Year 7 – HT4

Newsome Academy
Everyone Exceptional Everyday

Knowledge Organisers

Name:

Team:

Newsome Academy
Everyone Exceptional Everyday

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.

Year 7 – Fractions & Percentages of Amounts

To perform all four operations with directed numbers.
To be able to find and use equivalence to add and subtract fractions

What do I need to be able to do?

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

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

Keywords

Fraction: how many parts of a whole we have
Equivalent: of equal value
Whole: a number with no fractional or decimal part
Percentage: parts per 100 (uses the / symbol)
Place Value: the value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right
Convert: change into an equivalent representation, often fraction to decimal to a percentage cycle

Fraction of a given amount

Find $\frac{2}{5}$ of £205

The bar represents the whole amount

£205

£41 £41 £41 £41 £41

2 out of the 5 equal parts
2 x £41 = **£82**

£205 ÷ 5 = £41
Each part of the bar model represents £41

90
30 30 30
15 15 15
45

Use bar models for comparisons

$\frac{1}{3}$ of 90 = 30

$\frac{2}{3}$ of 45 = 30

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

Use a fraction of amount

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

70

35 35 35

35 x 3 = 105
The whole number is 105

70 ÷ 2 = 35
Each part of the bar model represents 35

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

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

63
21 21 21 21

Find the whole

What is $\frac{1}{6}$ of the number?

84
14 14 14 14 14 14

Use the whole to find a given part

-14

Career Focus - Where could this take you?

As an engineer, I use basic operation (addition, subtraction, multiplication, division) as well as fractions in order to design efficient and powerful engines

Challenge Activities

A rope measures 2.8 metres.

The rope is cut into 10 equal sized pieces.
What is the total length of 5 of these pieces?

Retrieval Practice

Work out $654 - 99$

Write $\frac{3}{4}$ as a percentage.

Write "three hundred million" in figures.

Work out $10a + 7$ when $a = 12$

Topic Links

This topic links to:

- Ratio, multiplication & division, and decimals

Additional Resources

To further practice and develop your knowledge see:
https://corbettmaths.com/contents/

- Number: 137, 234-235

Find the percentage of an amount (Mental methods)

The **whole** represents 100%

10% = $\frac{1}{10}$ of the whole

0% 20% 40% 60% 80% 100%

10% = $\frac{1}{10}$ of the whole
50% = $\frac{5}{10} = \frac{1}{2}$ of the whole
20% = $\frac{2}{10} = \frac{1}{5}$ of the whole
5% = $\frac{1}{20}$ of the whole

Find 65% of 80

80

10 10 10 10 10 10 10 10

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

Method 1
65% = 10% x 6 + 5%
= (8 x 6) + 4
= 52

Method 2
65% = 50% + 10% + 5%
= 40 + 8 + 4
= 52

Find the percentage of an amount (Calculator methods)

Using a multiplier

Find 65% of 80

Fraction, decimal, percentage conversion

65% = $\frac{65}{100}$ = 0.65 ← The multiplier

0.65 x 80 = **52**

Using the percent button

Find 65% of 80

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

Type **65**
Press SHIFT ((%)
Press × **80** and then press =

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

"of" can represent '×' in calculator methods

Year 7 – Operations & Equations with Directed Number

- To perform all four operations with directed numbers.
- To be able to find and use equivalence to add and subtract fractions.

What do I need to be able to do?

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

- Perform calculations that cross zero
- Add/ Subtract directed numbers
- Multiply/ Divide directed numbers
- Evaluate algebraic expressions
- Solve two-step equations
- Use order of operations with directed number

Keywords

Subtract: taking away one number from another.
Negative: a value less than zero.
Commutative: changing the order of the operations does not change the result
Product: multiply terms
Inverse: the opposite function
Square root: a square root of a number is a number when multiplied by itself gives the value (symbol $\sqrt{}$)
Square: a term multiplied by itself.
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)

Career Focus - Where could this take you?

As a pharmacist, I need to have a good understanding of fractions and negative numbers when making and storing pharmaceutical drugs.

Retrieval Practice

Ron has £235.52 in the bank.
He pays in £188.
What is his new bank balance?

Add together six thousand eight hundred and 794

Which is greater, 15% or 0.2? Justify your answer.

Solve the equation $20 = \frac{d}{10}$

Challenge Activities

On a bookcase

- $\frac{5}{8}$ of the books are fiction books.
- The rest are non-fiction.
- There are 72 non-fiction books.

How many books are fiction?

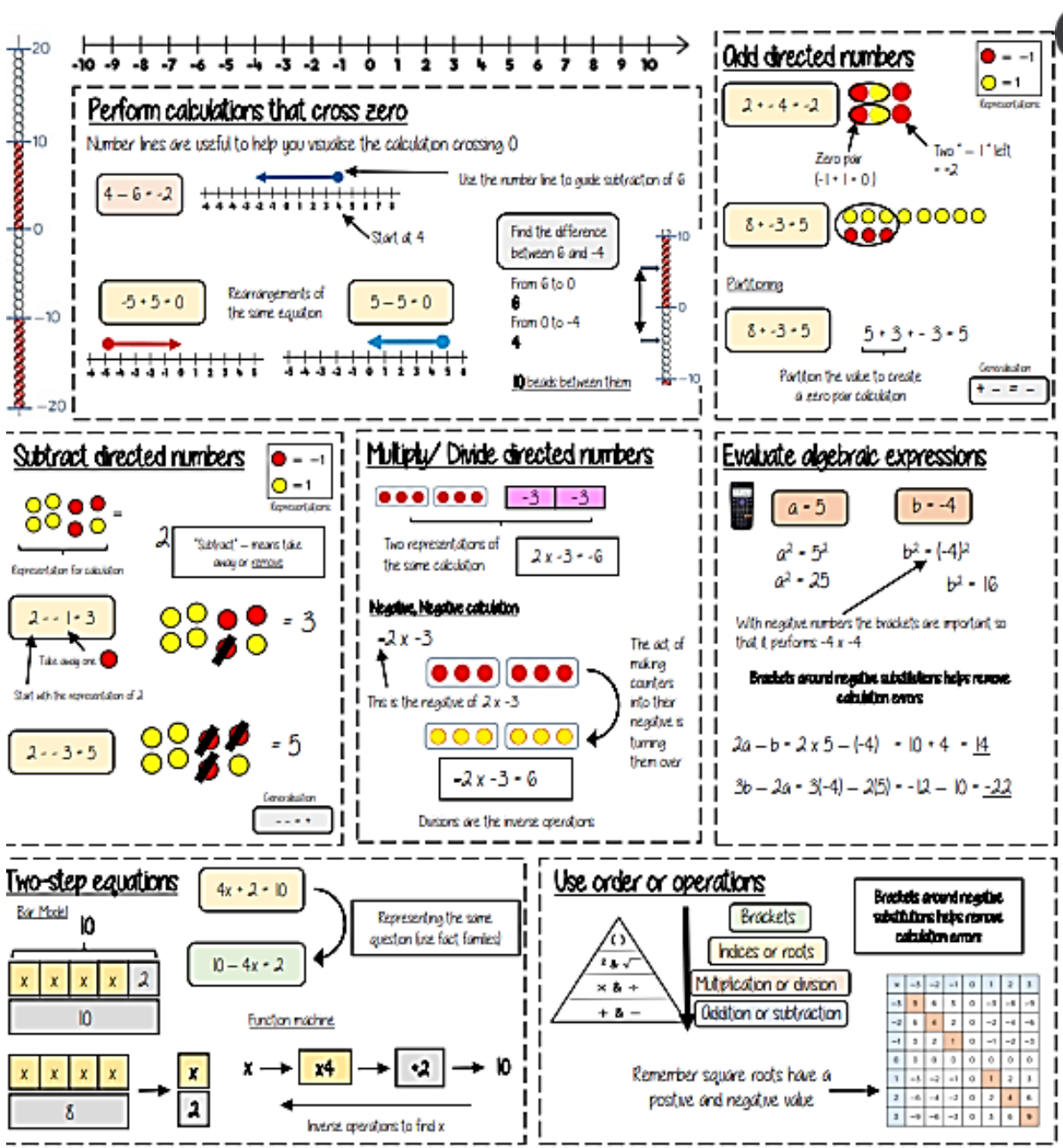
Topic Links

This topic links to:

- Addition, subtracting, multiplication, and division.

Additional Resources

To further practice and develop your knowledge see:
https://corbettmaths.com/contents/
Number: 205-209, 110-111



Year 7 – Addition & Subtraction of Fractions

- To perform all four operations with directed numbers.
- To be able to find and use equivalence to add and subtract fractions.

What do I need to be able to do?

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

- Convert between mixed numbers and fractions
- Add/Subtract unit fractions (same denominator)
- Add/Subtract fractions (same denominator)
- Add/Subtract fractions from integers
- Use equivalent fractions
- Add/Subtract any fractions
- Add/Subtract improper fractions and mixed numbers
- Use fractions in algebraic contexts

Keywords

Numerator : the number above the line on a fraction. The top number. Represents how many parts are taken

Denominator: the number below the line on a fraction. The number represent the total number of parts

Equivalent: of equal value

Mixed numbers: a number with an integer and a proper fraction

Improper fractions: a fraction with a bigger numerator than denominator

Substitute: replace a variable with a numerical value

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

Career Focus - Where could this take you?

As a pharmacist, I need to have a good understanding of fractions and negative numbers when making and storing pharmaceutical drugs.

Challenge Activities

Work out the value of each symbol.

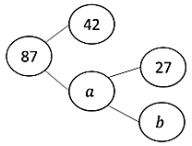
▲ + ★ + ◆ = 100

▲ + ◆ = 67

★ − ◆ = 18

Retrieval Practice

What are the missing numbers?



Subtract 512 from two thousand three hundred.

Write $\frac{4}{5}$ as a percentage.

What is the 4 worth in the number 8.3471?

Topic Links

This topic links to:

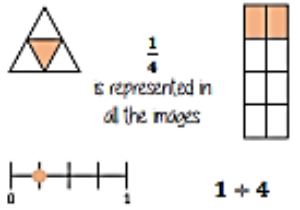
- Addition, subtraction, fractions, and algebra.

