Juliet has died and obtains a poison for himself. Romeo sees Juliet (assumes that she is dead) and poisons himself. Juliet awakes and realizes what has happened kills herself. The two families make peace with each other in the wake of the tragedy.

Topic Links



Additional Resources



This topic links to:

Conflict – the idea of war or long lasting feuds and whether it is moral to continue fighting over something you have long forgotten about. We will look at conflict in KS4 poetry: Power and Conflict.

PSHE – relationships and healthy relationships with boyfriends/girlfriends, families and wider communities.

To further practise and develop your knowledge see:

https://www.sparknotes.com/shakespeare/romeojuliet/

https://www.rsc.org.uk/shakespeare-learning-zone/romeo-and-juliet

Challenge Activities





Task 1: Research into the following contextual areas. Can you make a poster for each one to show your understanding?

Patriarchy – patriarchal societies are ones where men are dominant, and have control over women e.g. by choosing who they would marry. Nurses – employed by wealthy families to feed and care for their children.

The Humours – Elizabethans believed the body contained four 'humours': blood, phlegm, yellow bile and black bile. The amount you had of each determined your personality. People with too much phlegm are emotional. People with too much blood are irresponsible and gluttonous. People with too much yellow bile are violent and vengeful. People with too much black bile are depressed and self-centred.

Fate - the belief that your life is mapped out for you, or 'written in the stars'. Many Elizabethans believed God decided your fate, and that astrology could help you identify your course in life.







Career Focus - Playwright



I am a playwright. I use English skills to create exciting stories and characters. English helps me write clear dialogue, build interesting plots, and choose the right words to express emotions. These skills allow me to craft plays that entertain audiences and make them think about important ideas.



Academy Year 8 - Romeo and Juliet

The aims of the sequence of learning are to ensure that all students can:

- Identify and interpret ideas in a text.
- Explain and analyse how writer's use language and structure.
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Skills



Retrieval Practice				
Questions	Answers			
What is a soliloquy?	A speech delivered by a character alone on stage, revealing their true thoughts and emotions.			
What is a sonnet?	A sonnet is a 14-line rhyming poem, often about love.			
What is foreshadowing?	Foreshadowing is a hint that suggests future events.			
What is dramatic irony?	Where an audience knows more than the character onstage.			
What is a Prologue?	A Prologue is a spoken introduction to a play.			
Where is the play set?	Verona, Italy			
Where is Romeo exiled to?	Mantua, Italy			
Over how many days do the events of Romeo and Juliet unfold?	Five days! The play's events start on the Sunday Morning and by Thursday our protagonists have sadly and tragically met their end.			

Key Skill: Re-calling quotes. Who said the following quotes?
Romeo – Juliet – Tybalt – Mercutio – Benvolio – Lord Capulet – Friar Lawrence

- a. "I do but keep the peace. Put up thy sword or manage it to part these men with me." B
- b. "Peace? I hate the word, As I hate hell, all Montagues, and thee." T______
- c. "O swear not by the moon, the inconstant moon It is too rash, too unadvised, too sudden, too like... lightning" J_____
- d. "Hang thee, young baggage, disobedient wretch!" L______
- e. "Ask for me tomorrow and you shall find me a grave man... a plague o'both your houses" M_____
- f. "Wisely and slow, they stumble that run fast." F_____
- g. "Did my heart love til now? I never saw true beauty till this night. O she doth teach the torches to burn bright!" R_____

Skills Practice

Using the key quotations above. Can you annotate and explode the quotes to practise close analysis skills?

Think:

- What does the quote tell you about the character at this point in the play?
- How are they being presented?
- Why is Shakespeare wanting to show them in this way?



Year 8 – Romeo and Juliet

The aims of the sequence of learning are to ensure that all students can: Identify and interpret ideas in a text.

- Explain and analyse how writer's use language and structure.
- Use quotes to support their views.



Vocabulary - You will be tested on five words per week as part of your home learning.

Keyword	Definition
Prologue	a separate introductory section of a literary, dramatic, or musical work
Amorous	showing, feeling, or relating to sexual desire and love
Adversary	one's opponent in a contest, conflict, or dispute
Ancient	belonging to the very distant past and no longer in existence
Bondage	Slavery or involuntary servitude
Brawl	a rough or noisy fight or quarrel
Canker	an ulcerous condition or disease of a human or animal
Civil	relating to ordinary citizens and their concerns
Conflict	a serious disagreement or argument, typically a protracted one
Counsel	advice, especially that given formally
Disposition	a person's inherent qualities of mind and character
Esteem	respect and admiration
Fray	a battle or fight

Keyword	Definition
Feud	a prolonged and bitter quarrel or dispute
Grudge	a persistent feeling of ill will or resentment resulting from a past insult or injury
Bauble	a small, showy trinket or decoration
Drivel	nonsense
Garish	obtrusively bright and showy; lurid
Livery	a special uniform worn by a servant, an official, or a member of a City Company
Portentous	of momentous significance
Patriarchy	a system of society or government in which men hold the power and women are largely excluded from it
Stint	a fixed or limited period of time spent doing a particular job or activity
Shrift	confession, especially to a priest
Unrequited	(of a feeling, especially love) not returned
Unscrupulous	having or showing no moral principles; not honest or fair



Year 8 – Ghost Boys

The aims of the sequence of learning are to ensure that all students can:

Identify and explain their ideas

Select quotes from different texts

Explain, comment on and analyse how writers use language and structure



Knowledge



Ghost Boys - Synopsis

Ghost Boys by Jewell Parker Rhodes was published in 2018 and is set in the USA. It tells the story of Jerome, a young, unarmed Black boy who is shot dead by a white police officer. The plot then unravels as Jerome tries to understand what happened to him and the impact on his family, friends and community.

Rhodes was inspired by historical events when she wrote this book. Specifically, the murder of Emmett Till in 1955 and Tamir Rice in 2014. Both were young Black boys.



Tonic Links

Emmett Till (left) was a 14 year old African American boy who was abducted, tortured, and lynched in Mississippi in 1955 after being accused of offending a white woman, Carolyn Bryant, in her family's grocery store. The brutality of his murder and the acquittal of his killers drew attention to the long history of violent persecution of African Americans in the United States. Till posthumously became an icon of the civil rights movement.



Tamir Rice (right) was a 12 year old African American boy who was shot by 26 year old white police officer. He had been pointing a toy gun in the park. Tamir was shot in the torso and died in hospital the following day.

ТОРІС ЕПІКЗ
This topic links to:
•Y7 Frankenstein
•GCSE –A Christmas Carol
•GCSE – An Inspector Calls

•GCSE-Language Paper 2 (B)

Additional Resources

•Ghost Boys by Jewell Parker Rhodes - BBC Bitesize

To further practise and develop your knowledge see:

•The origins of the civil rights movement - The civil rights movement in America - KS3 History - homework help for year 7, 8 and 9. - BBC Bitesize

Challenge Activities





Task 1: Research into the Stephen Lawrence case. How does his story link to 'Ghost Boys'?

Task 2: Research Ruby Bridges. Who is she and why is she important to the Civil Rights Movement?

Task 3: Research into the Black Lives Matter movement.

Task 4: Research into Malcolm X and also Martin Luther King Jr. Who would you determine is the more morally behaved as they strive for equality? Why?

Task 5: Consider how all of these movements link into Ghost Boys as you read through.

Career Focus - Counsellor





I am a counsellor. I use English skills to communicate effectively with clients. English helps me listen carefully, understand feelings, and express ideas clearly. These skills allow me to offer support, provide guidance, and help people work through their problems, making sure they feel heard and understood.



Year 8 – Ghost Boys

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Explain, comment on and analyse how writers use language and structure

Skills



Retrieval Practice		
Questions	Answers	
What is institutional racism?	Racism or prejudice that exists throughout a whole society or organization.	
What does empathy mean?	the ability to understand and share the feelings of another.	
What is Motown?	A type of popular music that was prominent in the 1960s featuring predominantly African American artists	
What does it mean to 'bear witness'?	'Bearing witness' means using one's own personal story or experience to raise awareness of injustice or suffering.	
What religious celebration inspires Carlos to honour Jerome?	Day of the Dead	
What 'weapon' was Jerome carrying that caused his death?	A toy gun.	
In what year was Emmett Till murdered?	1955	
In what year was Tamir Rice killed by police and a racial attack?	2014	

Key Skill: Discussion and Argument

An important skill toward forming an interpretation and argument is to discuss our ideas. As we read the novel, consider the following discussion points:

- 1. Why do you think the novel begins with Jerome's death? How did the alternating time periods affect your reading of the story?
- 2. Why does Carlos bring a toy gun to school? Why might he feel like it is the best way to protect himself from bullies
- 3. Why is Sarah the only person who can see Jerome and Emmett? Why has Parker Rhodes structured this in this way?

Skills Practice - Writing



In the author's afterword, Jewell Parker Rhodes shares her goal in writing this novel: "Mv

hope is that parents and teachers will read Ghost Boys with their children and students.

and discuss racial prejudices and tensions that still haunt America. Through discussion,

awareness, and societal and civic action, I hope our youth will be able to dismantle personal and systemic racism" (pg. 206)

Task: Write a letter to your Principal explaining your point of view about Ghost Boys and why it is an important novel to read in school.



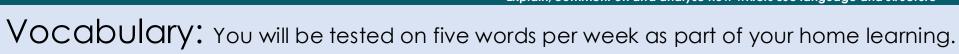
Year 8 – Ghost Boys

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Keyword	Definition
Bear witness	To show or say that something existed or happened
Civil Rights	The rights that every person should have, regardless of his or her sex, race or religion
Lynch (verb)	To kill someone (normally by hanging) as punishment for a crime
Compassion	A strong feeling of sympathy and sadness for the suffering or bad luck of others and a wish to help them
Justice	The quality of being fair and reasonable
Brutality	Savage physical violence, great cruelty
Pudgy	Slightly fat
Motown	A type of popular music that was prominent in the 1960s featuring predominantly African American artists
Superstition	A widely held but irrational belief in supernatural influences, especially as leading to good or bad luck, or a practice based on such a belie
Vestibule	A hall or lobby next to the outer door of a building
Hysterical	Affected by or deriving from wildly uncontrolled emotion
Contradicting	A word that implies something is both true and false

Keyword	Definition
Prejudice	A preconceived opinion that is not based on reason or actual experience
Holster	A holder for a hand-gun, worn on the body
Ritual	An action arising from habit
Preconceived	The forming of an idea or opinion before having the evidence for its truth or usefulness
Segregation	The policy of keeping one group of people apart from another and treating them differently, especially because of race, sex or religion
Stereotype	A widely held but fixed and oversimplified image or idea of a particular type of person or thing. By stereotyping we infer that a person has a whole range of characteristics or abilities that we assume all members of that group have
Deprives	Takes something away from someone or somewhere
Discrimination	Treating a person or particular group of people differently, especially in a worse way from the way in which you treat other people, because of their skin colour, sex, sexuality, etc.
Billows	Rises or rolls in waves or surges
Keens	Utters with a loud wailing voice or wordless cry
Listless	Lacking in energy, interest or spirit
Contorting	Twisting into a different shape



Science

Our students will:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- > develop understanding of the **nature**, **processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them
- > are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.



Newsome Academy Year 8 Scientific Skills

The aims of the sequence of learning are to ensure that all students:

- Confidently use the scientific method to get valid results and be able to plan investigations
- Creatively apply skills and knowledge to solve a problem

Keyword

Independent Variable

Dependent Variable

Control Variables

Risk Assessment

Hazard

Method

Conclusion

Evaluation

Accurate

Precise

Anomaly

Prediction

Prediction

Hypothesis

Definition

What you think will happen and why.

An idea that can be tested using experiments.

The variable that you change.

The variable that you measure (your results)

The variables that could influence the results so are kept the same.

Is something that can cause harm to someone.

Identifies hazards, the harm they can do and how to

minimise the risks.

Step by step instructions how to carry out practical.

When you consider the quality of the data and how the investigation could be improved.

When the data is close to the true value.

An explanation of what you found out

When the repeated data is similar (close to the mean).

Same results obtained by different people. Reproducible

A result that doesn't fit the pattern.

What you think will happen and why.

Key Concepts

Laboratory Safety Rules

Safety is the number 1 priority when you are carrying out practical work in the science labs so there are some important safety rules to follow:

- Always wear eye protection during a practical.
- Carry out a practical while standing up.
- Do not eat or drink in the laboratory.
- Tie long hair back and tuck loose clothing in during practicals.
- If something is spilled or broken, tell the teacher. Ensure that the floor and work space is clear of obstacles.
- · Light bunsen with splint on a safety flame.
- Stop immediately when asked to by the teacher.



What is STEM learning?

This year you will be carrying out project based learning that focuses on solving real life problems using Science, Technology, Engineering & Mathematics. You will develop important skills such as problem solving, creativity, team work, innovation, communication and digital literacy. STEM is expected to be one of the largest employers in the near future so this will help prepare you to be successful global citizens.

Evaluating Data

The quality of any data should be evaluated before making any conclusions.

Term	Meaning
Precision	Measurements are in close agreement
Repeatable	Measurements are very similar when repeated by the same person or group, using the same equipment and method
Reproducible	Measurements are very similar when repeated by a different person or group, using different equipment and/or methods

Evaluation of the data should also consider accuracy. A measurement is accurate if it is close to the true value

Precision and repeatability can be seen easily from a table of results containing repeat measurements. If the repeat measurements are close together, the data is precise and

To ensure the data is as accurate as possible, work out the **best estimate** of the true value: Identify any outliers (anomalous results) in the data. These are results that are very different to the others. Find the mean of the remaining results. To find the mean add together the results and divide by the number of measurements.

The Scientific Method

Step 1 - Observe and ask questions

When you ask a question about something that you observe: How, What, When, Who, Why, or Where?

Step 2 - Research

To help you find the best way to do things and ensure that you don't repeat mistakes from the past.

Step 3 - Construct a hypothesis

This a statement that you can test. Your evidence will allow you to either accept or reject the hypothesis. Step 4 - Test the hypothesis

Plan experiments making sure you have clear independent, dependent and control variables. Then carry out experiment(s) to test the hypothesis and record data.

Step 5 - Analyse data and make conclusions Organise data in ways to make it easier to understand (e.g. graphs) and check against hypothesis.

Step 6 - Share results

Results from experiments are shared with other scientists so they can evaluate the findings themselves.

Types of errors

Systematic – a problem with the method or equipment used. E.g. using a beaker to measure the volume of a liquid instead of a measuring cylinder. The effect cannot be reduced by taking repeat readings.

Random – whenever something is measured a random error is made. E.g. measuring with a ruler. The effect can be reduced by taking repeat readings.

Zero – caused by a piece of equipment not reading zero when it should. E.g. a balance. Either reset the piece of equipment or deduct the false reading from all measurements.

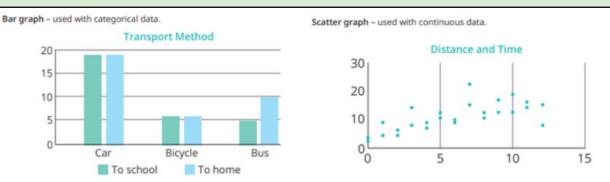


Year 8 Scientific Skills

The aims of the sequence of learning are to ensure that all students:

- Confidently use the scientific method to get valid results and be able to plan investigations
- Creatively apply skills and knowledge to solve a problem

Displaying Data - Graphs



Retrieval Practice



318		
Questions	Answers	
What is a hypothesis?	A regular structure with no space between particles.	
Name the 3 types of variables	The independent variable, dependent variable and control variables.	
How is data usually displayed?	In tables and graphs (bar graph or scatter graph).	
What is an anomalous result?	A result that doesn't fit the pattern of the other results.	
How is the mean calculated?	Repeat values added together then divided by number of repeats.	
What should a conclusion include?	A summary of whether your results do or do not support the hypothesis.	
What should an evaluation include?	An assessment of how the experiment went and how to improve it	
What are precise results?	When data is similar and close to the mean.	
What are accurate results?	When the data is close to the true value.	
What does STEM stand for?	Science, Technology, Engineering & Maths	

Career Focus - Where could this take you?





I am a research scientist (physics). My job is mainly to plan experiments, conduct experiments and analyse results.

My main workplace is a laboratory where I can be part of a team researching a variety of areas such as astrophysics, nuclear physics, Quantum Gravity and much more.

To do a good job as a research scientist you need to have an inquisitive mind and enjoy planning and working on experiments.

Challenge Activities



- 1. Make flashcards for the definitions and retrieval practice questions.
- 2. Research the different types of research that different research scientists carry out. Which fields do you find the most interesting?
- 3. Construct a fact file about the scientific method.
- 4. Plan an experiment. Remember to include the hypothesis, variables, method and results table.
- 5. Produce a poster about the different types of errors that can occur during experiments and how to reduce their effect.
- 6. Find out more about research scientists and what they do. What qualifications would you need for this career? What is the average salary?

Topic Links



Additional Resources



This topic links to all scientific topics such as

- Electricity
- Waves (sound and light)
- Life Diversity

We will also be practising how to

- Plan investigations
- Engineer solutions for real life problems using STEM

Educake - https://www.educake.co.uk/
BBC Bitesize -

https://www.bbc.co.uk/bitesize/topics/zsg6m39

https://www.bbc.co.uk/bitesize/topics/zsg6m39/articles/z 4pjdp3

YouTube -

https://www.youtube.com/watch?v=yi0hwFDQTSQ



Year 8 Solar System

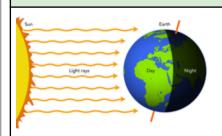
The learning outcomes for this topic are

- Describe how the position of the Earth causes day, night and seasons
- Explain the difference between mass and weight

Keyword	Definition	
Earth	The planet on which we live.	
Season	A part of the year marked by particular weather patterns (summer, spring, autumn and winter)	
Attraction	When 2 or more things come together,	
Rotation	AN object spinning on its axis.	
Orbit	To move in a regular curved path around another object.	
Axis	The imaginary line that the Earth spins on	
Star	A luminous body of gas.	
Universe	All space and time and their contents.	
Solar System	The sun, planets, and smaller objects such as comets that orbit around it,	
Planet	A large rounded body that orbits a sun.	
Satellite	A moon, planet or machine that orbits a planet or star.	
Gravity	The force of attraction between all objects. The more mass and less distance an object has the greater its gravity.	
Mass	The amount of matter there is. Kg	
Weight	The force of gravity on an object. N	

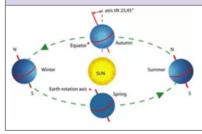
Key Concepts

Day and Night



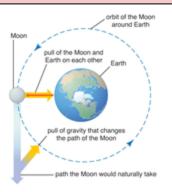
Earth rotates (spins) on its axis. It does a full rotation once every 24 hours. We spin into the light - day and then back out again night.

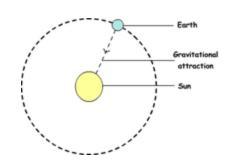
Seasons



The Earth orbits the Sun once every 365 days. The Earth's axis is tipped over in space. In Britain we get different seasons because sometimes we are tilted towards the Sun and sometimes away.

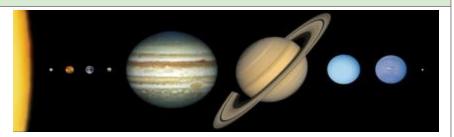
Gravity





The planets are held in their orbits by the force of the Sun's gravity. The Moon is held in its orbit around the Earth by the Earth's gravity. The Sun's gravity also holds dwarf planets and asteroids in their orbits. Comets orbit the Sun too. The Sun's gravity pulls them in from beyond the orbit of Pluto. The closer they get to the Sun the stronger the force of gravity gets and the faster they go. Gravity always pulls things towards the centre of the mass. So on Earth it pulls us down to the centre of the Earth.

The Solar System



Our solar system consists of our star, the Sun, and everything bound to it by gravity – the planets Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune; dwarf planets such as Pluto; dozens of moons; and millions of asteroids, comets, and meteoroids.

Weight and Mass

Mass is the amount of matter there is in something. It is measured in kilograms, kg. An object's mass the same everywhere in the universe.

Weight is the force of gravity on an object. All forces including weight are measured in Newtons, N. Gravity is not the same

So, an object's weight depends on where in the universe it is. To work out the weight of an object we do some maths:

Weight (N) = mass (kg) x gravitational field strength (N/kg)



Retrieval Practice

Name the planets of the solar system.

Why do we get day and night?

How can you calculate weight?

Questions

Year 8 Solar System

The Earth spins on its axis over 24 hours.

Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune

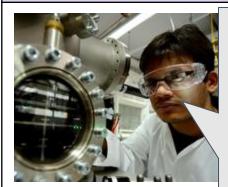
Answers

The learning outcomes for this topic are

- Describe how the position of the Earth causes day, night and seasons
- Explain the difference between mass and weight

Career Focus - Where could this take you?





I am an aerospace engineer. My job is mainly to design, build and maintain planes spacecraft and satellites. My workplace can be a factory, an office or even an aircraft hangar. My day-to-day tasks can be very varied as I can be testing prototypes, collecting data, designing navigation systems, writing reports, or even researching ways to make aircraft more fuel efficient.

To do a good job as an aerospace engineer you need to have good maths and science knowledge as well as be good at using computer systems.

Challenge Activities

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- 1. Make flashcards for the definitions and retrieval practice questions.
- 2. Make a mindmap for this topic. Remember to include keywords and the links between information.
- 3. Research the planets in more detail. Produce a presentation or poster about your favourite planet.
- 4. Carry out some research into the origins of the Universe and the different theories that exist.
- 5. Find out more about aerospace engineers and what they do. What qualifications would you need for this career? What current research is being done? What is the salary?
- 6. Construct a fact file about a famous historical scientist that helped us to understand more about the planets and the universe.

Topic Links



This topic links to all scientific topics such as

- Energy
- Waves (sound and light)

We will also be practising how to

- Use equations
- Use descriptive words to compare planets

Additional Resources



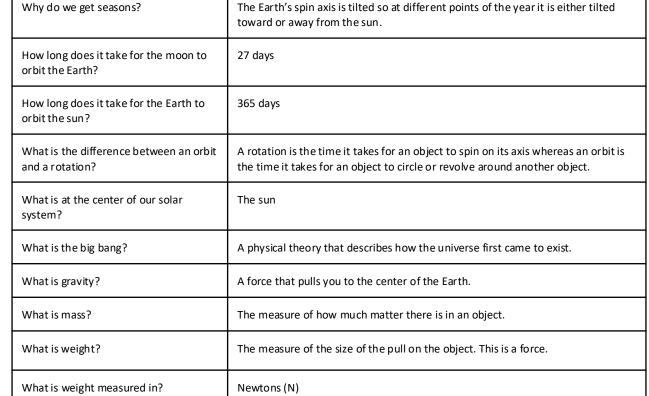
Educake - https://www.educake.co.uk/

BBC Bitesize -

https://www.bbc.co.uk/bitesize/guides/z8wx6sg/revision/1 https://www.bbc.co.uk/bitesize/topics/z4brd2p/articles/z6xjd p3

Cognito -

https://www.youtube.com/watch?v=AgwSdOzN4H4



Mass x Gravity

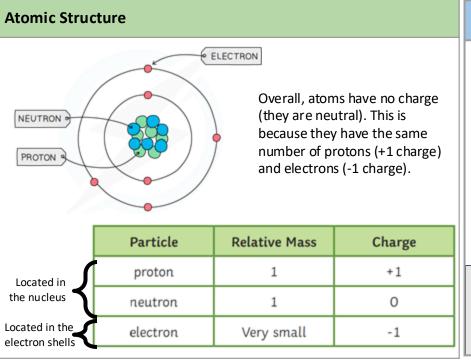


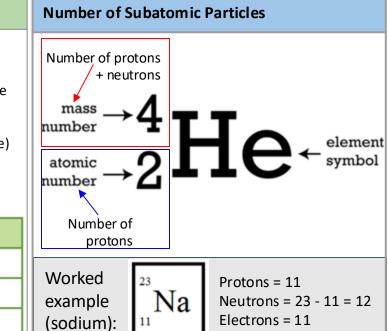
Year 8 - Pure Substances

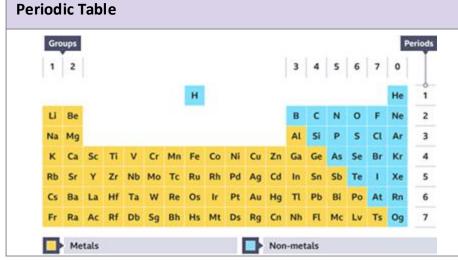
The learning outcomes for this topic are:

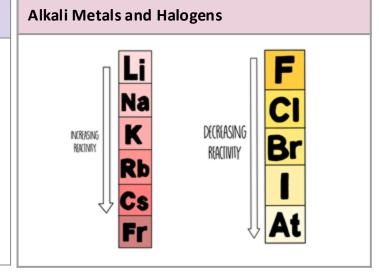
- Describe elements, compounds and mixtures
- Explain how elements are arranged on the periodic table and their properties

Keyword	Definition
Atom	The smallest unit of matter.
Element	A substance made up of only one type of atom.
Compound	Contains two or more different elements that are chemically bonded together.
Mixture	Contains two or more different substances that are not chemically joined together.
Proton	Positively charged particle in the atom.
Neutron	Neutral particle in the atom.
Electron	Negatively charged particle in the atom.
Subatomic particle	Particles that make up the atom.
Nucleus	The centre of the atom, containing protons and neutrons.
Perio dic table	A table of elements which are organised into groups and periods.
Group	A column on periodic table (all elements in the same group have similar properties).
Period	A row on the periodic table.
Properties	Characteristics or features of something.











Year 8 - Pure Substances

The learning outcomes for this topic are:

- Describe elements, compounds and mixtures
- Explain how elements are arranged on the periodic table and their properties

Career Focus - Where could this take you?





I am a chemical engineer. My job is to changing the chemical, biochemical and physical state of a substance to turn it into something else, such as making plastic from oil. I need to understand how to alter raw materials into required products, while taking into consideration health and safety and cost issues. My main workplace is in a lab, office or processing plant develop raw materials into a range of useful products. A career in the field will see you creating petrochemicals, medicine and plastics.

$|\star|$

Challenge Activities

- 1. Make flashcards for the definitions and retrieval practice questions.
- 2. Make a mind map for this topic. Remember to include keywords and the links between information.
- 3. Research how the periodic table was created? What scientists were involved?
- 1. Make a 3D model of an atom (showing the subatomic particles)
- 5. Find out more about chemical engineers and what they do. What qualifications would you need for this career? What is the average salary?
- 6. Research the history of the atomic model? What were the previous models? How do we know the atom looks the way we think it does?

Topic Links



Additional Resources



This topic links to other science topics such as

- States of matter
- Chemical reactions
- Energy

We will also be practising how to

Identify mixtures and compounds using data

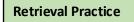
Educake - https://www.educake.co.uk/

BBC Bitesize -

https://www.bbc.co.uk/bitesize/topics/zcckk2p

YouTube Cognito -

https://www.youtube.com/watch?v=fN8kH9Vvqo0 https://www.youtube.com/watch?v=jBDr0mHyc5M



What is an atom?

What is an element?

What is a compound?

What is a mixture?

What is the structure of an atom?

Questions

Answers

The smallest unit of matter.

A substance made up of only one type of atom.

Contains two or more different elements that are chemically bonded together.

Contains two or more different substances that are not chemically joined together.

Protons and neutrons located in the nucleus, with electrons in electron shells.

What is a subatomic particle?

A particle that makes up the atom.

What is the charge, mass and location of a proton? Charge = +1, Mass = 1, Location = nucleus.

What is the charge, mass and location of a neutron? Charge = 0, Mass = 1, Location = nucleus.

What is the charge, mass and location of an electron? Charge = -1, Mass = very small, Location = shell..

How is the periodic table arranged?

In groups and periods (elements in the same group all have similar properties).

What is the overall charge of an atom?

An atom has no charge because it has an equal number of protons (+1) and electrons (-1).

Where are the alkali metals found and what are their properties?

They are found in group 1. They are highly reactive soft metals with low density and melting points.

Where are the halogens found and what are their properties?

They are found in group 7. Non-metals that form salts when they react with metals.



Year 8 - Magnetism

The learning outcomes for this topic are:

- Describe how magnetic fields work
- Explain how the strength of electromagnets can be altered

Keyword	Definition
Non-Contact Force	A force which acts on an object without coming physically in contact with it.
Bar Magnet	A rectangular piece of an object that shows permanent magnetic properties
North Pole	The side of the magnet where the magnetic field lines leave. Attracted to the south pole.
South Pole	The side of the magnet where the magnetic field lines enter. Attracted to the north pole.
Attract	When poles are pushed away from each other.
Repel	When poles are pulled towards each other.
Magnetic Field Lines	The area surrounding a magnet where the force is acting on another magnet or magnetic material.
Plotting Compass	A plotting compass is like a small bar magnet, with a north and south pole.
Electromagnet	A type of magnet in which the magnetic field is produced by an electric current.
Coil	A conductive wire that is wrapped around a magnetic material in a spiral shape.
Solenoid	A wire wrapped around a solid block of metal that produces a magnetic field when electricity passes through it.
The motor effect	The result of two interacting magnetic fields. North-South attract, North-North and South-South repel.

Magnetism

Magnetism is a non-contact force. Magnetic materials can be magnetised or they are attracted to a magnet. There are three types of metal that are magnetic; iron (including steel), nickel and colbalt.

A bar magnet has a north pole and a south pole. It is a permanent magnet.

If the poles are opposite (North-South) then the poles attract. This means that the invisible magnetic force pulls the poles towards each other.



If the poles are the same (North-North or South-South) then they will repel. This means the poles push each other away.



Electromagnets

When electricity flows through the wire, a magnetic field is created around the wire.

A coil of wire with many turns is called a solenoid. The shape of the magnetic field around a current-carrying solenoid is like the magnetic field pattern of a bar magnet.

If the magnetic field becomes strong enough to be useful, it is called an electromagnet.

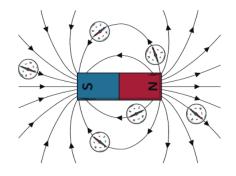
A typical electromagnet consists of a wire coiled around an iron core.



Electromagnets are useful because they can be switched on and off and their strength can be increased or decreased. This makes them useful for sorting scrap metal and recycling centres.

Magnetic Field Lines

The magnet field around a magnet can be shown as lines around the magnet. The magnetic field can be plotted using either iron filings or a compass.

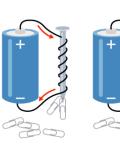


Investigating Electromagnets

We can investigate the factors that affect the strength of an electromagnetic by making a solenoid and recording the number pf paperclips it can pick up.

There are

The larger the current flowing the electromagnet.





Year 8 - Magnetism

The learning outcomes for this topic are:

- Describe how magnetic fields work
- Explain how the strength of electromagnets can be altered

Career Focus - Where could this take you?





I am an MRI radiographer that works in hospitals to create images of patients' bodies using scans. I operate the MRI machine that uses strong magnetic fields and radio waves to produce detailed images of inside the body.

In order to do my job well I need a good understanding of medical procedures, biology and computers.

In order to become a radiographer you need a degree or post graduate certificate. You also need to be a good communicator and be able to think and reason well.



Challenge Activities

- 1. Make flashcards for the definitions and retrieval practice questions.
- 2. Make a mind map for this topic. Remember to include keywords and the links between information.
- 3. Research how the electromagnets were invented. What are they used for?
- 4. Make a poster about magnets and the motor effect.
- Find out more about MRI radiographers and what they do. What qualifications would you need for this career? What is the average salary?
- 6. Research how magnets are used in speakers. Produce a fact file about the development of the speaker and the importance of magnetic fields in the process of producing sounds.