Additional Resources

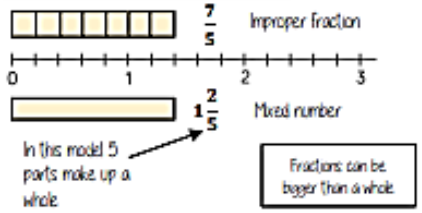
To further practice and develop your knowledge see:
https://corbettmaths.com/contents/
Number: 132-133, 139-140

Representing Fractions

$\frac{1}{4}$ is represented in all the images

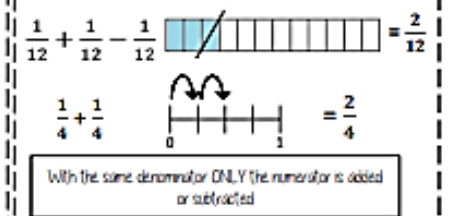


Mixed numbers and fractions



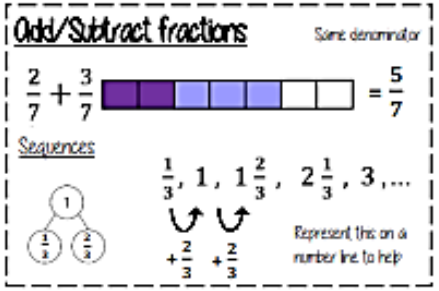
Add/Subtract unit fractions

Same denominator

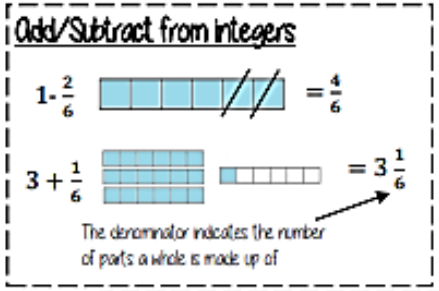


Add/Subtract fractions

Same denominator

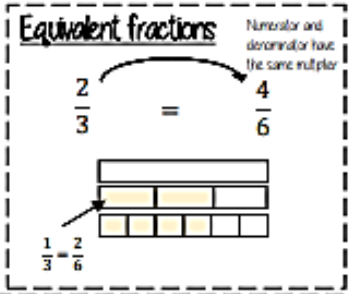


Add/Subtract from integers

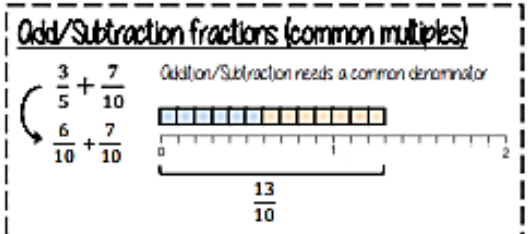


Equivalent fractions

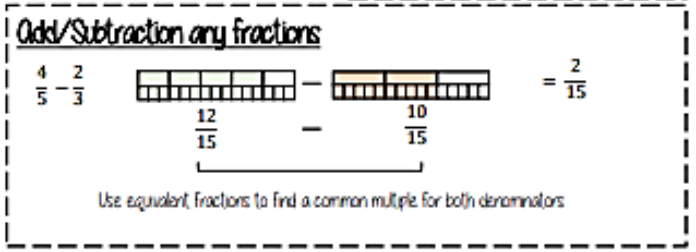
Numerator and denominator have the same multiplier



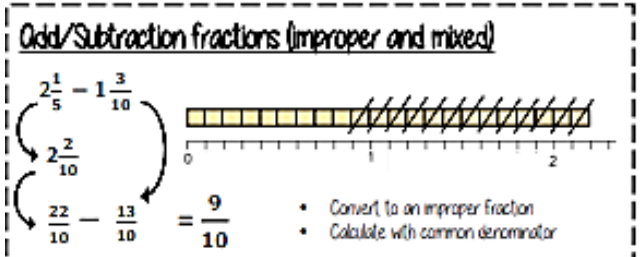
Add/Subtraction fractions (common multiples)



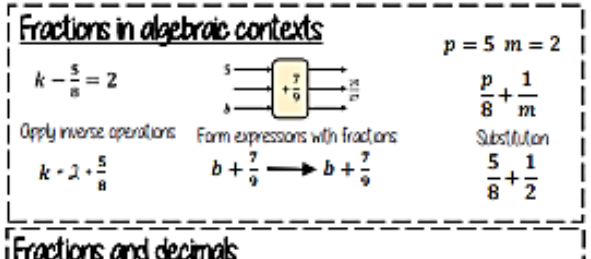
Add/Subtraction any fractions



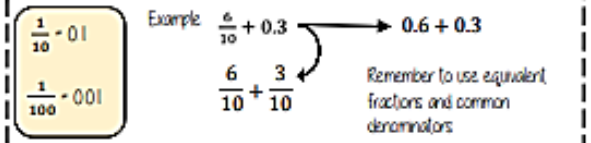
Add/Subtraction fractions (improper and mixed)



Fractions in algebraic contexts

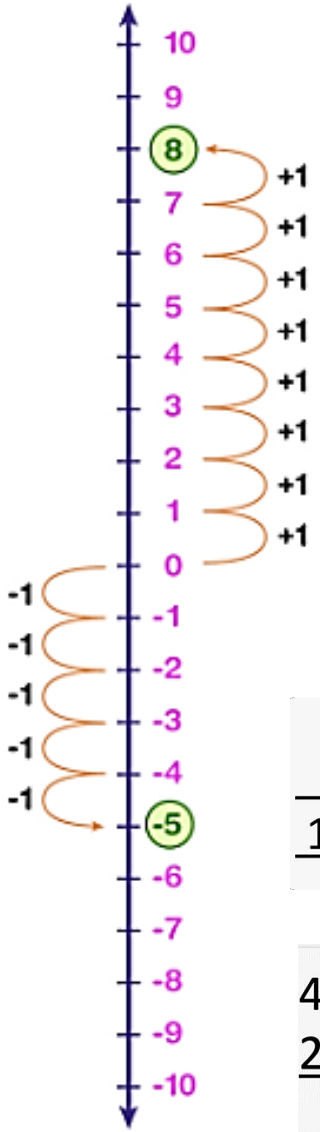


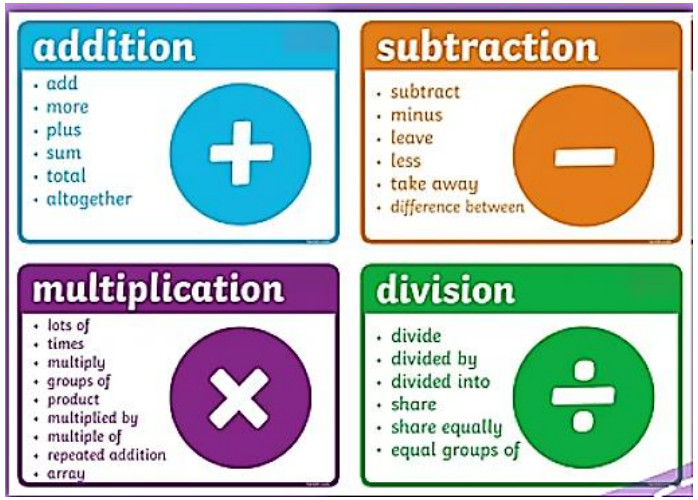
Fractions and decimals



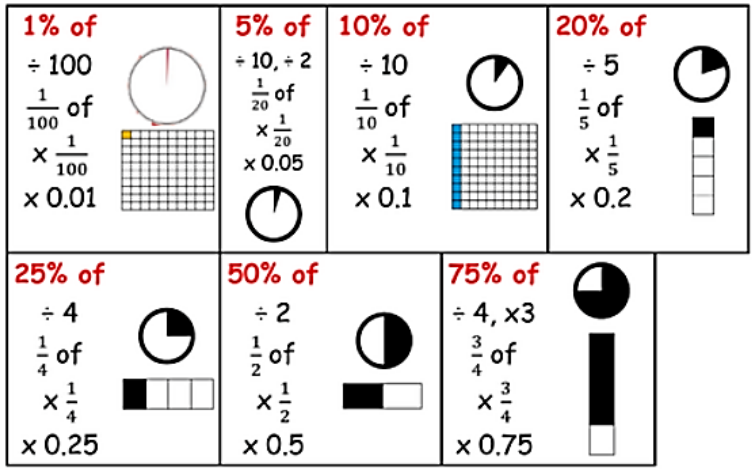
Maths Quick Reference: Number Skills

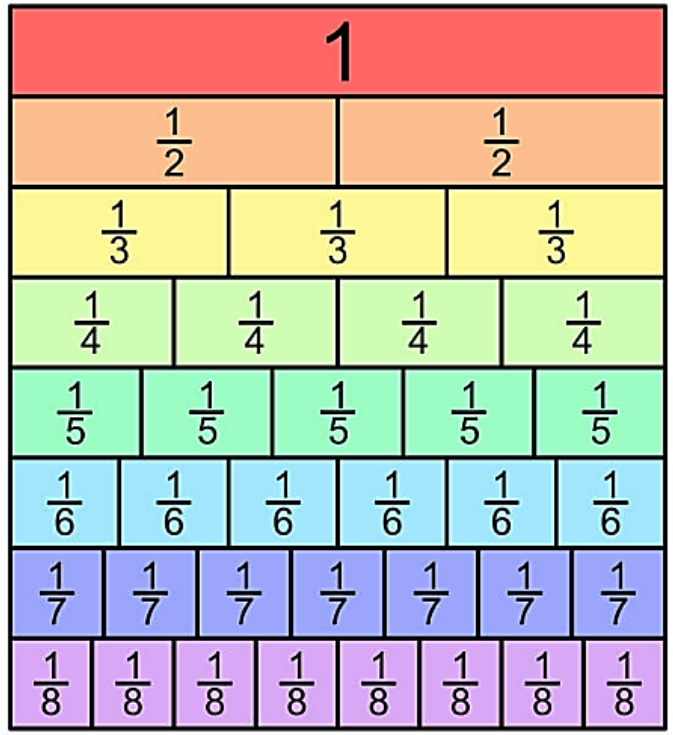
100	10	1	·	$\frac{1}{10}$	$\frac{1}{100}$
Hundreds	Tens	Units		Tenths	Hundredths
3	5	2	·	7	1





X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144





$$\begin{array}{r} 476 + \\ 874 \\ \hline 1350 \\ 1\ 1 \end{array}$$

$$\begin{array}{r} 586 \\ \times\ \ 7 \\ \hline 42 \\ 560 \\ 3500 \\ \hline \end{array}$$

$$8\overline{)3^{3}6^{4}0} \quad 045$$

$$\begin{array}{r} {}^{7} \\ 4{,}783 - \\ 2{,}349 \\ \hline 4 \end{array}$$

BIDMAS

() x^y ÷ or × + or −

Brackets Indices Divide & Multiply Add & Subtract

Order of Operations

$156000. = 1.56 \times 10^{5}$

Move decimal point 5 places left, exponent goes up by 5

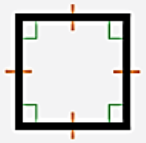
$0.0000053 = 5.3 \times 10^{-6}$

Move decimal point 6 places right, exponent goes down by 6

Maths Quick Reference: Geometry & Measures

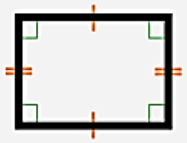
Quadrilaterals

Square



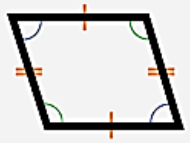
Four sides of equal length, four internal right angles.