Topi	ic l	.inl	ks



Additional Resources



This topic links to other science topics such as

- Atomic structure
- Energy
- Forces

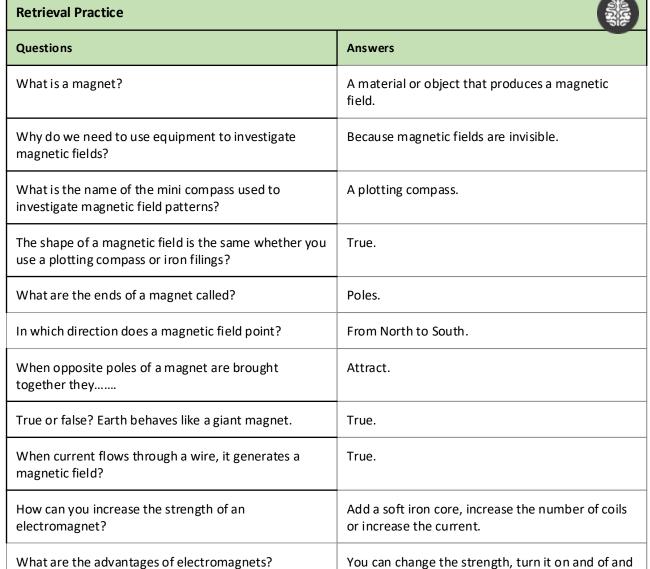
We will also be practising how to

Investigate magnetic fields and drawing diagrams

Educake - https://www.educake.co.uk/
BBC Bitesize -

https://www.bbc.co.uk/bitesize/topics/zrvbkqt YouTube Cognito -

https://www.youtube.com/watch?v=3elpPfyHV0E https://www.youtube.com/watch?v=79_SF5AZtzo



reverse it.

Solenoid

What is the name of the coil of wire with many turns?



Year 8 Variation

The aims of the sequence of learning are to ensure that all students:

- Identify and record different types of variation
- Explain how species are classified

Keyword	Definition
Variation	The differences that occur between living things.
Continuous variation	Where differences between living things can have any numerical value.
Discontinuous variation	Where differences between living things can only be grouped into categories.
Species	A species is a group of organisms that interbreed to produce fertile offspring.
Adaptation	A change in structure or function that improves the chance of survival for an animal or plant within a given environment
Inheritance	When genetic information is passed on from parents to offspring via DNA.
DNA	The genetic code that has all the instructions that a living thing needs to grow, function and reproduce.
Gene	A section of DNA that code for a characteristic e.g. eye colour
Classification	The arrangement of organisms into orderly groups based on similarities.
Classification key	A system which divides things into groups or types
Barchart	A graph where values are represented by the height or length of lines/rectangles. Best for discontinuous data.
Line graph	A graph where values are represented by data points

and include a line of best fit. Best for continuous data.

Key Concepts

DNA and Inheritance

DNA is the genetic code which makes up genes, which are responsible for giving an organism a specific characteristic.

It is a chemical made up of two long strands, arranged in a spiral. This is the double-helix structure.

DNA carries genetic information - the genetic code. It has all the instructions that a living organism needs to grow, reproduce and function. DNA is passed on from parents to their offspring during fertilisation.

Species

A species is a group of similar organisms that can breed with one another to produce fertile offspring. For example, humans are one species and dogs are another species.

Individuals of the same species can reproduce to make more individuals of the same species. Two individuals belonging to different species cannot normally reproduce together. If they do, their offspring is often infertile and unable to reproduce.

Sometimes individuals from two different species can reproduce. For example, animals called ligers are produced when a male lion and a female tiger reproduce. Tigons are produced when a female lion and male tiger have cubs.

Variation

There is variation between individuals of the same species. Some variation is inherited, some is caused by the environment and some is a combination. Variation between individuals is important for the survival of a species, helping it to avoid extinction in an always changing environment.

Discontinuous Variation

Surveys of discontinuous variation give us values that come in groups rather than a range. Human blood groups are an example of discontinuous variation. There are only four blood groups possible - A, B, AB or O. You cannot have a blood group in between these four groups, so this is discontinuous variation. They are best represented by charts (bar charts, pie charts etc).

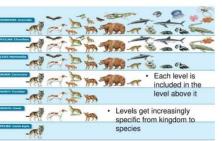
Continuous Variation

Surveys of continuous variation give us results that come in a range. Human height is an example of continuous variation. It ranges from that of the shortest person in the world to that of the tallest person. Any height is possible between these values, so this is continuous variation. They are best represented by line graphs.

Classification

Living things can be grouped according to different criteria (where they live, what type of organism they are, what features they have). A classification key is a tool that is used to group living things to help us identify them using recognisable characteristics.

The Linnaean system, named after Carl Linnaeus, has different levels where the number of living things in each group gets smaller and smaller, until there will just be one type of animal in the species group.





What is a species?

discontinuous variation?

variation?

variation?

classification system?

What is the binomial name for a human?

- The aims of the sequence of learning are to ensure that all students:
- Identify and record different types of variation
- · Explain how species are classified

Retrieval Practice Questions **Answers**

- A group of organisms that interbreed to produce fertile offspring.
- How are characteristics inherited? Half the DNA is given from the mother and half from the father. Each parent passes on a copy of each gene.
- Variation can be caused by either genetic or the environment, or What causes variation? both.
- What is the difference between continuous and Continuous variation is data that when collected can be a range of values. Discontinuous variation is data when collected can be discontinuous variation? put into groups/categories.
- Is eye colour an example of continuous or Discontinuous
- Is height an example of continuous or discontinuous Continuous
- A line of best fit is drawn on bar charts of False discontinuous variation.
- Which type of graph is used for discontinuous Bar chart
- How are species classified? Kingdom, Phylum, Class, Order, Family, Genus, Species
- What is a classification key? A tool to help group organisms based on their characteristics. Which scientist first suggested the uniform Carl Linneaus
- What main characteristics define the group phylum? Whether they have a backbone.
 - Homo sapien

Career Focus - Where could this take you?



I am a crop plant breeder. The aim of my job is to improve the quantity and quality of the food produced by crops. I use selective breeding to help give plants desirable characteristics that farmers need when growing crops. I work mainly outside (in the field) although some work in carried out in a lab.

As this takes time to happen, so I need to be very patient when

waiting to see the results of my work. My responsibilities include carrying out research methods and techniques, cross pollinating plants, making observations and analysing results, keeping detailed records and presenting findings to farmers and other scientists.

Challenge Activities

- Make flashcards for the definitions and retrieval practice questions.
- Make a mind map for this topic. Remember to include keywords and links between information.
- Produce a fact file or a poster about the different ways variation in a species can occur.
- Construct a story board to explain how selective breeding or genetic modification works. Find out about a famous scientist that changed our understanding about life diversity and how
- species evolve over time. 6. Research about other careers linked to life diversity – forensic scientist, DNA analysts, Genetic counsellors.

Topic Links

- This topic links to: Cells
 - Energy
 - Photosynthesis and Respiration
- We will also be practising how to
 - Draw punnet squares
 - Calculate probability

Additional Resources



Educake - https://www.educake.co.uk/

BBC Bitesize https://www.bbc.co.uk/bitesize/topics/zxhhycw/articles/

zdi3vwx YouTube Cognito -

https://www.voutube.com/watch?v=VilE5Ozl1S0



Humanities

Our students will:

- > know and understand the history of these islands as a coherent, chronological narrative, from the earliest times to the present day: how people's lives have shaped this nation and how Britain has influenced and been influenced by the wider world
- understand historical concepts such as continuity and change, cause and consequence, similarity, difference and significance, and use them to make connections, draw contrasts, analyse trends, frame historically-valid questions and create their own structured accounts, including written narratives and analyses
- > understand the methods of historical enquiry, including how evidence is used rigorously to make historical claims, and discern how and why contrasting arguments and interpretations of the past have been constructed
- ➢ develop contextual knowledge of the location of globally significant places both terrestrial and marine including their defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes
- > understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time



Keyword

Tudor

Monarch

Reign

Catholic

(Roman)

Protestant

Significant

Reformation

Treason

Martyr

Civil War

Judgement

Interpretation

Definition

Academy Year 8 Tudors & Stuarts

The aims of the sequence of learning are to ensure that all students can: evaluate the impact of Henry VIII's break with Rome.

- explore the religious changes and problems under Elizabeth I consider how England changed under the Stuart's reign.
- explore the causes, impacts and events of the English Civil War and how it changed England. evaluate social issues, such as the Great Plague and the
- **Great Fire of London**

Key Concepts: Tudor and Stuart Monarchs



English royal family / dynasty which held the throne from Henry VII in 1485 until the death of Elizabeth I in 1603.

- A ruler such as a King, Queen or Emperor. This is a complex word in
- History and you will explore it thoroughly. Time during which a Monarch rules.
- Heir A person who has legal claim to a title or throne when the person holding it dies.
 - Christian religious beliefs the Pope is Head of the Church
 - Christian; they separated from the Roman Catholic Church in the 16th century. The monarch is Head of the Church.
 - Something or someone who is important and remembered.
- Latin for 'to separate': To legally end a marriage. Divorce
 - A religious movement in Europe in the 1500s where its leaders disagreed with the Roman Catholic Church.

Make decisions carefully, after studying and comparing all

- The crime of betraying your country, particularly by attempting to kill or overthrow the monarch.
- Someone who dies for their beliefs (often religious).

A war between two sides from the same country.

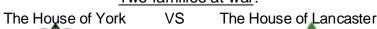
In History this means different versions of the past.

- The process of restoring the English Monarchy. Restoration

evidence that is available.

removed. A massive change for England and English rule.

Two families at war:











Henry VII (1485 - 1509)

- Henry Tudor started the Tudor Dynasty after defeating Richard III.
- Married Elizabeth of York.
- Created the Tudor Rose.

Catholics:





Protestants:





Henry VIII (1509 - 1547)

- Created the Church of England after his break from Rome.
- Had an expensive lifestyle.
- Had 6 wives and 3 children.

Key Events between 1485 and 1700

The Battle of Bosworth:

Last significant battle of the War of the Roses, fought on 22 August 1485 between King Richard III (House of York) and Henry Tudor (House of Lancaster). Henry won the battle and the Tudor dynasty began

The Reformation:

In 1533 Henry VIII 'broke' from the Catholic Church and made himself Head of the Church of England (rather than the Pope, who was the head of the Catholic Church).

Henry VIII did this as the Pope would not let him divorce his wife. As part of the reformation Henry VIII closed the monasteries, often selling their belongings and land (dissolution of the monasteries).

English Civil War:

Beginning in 1642, this saw King Charles I executed and the monarchy



Elizabeth I (1558 - 1603)

- Longest reigning Tudor Monarch.
- Defeated the Spanish Armada in 1588.
- Never Married.
- Had to balance her country between **Catholics and Protestants**



Charles I 1(625 - 1649)

- Son of James I the first Stuart King of **England**
- Awful relationship with his parliament which led to the civil war.
- Was the first King ever to be executed and power removed,



Questions:

Academy Year 8 Tudors & Stuarts

Answers:

Henry VIII.

The aims of the sequence of learning are to ensure that all students can: evaluate the impact of Henry VIII's break with Rome.

- explore the religious changes and problems under Elizabeth I consider how England changed under the Stuart's reign.
- explore the causes, impacts and events of the English Civil War and how it changed England.
- evaluate social issues, such as the Great Plague and the Great Fire of London

Retrieval Practice:



Henry was from the House of Lancaster and
defeated Richard II

Married Elizabeth of York, their child was

Robert Dudley, Phillip II of Spain, Robert

Devereux, Francis, Duke of Alencon.

What was the name of Henry VII's wife and his son who succeeded him?

Who did Henry Tudor defeat at the Battle of

Bosworth and what 'House' was he from?

- Who was the founder of the Protestant Reformation and where was he from?
 - der of the Protestant Reformation Martin Luther, from Germany.
- Tell me **two** differences between Catholics and Protestants in the 16th Century:

 Catholic bible was in Latin, Protestant in English and Catholic priests could not get married.
- What was the name of Henry VIII's **first and second**wives?

 Catherine of Aragon and Anne Boleyn.
- Tell me **one** reason Henry VIII broke from Rome:

 To allow him to divorce his wife.
- Who were the eligible suitors who were contenders
- for Elizabeth's hand in marriage?
- Which monarch was executed at the end of the English Civil War?
- Who replaced the King as the Head of State after the end of the English monarchy?
- How many people died during the Great Plague in 1665?

100,000.

King Charles I.

Oliver Cromwell.

Career Focus - Where could this take you?



I am a Judge: My job is to uphold the law and see that justice is made. I act as a referee between disputing parties; analysing and interpreting all provided evidence to be able to reach a fair verdict and a sentence where necessary. I need to listen to all opinions and have a balanced view so that I can then make a final decision on whether someone is guilty or innocent.



Challenge Activities



- 1. Produce a FULL fact file about any of the Monarchs we have studied this half term. You should include information about their life and reign, historical facts and images.
- Create a timeline of the Tudor and Stuart period. You must detail all the events that happened during their reigns.
- 3. Imagine you are Martin Luther the German Protestant Monk. Produce a leaflet to inform the people of England about the new ideas of Protestantism and why they may prefer to follow that as Christians in England during the 16th Century. Use what you have learnt in lessons about the difference between Catholics and Protestants in the 16th Century.

Topic Links



Additional Resources



This topic links to other humanities topics such as:

- The makeup of the UK
- Parliament and our democracy
- Christianity
- Elizabethan England

We will also be practicing how to

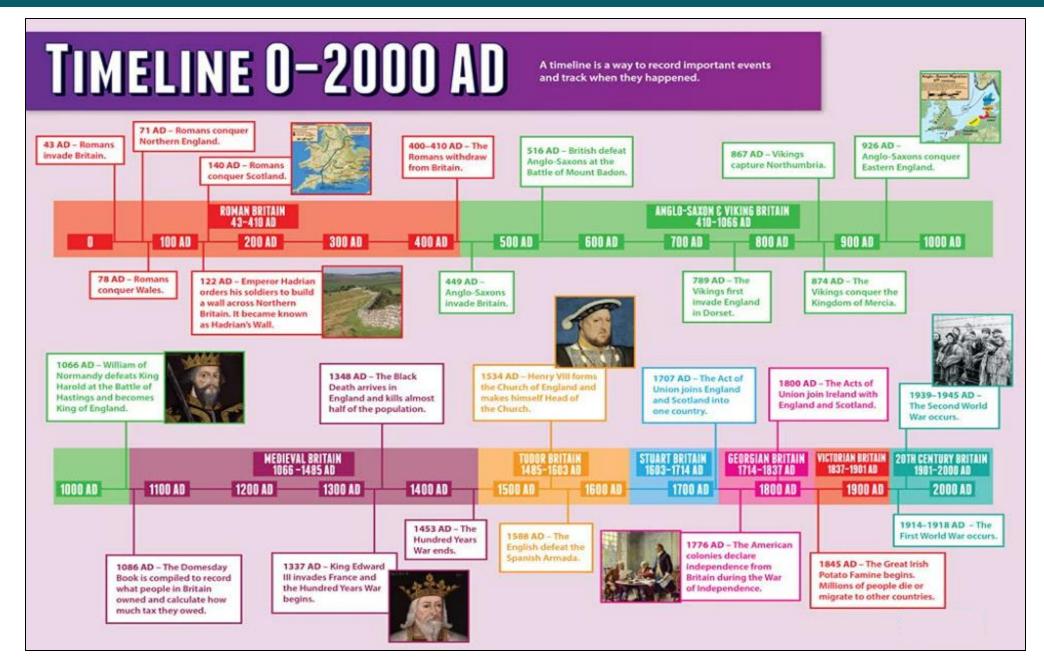
Create a balanced argument.

The Reformation:

The Tudors:



Timeline







Academy Year 8 Population

The aims of the sequence of learning are to ensure that all students can:

- Describe the issues of an ageing populations
- Describe the impacts of population growth
- Construct and describe population pyramids

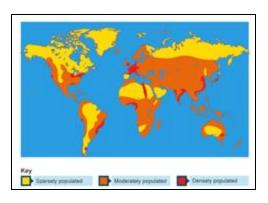
- Explain the causes and impacts of migration
- Evaluate a strategy for population management

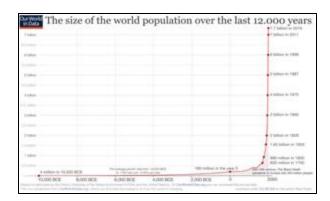


(4)

Population density

Refers to the number of people living in an area. It is worked out by dividing the number of people in an area by the size of the area. If there are few people living in an area this means that it is **sparsely populated**, while a **densely populated** area has many people living there.