Rectangle



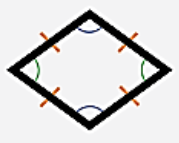
Four internal right angles, opposite sides of equal length.

Parallelogram



Opposite sides are parallel and equal in length, opposite angles are equal.

Rhombus



All four sides are the same length, like a square that has been squashed sideways.

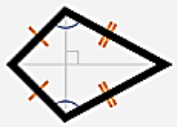
Trapezium (or trapezoid)

Two sides are parallel. Side lengths and angles are not equal.

Isosceles Trapezium (or trapezoid)

Two sides are parallel and base angles are equal, non-parallel sides are equal length.

Kite

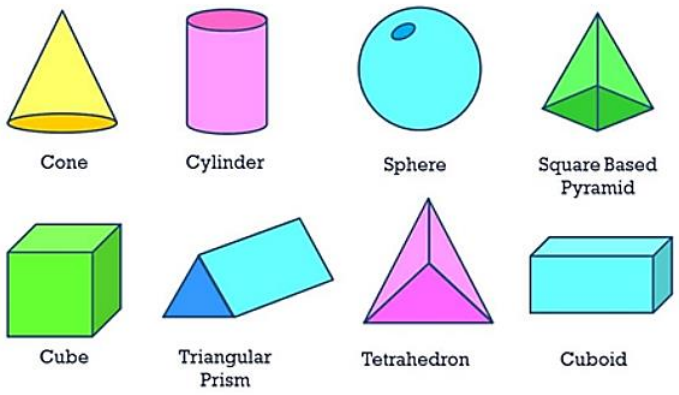


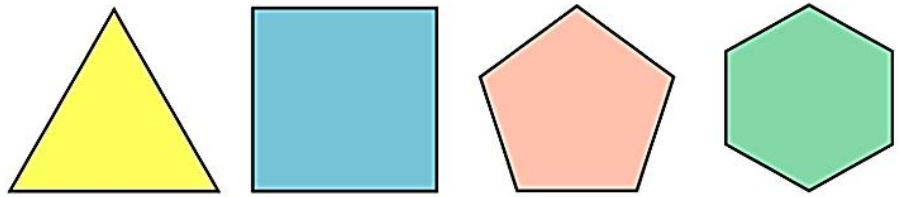
Two pairs of adjacent sides are of equal length; the shape has an axis of symmetry.

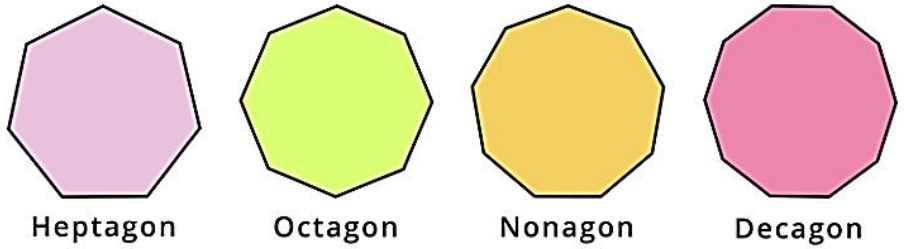
Irregular Quadrilateral

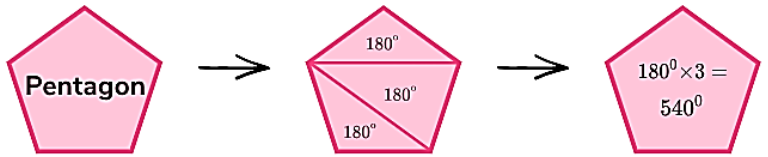
No sides are equal in length and no internal angles are the same.

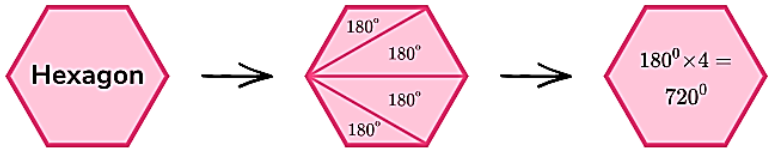
3D shapes

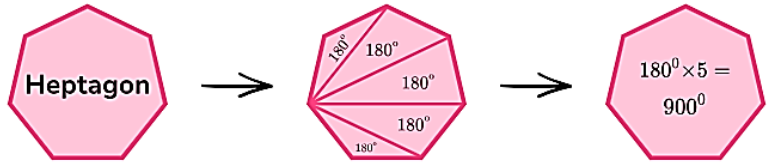


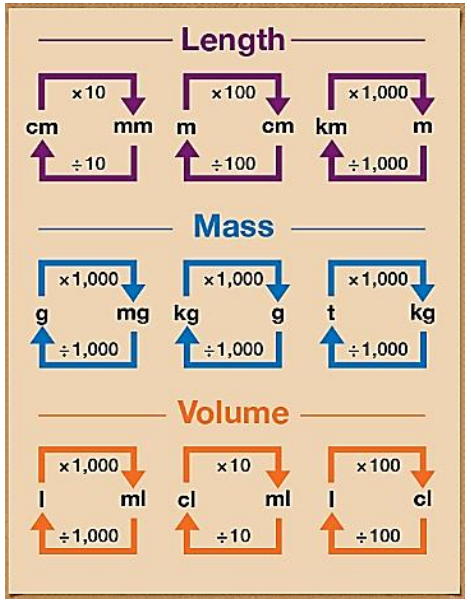












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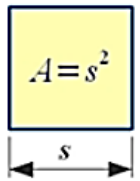
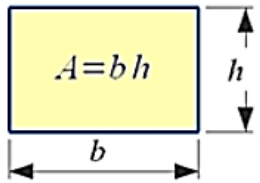
Maths Quick Reference: Geometry (Areas & Volumes)

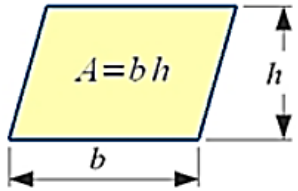
Square



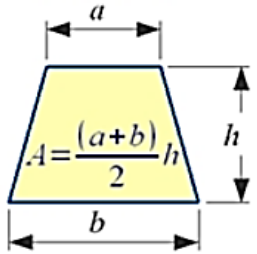
Rectangle



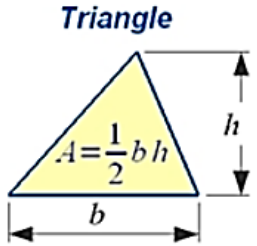
Parallelogram



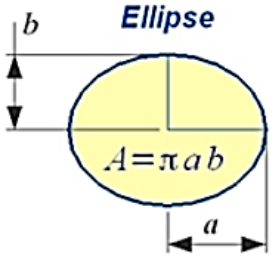
Trapezoid



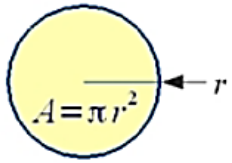
Triangle



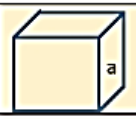
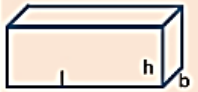
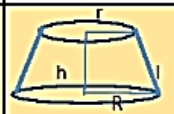
Ellipse



Circle

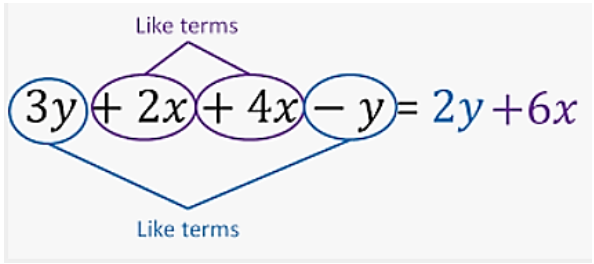


Area and volume of 3d figures

S.No	Name	Figure		Curved Surface Area	Total Surface Area	Volume
1)	Cube		a = side	$4a^2$	$6a^2$	a^3
2)	Cuboid		l= length b = breadth h= height	$2h(l + b)$	$2(lb+ bh+ lh)$	$l \times b \times h$
3)	Sphere		r = radius	$4\pi r^2$	$4\pi r^2$	$\frac{4}{3}\pi r^3$
4)	Solid Hemisphere		r = radius	$2\pi r^2$	$3\pi r^2$	$\frac{2}{3}\pi r^3$
5)	Right circular cylinder		r = radius h = height	$2\pi rh$	$2\pi r(h+r)$	$\pi r^2 h$
6)	Right circular cone		r = radius h = height l= slant height	πrl	$\pi r(l+r)$	$\frac{1}{3}\pi r^2 h$
7)	Frustum of a cone		r = top radius R = base radius h = height l= slant height	$\pi l(R + r)$	$\pi l(R+r) + \pi r^2+\pi R^2$	$\frac{1}{3}\pi h(R^2+r^2+Rr)$

Maths Quick Reference: Algebra Skills

Simplifying Expressions

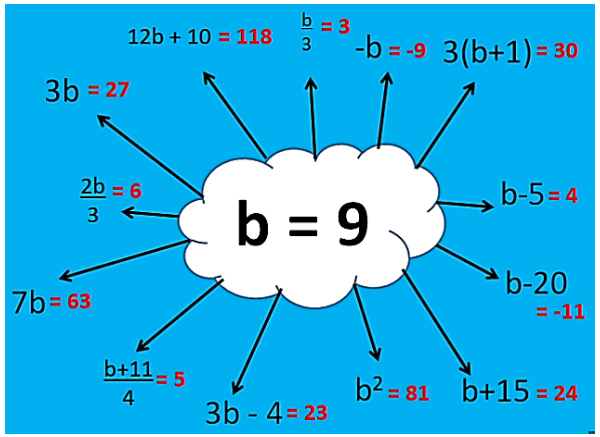


$C \times C \times C \times C = C^4$

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

An Expression	An Equation
$4a + 7b$	$4a + 12 = 60$
A Formula	**An Identity**
$A = \pi r^2$	$(a+b)^2 = a^2 + 2ab + b^2$

Substitution



Expanding Brackets

multiply

$7(x+2)$

$7x+14$

multiply

$5a(b-4)$

$5ab-20a$

FOIL Method

$(2x+3)(5x-8)$

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

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

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

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

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

Grid Method

$(2x+3)(5x-8)$

	$2x$	$+3$
$5x$	$10x^2$	$+15x$
-8	$-16x$	-24

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

Factorising Brackets

$7x+14$

Common factor?

$7(x+2)$

$5ab-20a$

Common factor?

$5a(b-4)$

Expand & Simplify...

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

$5x + 15 + 6x - 24$

$11x - 9$

Solving Equations

$6x - 5 = 7$

$+5 \quad +5$

$6x = 12$

$\div 6 \quad \div 6$

$x = 2$

Maths Quick Reference: Statistics

Mode
most common

Mean
$\frac{\text{sum of values}}{\text{number of values}}$

Median
middle value

Range
largest value – smallest value

Mean

7, 3, 4, 1, 7, 6

Sum of numbers divided by the total numbers

Mean = (7+3+4+1+7+6)/6
= 28/6 = 4.66

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

Mode

7, 3, 4, 1, 7, 6

Most common number

7, 3, 4, 1, 7, 6

Mode = 7

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

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

Grouped Data Frequency Table

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

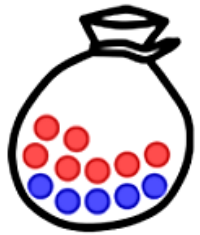
Length (x cm)	Frequency	Midpoint	Midpoint × frequency
$0 < x \leq 10$	4	× 5	= 20
$10 < x \leq 20$	10	× 15	= 150
$20 < x \leq 30$	7	× 25	= 175
$30 < x \leq 40$	4	× 35	= 140
	25		**485**

estimated mean = 485 ÷ 25 = **19·4 cm**

Maths Quick Reference: Probability

Simple Probability

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



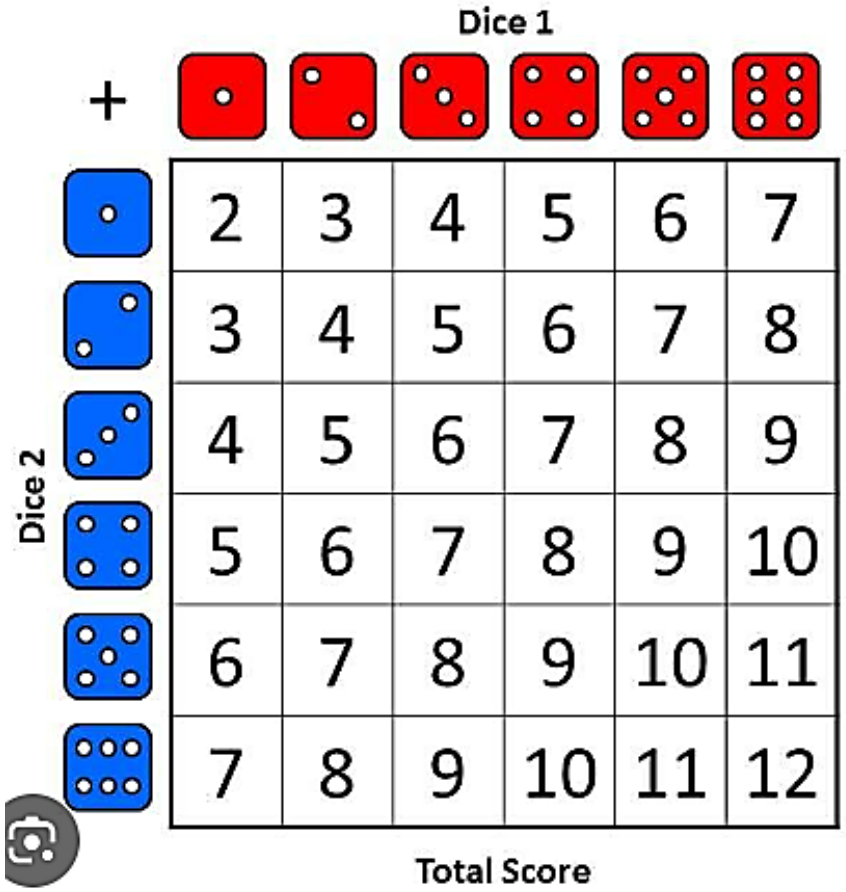
Example:

$P(red) = \frac{7}{12}$ ← Number of red marbles / Total number of marbles (sample space)

$P(blue) = \frac{5}{12}$ ← Number of blue marbles / Total number of 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:	0%	20%	40%	50%	60%	80%	100%

Sample Space Diagrams



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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.

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Victorian Heroines

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

- recognise 'Genre, Audience and Purpose' (GAP)
- Understand and use specific vocabulary
- Use a range of sentences
- Understand how authors craft their writing and use methods to create meaning
- Use punctuation and spelling accurately

KNOWLEDGE

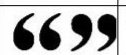
Character types

What is a **major character**?		A main or important character, a character who plays a large role in a story.
What is a **minor character**?		A character who does not play a large role in a story.
What is a **protagonist**?		A main character who is usually the hero of a narrative.
What is an **antagonist**?		A main character who is the opponent of the protagonist or the hero of a narrative – a villain.
What is a **stative character?**		There are characters who do not change during the course of a story.
What is a **dynamic character?**		These are characters who change during the course of a story.

Person

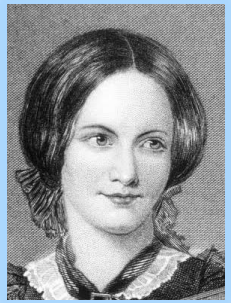
What is a **first person narrator**?		When a narrative uses 'I' or 'we' and is told from the perspective of one of the characters.
What is a **second person narrator**?		When a narrative brings the reader into the story using 'you'.
What is a **third person narrator**?		When a narrative uses 'he', 'she' or 'they' with the person existing outside of the story.
What is a **third person omniscient narrator**?		A god-like perspective who knows everything about every character, including secret thoughts and feelings.
What is a **third person limited narrator**?		When the narrator follows a single character through the story and only has access to the thoughts and emotions of that character.

Crafting a character

What is a **back story**?		This is when background information is given to help us understand more about a character or situation.
What is **physical appearance**?		This is what a character looks like.
What is an **unusual characteristic**?		This is a mark or a feature that makes a character stand out like a scar or a tattoo.
What is a **personality**?		The behaviours or the characteristics of a person. For example, they are kind or they are funny.
What are **thoughts**?		The ideas or opinions that a character might have and keep to themselves.
What is an **internal conflict**?		When a character has a struggle in their mind or with themselves.
What is an **external conflict**?		When a character has a difference of opinion with another character or something within the world.
What is **description**?		When words are used to create pictures in the reader's mind.
What is **dialogue**?		A conversation between two or more people within a narrative.
What is **direct speech**?		Speech which is reported by using the exact words that the speaker used and speech marks around what is said.
What is **indirect speech**?		Speech which tells you what someone said but does not use the person's actual words.

Vladimir Propp Character Types

What character type is **The Hero**?		Either the seeker who goes on a quest to defeat evil. The victim who directly suffers from the action of the villain at the start of the story.	What character type is **The Princess**?		The sought-after character.
What character type is **The Villain**?		The character who causes some form of 'misfortune, damage or harm' by stealing a magical object for their own gain, ruining crops, kidnapping a person, or committing a murder.	What character type is **The Dispatcher**?		The character who sends the hero on their quest.
What character type is **The Donor**?		The character who uses their force or cunningness to help the hero.	What character type is **The False-Hero**?		The character who initially appears as good but turns out to be evil.
What character type is **The Helper**?		The character who is prepared to help the hero by providing something.			



Victorian Heroines

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SKILLS – Narrative Writing

IMPOSE	Definition
Irony	Something contrary to what you might expect.
Metaphor	Saying something is something else; a direct comparison, not meant literally. i.e. The classroom was an oven.
Personification	Applying human characteristics to objects or things. E.g., The darkness beckoned me in (Zoomorphism is the opposite, where you give animals human features!).
Pathetic Fallacy	The attribution of human feelings and responses to inanimate things or animals, i.e. the angry sea
Onomatopoeia	Words that sound like what they are. Bang, clap, thud…. etc.
Sensory Detail	Sight, sound, taste, touch, smell.
Simile	Comparing something using like or as. The classroom was like an oven.
Sibilance	A repeated 's' sound – either at the start, or in the middle of words (N.B. 'c' can sometimes sound like an s!) "silence, sentries whisper, curious nervous."
Semantic field	When a group of words all link to one overall theme. Water – damp, drip, puddle, mist…
Evocative Verbs	A doing word which sounds particularly active. The cat slinked, crawled, darted – rather than just walked.

Punctuation		
Capital letters	Full stops	Apostrophes
Semi colon	Commas	Parentheticals

Victorian Heroines

- Strong female protagonists
- Representation of women
- Victorian society
- Writing to describe

A S P I C E D

Remember, if your subordinate clause comes before your main clause, you do need a comma.

A	Adverb	Start your sentence with an adverb. Lovingly and attentively, he stared into her beautiful green eyes.
S	Simile	Start your sentence with a simile. Begin with the word 'as' or 'like'. As brave as a lion, he slayed the evil monster.
P	Preposition	Start your sentence with a preposition. On the top of the hill, there stood an old castle.
I	-ing word (Verb)	Start your sentence with an 'ing' word. Unlocking the door, she left the room.
C	Connective (A subordinator) I WAS A WE BABI	If, Where, Although, Since, After, when, even though, because, as, before, in the event that
		Start your sentence with a connective. Although he was hurt, he continued his quest.
	as if, as long as, as much as, as soon as, as though, by the time, even if, in case, in order that, in the event that, lest, now that, once, only, only if, provided that, so, supposing, than, that, though, till, unless, until, whenever, whereas, wherever, whether or not, while,	
E	-ed word (Verb)	Start your sentence with an 'ed' word. Scared by the sound, he hid under his covers for shelter.
D	Drop in clause (Embedded clause)	Add a drop in clause to your sentence. (who = person / which = place) Michelle, who was very clumsy, always fell over her own laces. Newsome Academy, which is located in the Kirklees area, is an excellent school.