Population changes

The world's population does not stay the same. During the 1st century AD, the world population was about 300,000 people. The current population is over 8 billion, and most of the growth has taken place within the last 100 years.

What causes population to change:

- Births
- Deaths
- Migration

Overtime, as healthcare has improved, death rates have continued to fall. The introduction of vaccines has also helped to protect people from diseases.

Keyword	Definition
Population	Word used to describe a group of people. Populations can exist at many scales.
Population Density	How crowded or empty a place is (measured in people per square km).
Population Distribution	The pattern of where people live.
Densely Populated	A crowded area.
Sparsely Populated	An empty area.
Birth Rate	Is a measure of the number of healthy babies born each year per 1000 people in the population.
Death Rate	The number of deaths per year per 1000 people in the population.
Population pyramid	A type of bar chart that shows the population structure (i.e. how many people, how old they are, what sex they are) of a country.
Life Expectancy	How many years a new baby can expect to live for on average.
Fertility Rate	The average number of children per woman.
Natural Increase	The number of births minus the number of deaths in a period.
Immigrants	People who move into a country from another country.
Emigrants	People who move out of a country to live in another country.



Academy Year 8 Population

The aims of the sequence of learning are to ensure that all students can:

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- Construct and describe population pyramids
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- Evaluate a strategy for population management

Key Concepts

Population Pyramids

Population structures are shown using population pyramids. A population structure refers to the number of males and females in each age group that are found within a specific place.

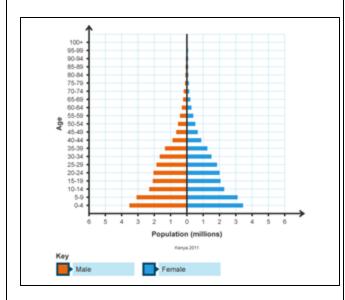
What does this mean?

A wide base means there are lots of young people and suggests a high birth rate.

A narrow base means a smaller proportion of young people, suggesting a low birth rate.

A thin middle, short pyramid means a smaller ageing population, suggesting that there is not a long-life expectancy.

While improvements in healthcare have historically lowered death rates, increased access to contraception has lowered birth rates.



Factors affecting population density

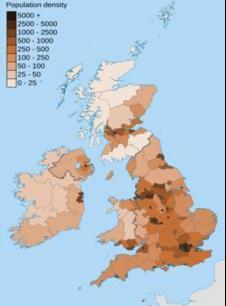
Factors that can lead to dense populations include:

- flat or gently sloping land
- mild climate
- good soils
- lowland
- water
- good transport and communication links, e.g. ports
- places to work
- · resources, e.g. coal, oil

Factors that can lead to sparse populations include:

- steep slopes
- · harsh climate very hot or very cold
- dense forest
- dry conditions
- isolated areas with poor transport links
- few jobs
- · lack of resources

UK population



Overpopulation means there are too many people living in a certain area, which can create environmental and social problems.



Academy Year 8 Population

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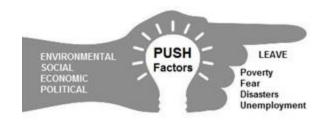
Key Concepts



Push factors

These are the reasons for why someone would want to move away from a place:

- Lack of services
- War
- Famine (starvation/food shortages)
- Few Jobs
- Natural Disasters



Pull factors

These are the reasons for why someone would want to move to a place:

- Higher quality of life (better homes, etc.)
- Access to education
- "Bright Lights" of the city
- Better healthcare
- Better job opportunities



Rural-urban migration

- Rural to urban migration is the movement of people from the countryside to the city.
- People move from the countryside due to various push factors. People believe that by moving to the city they will have access to more opportunities. However, in many cases moving to the city does not mean a better quality of life.
- Many poor people end up living in areas on the edge of a city, in small, very cheaply built houses. These areas are known as shanty towns or slums.

Refugees and Asylum Seekers

- Refugees: people who have been forced to move away from their home country and have been granted asylum in another country.
- Economic migrants: a person who has left his or her own country and seeks to find employment in another country.
- Asylum seekers: means a person who has applied for asylum in another country.





Case Study: China's One Child Policy

To manage its own growing population, China introduced the One Child Policy in 1979. The new policy meant that any couple having a second child would get a heavy fine, around £3,000.

Impacts of the Policy

- The fertility rate has dropped from 5.7 in 1960 to 1.7 in 2016.
- Large numbers of female babies have ended up homeless or in orphanages, and in some cases killed.
- · Many people claim that some women, who became pregnant after they had already had a child, were forced to have an abortion and many women were forcibly sterilised.
- There have been reports of female infanticide (killing of infants).

Long-term implications of the policy are that China now has a gender imbalance in their population. Its ageing population also has a high dependency ratio.





Newsome Academy Year 8 Population

The aims of the sequence of learning are to ensure that all students can:

- Describe the issues of an ageing populations
- Describe the impacts of population growth
- Construct and describe population pyramids

- Explain the causes and impacts of migration
- Evaluate a strategy for population management

Retrieval Practice

What is the fertility rate?

What is the birth rate and death rate?

What is a population pyramid?

What is life expectancy?

What is natural Increase?

and explain one

Questions



An area with few people What is a sparsely populated area?

Answers

What is a densely populated area? An area with lots of people

The average number of children per woman

The number of people who are born and die each year per 1000 of the population

A graph which shows the population structure of a country

The average age people can expect to live to

The number of births minus the number of deaths in a period of time

Describe the problems caused by A gender imbalance as boys were preferred to girls China's population policy

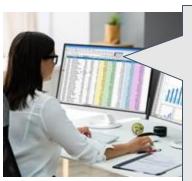
Takes away people's rights to have children Explain why there are concerns about the effects of China's family planning policy

People wanted a boy as they would look after the parents Explain why there is a gender imbalance in China when they were older

Give a benefit of the one child policy The fertility rate has dropped from 5.7 in 1960 to 1.7 in 2016

Give two negative impacts of the policy Many women were pressured to have an abortion, and some were forcibly sterilised meaning they could not have any more children

Career Focus -



I am a data analyst for the Office of National Statistic. I collect, organise and study data to provide a business insight into the data. My responsibilities are working in a small team to develop codes and processes to standardise and exploit key strategic external data for a wide variety business products. As part of my job, I link key administrative data and prepare data for use across the business using a wide range of statistical and analytical products.

Challenge Activities



- What affects the population distribution of the world?
- Why are there differences in the growth rate of the population of the world?
- How did the Industrial Revolution affect the UK's population?
- Suggest one way in which the UK's population structure is changing.
- Many countries now have an ageing population. Describe how a country may try to encourage an increase in the birth rate.
- If the human population doubles in the next 50 years, what problems will this cause?
- Suggest why the birth rate in many poor countries is falling.
- Describe the features of China's family planning policy since the 1990s.

Topic Links



This topic links to other Humanities topics such as: Weather Hazards, Coastal landscapes, River landscapes, Tectonic landscapes, Resource Management, Economic development UK Africa, China, India, Middle East.

Additional Resources











Newsome Academy Everyone Exceptional Everyday Geography

Key Concepts: World – Countries and Oceans









Academy Year 8 Life After Death and Animal Rights Everyone Exceptional Everyday

The aims of the sequence of learning are to ensure that all students can:

- Describe a non-believers view on the afterlife
- Explain different religious beliefs about the afterlife
- · Evaluate which Religion has the most convincing afterlife argument

Keyword	Definition
Reincarnation	The religious belief that existence is a cycle of birth, life, death and rebirth which survives physical death.
Resurrection	Christian belief that Jesus rose from the dead after crucifixion.
Rebirth	The belief that some part of the person passes into a new life from death.
Immortality as a legacy	The belief that there is no life after death, and we only exist in what we leave behind.
Immortality as a memory of others	The belief that there is no life after death and that you only exist in the memories of family and friends.
Animal experimentation	Procedures performed on living animals for purposes of research into basic biology and diseases, assessing the effectiveness of new medicinal products.
Inhumane	Lacking pity, kindness or mercy, being cruel.
Responsibility	To be in charge of own actions.
Extinction	When all members of a species has died and will never exist again.
Exploitation	Act of selfish needs to take advantage of something to profit or benefit from it.
Factory farming	An intensive system of farming to rear animals quickly and cheaply indoors with

very little space and low welfare.

Key Concepts

RELIGIOUS BELIEFS ABOUT LIFE AFTER DEATH

For many religious people, belief in life after death is based on teachings in their scriptures or traditions. The sacred texts in Christianity, Judaism and Islam talk of an afterlife, so for followers of these faiths life after death has been promised by God. For Buddhists, belief in reincarnation is based on the tradition that the Buddha remembered his past lives when he reached enlightenment.

NON-RELIGIOUS BELIEFS ABOUT LIFE AFTER DEATH Not all people who believe in life after

death would call themselves 'religious'.

concept of reincarnation but are not

necessarily Buddhist, Hindu or Sikh.

not hold one of the traditional faiths

that promise an afterlife.

experiences

For some people, near-death

For example, some people believe in the

Others feel natural justice requires good

to be rewarded and evil punished but do

(NDEs), a sense of déjà vu or witnessing

convinces them about life after death...

ghosts, perhaps through a medium

ANIMAL RIGHTS

Animal rights refers to the idea that animals should be entitled to live lives that are free from abuse by humans. In the UK, there are laws designed to protect animals from cruelty. For instance, it is a crime to neglect or mistreat an animal, including when an animal is being transported or slaughtered. It is also illegal to stage fights between animals for entertainment or to test cosmetics on animals. Some forms of hunting are also illegal, and people can be fined or face imprisonment if they cause unnecessary suffering to animals.

FACTORY FARMING

Industrial farming involves large-scale intensive production of crops and animals for human consumption. The most extreme example is factory farms, where animals are reared year-round in huge numbers. They are bred to grow quickly and are fed on cheap food. Farmers are continually pushed to produce more for less.











ANIMAL EXPERIMENTATION

Animal experiments are widely used to develop new medicines and to test the safety of other products. Many of these experiments cause pain to the animals involved or reduce their quality of life in other ways. If it is morally wrong to cause animals to suffer then experimenting on animals produces serious moral problems. Animal experimenters are very aware of this ethical problem and acknowledge that experiments should be made as humane as possible. They also agree that it's wrong to use

animals if alternative testing methods would

produce equally valid results.

THE RSPCA

Founded in 1824, it is the oldest and largest animal welfare organisation in the world and is one of the largest charities in the UK. They were the first to introduce a law to protect animals and work hard to ensure that all animals can live free from pain and suffering. Through their campaigns they raise standards of care, and awareness of issues, affecting animals today.



Year 8 Life After Death and Animal Rights

The aims of the sequence of learning are to ensure that all students can:

- Describe a non-believers view on the afterlife
- Explain different religious beliefs about the afterlife
- Evaluate which Religion has the most convincing afterlife argument

Retrieval Practice

What is reincarnation?

give an example

Immortality of a legacy – can you

What is animal experimentation?

Can you give an example.

What is exploitation?

Answers

leave behind.

new medicinal products.

profit or benefit from it.

rebirth and survives physical death.

Questions



Career Focus - Where could this take you?





I am a free range farmer, I love to see my animals make the most of the wider space around them. The care and importance of maintaining free animals is vital to provide healthy and ethical produce. Religious Education has given me the skills and knowledge to explore and know more about freerange as well as the benefits it has on the animals as well as identifying ethical views on animal rights.

The religious belief that existence is a cycle of birth, life, death and The belief that there is no life after death, we only exist in what we Procedures performed on living animals for purposes of research into basic biology and diseases, assessing the effectiveness of

Challenge Activities



- Create a poster campaigning for animal rights.
- Do you think human life is valued more than an animal's life? Explain your question in more detail. Include a quote within your answer.
- Research the history on animal rights. Do you think it has changed over the years?
- How can we protect animals? Explain your answer.
- Create a day of the dead mask.
- Do you think people's opinion on life after death has changed and why?

give an example. How can animals ne used?

What is the point in the RSPCA?

What do non - believers believe

about life after death?

What is factory farming? Can you

Animals can be used as domestic animals such as pets, as well as used for food and in some cases for testing certain products. Animals can also be used as a mean of transport, as well as helping workload.

Act of selfish needs to take advantage of something in order to

An intensive system of farming to rear animals quickly and

cheaply indoors with very little space and low welfare.

Founded in 1824, it is the oldest and largest animal welfare organisation in the world and is one of the largest charities in the UK.

They were the first to introduce a law to protect animals and they work hard to ensure that all animals can live free from pain and suffering. Through their campaigns they raise standards of care, and awareness of issues, affecting animals today.

Some non-religious people believe in life after death.

Not all people who believe in life after death would call themselves 'religious'.

Topic Links



Additional Resources



This topic links to:

- PME
- English
- Science
- Religious rules and the good life
- Religion and the media

We will also be practicing how to

- Voice 21 Argue a point, practice and participate in
- Write PEE paragraphs and how to structure exam questions.

To further practise and develop your knowledge see:

https://studv.com/academy/lesson/animal-rights-ethicsarguments.html

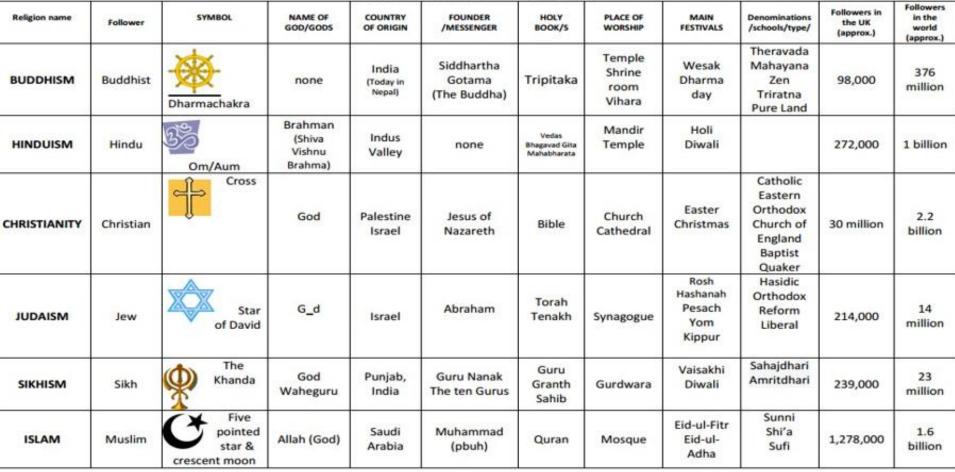
https://www.bbc.co.uk/bitesize/topics/zkdk382/articles/zn s2kmn



Religious Studies

Key Concepts

SIX WORLD RELIGIONS (spellings vary)



Theist = Someone that believes in God
Atheist = Someone that doesn't believe in God

Agnostic = Someone that is not sure about the existence of God

Monotheist = Someone that believes in one God Polytheist = Someone that believes in many gods

Timeline of religions (all dates approximate)

1	1	1	1	1	1	1
2000 BC	1500BC	560 BC	0	30 AD	610 AD	1500 AD
Hinduism	Judaism	Buddhism	3	Christianity	Islam	Sikhism





MFL

Our students will:

- > understand and respond to spoken and written language from a variety of authentic sources
- > speak with increasing confidence, fluency and spontaneity, finding ways of communicating what they want to say, including through discussion and asking questions, and continually improving the accuracy of their pronunciation and intonation
- > can write at varying length, for different purposes and audiences, using the variety of grammatical structures that they have learnt
- discover and develop an appreciation of a range of writing in the language studied.