- Links with: Yr 8 Maze Runner, Romeo and Juliet – Yr 9 Our Day Out – GCSE Macbeth, An Inspector Calls, Language Paper 1

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Victorian Heroines

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

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- Understand and use specific vocabulary
- Use a range of sentences
- Understand how authors craft their writing and use methods to create meaning
- Use punctuation and spelling accurately

VOCABULARY

You will be tested on five words per week

adored - love and respect (someone) deeply

adventurous - willing to take risks or to try out new methods, ideas, or experiences

alluring - powerfully and mysteriously attractive or fascinating; seductive

ardent - enthusiastic or passionate

articulate - (of a person or a person's words) having or showing the ability to speak fluently and coherently

assertive - having or showing a confident and forceful personality

audacious - showing a willingness to take surprisingly bold risks

charismatic - exercising a compelling charm which inspires devotion in others

commanding. – (verb) be in a strong enough position to have or secure (something

confident - feeling or showing confidence in oneself; self-assured

courageous - not deterred by danger or pain; brave

daring. - (of a person or action) adventurous or audaciously bold

decisive - settling an issue; producing a definite result

dynamic - (of a process or system) characterized by constant change, activity, or progress

eloquent - fluent or persuasive in speaking or writing

enlightened - having or showing a rational, modern, and well-informed outlook

exquisite - extremely beautiful and, typically, delicate

fierce - having or displaying an intense or ferocious aggressiveness

gumptious. - having gumption**:** alert, eager, vigorous

heroine - a woman admired or idealized for her courage, outstanding achievements, or noble qualities

influential - having great influence on someone or something

ingenious. - (of a person) clever, original, and inventive

inimitable - so good or unusual as to be impossible to copy; unique

pioneering - involving new ideas or methods

resilient - (of a person or animal) able to withstand or recover quickly from difficult conditions

revered - feel deep respect or admiration for (something)

sagacious - having or showing keen mental discernment and good judgment; shrewd

sage - a profoundly wise person, especially one who features in ancient history or legend

scintillating - sparkling or shining brightly

unashamed- expressed or acting openly and without guilt or embarrassment

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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.

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Year 7 Interdependence

The aims of the sequence of learning are to ensure that all students: can
- Describe the transfer of energy in food chains and webs
- Explain how organisms interact with their environment

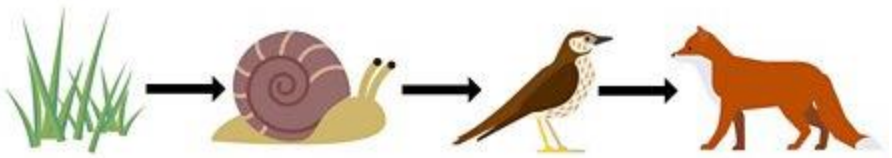
Keyword	Definition
Habitat	A home environment for plants and animals or other organisms.
Environment	The surroundings or conditions in which a person, animal, or plant lives.
Food chain	Part of a food web, starting with a producer, ending with a top predator
Food web	Shows how food chains in an ecosystem are linked.
Adaptation	Features of living organisms that help them survive.
Population	Group of the same species living in an area.
Producer	Green plant or algae that makes its own food using sunlight.
Consumer	Animal that eats other animals or plants.
Decomposer	Organism that breaks down dead plant/animal material so nutrients can be recycled back to the soil/ water.
Pyramid of numbers	The number of organisms in each trophic level is counted and presented in a pyramid of numbers.
Pyramids of biomass	The mass - in grams or kilograms - of the population of the trophic levels in a food chain.
Biodiversity	A measure of how many different species live in an ecosystem.
Ecosystem	The living things in a given area and their non-living environment.

Key Concepts

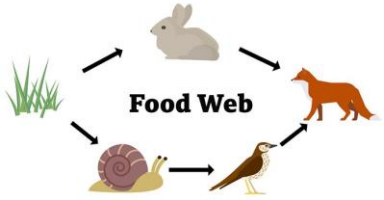
Habitats

Food chains/Webs

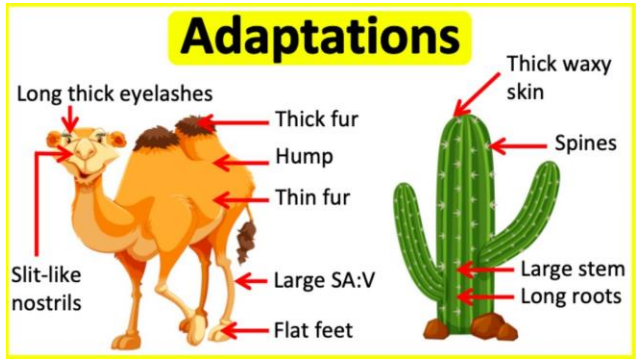
The flow of energy from one living thing to another is shown in the arrows in a **food chain**.



Plants are at the beginning of most food chains. They are called **producers** because they make their own food.
Any animal which eats a producer is called a **primary consumer**. All primary consumers are **herbivores** because they only eat plants.
Secondary consumers eat primary consumers. All secondary consumers are **predators** because they kill and eat other animals.

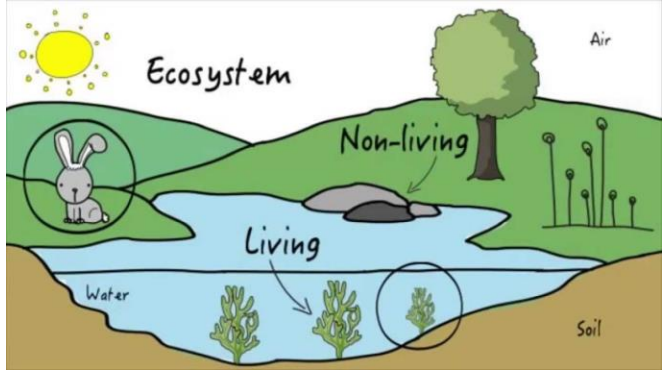


Adaptations



Ecosystems

An ecosystem is a geographic area where plants, animals, and other organisms, as well as weather and landscape, work together to form a bubble of life. Ecosystems contain biotic or living, parts, as well as abiotic factors, or nonliving parts. Biotic factors include plants, animals, and other organisms,



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Year 7 Interdependence

The aims of the sequence of learning are to ensure that all students:
•Describe the transfer of energy in food chains and webs

Retrieval Practice

Questions	Answers
What is a habitat?	A place that organisms live.
What is an abiotic factor?	Non-living factors such as temperature, rainfall, terrain etc.
What is a biotic factor?	Living factors such as different species and diseases.
Describe the adaptations of a polar bear.	White fur, large paws, thick fur, sharp teeth.
What do arrows in a food chain represent?	Energy being transferred.
Which direction do arrows point in a food chain?	In the direction of the consumer.
What do all food chains start with?	A producer
What is interdependence?	Organisms that rely on each other for survival in an ecosystem.
What is an endangered species?	A group of organisms that are at risk of becoming extinct due to low levels.
What does extinction mean?	The species no longer exists.
What factors increase biodiversity?	A substance that changes colour in the presence of a chemical i.e. acid or alkali.
What factors decrease biodiversity?	Loss of habitats due to farming/building, pollution and hunting animals.
What causes global warming?	Burning fossil fuels, deforestation, landfill waste.
How does global warming lead to loss of habitats?	Increasing land/ocean temperature, rising sea levels, climate change (droughts etc)
How can population sizes be measured?	Using sampling methods such as quadrats and transects.

Career Focus - Where could this take you?

I am a bee keeper. Beekeeping is much more than just collecting honey. Bees can be used for crop pollination, wax production or collecting pollen. I raise and care for bees using a variety of skills such as wood work, honey extraction, disease and parasite control and queen rearing.
I have to use my skills and knowledge about the fascinating cycles and interactions that occur in a colony of bees to maintain the health of their lives.
The wage is variable but with more experience and science qualifications you can move into commercial production or research.

Challenge Activities

1. Make flashcards for the definitions and retrieval practice questions.
2. Choose an organism to research and produce an information leaflet on the organism and the habitat it is found in.
3. Create a new organism and produce a model of its habitat.
4. Identify a habitat and draw some food chains and a food web for that habitat.
5. Research the role of a beekeeper and the importance of bees.

Topic Links

This topic links to:
- Organisation
- Energy transfers
- Climate change

We will also be practising how to
- Draw pyramids of biomass
- Calculate energy transfers in a food chain
- Construct a scientific report

Additional Resources

To further practise and develop your knowledge see:

Educake - https://www.educake.co.uk/
BBC Bitesize - Ecosystems and habitats - KS3 Biology - BBC Bitesize
YouTube Cognito - https://www.youtube.com/watch?v=XVD5izWXmKo

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Year 7 Separating Substances

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

- to understand the states of matter and how we use the particle model to draw them including how states change
- to understand how we can separate substances using filtration, evaporation, chromatography and distillation

Keyword	Definition
Solid	Solid objects can hold their shape.
Liquid	Liquids can flow but cannot be compressed (squashed).
Gas	Gases can flow and expand to fill a container.
State of Matter	The states at which substances can exist, either solid, liquid or gas.
Particles	A small portion of matter usually drawn as a circle.
Properties	The characteristics of a substance.
Melt	When a substance changes from a solid to a liquid.
Freeze	When a substance changes from a liquid to a solid.
Condense	When a substance changes from a gas to a liquid.
Evaporate	When a substance changes from a liquid to a gas.
Diffuse	When particles of a substance spread out.
Filtration	Separating insoluble solid from liquid.
Distillation	Separating a solvent from a mixture.
Chromatography	Separating a mixture of soluble substances.