Year 8 Les vacances

The aims of the sequence of learning are to ensure that all students can:

- Recognise and name countries in French.
- Talk about holidays in the past.
- Use the past tense of key avoir and être verbs
- Use negatives in the past tense
- Use the present and past tense together.
- Pronounce key French sounds accurately

Keyword	Definition
Où habites-tu?	Where do you live?
J'habite à Huddersfield en Angletere.	I live in <u>Huddersfield in</u> <u>England.</u>
Où passes-tu tes vacances?	Where do you spend the holidays?
Je passe mes vacances	I spend my holidays
Que fais-tu pendant les vacances?	What do you do during the holidays?
Je vais en France / à Blackpool	I go to France / to Blackpool.
Tu as passé des bonnes vacances?	Did you have a good holiday?
L'année dernière je suis allé à <u>Norfolk</u> / en <u>Espagne.</u>	Last year I went to Norfolk / to Spain.
Qu'est-ce que tu as fait?	What did you do?
Tu es allé avec qui?	With whom did you go?
Je suis allé avec <u>ma famille.</u>	I went with my family .
Tu as voyagé comment?	How did you travel?
J'ai voyagé <u>en avion.</u>	I travelled by plane.
C'était comment?	What was it like?
C'était assez bien.	It was quite good.

Key Concepts

Grammar – Present Tense

Normalement, pendant les vacances....

Normally during the holidays...

je vais en colo à la campagne – I go to a holiday camp in the countryside je voyage en car – I travel by coach je nage dans la piscine – I swim in the pool je fais du sport – I do sport je mange des hamburger-frites – I eat burgers and chips

Past Tense

Qu'est-ce que tu as fait pendant les vacances? What did you do during the holidays?

j'ai joué au tennis - I played tennis
j'ai mangé des glaces - I ate ice creams
j'ai retrouvé mes amis - I met up with my friends
j'ai écouté de la musique - I listened to music
j'ai acheté des baskets - I bought some trainers
j'ai regardé des clips vidéo - I watched video clips
j'ai nagé dans la mer - I swam in th sea
j'ai traîné à la maison - I hung around the house
j'ai visité un parc d'attractions - I visited a theme park
j'ai bu un coca au café - I drank a cola in the café
j'ai pris beaucoup de photos - I took lots of photos
j'ai vu un spectacle - I saw a show
j'ai fait une balade en bateau - I went on a boat ride
j'ai vu mes personnages préférés - I saw my favourite characters
j'ai fait tous les manèges - I went on all the rides





Phonics and Vocabulary



é - ay





équipe

Quel désastre! - Describing what went wrong

j'ai oublié mon passport

j'ai cassé mon portable j'ai perdu mon portemonnaie j'ai choisi le poisson j'ai beaucoup vomi ie suis tombé(e) sur la

plage

on a raté l'avion

on est arrivés en retard

je suis resté(e) au lit

je n'ai pas acheté de souvenirs je n'ai pas pris de photos

je ne suis pas sorti(e) Quel désastre! Quelle horreur! I forgot my passport I broke my phone I lost my purse

I chose the fish I vomited a lot I fell over on the beach I stayed in bed

we missed the plane we arrived late

I didn't buy any souvenirs I didn't take any photos I didn't go out What a disaster! How horrible!



Academy Year 8 Les vacances

Answers

The aims of the sequence of learning are to ensure that all students can:

- Recognise and name countries in French.
- · Talk about holidays in the past.
- Use the past tense of avoir and être verbs

- Use negatives in the past tense
- Use the present and past tense together.
- Pronounce key French sounds accurately

Où habites-tu?

Où passes-tu tes vacances?

Que fais-tu pendant les

Tu es allé avec qui?

C'était comment?

Questions

vacances?



Career Focus	-	V
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Where could this take you?

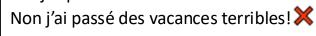


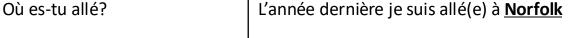


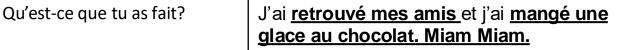
I am a tour guide. We meet people from all over the world, so it is very important that I can speak a Language. It doesn't matter which language I speak, because learning a language helps me to understand the different cultures of countries around the world.

J'habite à Huddersfield en Angleterre. Je passe mes vacances au bord de la mer. Je vais en France / à Blackpool

Tu as passé des bonnes Oui j'ai passé des bonnes vacances. \checkmark vacances?







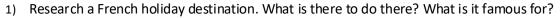
J'y suis allé(e) avec ma mère et ma sœur.

Tu as voyagé comment?	J'ai voyagé <u>en taxi et en avion</u> . C'était assez
	ennuyeux.
	_

À mon avis, c'était **formidable**. J'adore les vacances.

C'était terrible car j'ai perdu mon passeport. Quelle horreur!

Challenge Activities



- 2) Find out about where the most popular holiday destinations are in France. How long are their holidays?
- Complete the activities on www.sentencebuilders.com
- Design a postcard from a famous French-speaking holiday destination. Write few sentences in French to say where you are, what you have been doing and your opinion about your holiday.

Topic Links



Additional Resources



This topic links to:

- Food and drink.
- Birthdays and special occasions.
- Where I live.

knowledge see: Sentencebuilders.com

- Active learn.
- Watch this short video here



Year 8 Les fêtes.

The aims of the sequence of learning are to ensure that all students:

Learn how to talk about festivals in France and England. Learn how to express simple preferences about festivals.

o choose

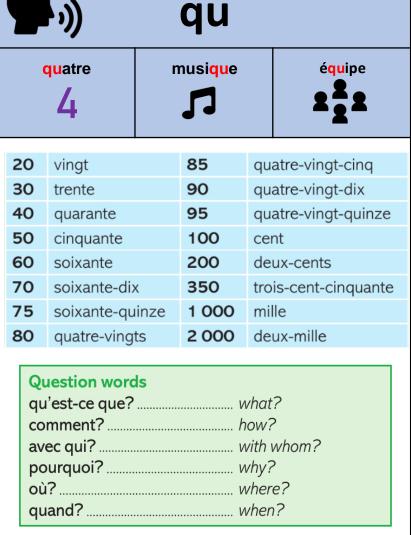
- Learn how to use the present tense of er, ir and reverbs.

Phonics and Vocabulary

- Learn how to use aller + infinitive to make the simple future.. Learn how to use high numbers and understand prices.
- Pronounce key French sounds accurately.

Keyword	Definition		y Concept	s	
C'est quelle fête?	Which celebration is it?	Gr	Grammar		
C'est <u>Pâques.</u>	It's <u>Easter.</u>	Dr	esent Tei	150	
La fête nationale	Bastille Day (14th July)		esent rei	130	T
La fête des M ères	Mothers' Day			<i>-er</i> verbs <i>danser</i>	-ir ver
La fête du travail	Labour Day (1st May)	ie	/ j'	dans e	fin is
L'Aïd	Eid	tu	.,	dans es	fin is
Noël	Christmas	il/	elle / on	dans e	fin it
La Toussaint	Halloween	no	ous	dans ons	fin isso
Quelle est ta fête préférée?	What is your favourite celebration?		ous /elles	dans ez dans ent	fin isse .
Pourquoi?	Why?				
Parce que j'aime le chocolat.	Because I like chocolate	Fu	iture Ten		
Qu'est-ce que tu fais pour fêter <u>le Nouvel An</u> ?	What do you do to celebrate New Year?			oout what is g se part of the itive .	_
Le soir on danse et on mange avec la famille.	In the evening, we dance and eat with family.		aller (to	go) + <mark>infinit</mark> couter	ive
Qu'est que tu manges?	What do you eat?		tu vas éc		
C'est à quelle date?	What date is it on?			va écouter ons écouter	
Qu'est-ce que tu vas faire?	What are you going to do?			z écouter	
Vous désirez?	What would you like?			ont écouter	
Ça fait combien	How much is it?	1	je vais c i	<i>hoisir</i> ∣am g	going <mark>to</mark>

	-er verbs danser	-ir verbs finir	-re verbs attendre					
je / j'	dans e	fin is	attend s					
tu	dans es	fin is	attend s					
il/elle / on	dans e	fin it	attend					
nous	dans ons	fin issons	attend ons					
vous	dans ez	fin issez	attend ez					
ils/elles	<u>dansent</u>	fin issent	attend ent					
To talk about what is going to happen in the future, use part of the verb <i>aller</i> followed by the infinitive. aller (to go) + infinitive je vais écouter tu vas écouter il/elle/on va écouter								
	nous allors écouter							





l'année prochaine?

Year 8 Les fêtes.

The aims of the sequence of learning are to ensure that all students:

- Learn how to talk about festivals in France and England.
- Learn how to express simple preferences about festivals.
- Learn how to use the present tense of er, ir and re verbs.
- Learn how to use aller + infinitive to make the simple future.
- Learn how to use high numbers and understand prices.
- Pronounce key French sounds accurately.

Retrieval Practice



Career Focus - Where could this take you?





am a market trader. I work all over Europe at Christmas to sell traditional gifts. It helps me that I can speak another language, because I can communicate with my

Challenge Activities



- 1) Research a festival of your choice. How is it celebrated in France? How is it different? How is it similar?
- 2) Prepare some crêpes for your family like French people do for La Chandeleur. If you can't make them, why not design a menu made of pancakes. A savoury and a sweet course.

customers.

- 3) How is La fête des Rois celebrated in France? Make a presentation to send to your teacher. They may even show it to the class.
- Find out about the Alsace region in France. What languages are spoken? What country is it next to?

Questions	Answers
C'est quelle date aujourd'hui?	C'est le trois novembre deux mille vingt.
C'est quelle fête?	C'est l'Aïd.
Quelle est ta fête préférée?	J'adore mon anniversaire parce que j'adore choisir des cadeaux et faire une soirée pyjama.
Qu'est-ce que tu fais pour fêter <u>le</u> Nouvel An?	Le matin j'ai des cadeaux et l'après-midi je mange avec ma famille. J'adore ça.
Qu'est que tu manges à Noël?	D'habitude on mange de la dinde avec des légumes. Comme dessert on mange du gâteau.
<u>Où est que</u> tu vas aller pendant les vacances de Noël?	Je vais <u>aller à Paris avec mes amis</u> .
Qu'est-ce que tu vas faire?	On va <u>visiter les monuments</u> . Ce sera chouette!
Qu'est-ce que tu vas manger?	Je vais manger du poulet rôti et une crêpe au chocolat.
Est-ce que tu vas visiter la Tour Eiffel?	Non, je <u>vais rendre visite à mes grands-parents</u> et on va <u>visiter la Notre Dame.</u>
Quels sont tes résolutions pour	En ce moment je <u>mange du chocolat</u> mais l'année

prochaine je vais manger des fruits.

This topic links to:

- Food and drink.
- Birthdays and special occasions.
- Future plans

Topic Links

To further practise and develop your knowledge see:

Active learn.

Additional Resources

- Sentencebuilders.com
- Watch this short video here

avoir (to have)

j'ai I have tu as you (sing) have il/elle/on a he/she has /we have nous avons we have vous avez you (plural/polite) have ils/elles ont they have (m/f)

The perfect (past) tense

Use this tense to talk about what you did or have done

1. j'ai or je suis

c'était = it was

2. Past participle

Hier, j'ai bavardé avec mon meilleur ami sur mon portable. Après, j'ai bu un thé. C'était relaxant.





avoir = to have être = to be

Key irregular verbs in

J'ai bu = I drank J'ai fait = I did J'ai vu = I saw J'ai pris = I took Je suis allé(e) = I went

Past participles

- 1. -er verbs → remove er +é = regarder > regard- > regardé
- -ir verbs -> remove ir +i = vomir > vom- > vomi
- 3. -re verbs → remove re +u = perdre > perd- > perdu

the past tense

Tu vas Il/elle va Negative expressions

être (to be)

je suis I am tu es you (sing) are il/elle/on est he/she is /we are nous sommes we are vous etes you (plural/polite) are ils/elles sont they are (m/f)



Les quatres saisons

Le printemps spring l'été summer l'automne autumn L'hiver winter

janvier février mars avril mai juin iuillet août septembre octobre novembre décembre

Negatives in the perfect tense

Put ne...pas around the part of avoir or être

Remember ne shortens to n' before a vowel.

Je n'ai pas regardé la télé Je ne suis pas allé(e) en vacances

Saying "to" or "in" with countries

- · Most countries are feminine: en Tunisie: en France: en Australie
- A few countries are masculine: au Canada: au Maroc
- A small number of countries are plural: aux États-Unis
- With islands use à Vanuatu

Present tense

d'habitude = usually normalement = normally

Perfect tense

hier yesterday le week-end dernier last weekend l'année dernière last vear

Conectives

et and aussi also ou or mais but avec with

Present tense

d'habitude = usually normalement = normally

Narrative words

d'abord firstly **puis** then ensuite next après afterwards finalement finally

Intensifiers

assez quite très very trop too un peu a little/bit complètement completely **vraiment** really

Possessive adjectives

The near future tense

Use this to talk about what you

are **going to** do.

nous allons

vous allez

ils/elles vont

aller + infinitive

ne...pas = not

ne...jamais = never

ne...rien = nothing

front of a vowel

*ne shortens to n' in

Je vais

mon/ma/mes = my ton/ta/tes = your son/sa/ses = his/hers

The comparative

Use the comparative to compare two or more things

- plus + adjective + que = more ... than ... moins + adjective + que = less... than ...
- Le ski est plus amusant que le cyclisme Skiing is more fun than cycling
- The adjective must agree with (match) the first noun La voile est plus fatigante que le tennis Sailing is more tiring than tennis
- With plural nouns use sont (are) and not est (is)

Use the QR codes to revise key vocabulary

















Year 8 - Hallo!

The aims of the sequence of learning are to ensure that all students can:

- Meet and greet in German.
- Count to 31
- Give dates in German.

- Pronounce key phonics sounds.
- Ask and answer simple questions in German.
- Give their name age and birthday

Keyword	Definition	Key Concepts									
Hallo! Guten Tag	Hello!	Alphabet				● .)) P	honics				
nailo: Guteii iag	пено!	B (beh	C(tseh)	(deh)	- h)	- "	C	+6	_		100
Wie geht's?	How are you?	A(ah) b(ben	ee) J(yot) K	(eh)	F(eff) G(geh)	55	- ß	LS	- Z	V	- W
Es geht mir gut danke	I'm fine thank you	O (oh) P (pet) (100) 1	(air) S	M (emm) N (enn) (teh) U (oo)	Ful	Sball	Z	00	W ine	dsurfen
Wie heißt du?	What are you called?	1 (fo)	w) W (veh)	(iks) (oopsil	(teh)						&
Ich heiße <u>Clara</u>	I'm called <u>Clara</u>	Monaten - Mo		(OOpsil	on) Z(tsett)	eye	- ei	ee	- ie	loc	<i>h</i> -ch
Wie alt bist du?	How old are you?	Januar	Februar	März	April	ı	is	l	ben	E	Bu ch
Ich bin <u>zwölf</u> Jahre alt	I'm <u>12</u> years old			W.							
Wann hast du	When is your birthday?	100		Marin Marin		Dates & I	Days		Farben -	Colours	
Geburtstag?						0 null	l6 sechze		schw	arz 🥏	braun
Ich habe am vierten Juli Geburtstag.	My birthday is on the 4th July.	Mai	Juni	Juli	August	2 zwei 3 drei 4 vier	I8 achtze I9 neunze 20 zwanz	ehn	rot gel	b 💣	lila rosa
Gebuitstag.	4th July.	%	*		al Capa	5 fünf	2l einund	dzwanzig	oran	_	blau
Wo wohnst du?	Where do you live?			RAN	1000	6 sechs 7 sieben		ndzwanzig ndzwanzig	grü		grau
Ich wohne in	I llive in Huddersfield		**** ***** ***** ***** **	*** **** **** **** **		8 acht 9 neun		ndzwanzig ndzwanzig	beig	e –	weiß
Huddersfield.	Tillve iii Tidddei Sileid	September	Oktober	November	Dezember	IO zehn	26 sechs	undzwanzig	N	MONIA TO C. MI	G Wantah
			1			II elf I2 zwölf		nundzwanzig ndzwanzig	DIEMOI	14-7111	twoch.
Ich bin sehr feundlich und kreativ.	I am very friendly and cretive	*****				13 dreizel	n 29 neunu	ndzwanzig	Denne.	stag Fr	EITAG
unu kreativ.	Cletive	HHH			aut Out	I4 vierzel I5 fünfze		_	85AM	ithg 50	NNTAG



Hallo! Guten Tag

Wie geht's?

Wie heißt du?

Wie alt bist du?

Wann hast du

Geburtstag?

Tasche?

Wie schreibt man das?

Welchen Tag haben wir?

Was hast du in deiner

Hast du ein Handy?

Welche Farbe ist das?

Auf Wiedersehen.

Ouestions

Retrieval Practice

Year 8 - Hallo!

The aims of the sequence of learning are to ensure that all students can:

- Meet and greet in German
- Count to 31
- Give dates in German

- Pronounce key phonics sounds.
- Ask and answer simple questions in German.
- Give their name age and birthday.



Career Focus - Where could this take you?



10



I am a travel agent. I book holidays for my clients. Having language skills means I can get my clients the best deals by communicating directly with tour operators around the world. I also use my excellent communication skills and understanding of how to build relationships with people from all cultures.

Answers Hallo! Guten Tag! Gut, danke! ✓

Ich heiße Clara.

Nicht so gut! X

tseh- el-ah-air-ah

Ich bin zwölf Jahre alt.

Mein Geburtstag ist am neunten November. Ich habe am neunten November Geburtstag.

Heute ist **Dienstag.**

Ich habe einen Bleistift, einen Radiergummi und ein Lineal

Ja, ich habe ein Handy. Nein, Ich habe **kein Handy.**

Das ist blau.

Tschüss

Challenge Activities

- Make flashcards for the questions and answers.
- Use Sentence builders to practise numbers, days, months and key phonic sounds.
- Research a famous German person. Make a factfile. What do they do? Where do they live? Why are they famous?
- What do you know about German? Present your knowledge in a creative way.

This topic links to other German topics such as

· Introducing yourself and family.

This topic also links to:

- Numeracy
- Geography
- Literacy

Topic Links

To further practise and develop your knowledge see:

Sentence builders.com Usernames and password. www.sentencebuilders.

teacher...

Additional Resources

com Active Learn - You will be given your username and password by your



Where?

Who?

Where ... from?

Wo?

Wer?

Woher?

Academy Year 8 - Meine Familie

The aims of the sequence of learning are to ensure that all students can:

- Say how many brothers and sisters they have.
- Describe their pets.
- Say what they like and dislike using cognates
- Describe their personality.
- Conjugate key verbs in 1st/2nd/3rd person singular, e.g. haben and sein.
- Understand a traditional celebration in Germany Weihnachten.

sch

u

u

Keyword	Definition
Wie heißt du?	What is your name?
Wie schreibt man das?	How do you spell it?
Wie alt bist du?	How old are you?
Wann hast du Geburtstag?	When is your birthday?
Wo wohnst du?	Where do you live?
Hast du Geschwister?	Do you have any brothers and sisters?
Hast du ein Haustier?	Do you have a pet?
Wie bist du?	What are you like?
Wie siehst du aus?	What do you look like?
Vie? How? Vas? What?	Most verbs end in -en , e.g. wohnen (to live). For the present tense you replace the -en ending like this:

ich wohne

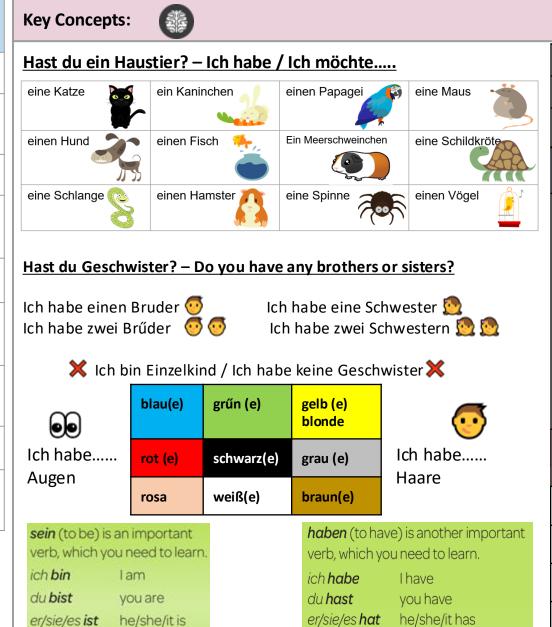
du wohnst

er/sie/es wohnt

I live

you live

he/she/it lives





W

V

Numbers 20-100

00

zwanzig	twenty	
dreißig	thirty	
vierzig	forty	
fünfzig	fifty	
sechzig	sixty	
siebzig	seventy	
achtzig	eighty	
neunzig	ninety	
hundert	hundred	
einundzwanzig	twenty-one	
zweiundzwanzig	twenty-two	

Personality – Wie bist du? Ich bin

freundlich	friendly	sportlich	sporty
launisch	moody	laut	loud
kreativ	creative	faul	lazy
intelligent	clever	lustig	funny



Retrieval Practice

Academy Year 8 - Meine Familie

The aims of the sequence of learning are to ensure that all students can:

- Say how many brothers and sisters they have.
- Describe their pets.
- Say what they like and dislike using cognates
- Describe their personality.
- Conjugate key verbs in 1st/2nd/3rd person singular, e.g. haben and sein.
- Understand a traditional celebration in Germany Weihnachten.

Retrieval Practice	
Questions	Answers
Wie heißt du?	Ich heiße <u>Clara.</u>
Wie schreibt man das?	tseh- el-ah-air-ah
Wie alt bist du?	Ich bin <u>zwölf</u> Jahre alt.
Wann hast du Geburtstag?	Mein Geburtstag ist am <u>neunten November</u> .
Wo wohnst du?	Ich wohne in <u>Huddersfield.</u>
Hast du Geschwister?	Ich habe <u>einen Bruder</u> Ich habe zwei Schwestern
Hast du ein Haustier?	Ja, ich habe <u>ein Kaninchen. Er ist grau</u> . Er heißt Peter. Nein, Ich habe <u>kein Haustier.</u>
Wie bist du?	Ich bin <u>kreativ</u> und <u>musikalisch.</u>
Wie siehst du aus?	Ich habe lange braune Haare. Ich habe blaue Augen.

Career Focus - Where could this take you?





I am a charity worker. I work abroad to help animals, that are mistreated or abandoned in many towns and cities. It helps that I can speak a language, because I can communicate with local people, tourists and other charity workers. I find that speaking another language has really helped me to settle into life in a foreign country and helped me to make lots of new friends.

Challenge Activities



- Make flashcards for the questions and answers.
- Use Sentence builders to practise describing yourself and other people.
- Make a fact file about yourself in German. Include lots of information, including your favourite things.
- Design your ideal zoo. Say what you have in the crazy zoo and then describe each animal. Eg Ich habe eine Katze. Sie ist blau und rosa. Sie heißt Fifi.

Topic Links



Additional Resources



This topic links to other German topics such as:

Introducing yourself and family.

This topic also links to:

- Numeracy
- Geography
- Literacy

To further practise and develop your knowledge see:

www.sentencebuilders.com

- Active Learn You will be given your username and password by your teacher..



Computing

Our students will:

- > can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- > can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- > can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- > are responsible, competent, confident and creative users of information and communication technology



Year 8: Top Trumps

The aims of the sequence of learning are to ensure that all students:

- Demonstrate knowledge of planning techniques by describing the difference between a 'theme' and an 'audience'
- Demonstrate knowledge of internet safety by describing how to find appropriate and reliable data from trustworthy online sources
- Demonstrate knowledge of digital design using MS Publisher by using a range of tools and features to create a set of customised Top Trump cards
- Apply knowledge from this unit to accurately describe some keywords

Keyword	Definition
Audience	The primary group of people that something is aimed at appealing to
Theme	The particular subject or idea on which the style of something is based on
Statistics	The collection, organisation, analysis, interpretation, and presentation of data
Reliable Source	Sources have links to verifiable and current evidence, usually written by an expert in the subject
Professional Design	A design that aims to replicate the design of something that has been created by a professional
Template	Pre-made designs and documents that have the editing flexibility to be customised
Mail Merge	A feature which lets you combine a document with a data file to create a new personalised document for each record on the data file
Transparent Image	An image that has no background

colour

Key Concepts Students will be expected to create a customised set of Top Trumps cards by following design processes inspired by industry experts. The tasks include collating data from several reliable sources, designing the card layout and using the Mail Merge feature to create each individual card 1. Click the 'Mailings' Tab menu > Select 2. Find your Stats Spreadsheet document 3. Click on the first table option and then Recipients > Use an Existing List and then press the 'Open' button press the 'OK' button Select Table Home Insert Page Design Description Modified Created <u>.</u>.... 10/1/2012 7:14:2 10/1/2012 7:14:22 AM 10/1/2012 7:14:2 04 - Pong Ga Use an Existing List.. **Pages** Cancel Merge OK First row of data contains column headers Mailings Page Design Review 5. Now click 4.Click on the Format 10 'Insert Merged on the 'Finish 23 & Merge' Field' button mail Select Edit Insert Merge dress Greeting Picture button (on the and select the Recipient Lis Field + Find Recipient Card Name Write & Insert Fi 'Mailings' tab) Preview stat name Finish & Exclude This Recipient goals Results Merge ▼ and then which you Preview Results 🖺 Merge to Printer... caps select 'Merge want to put age 22 to New inside the Stat Merge to New Publication height 1 box (e.g. Publication' ThemeFive d to Existing Publication Goals stat box) option GOA F7 nd Email Messages... F8 F9



The aims of the sequence of learning are to ensure that all students:

- Demonstrate knowledge of planning techniques by describing the difference between a 'theme' and an 'audience'
- Demonstrate knowledge of internet safety by describing how to find appropriate and reliable data from trustworthy online sources
- Demonstrate knowledge of digital design using MS Publisher by using a range of tools and features to create a set of customised Top Trump cards
- Apply knowledge from this unit to accurately describe some keywords

Retrieval Practice



Retrieval Practice	
Questions	Answers
What is the difference between the terms 'Audience' and 'Theme'?	Audience is the primary group of people that something is aimed at appealing to e.g. teenagers, 18 to 39 year olds, fans of Manchester United etc Theme is the particular subject or idea on which the style of something is based on e.g. Sports, Movies, Netflix etc
Is Wikipedia a reliable source of information on the internet? Explain why.	No, it cannot be classed as a reliable source of information. The creators admit that not every entry is accurate and that it might not be the best source of material for research tasks. However, if used correctly, it can be used as a starting point for any research based tasks.
Why is it important to collate and use number-based stats on the Top Trump cards?	It is important that the statistics that you use is suitable for Top Trumps cards. The stats must be number-based otherwise you would not be able to play the game of Top Trumps. These numbers will be needed to compare a stat from your card with the stat from another card. Words cannot be compared to determine a winner.
Why is it important to create professional looking Top Trump card template designs?	The first impression counts for a lot. It is easier than ever to compare products with each other. If your design does not look eye catching and professional then people may choose not to purchase the product. The time and money spent on developing and promoting the product would have been a complete waste of time, resources and money. It will have a negative impact on the reputation of the company going forward.
What is a 'Mail Merge'? Give an example of how a mail merge can be used in a school.	A Mail Merge is a feature which lets you combine a document with a data file. A new personalised document is created for each record on the data file e.g. school can use the student's data file to send personalised letters addressed to each parent / carer / guardian.

Career Focus - Where could this take you?





I am a **Graphic designer** and work in a team that is responsible for creating visuals for all kinds of projects, from websites to advertisements. My job involves creating designs that communicate information in a way that inspires and informs consumers.

Challenge Activities



- 1. Describe the steps that you would take to check that the information found on Wikipedia is reliable.
- 2. Create two more completely different Top Trump card template designs. You need to analyse each template design and then decide which template you would like to use to as the final design. Explain the reasons for the choice of template design.
- 3. Create a tutorial document to explain all of steps involved in creating a Mail Merge in MS Publisher. This must be suitable for a novice user to easily follow.

Topic Links



Additional Resources



This topic links to:

Computing Curriculum:

- Undertake creative projects that involve combining multiple applications to achieve challenging goals
- Create and re-purpose digital artefacts for a given audience, with attention to trustworthiness and usability
- Art and Design (using artist skills to create eye-catching visuals)

To further practise and develop your knowledge see:

- Top Trumps game rules and examples www.toptrumps.com/kids
- YouTube MS Excel Tutorial: youtu.be/k1VUZEVuDJ8
- YouTube MS Publisher Tutorial: voutu.be/StzvBxnhHmE



CAPE

Our students will:

- > produce creative work, exploring their ideas and recording their experiences
- > become proficient in drawing, painting, sculpture and other art, craft and design techniques
- > evaluate and analyse creative works using the language of art, craft and design
- > know about great artists, craft makers and designers, and understand the historical and
- cultural development of their art forms.
- develop competence to excel in a broad range of physical activities are physically active for sustained periods of time engage in competitive sports and activities
- lead healthy, active lives.



Y8 Day of the Dead

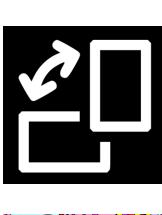
The aims of the sequence of learning are to ensure that all students:

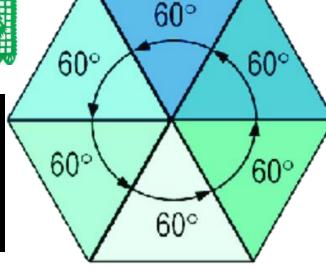
- Learn about the Mexican festival Dia de los Muertos.
- Learn about the symbols associated with the festival.
- Learn how the artist Thaneeya McArdle uses patterns in her work.
- Demonstrate that they can blend colours together effectively.
- Learn how to create patterns using rotation and symmetry.
- Consolidate their learning in a final mandala design inspired by the festival.

Keyword	Definition
Dia	Spanish for 'day'
Muertos	Spanish for 'dead'
Festival	A day or period of celebration, often for religious reasons.
Symbols	A picture used as a conventional representation of an object, function, or process
Sugar skull	Made out of sugar paste, these were originally made as gifts for children.
Ofrenda	The offering placed in a home altar during the Dia de los Muertos festival.
Papel picado	Traditional Mexican decorative craft made by cutting elaborate designs into sheets of tissue paper.
Mandala	A mandala is a geometric configuration of symbols.
Rotation	The action of rotating about an axis or centre.
Symmetry	Defined as a balanced and proportionate similarity that is found in two halves of an object.

Key Concepts













What are alebrijes?

Newsome Academy Y8 Day of the Dead :

The aims of the sequence of learning are to ensure that all students:

- Learn about the Mexican festival Dia de los Muertos.
- Learn about the symbols associated with the festival.
- Learn how the artist Thaneeya McArdle uses patterns in her work.
- Demonstrate that they can blend colours together effectively.
- Learn how to create patterns using rotation and symmetry.
- Consolidate their learning in a final mandala design inspired by the festival.

Retrieval Practice	
Questions	Answers
What does Dia de los Muertos mean?	Day of the Dead in Spanish.
When does the festival take place?	1 st November All Saints day) and the 2 nd November (All souls day).
What is the belief behind the festival?	Mexican people believe that the spirits of deceased loved ones come back to Earth to be with those that are still alive.
Where is Mexico?	Mexico is located in North America. It is bordered by the Pacific Ocean, the Caribbean Sea, and the Gulf of Mexico; the United States is to the north, and Belize and Guatemala are to the south.
Why are Monarch butterflies associated with the festival?	These butterflies migrate to Mexico and start arriving at the start of November. People believe that they are the spirits of ancestors coming to

visit.

fantastical creatures.

Brightly coloured Mexican folk-art sculptures of

Career Focus - Where could this take you?





My job is a make up artist. I enhance facial aesthetics through makeup. I consult with clients and create custom looks based on their specifications. I work with actors on movie sets, and need to take lighting and setting into account when applying makeup.

Challenge Activities



Follow a make up tutorial inspired by Day of the Dead https://www.youtube.com/watch?v=OfvfdVAC2G4

Design your own sugar skull.

https://www.youtube.com/watch?v=UMn6R9-84a0

Topic Links	Additional Resources
This topic links to:	To further practise and develop your knowledge see:
 RE - Religious beliefs and rituals of a different culture. Geography – location of different countries. Mathematics – use of rotation and symmetry. 	https://www.bbc.co.uk/bitesize/articles/zdj78hv
	https://www.youtube.com/watch?v=c7EwqyyljRU

 $\overline{}$



Equipment

Battery

Year 8 Textiles

The aims of the sequence of learning are to ensure that all students:

- Demonstrate safe use of tools and equipment.
- Explain a range of Regenerated fibre properties Rank Fibers in order of environmental impact.