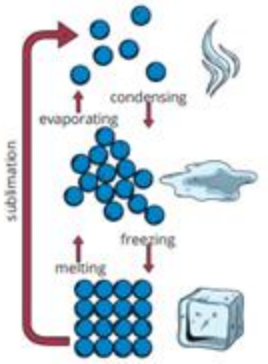
Key Concepts

	Solid	Liquid	Gas
particle model diagram			
particle arrangement	regular structure no space between particles	irregular structure very little space between particles	irregular structure large space between particles
volume and shape	fixed volume fixed shape	fixed volume shape changes to fill bottom of container	volume increases to fill capacity shape changes to fill capacity
able to flow	no (forces between particles are very strong and hold them in fixed positions)	yes (forces between particles are weak and particles slide over one another)	yes (forces between particles are very weak and particles move randomly and rapidly)
density	high cannot be compressed (particles are already tightly packed)	high cannot be compressed (particles are already tightly packed)	low can be compressed (particles are forced closer together)
particle energy levels	low (particles vibrate around a fixed point only)	moderate (particles can move and flow but slowly)	high (particles moving rapidly and freely)

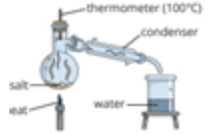
Changes of State

Substances can change state; from a solid to a liquid (melting) liquid to a gas (evaporating) gas to liquid (condensing) and liquid to solid (freezing).
Sublimation is when a substance changes from a solid directly to a gas.

The arrangement of particles changes when the substance changes state.



Distillation



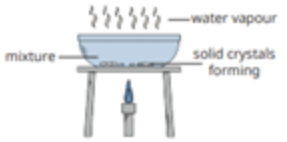
Distillation can be used to separate a solvent from a solution. The liquid is heated and evaporates from the flask and into the condenser where it turns back into a liquid.

Distillation is used to either collect a liquid or separate 2 liquids with different boiling points. E.g. collect pure water from salt water or separating water and ink.

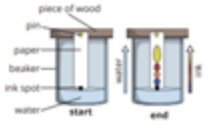
Filtration and Crystallisation

Filtration can be used to separate an insoluble solid from a liquid by passing the mixture through a funnel and filter paper. The solid residue remains in the paper and the liquid is called the filtrate. For example separating sand and water.

Evaporation can be used to separate a soluble solid from a liquid by heating the solution and allowing the liquid to evaporate. The soluble solid will be left behind and will crystallise. For example separating salt and water.



Chromatography



Chromatography can be used to separate a mixture of soluble substances. For example different dyes in inks.
The colours are separated because they have varying solubilities.

The inks are carried up the filter paper (stationary phase) by a solvent (the mobile phase).

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Year 7 Separating Substances

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

- to understand the states of matter and how we use the particle model to draw them including how states change
- to understand how we can separate substances using filtration, evaporation, chromatography and distillation

Retrieval Practice

Questions	Answers
How are particles arranged in solids?	A regular structure with no space between particles
How are particles arranged in liquids?	An irregular structure with little space between particles
How are particles arranged in gases?	An irregular structure with large spaces between particles
What are the properties of a solid?	Fixed volume and shape that cannot flow or be compressed
What are the properties of a liquid?	Fixed volume, can flow/change shape, can't be compressed
What are the properties of a gas?	No fixed volume or shape, can be compressed
What is happening when a substance melts?	The particles gain energy and change from solid to liquid
What is happening when a substance freezes?	The particles lose energy and change from liquid to solid
What is happening when a substance evaporates?	The particles gain energy and change from liquid to gas
What is happening when a substance condenses?	The particles lose energy and change from gas to liquid
What equipment is used during filtration?	Funnel, filter paper and conical flask
How does filtration work?	Insoluble solids remains in paper and liquid passes through
What equipment is used during crystallisation?	Evaporating dish and bunsen burner
How does crystallisation work?	Liquid evaporates when heated and soluble solid crystalises
What equipment is used during distillation?	Round bottom flask, thermometer and condenser
How does distillation work?	Substances are boiled (evaporated) then cooled (condensed) they separate because they have different boiling points

Career Focus - Where could this take you?

I am an alcohol and drug technician. My job is to carry out alcohol and drug testing for workplaces, the police force and drug rehabilitation programmes.
My main workplace is a laboratory where I test urine samples using techniques such as immunoassay and gas chromatography to help me identify the type and the amount of substances in a person's system.
Chromatography is used for many applications and affects everything from what you eat to how we fight disease.

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 the real-life applications for the different separating techniques. Who uses them in which careers?
4. Make a 3D model of the different states of matter - solid, liquid and gas.
5. Find out more about alcohol and drug technicians and what they do. What qualifications would you need for this career? What is the average salary?
6. Construct a fact file about a famous historical scientist that helped us to understand more about substances and particles.

Topic Links

This topic links to other science topics such as

- Scientific Skills
- Chemical reactions
- Energy

We will also be practising how to

- Use numerical data to identify states of matter
- Present using V21 skills

Additional Resources

Educake - https://www.educake.co.uk/
BBC Bitesize - https://www.bbc.co.uk/bitesize/topics/zkr4jxs/articles/z3qyydm
YouTube Cognito - https://www.youtube.com/watch?v=vi_SJBnxmHo&list=PLidqqIGKox7WeOKVGHxcd69kKqtwrKl8W&index=5

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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

Year 7: The Norman Conquest

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

- Explore the claimants to the English throne in 1066.
- Establish why the Battle of Stamford Bridge might be of benefit to William Duke of Normandy
- Explain why William won the Battle of Hastings in 1066 using evidence of 'preparation', 'leadership' and 'luck' to support.
- Evaluate William's methods of control in England, including: Fear, The Feudal System and Castles.

Keyword	Definition
Anglo-Saxon	A group of people from Germany and Denmark who settled in England in the 5th Century. They ruled until 1066.
Claimant	A person who claims they have a right to the throne.
Normans	A group of people from Normandy in France. They invaded England in 1066.
Fyrd	Men who fight in an Anglo-Saxon army to protect the King.
Housecarls	A group of elite soldiers in the Anglo-Saxon army.
Shield Wall	A military formation whereby all the shields interlock and form a strong barrier.
Feigned Retreat	Where the soldiers in an army pretend to retreat in order to break the formation of the opposing side.
Archers	Soldiers with a bow and arrow.
Feudal system	A Norman system which gave people land and protection by those of a higher rank, and worked and fought for them in return.
Villeins	A Villein is a class of peasant who was tied to the land that was owned by their master. Their main role was farming.
Domesday book	Created in 1086, it was a record of what each person in England owned, in terms of land and wealth.
Taxes	A compulsory contribution to the King, Queen or government. Usually based on a persons wealth and income.
Consolidate	To make something stronger or more solid.
Motte and Bailey Castle	A type of castle which has a motte (small mound of earth) and a bailey (open area / village) inside an outer wall.
Palisade	A protective fence that surrounds the Bailey and the Keep in a Motte and Bailey Castle.

Key Concepts

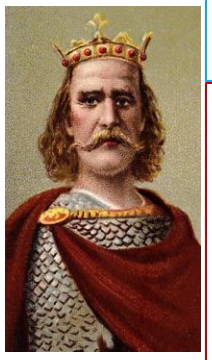
Life in Anglo Saxon England- The Anglo-Saxon period lasted from the year 410AD, when Historians think the Romans left England, until 1066 when the Normans invaded. Most people in Anglo-Saxon England lived in villages. Their homes were made of wood, wattle and daub, and thatched roofs. Most Anglo-Saxons were farmers and lived off the land.

Claimants to the Throne

Edward the Confessor died on the 5th of January 1066, leaving no Heir to the English throne. There were three men who claimed they should be the next King...

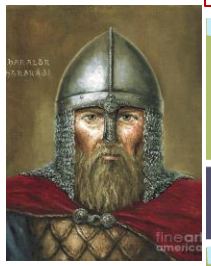
Harold Godwinson, Earl of Wessex:

Edward's brother-in-law, England's leading nobleman and The Witan's first choice. He was crowned on the 6th January the day after Edward died.



Harald Hardrada:

King of Norway, he claimed Harthacnut, King of England in 1042, promised the crown to his family. He was supported by Harold's brother, Tostig. Harold defeated Hardrada and Tostig at the Battle of Stamford Bridge on 25th September 1066.



William, Duke of Normandy:

Claim: Edward had promised him the crown. In 1063 Edward gave William, who was a great friend, and whom he had already named heir in 1051, a more serious pledge. He sent Harold to William to confirm his promise by oath. However, Harold said that the oath had been made under pressure and feared he would have been kept prisoner if he had not taken the oath.

The Battle of Stamford Bridge: In two days, King Harold assembled an army of 15,000 men, which included roughly 3,000 of his elite troops - the Housecarls. King Harold led his army, most of whom were on foot, across 185 miles in just four days. The English army marched with such speed that they surprised Hardrada's Army and won a decisive victory.

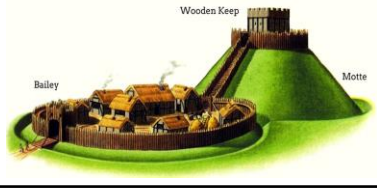
The Battle of Hastings: Having delayed his invasion due to the weather, William finally set sail for England. When they reached Sussex on the 28th of September, Harold was forced to march his already exhausted army back down south to defend England against its second invasion. William of Normandy emerged victorious from the Battle of Hastings and became King of England - William the Conqueror.

The feudal system

The Harrying of the North:

There was opposition to William's rule, especially in the North of England. In order to prevent any challenge to his crown, William used terror to stop people from revolting. In 1069 his forces carried out the Harrying of the North which saw villages burned and caused the death of 100,000 people from starvation.

Motte and Bailey castles: In order to ensure that people across England were loyal to him, William built castles across the country to act as fortresses. These castles intimidated Anglo-Saxon opponents and helped William keep power.



Year 7: The Norman Conquest

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- Explain why William won the Battle of Hastings in 1066 using evidence of 'preparation', 'leadership' and 'luck' to support.
- Evaluate William's methods of control in England, including: Fear, The Feudal System and Castles.

Retrieval Practice

Questions	Answers
Describe two features of life in Anglo Saxon England:	Most people were farmers, and lived in wooden huts. Children generally didn't go to school. They made lots of things from wood, e.g. boats, and they made beautiful items of jewellery.
Who was the King who died in 1066?	Edward the Confessor.
Name two claimants to the throne in 1066:	Harold Godwinson, Harold Hardrada and William Duke of Normandy.
Describe one feature of the battle of Stamford Bridge:	It was King Harold Godwinson vs Harald Hardrada. King Harold marched his army 185 miles in 4 days to reach Stamford Bridge. King Harold had surprised Hardrada's army which gave him an advantage.
Why was the weather lucky for William Duke of Normandy?	The wind meant that William could not sail to England on the day he intended, delaying his invasion. In this time King Harold marched his army north to beat Hardrada, meaning King Harold's army were weakened in the Battle of Hastings
Name one of Williams tactics that enabled him to win the Battle of Hastings:	The Feigned Retreat. He had a 2000 - 3000 strong cavalry force. William had waited for Harold's army to come to him, making them even more exhausted. William bravely rode in front of his army in the battle to prove he was still alive, preventing panic amongst his soldiers.
Describe the events of the Harrying of the North:	The Harrying of the North refers to the brutal slaughter and pillaging of villages in Northumbria in 1069-1070 by the army of William the Conqueror. It is thought that 100,000 people starved to death.
Name two ways that William consolidated his power over England:	The Domesday book. The Feudal System. Terror. Castles
Why did William choose to build Motte and Bailey castles?	They could be built quickly and were less expensive than other castles, mainly because they were made partly from wood. They were also secure.
How did Castles help William keep control of England?	The Normans used these large fortresses to impose their authority over a whole country.