- Annotated a range of design ideas which include moral and cultural issues.
- Demonstrate an understanding of smart materials.

Keyword **Definition** Having the property of conducting something **Conductive** (especially heat or electricity): Cloth or other material produced by weaving or **Fabric** knitting fibres: Made by chemical synthesis, especially to imitate **Synthetic** a natural product: A thread or filament from which a vegetable **Fibres** tissue, mineral substance, or textile Worked by, charged with, or producing electricity: Electric A type of cloth or woven/ knitted fabric: **Textiles** A set of principles concerned with the nature and **Aesthetics** appreciation of beauty Solder is a fusible metal alloy used to create a Solder permanent bond between metal A plan or drawing produced to show the look and Design function or workings of a building, garment, or other object before it is built or made Electronic component that conducts current Diode primarily in one direction Electric charge of a positive point charge **Positive** Electric field of a negative point charge **Negative** A laser is a device that emits light through a Laser

process of optical amplification

of tools or other objects

Equipment most commonly refers to a set

A device that provides electrical power





development over the last 10 yrs. The main development are the circular economy, anti















Year 8 Comforting a child

The aims of the sequence of learning are to ensure that all students:

- Demonstrate safe use of tools and equipment.
- Explain a range of Regenerated fibre propertiesRank Fibers in order of environmental impact.
- Annotated a range of design ideas which include moral and cultural issues.
- Demonstrate an understanding of smart materials.

Retrieval Practice



11011101111111101100						318
Question	A1	A2	А3	Α4	A5	
A. What is a regenerated fibre?	Made from a plant	Made in a factory	Coal & oil	A fibre made from cellulose (wood pulp)	A fibre made from Animals	
B. Which fibres are Regenerated? (select more than 1)	Wool	Lyocell	Acetate	Cotton	Polyester	
C. What is a design Specification?	A list of design solutions	A list of costings	A list of design issues	A list of important points	A detailed list of what the product must be/	
D. Which fibres are Synthetic? (select more than 1)	Polyester	Nylon	Cotton	Bamboo	Viscose	
E. What is a light emitting Diode?	A type of disco ball	A Type of switch	A type of resistor	LED Light	A type of battery	
F. What advantages are they in using a laser cutter? (select more than 1)	Fast	Accurate	Less material wastage	Cuts multi materials (except metal)	Cuts complex shapes and fine detail	
Questions you got wrong	Quic		ns (bridge sconceptio	learning ga _l	ps &	

Career Focus - Where could this take you?





I am a textile lab technician with a Design and Technology qualification. My role involves interpreting technical documents, writing detailed reports, and communicating findings clearly. These skills ensure I can effectively test and analyse fabrics and share essential information with designers and manufacturers to create high-quality products.

Challenge Activities



Can you Identify these E-Textile Symbols and Explain when they do?











Topic Links Additional Resources



This topic links to:

- Science- How electronics can be used within textiles and the development of Smart Fibres
- English- Subject specific Vocabulary knowledge, understanding and spelling.

To further practise and develop your knowledge see:





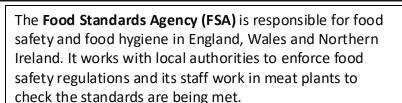


The aims of the sequence of learning are to ensure that all students:

- Apply knowledge of Health and Safety in relation to the Food Standards Agency and Legislation
- Demonstrate knowledge of food provenance Be able to discuss confidently a range of manufacturing processes

Keyword	Definition
Food origin	Where the food originated in the world
Food provenance	Whether the food was grown, caught or reared
Transportation	How food is transported from one place to another
Food processing	Changing food in some way e.g washing, chopping, pasteurising, freezing, fermenting, packaging
Food manufacturing	Food manufacturing refers to transforming raw ingredients into edible products such as using wheat, oat, and sugar to make cereals, desserts, and pet food.
Farming	Farming is the activity of growing crops or keeping animals on a farm.
Calcium	Calcium is a mineral your body needs to build and maintain strong bones and to carry out many important functions.
Carbohydrate	Carbohydrates provide energy for the body. The body breaks carbohydrates down into glucose, which is the primary energy source for the brain and muscles.
Protein	Protein is one of the three nutrients found in food that the body needs in large amounts. It is essential for the maintenance and building of body tissues and muscle.
Fibre	Fibre is a type of carbohydrate that the body cannot break down and so it passes through our gut into our large intestine (or colon). It is found naturally in plant foods like wholegrains, beans, nuts, fruit and vegetables and is sometimes added to foods or drinks. Fibre helps to keep our digestive system healthy and helps to prevent constipation.
Fat	The body uses fat as a fuel source, and fat is the major storage form of energy in the body. Fat also has many other important functions in the body, and a moderate amount is needed in the diet for good health. Too much fat or too much of the wrong type of fat can be unhealthy.
Cross- contamination	Cross-contamination is the physical movement or transfer of harmful bacteria from one person, object or place to another.
Nutrient	a substance that provides nourishment essential for the maintenance of life and for growth.
Healthy	In a good physical or mental condition; in good health.

Key Concepts



Food Standards Act 1999

The Act was introduced in the House of Commons in 1999.

It sets out our main goal to protect public health in relation to food. It gives us the power to act in the consumer's interest at any stage in the food production and supply chain.

Food Safety Act 1990

The main responsibilities for all food businesses covered by the Act are to ensure that:

- businesses do not include anything in food, remove anything from food or treat food in any way which means it would be damaging to the health of people eating it
- the food businesses serve or sell is of the nature, substance or quality which consumers would expect
- the food is labelled, advertised and presented in a way that is not false or misleading



The scheme gives businesses a rating from 5 to 0 which is displayed at their premises and online so you can make more informed choices about where to buy and eat food.

- 5 hygiene standards are very good
- 4 hygiene standards are good
- 3 hygiene standards are generally satisfactory
- 2 some improvement is necessary
- 1 major improvement is necessary
- 0 urgent improvement is required





The aims of the sequence of learning are to ensure that all students:

- Use safe and hygienic practices in a working kitchen environment
- Demonstrate sound preparation skills of both equipment and ingredients

Safely use a range of cooking techniques, appropriate to the task

Breakfast Pizza

Method

- **1. Preheat** oven to 180 degree
- Carefully chop your vegetables using the correct chopping board and knife technique
- 3. Lay the tortilla at the bottom of your tray
- **4. Whisk** the eggs thoroughly and pour into your tortilla
- 5. Sprinkle over your fillings and make sure they are spread across the tortilla
- **Season** with a small amount of salt and some pepper
- **7. Bake** in the oven for 20 minutes, until the eggs have set.

Ingredients

1 round flour tortilla

3 large eggs (or 4-5 smaller eggs)

50g grated cheese

8 cherry tomatoes

1 mushroom

1/2 pepper

2 slices ham or cooked bacon/chicken

Skills:	Meaning
1.	General Practical Skills: Weighing ingredients, measuring, preparing ingredients and equipment, correct cooking times, testing for readiness and sensory testing.
2.	Knife skills: Can use equipment safely. Slicing, dicing and chopping
3.	Preparing fruit and vegetables: I can prepare fruit and vegetables in many different ways: Slicing, peeling, grating, dicing and chopping.
4.	Use of the cooker (and Skills 6: Cooking Methods): Using the cooker including: the hob, grill and oven.
6.	Cooking Methods: Using the cooker including: the hob, gril and oven.
7.	Preparing, combine and shape: Techniques to prepare, cook and combine different ingredients.





Whisk

Bake





Bridge method



Claw method



Sauce pan

Lined tray

Palette knife

Work in

pairs: when

sharing the

sauce pan.

•Rounded knife

The aims of the sequence of learning are to ensure that all students:

- Use safe and hygienic practices in a working kitchen environment
- Demonstrate sound preparation skills of both equipment and ingredients

Safely use a range of cooking techniques, appropriate to the task

Flapjack



Equipment

- Grease proof paper
- Large mixing bowl
- Wooden spoon
- Weighting scales
- ** Container with a lid

Ingredients

- 2 tbsp. golden syrup/treacle
- 150 grams Butter
- 100 grams Sugar
- 350 grams Oats
- *** container with a lid ***



Method:

- Melt the treacle, butter and sugar in the pan but do not boil.
- Take the mixture off the heat and add the oats.
- Add a selection of the dried fruit and seeds.
- Stir until all the oats are covered.
- Press the oat mixture into the tin with a knife.
- Bake in the oven 190 degrees for 15 minutes.
- After 15 minutes use quality control to see if the flapjack is cooked. If not bake for a further 5 minutes.
- Mark the flapjack into squares and loosen the sides while the tin is still hot.
- Do not remove the flapjack from the tin until it is completely cold or it will crumble.

<u>Skills:</u>	<u>Meaning</u>
1.	General Practical Skills: Weighing ingredients, measuring, preparing ingredients and equipment, correct cooking times, testing for readiness and sensory testing.
4.	Use of the cooker (and Skills 6: Cooking Methods): Using the cooker including: the hob, grill and oven.
6.	Cooking Methods: Using the cooker including: the hob, grill and oven.
7.	Preparing, combine and shape: Techniques to prepare, cook and combine different ingredients.

EXTENSION: Bain-marie

Definition: A bain-marie consists of placing a container (pan, bowl, soufflé dish, etc) of food in a large, shallow pan of warm water, which surrounds the food with gentle heat. The food may be cooked in this manner either in an oven or on the hob.

This technique is designed to cook delicate dishes such as custards, sauces and savoury mousses without breaking or curdling them. It can also be used to keep cooked foods warm.



How to make your chocolate

- **EQUAL** over a pot of simmering water. Make sure the bowl is very clean and does not have any moisture in it or else the chocolate will split.
- 2. Warning The bowl should not touch the surface of the water at all.
- 3. Break the chocolate into small pieces and place in the bowl.
- 4. Stir with a spatula. Always use a spatula so that no bubbles form.
- 5. When the chocolate almost melts, remove bowl from heat and place on a towel.
- 6. Stir with spatula until every last piece of chocolate melts completely.
- 7. Transfer to a serving bowl and the melted chocolate is ready to use as needed!!



The aims of the sequence of learning are to ensure that all students:

- Use safe and hygienic practices in a working kitchen environment
- Demonstrate sound preparation skills of both equipment and ingredients

Safely use a range of cooking techniques, appropriate to the task

Cheese and Onion Pasty (Triangles)

Method:

- 1. Set oven at Gas 4 / 180°C.
- **2. Prepare the cheese and onion filling:** grate the cheese and slice the onion;
- 3. Mix the cheese and onion together.
- 4. Make up the shortcrust pastry:
- sift the flour into the bowl and rub the butter or margarine into the flour, using your

fingertips, until it resembles breadcrumbs;

- gradually add the cold water and start to mix together. The mix to form a firm, smooth dough.
- 5. Roll out the pastry into a square, on a floured surface.
- 6. Cut the square into quarters using the palette knife.
- 7. Spoon some cheese filling in the middle of the square.
- 8. Next, brush the edges of the pastry with beaten egg. Fold over each pasty and pinch them together all the way along.
- 9. Brush each pasty with beaten egg and transfer them onto the baking tray.
- 10. Bake for 20 minutes, until golden brown.

Top tip:

- Vary the types of spices and herbs used for different flavour sensations!
- Try adding slices of chicken and beef, perhaps with mushrooms and sweetcorn.
- Make up the pastry using wholemeal flour remember to use a little more water.

Ing	redients:		! :
•	Weighing scales	Pastry brush	•
•	Chopping board	Baking tray	I
•	Grater	• Sieve	
•	Knife	Platte knife	
•	Mixing bowl	• Fork	
•	Rolling pin	• Spoon	I
•	2 small bowls		

		a. carerrer	
ı	١٠	50g Cheddar cheese	I
ľ	٠.	½ small onion	i
		100g plain flour	:
!	١.	50g butter or margarine	!
į	•	2 – 3 x 15ml spoons cold water	!
!	١.	1 egg	!
i	l		ĺ
ľ	**	** Container with a lid ***	i

Ingredients:

Skills:	<u>Meaning</u>
1.	General Practical Skills: Weighing ingredients, measuring, preparing ingredients and equipment, correct cooking times, testing for readiness and sensory testing.
2.	Knife skills: Can use equipment safely. Slicing, dicing and chopping
3.	Preparing fruit and vegetables: I can prepare fruit and vegetables in many different ways: Slicing, peeling, grating, dicing and chopping.
4.	Use of the cooker (and Skills 6: Cooking Methods): Using the cooker including: the hob, grill and oven.
6.	Cooking Methods: Using the cooker including: the hob, grill and oven.
7.	Preparing, combine and shape: Techniques to prepare, cook and combine different ingredients.
11.	Raising Agents: Use of raising agents including: eggs, chemical, steam and biological.

K	ITC	Н	EN	ı c	10	4 ^	ER	SIC	N	S
			SP	001	15 8	& CI	UPS	5		
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6		2	1		1/8		/16	1/32		-
12		4	2		1/4		1/8	1/16		_
18		6	3		3/8		-	-		-
24		В	4		1/2	1	1/4	1/8		1/32
36	1	2	6		3/4			-		-
48	1	6	8		1	1	1/2	1/4		1/16
96	3	2	16		1		1	1/2		1/8
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4	115		1/2	120				4	114	
6	150		2/3	160				6	170	
8	230		2/4	180				8	226	1/2
10	285		1	240				12	340	-
12	340		2	480				16	454	1
1	1/4 CUP				1/2 CUP	7			ci	JP
FLOU	R 3	2g		FLO	UR	64g		FLO	OUR	125
SUGA	R 5	Og		SUG	AR	100g		SU	GAR	200
BUTT	ER 5	5g		BUT	TER	112g		BU	TTER	225



The aims of the sequence of learning are to ensure that all students:

- Use safe and hygienic practices in a working kitchen environment
- Demonstrate sound preparation skills of both equipment and ingredients

Safely use a range of cooking techniques, appropriate to the task



Ingredients:	Topping (choose from):
 200g strong bread flour 25g margarine ½ tsp salt 1 packet of dried yeast ½ tsp dried herbs/garlic ***Bring tub with a lid***	 5 Olives ½ red pepper ½ onion 50g cheese Garlic paste Basil oil – fresh basil and oil – blended and spread over the top before toppings are put on.

Equipment:

- Lined tray
- · Table knife
- Measuring jug
- Chopping board
- Vegetable knife
- Grater
- Large bowl

Career Focus - Where could this take you?



My job is a head chef in a restaurant. My job is to make sure the food we cook and serve is of the highest quality. I create menus and must delegate to the team of chefs and kitchen porters in my kitchen. I must be very driven, well organised, have excellent kitchen skills and enjoy working and leading a team.

Samira Effa is from Huddersfield and is head chef at Grantley Hall

Method:

- 1. Turn on oven to 180°c. (between 5-6 on the hob).
- 2. Put flour and butter into a large bowl. Rub in butter into flour using finger tips to form bread crumbs.
- 3. Add salt, sugar and yeast.
- **4. Gradually** stir in hot water with table knife to form dough.
- 5. Knead dough for around 10 minutes. Flour hands and surface if required.
- 6. Shape and place on tray.
- 7. Chop and slice onion/pepper.
- Make indents in dough with finger tips.
- 9. Add toppings push into dough.
- 10. Drizzle with basil oil.
- 11. Place tray in top of oven to rise. 20-40 minutes.
- 12. Once risen place in oven to cook for around 15 minutes

Meaning Skills: 1. General Practical Skills: Weighing ingredients, measuring, preparing ingredients and equipment, correct cooking times, testing for readiness and sensory testing. Knife skills: Can use equipment safely. Slicing, dicing and 2. chopping 3. Preparing fruit and vegetables: I can prepare fruit and vegetables in many different ways: Slicing, peeling, grating, dicing and chopping. 4. Use of the cooker (and Skills 6: Cooking Methods): Using the cooker including: the hob, grill and oven. 6. Cooking Methods: Using the cooker including: the hob, grill and oven. 7. **Preparing, combine and shape:** Techniques to prepare, cook and combine different ingredients. **Dough:** Making dough including: bread, pastry and pasta. 10. 11. Raising Agents: Use of raising agents including: eggs, chemical, steam and biological.