Career Focus - Where could this take you?

I am an Architect: My job is to design new buildings and help improve old ones. I have to ensure I use the correct materials and consider what will make a building strong as well as attractive on the eye. I have a wide knowledge of Architecture throughout history and spend time researching the heritage of the buildings that I work on. Architecture is influenced by society and culture and my study of history enables me to understand this connection.

Challenge Activities

1. Create a model of a Motte and Bailey castle using materials you can find at home! E.g. wooden lollypop sticks, cardboard and newspaper. You could also bake a cake to look like a castle or draw / paint a castle then label it.
2. Research a Norman castle in England that is still standing today. Then write a newspaper report detailing all you have found. You should include:
   - When was it built?
   - Why was it built?
   - Who has lived there?
   - What it is used for now.
   - Pictures of it (and maps too, if available).
   - Any other interesting or important facts or history about your chosen castle.

Topic Links

This topic links to other humanities topics such as:

- The Romans
- Medieval Life
- Christianity

Additional Resources

To further practise and develop your knowledge see:
https://www.bbc.co.uk/teach/class-clips-video/history-ks3-ks4-1066/zm3m382

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

https://www.essentially-england.com/norman-castles-a-to-z.html

Timeline

TIMELINE 0-2000 AD

A timeline is a way to record important events and track when they happened.

43 AD – Romans invade Britain.

71 AD – Romans conquer Northern England.

140 AD – Romans conquer Scotland.

400–410 AD – The Romans withdraw from Britain.

516 AD – British defeat Anglo-Saxons at the Battle of Mount Badon.

867 AD – Vikings capture Northumbria.

926 AD – Anglo-Saxons conquer Eastern England.

ROMAN BRITAIN 43–410 AD

ANGLO-SAXON & VIKING BRITAIN 410–1066 AD

0 | 100 AD | 200 AD | 300 AD | 400 AD | 500 AD | 600 AD | 700 AD | 800 AD | 900 AD | 1000 AD

78 AD – Romans conquer Wales.

122 AD – Emperor Hadrian orders his soldiers to build a wall across Northern Britain. It became known as Hadrian's Wall.

449 AD – Anglo-Saxons invade Britain.

789 AD – The Vikings first invade England in Dorset.

874 AD – The Vikings conquer the Kingdom of Mercia.

1939–1945 AD – The Second World War occurs.

1066 AD – William of Normandy defeats King Harold at the Battle of Hastings and becomes King of England.

1348 AD – The Black Death arrives in England and kills almost half of the population.

1534 AD – Henry VIII forms the Church of England and makes himself Head of the Church.

1707 AD – The Act of Union joins England and Scotland into one country.

1800 AD – The Acts of Union join Ireland with England and Scotland.

MEDIEVAL BRITAIN 1066–1485 AD

TUDOR BRITAIN 1485–1603 AD

STUART BRITAIN 1603–1714 AD

GEORGIAN BRITAIN 1714–1837 AD

VICTORIAN BRITAIN 1837–1901 AD

20TH CENTURY BRITAIN 1901–2000 AD

1000 AD | 1100 AD | 1200 AD | 1300 AD | 1400 AD | 1500 AD | 1600 AD | 1700 AD | 1800 AD | 1900 AD | 2000 AD

1914–1918 AD – The First World War occurs.

1086 AD – The Domesday Book is compiled to record what people in Britain owned and calculate how much tax they owed.

1337 AD – King Edward III invades France and the Hundred Years War begins.

1453 AD – The Hundred Years War ends.

1588 AD – The English defeat the Spanish Armada.

1776 AD – The American colonies declare independence from Britain during the War of Independence.

1845 AD – The Great Irish Potato Famine begins. Millions of people die or migrate to other countries.

Year 7 Maps and Mapping

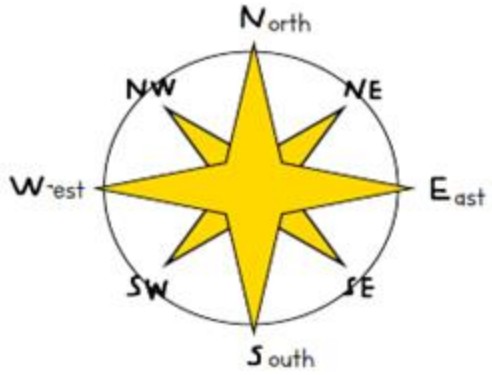
The aims of the sequence of learning are to ensure that all students:

- Accurately use an 8- and 16-point compass
- Use four and six-figure grid references, to locate places on maps
- Measure distances on a map, and use the scale to work out actual distances
- Interpret contour lines and their patterns, and spot heights on maps
- Accurately use a world map to locate places using lines of longitude and latitude

Keyword	Definition
Aerial Photo	Taking of photographs from an aircraft or other airborne platform
Contour lines	A line drawn on a map to indicate ground elevation
Degrees	To measure longitude and latitude.
Grid Reference	Used to locate a particular square/ location on a map
Latitude	Lines which run parallel to the equator and measure the distance north or south of the equator
Longitude	Lines of longitude run in a north to south direction to locate places
Minutes	Degrees of longitude and latitude are divided into minutes (60 minutes in 1 degree)
Prime Meridian	The line of 0° longitude, starting point for measuring distance both east and west around Earth
Scale	The relationship between distance on a map and the corresponding distance on the ground
Spot Heights	An exact point on a map with its height
Topography	The features and forms of land surfaces

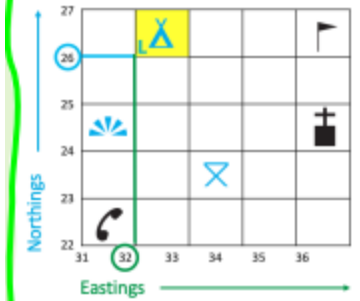
Key Concepts

COMPASS POINTS



4 FIGURE GRID REFERENCES

Along the edges of each map there are numbers. These numbers help you work out where a location is on a map. Northings are numbers that go from bottom to top, Eastings go from left to right.



The first two numbers give the eastings.

32 26

The second two numbers give the northings.

Remember... eastings then northings!

Along the corridor and up the stairs!

6 FIGURE GRID REFERENCES

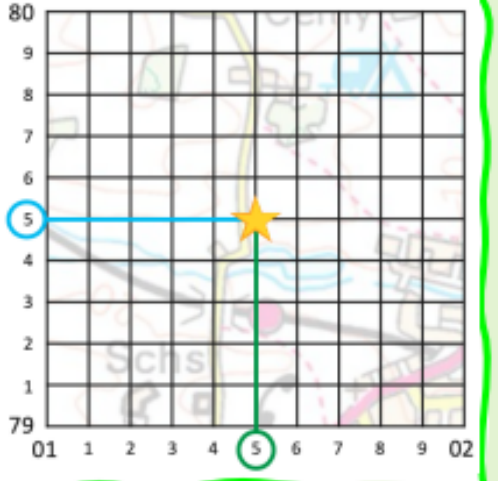
We can use six-figure grid references to find an exact location within a grid square, so they are much more accurate The grid square is divided into tenths.

Example:

015 795

The first three numbers give the easting which includes the number of tenths.

The last three numbers give the northing which includes the number of tenths.



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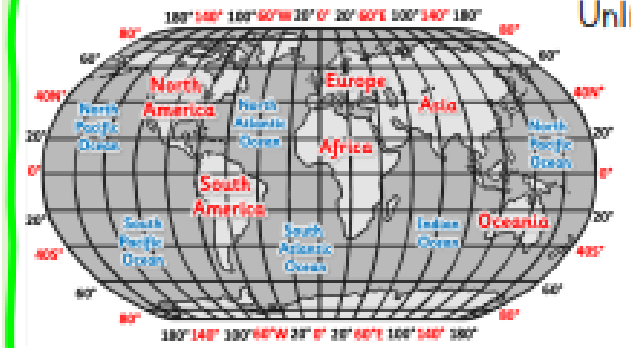
Key Concepts

MAP SYMBOLS

Symbols are useful for lots of reasons including, space saving on a map, multi-lingual (all languages can understand them), saves time, clear.

LONGITUDE AND LATITUDE



Unlike grid lines where we go along the corridor and the stairs, here we go **UP** and **ACROSS**

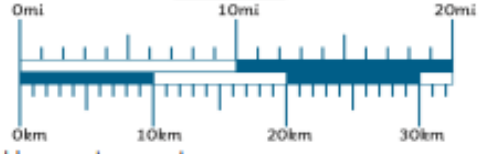
LATITUDE
Flat lines. Flat-itude!

LONGITUDE
Long lines – up and down

SCALE AND DISTANCE

OS maps have a scale. On some smaller maps, 1cm on the map equals 250m in real life. On some larger maps, 1cm on the map equals 500m. Different maps might have different scales, so check on your map to find its scale.

LINE SCALE



Using a line scale on a map is as easy as using a ruler. The important thing to remember is that a line scale shows measurements in km and the measurements on a ruler are in cm.

WORD SCALE

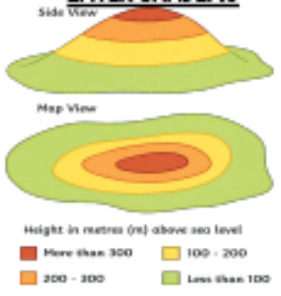
One centimeter on the map represents 3 kilometers on the ground. (1cm = 3 km)

Using the scale above, if we measure the distance on a map between two places with our ruler. The measurement is 4cm. We then have to multiply that measurement by 3 to calculate that the real distance between the two places is 12km.