Challenge Activities



Try some of these recipes at home. Follow the links:

Turkey Burgers

Cottage Pie

Easy Veg Frittatas

Food skills are acquired, developed and secured over time

Bridge hold

Claw grip





and detached

Legato - Long and smooth

Staccato - Short and choppy.

The main layer or tune of a piece

How loud or quiet the sound is.

The layers that make up a piece

Keyword(s)

Melody

Articulation

Dynamics Market 1988

Texturc

Structure

Tonality

Harmony and

Instrumentation/

Rhythm

Tempo

Performance Forces

JJJJ

The aims of the sequence of learning are to ensure that all students can:

- apply in depth appropriate musical vocabulary through the MAD TSHIRT mnemonic.
- aurally identify musical features of music from Gangsta's Paradise as well as the wider Hip-Hop Genre.

music.

Hip Hop.

Structure

Chorus structure.

Time Signature

perform Gangsta's Paradise on the keyboard, using appropriate instrumental technique.

key concepts – Rup and l	пір пор
Нір Нор	Musical Devices

Hip Hop is not just a style of music but an entire **culture** that is made up:

- DJing and beat making.
- B-Boving or Break Dancing, a form of
- acrobatic group dancing. Graffiti art
- Mc'ing or rapping.

Musical devices are techniques

used by people who write

Examples = Riffs, as well as Sampling and Looping are

common musical devices to

Gangsta's Paradise uses a Verse-

Gangsta's Paradise is in 4/4,

meaning each bar has 4 beats.

e.g. by changing the pitch or slowing them down.

Gangsta's Paradise: Tonality

In music, sampling is when a short snippet

(or sample) of a sound recording is used in

Samples are usually changed in some way

Gangsta's Paradise is in a minor key. It

A short break in the song that is **just** the

Breakbeats are **sampled** because

drumbeats are perfect to rap over.

breakbeats, from which breakdancing

sounds sad, which fits with the lyrics.

Sampling

another recording.

Riff

Monophonic - Single layer on its own.

- **Homophonic** One melody with accompaniment.
- **Polyphonic –** More than one melody at the same time.

The way the music is put together in sections.

E.g. - Verse, Chorus, Bridge.

Definition

The way the notes are played – long and smooth or short

Harmony: The **chords and scales** that accompany the melody. Diatonic Harmony - Chords and scales that blend well together.

Dissonant Harmony – Chords and scales that clash with each other.

Tonality – Whether the music is in a Major ⊕ or Minor ⊕

Key.

The **instruments** or **voices** used to perform a piece.

A riff is a short **repeating pattern** in a piece

of **pop** music.

Gangsta's Paradise: Harmony

The chord sequence, which repeats throughout the song is: G Em F# Bm

The song is also *diatonic* throughout.

Wordless singing.

(80 BPM – Beats per minute)

Vocalisation

Tempo

Vocalisation is during the chorus in the backing vocals.

Melisma

Looping

drum beat on its own.

Signing more than one note per syllable. DJ Kool Hercwas the first to loop

A small section of sound that is repeated.

developed.

Breakbeat

Gangsta's Paradise: Texture

Gangsta's Paradise uses an andante tempo

The song uses **two** types of texture:

Homophonic – One melody and accompaniment (during the **verse** sections) **Polyphonic** – more than one melody at the same time (during the **chorus** sections).

The **note values** used ות ות

The **speed** of the beat



Year 8 - Rap and Hip Hop

The aims of the sequence of learning are to ensure that all students can:

Answers

- aurally identify musical features of music from Gangsta's Paradise as well as the wider Hip-Hop Genre.
- perform Gangsta's Paradise on the keyboard, using appropriate instrumental technique.

apply in depth - appropriate musical vocabulary through the MAD TSHIRT mnemonic.

Retrieval Practice

Firstly, make sure you have memorised the definitions for all the keywords we use in music:

Melody / Articulation / Dynamics / Texture / Structure / Harmony / Instrumentation and Forces / Rhythm / Tempo.

Using your knowledge organiser you must:

Questions

- Look, cover and check.
- Have somebody else test you.
- Make flash cards to test yourself.

Questions	Answers
What is Hip Hop ?	Hip Hop is not just a style of music but an entire culture
Identify the four things that make up Hip Hop.	 DJing and beat making. B-Boying or Break Dancing, a form of acrobatic group dancing. Graffiti art Mc'ing or rapping.
What type of tonality does Gangsta's Paradise use? Why does this suit the lyrics?	Gangsta's Paradise is in a minor key. It sounds sad, which fits with the theme of the lyrics.
What is a riff ?	A riff is a short repeating pattern in a piece of pop music
Describe the structure of Gangsta's Paradise.	Gangsta's Paradise uses a Verse-Chorus structure.
Describe the harmony of Gangsta's Paradise.	The chord sequence, which repeats throughout the song is: G Em F# Bm. The song is also <i>diatonic</i> throughout.
What is the time signature of Gangsta's Paradise?	Gangsta's Paradise is in 4/4 , meaning each bar has 4 beats.
Describe the tempo of Gangsta's Paradise.	Gangsta's Paradise uses an andante tempo (80 BPM – Beats per minute)
What is sampling ?	In music, sampling is when a short snippet (or sample) of a sound recording is used in another recording. Samples are usually changed in some way e.g. by changing the pitch or slowing them down.
What is a breakbeat ? Why are breakbeats commonly sampled ?	A short break in the song that is just the drum beat on its own. Breakbeats are sampled because drumbeats are perfect to rap over.
What is vocalisation ? Where can it be heard in Gangsta's Paradise?	Wordless singing. Vocalisation is during the chorus in the backing vocals.

My name is Rosetta Reitz and I was a famous musicologist. My job was to study and analyse music, writing and releasing journals and papers to gain a deeper understanding of the art form.

Challenge Activities

f you manage to perform **step 9** for the performance exam why not take develop your skills further with the following performance on piano? (Link to YouTube tutorial):

Still Dre Piano - How to Play Dr. Dre Still Dre Piano Tutorial! (youtube.com)

Topic Links	Additional Resources
History – The development of Hip Hop Culture is deeply rooted in The Bronx and the history of New York/its inhabitants.	 BBC KS3 Music – Hip Hop Article GCSE Bitesize –
Art – Graffiti art came out of the developing Hip Hop Culture	<u>Hip Hop</u>



Year 8 Invasion Games

The aims of the sequence of learning are to ensure that all students:

- · Can identify core skills and processes
- Can demonstrate core skills in isolation with accuracy
- Can demonstrate core skills in a competitive game with accuracy

Keyword Definition To keep possession of the ball by maneuvering it between **Pass** different players with the objective of advancing it up the playing field. To receive the ball from Catch another player and keep possession. To resist the attack of the **Defend** opposing team. The action of attacking or engaging an opposing team with **Attack** the objective of scoring points or

Trying to take the ball from

Obstruct someone/something

desired position/destination.

and implemented to achieve a set

goals.

goal.

an opponent.

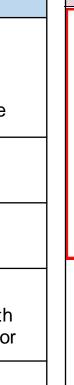
from getting to their

A strategy planned

Tackle

Intercept

Tactics



Pressure a certain direction

Key Concepts Defending Cover When a defender puts pressure on Closest defender moves towards the attacker with the ball - aim to slow the attacker — the other defenders the attacker down or guide them into cover the space the defender left.





Width To create space in front of the goal send the ball

wide to move the defenders out of positiongiving an easy chance to shoot at goal.

Attacking

Penetration (forward move)

A quick pass or dribble through the defensive line in order for the attacking team to get closer to their opponents goal



You should already know:

The aim of invasion games The name of at least 3 invasion games The basic principles of invasion games The core skills required to be successful in invasion games



Athletes to research further: Raheem Sterling

Athletes to research further: Sophie Cunningham



You will be assessed on:

Understanding Technique in isolation Technique in game Attitude to learning

Eleanor Cardwell

Courtney Lawes







What are the

core Rugby

skills?

Year 8 Invasion Games

The aims of the sequence of learning are to ensure that all students:

- Can identify core skills and processes
- Can demonstrate core skills in isolation with accuracy

Can demonstrate core skills in a competitive game with accuracy

Retrieval Practice				
Questions	Answers			
What are the core Netball and Basketball skills?	Chest pass, bounce pass, shoulder pass, overhead pass, two-footed landing, one-footed landing, shooting, pivot, man marking and dodging.			
What are the Netball positions?	Goalkeeper, goal defence, wing defence, centre, wing attack, goal attack and goal shooter.			
What are the core football skills?	Dribbling close to feet, Dribbling changing direction with speed, Passing side foot (close distance), Passing on laces (long distance), Defending (man to			



Career Focus - Where could this take you?

I am a team psychologist. As part of my job, I develop and implement strategies to help athletes manage pre-match nerves, overcome anxiety, and build mental resilience. I work on enhancing their focus, motivation, and confidence, ensuring they perform at their best under pressure.

Challenge Activities

- 1. Answer the following question: Why is it important that we understand the playing area for an invasion game?
- 2. Create a mind map of the differences between netball, basketball, football and rugby.



Additional Resources



This topic links to:

- Science movement of the body and muscles; the physics of sports
- English understanding and defining key terminology
- Mathematics problem solving, recording figures and analysing performance

Voice 21 – coaching peers

- ht ht
- https://www.youtube.com/watch?v=ABC5iPye7JY

To further practise and develop you knowledge see:

https://seeliger.carsoncityschools.com/common/pa

 https://www.youtube.com/watch?v=yW7JH6xkV7 w

ges/DisplayFile.aspx?itemId=8364188

Target with hands out, Push pass, Pop pass, Catch and pass and move, Protecting, Holding, Contact, Side-stepping, Attacking (line speed), Attacking (creating an overlap), Defending (line and movement).

man) and Attacking (two versus one).





Year 8 Invasion Games

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Keyword Definition To keep possession of the ball by maneuvering it between **Pass** different players with the objective of advancing it up the playing field. To receive the ball from Catch another player and keep possession. To resist the attack of the **Defend** opposing team. The action of attacking or engaging an opposing team with **Attack** the objective of scoring points or

Trying to take the ball from

Obstruct someone/something

desired position/destination.

and implemented to achieve a set

goals.

goal.

an opponent.

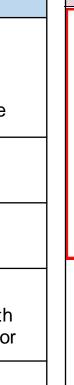
from getting to their

A strategy planned

Tackle

Intercept

Tactics



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man) and Attacking (two versus one).

Target with hands out, Push pass, **Pop**

Protecting, Holding, Contact, Side-stepping,

Attacking (line speed), Attacking (creating

pass, Catch and pass and move,

an overlap), Defending (line and

movement)

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То	pic	Links	



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ges/DisplayFile.aspx?itemId=8364188

To further practise and develop you knowledge see:

https://seeliger.carsoncityschools.com/common/pa



Year 8 Health and Fitness

The aims of the sequence of learning are to ensure that all students:

- Show Knowledge and understanding of key concepts
- Demonstrate safe working practice
- Apply knowledge and practice in fitness testing

Keyword	Definition
Power	The maximum strength and maximum speed of your muscles in order to move an object or yourself forward. Power = strength x speed.
Co-ordination	The ability for muscles to work together in pairs to move different body parts in time.
Reaction Time	The time taken for a person to react to a stimulus.
Agility	The ability to change direction at speed without making a mistake in your performance.
Balance	The ability to maintain your centre of mass and control without falling over.
Speed	To moves as fast as possible over a distance in the shortest time. Speed=distance/time.
Cardiovascular endurance	The ability for the heart and blood vessels to transport oxygenated blood to the working muscles in sports performance so a person can work for a long time without getting tired.
Muscular strength	The maximum force that your muscles can make to move an object.
Muscular endurance	Your muscles can work continuously at moderate intensity for a long period of time without them getting tired.
Flexibility	This is the range of movement that can be performed around a joint by the muscles.
Body composition	This is the total amount of fat, bone and muscles

of a persons body.

Key Concepts You should already know: - Some components of fitness and be able to apply them to a healthy and active lifestyle You will be assessed on: - Understanding - Technique - Application - Leadership



TRAINING METHODS

Different sports require different training methods. As a result, sports performers must select training methods that are specific or can be adapted to their chosen activity.

-CONTINUOUS-



- Long periods of moderate work, without rest.
- Improves cardiovascular fitness and muscle endurance.
- Suitable for distance runners and tri-athletes.

FARTLEK (SPEED PLAY)-



- A continuous workout, involving changes in speed and/or terrain.
- Improves recovery time and both aerobic and anaerobic fitness.
- Suitable for cross country runners and team games involving changes in speed.

-CIRCUIT



- A series of exercises performed in a circuit.
- Improves cardiovascular endurance and muscular endurance.
- Excellent for general fitness and can be structured to suit most sports.

-INTERVAL-



- · Involves alternating periods of work and rest.
- Can be used to improve speed, recovery time, and aerobic and anaerobic fitness.
- Suitable for team games involving short bursts of speed.

FLEXIBILITY/MOBILITY



- Stretching methods including static, dynamic and Proprioceptive Neuromuscular Facilitation (PNF).
- Improves range of movement, reducing the chance of injury.
- Beneficial for all sporting activities, in particular gymnastics and dance.

-WEIGHT TRAINING



- A workout using weights as a form of resistance.
- Can be tailored to improve muscular endurance, power and strength.
- Suitable for all activities and general fitness/toning.

PLYOMETRICS-



- A series of explosive movements such as jumps, bounds, hops etc.
- . Improves power.
- Excellent for activities that require explosive strength; e.g. long/high jump.

SAQ (SPEED, AGILITY, QUICKNESS)-



- · Exercises aimed at activating neural pathways.
- Improves speed, agility and quickness.
- Suitable for team games involving changes in direction.





Year 8 Health and Fitness

The aims of the sequence of learning are to ensure that all students:

- Show Knowledge and understanding of key concepts
- Demonstrate safe working practice
- Apply knowledge and practice in fitness testing

Retrieval Practice:

Unscramble the component of fitness keywords and match them to the correct definitions



COMPONENT OF FITNESS	DEFINITION	
SHGTERNT	When one or muscles contract repeatedly when	
	lifting or moving, for a certain length of time.	
CAEIBRO EECNDANUR	The amount of body fat compared to muscle in the body.	
WEPOR	When the body has to exert a force against resistance.	
IBILEXILTYF	How fast the body can move from A to B or perform an action until it's complete.	
LACEBAN	The amount/range of movement around a joint.	
LIYAGIT	The time it takes for the body to respond to a stimulus.	
NOCARDOINTIO	When a sequence of movements are performed smoothly and accurately together.	
CREATION MEIT	The rate at which work is performed often strength x speed = this	
PESED	The ability to maintain your centre of gravity when standing still or moving.	
BOYD MOPOSTINICO	Being able to change direction whilst keeping the body under control.	
MULSCURA EECNDANUR	When the body is working at a level that demands the need for more oxygen.	

Career Focus - Where could this take you?





I am a personal trainer. My role involves creating tailored workout plans, analysing fitness levels, and providing clear instructions. The skills I have developed studying PE help me effectively guide clients towards their fitness goals, ensuring they understand exercises and achieve optimal results in a safe and motivating way.

Challenge Activities



Design a training programme:-

Can you create a 4 week training programme that shows 5 different exercises that get progressively harder each week. Use the example provided on the previous page for guidance.

Create a match the keywords to definition poster:-

Select between four to six different keywords and match them to the correct definition answers. Make sure on the reverse of your skill card you have included the correct answers so students can test and assess themselves and others.

Topic Links



Additional Resources



This topic links to:

- RSHE Understanding how physical activity can reduce stress and anxiety and promote physical, mental and social wellbeing
- •English –understanding and defining key terminology
- •Mathematics problem solving, recording figures and analysing performance.
- •Voice 21 –testing others in the class on keywords.

To further practise and develop your knowledge see:

https://www.topendsports.com/testing/tests/

https://www.teachpe.com/training-fitness/fitness-testing



Usernames and Passwords