HEIGHT AND RELIEF

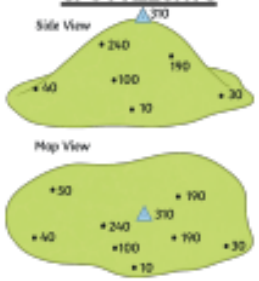
RELIEF the difference between the highest and lowest heights of an area.
TOPOGRAPHY the surface features of the earth like hills, mountains, valleys etc.

LAYER SHADING



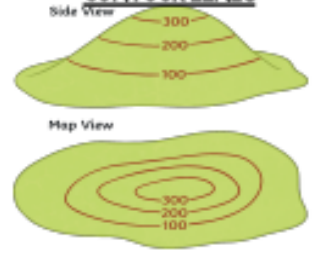
Areas of different heights are shown using different colours. A key is used to show how high the land is.

SPOT HEIGHTS



The exact height of a place above the ground is measured and written onto a map.

CONTOUR LINES



Contour lines are lines on a map which join up places of the same height. Everywhere along a contour line is the same height.

Year 7 Maps and Mapping

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Retrieval Practice

Questions	Answers
Which compass point is opposite South West?	North East
Which compass point is opposite North West?	South East
What are Northings?	Numbers on a map which go from the bottom to the top
What are Eastings?	Numbers on a map which go from left to right
What is meant by the term topography?	The surface features of the earth like hills and valleys
What are the lines on a world map referred to as?	Lines of longitude and latitude
What do contour lines close to each other show?	A steep slope
What are the map symbols for a bus station and parking?	 and 
What does a 6-figure grid reference show?	The exact location of a point within a grid square. They are more accurate

Career Focus - Cartographer

As a cartographer I design digital or paper-based maps, I check maps and charts are accurate and to scale. I also edit maps by adding or removing new roads, structures or landmarks. I also collect and analyse data from remote sensors on satellites and planes

Challenge Activities

- Create a contour model of a hill, using cardboard - try to give your hill different types of slope and relief
- Design your own map symbols and then create a map of your local area and add your symbols to show the features of the area where you live
- Write a set of detailed instructions you could provide to a friend to get them from school to your house, or from one location to another of your choice

Topic Links

This topic links to:

- Maths
- Science

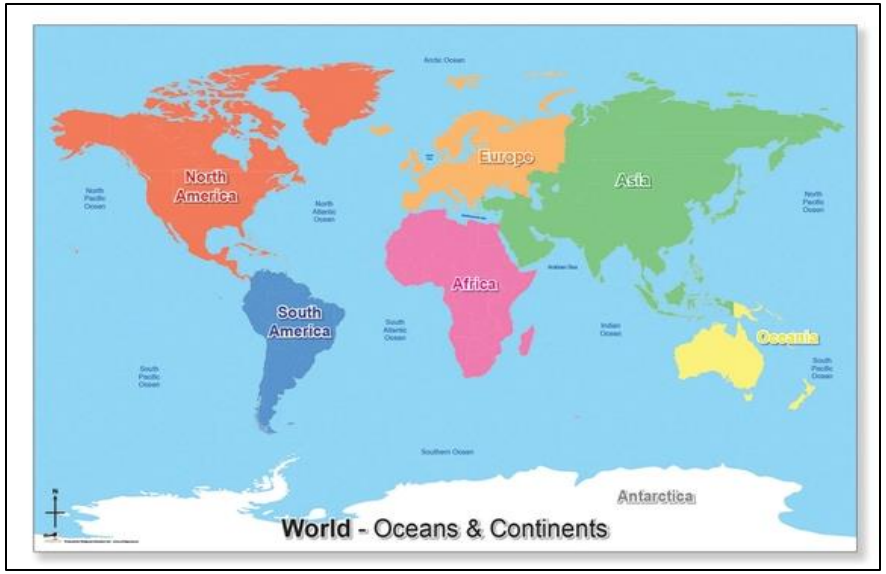
Additional Resources

To further practise and develop your knowledge see:

Map symbols, direction & relief Grid references & distance

Geography

Key Concepts: World – Countries and Oceans



Year 7 Hinduism - Practices

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

- Discuss why there is such a focus on the three avatars of God
- Describe how going to a Mandir is the best way for a Hindu to show their faith

Keyword	Definition
Hinduism	A religion which has cultural traditions which developed from Vedic religion.
Samskaras	A ceremony or a rite, which marks a major event in the life of a Hindu.
Sacred	Something that is dedicated or set apart for the services or worship of a deity; is considered worthy of spiritual respect or devotion.
Ceremony	A set of acts, often traditional or religious, performed at formal occasions. In Hinduism rituals are performed to bring spirituality into human life.
Symbolism	Hinduism is rich on symbolism. Many acts of worship, such as puja are symbolic. Symbolism is the idea that things represent other things.
Pilgrimage	A journey, especially a long one, which is made to some sacred place as an act of religious devotion. Pilgrimage in Hinduism is the practice of journeying to sites where religious powers, knowledge, or experience have been marked or been present.

Key Concepts

Samskaras

Religious people often have ceremonies to mark changes in their life. Hindu rites of passage cover a person's birth to their death through various traditions and customs.

Hindu sacraments are called 'sanskars'

The sacraments performed at the time of a wedding are called 'Vivah Sanskar'.

This sanskar marks the start of the second and the most important stage of life called the 'Grihistha Ashrama' which involves setting up of a new family unit.

Sacred Thread ceremony (Upanayana)

The Sacred Thread ceremony is a ceremony for boys in some Hindu communities to confirm they are of an age to take on religious responsibility.

Girls are sometimes honoured in the same way, but it is rare for them to receive and wear the thread.

In some Hindu communities, the male participant's head is shaved for the ceremony, symbolising a cleansing from their old ways of living. New clothes are put on after bathing. Gifts and blessings from family and friends are often received.

In some communities, the person asks family and friends for **alms** to show that they no longer expect the family to automatically provide for them now they are an adult.

Features of the Sacred Thread ceremony include:

- The **Janoi** is made up of three strands, representing purity of thought, words and actions
- The cotton strands go over the left shoulder and under the right arm
- Janoi wearers may chant a special **mantra** when putting on and taking off their sacred thread
- Vows are made to obey all aspects of the first **ashrama**
- Some young Hindus also accept a **Guru** at this point and start their study of **scripture**. It is increasingly common for young Hindus in the UK and in urban India to have the ceremony at different ages.

Year 7 Hinduism - Practices

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

- Discuss why there is such a focus on the three avatars of God
- Describe how going to a Mandir is the best way for a Hindu to show their faith

Key Concepts

Puja Tray

The Puja Tray

On the puja tray there is

- A pot of water for ritual cleansing.
- A bell to call the family to worship.
- A tiny pot of red gum paste to mark the forehead. This mark means that a woman's soul (her husband) is with her.
- An Aarti lamp for the Aarti ceremony.
- An incense burner or jos stick holder.

Holi

A Hindu festival that celebrates spring, love, and new life.

Some families hold religious ceremonies, but for many Holi is more a time for fun. It's a colourful festival, with dancing, singing and throwing of powder paint and coloured water.

Holi is also known as the **"festival of colours".**

Kumbh Mela

One of the most important pilgrimages in Hinduism is **Kumbh Mela**. This is the largest gathering of people in the world.

Millions of people attend and bathe in the Ganges (in North India).

The main Kumbh Mela gathering takes place every 12 years, with other events taking place every three years at four different sites (a different site is used every three years).

Hindu Pilgrimage

Hindu practices allow those who follow the religion to demonstrate their commitment to the faith and this includes worshipping in temples and at shrines.

Hindu practices might also involve showing a commitment to the wider community, such as pilgrimage and charity work.

Varanasi

The most sacred city in Hinduism is **Varanasi**, as it is one of the oldest and most respected cities. It is believed to be the city where **Shiva**, the god of destruction, lived a long time ago.

The **River Ganges**, which is one of the most sacred rivers in the world, runs through the city and is important as it is where Hindus bathe in the hope, they can wash their sins away. A lot of Hindus believe that people who die in the city of Varanasi can achieve moksha.

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Year 7 Hinduism - Practices

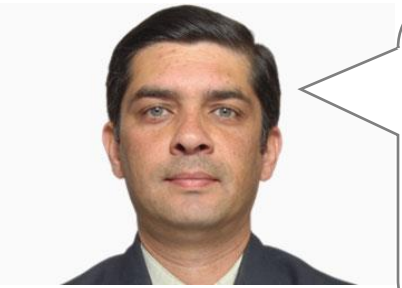
The aims of the sequence of learning are to ensure that all students:

- Discuss why there is such a focus on the three avatars of God
- Describe how going to a Mandir is the best way for a Hindu to show their faith

Retrieval Practice

Questions	Answers
What are Samskaras?	Samskaras are rites of passage within Hinduism. Marking important event within their life.
Why is the thread ceremony important within Hinduism?	The Sacred Thread ceremony is a ceremony for boys in some Hindu communities to confirm they are of an age to take on religious responsibility. This represents a new beginning as well as maturity to help and provide for their family.
Whose story lies between the festival of Holi?	The story of Holika and Prahlad. The story behind Holi is about good triumphing over evil.
What do Hindus use in worship?	Hindus use a puja tray, when they are worshipping.
Where do Hindus go for pilgrimage?	Hindus go to Varanasi, as this is the sacred site in Hinduism.
Why is Varanasi a sacred site for Hindus?	It is believed to be the city where **Shiva**, the god of destruction, lived a long time ago. The **River Ganges**, which is one of the most sacred rivers in the world, runs through the city and is important as it is where Hindus bathe in the hope, they can wash their sins away. A lot of Hindus believe that people who die in the city of Varanasi can achieve moksha.
Why do Hindus celebrate Navratri?	Navratri is a time when Hindus celebrate the goddess Durga for killing the demon, Mahishasura. Nav means **nine** and Ratri means **nights**. Hindus celebrate Navratri by dancing and different colours which symbolises one of her distinct characteristics. Many Hindus wear a different coloured traditional outfit each day to reflect this.

Career Focus - Where could this take you?



Global coordinator for Hindu Swayamsevak Sangh: "I love to help around and look after the plants and the world around us, there is a famous slogan which states 'Service to Mankind is Service to God' this motivates me to help the people and the communities around me."

"Religious education has given me skills to understand the world we live in now, how animals and humans need to be looked after, as well as the world around us. Our community projects have included; Voluntary work at Old People Homes, Blood Donation, Distribution of fruit to local hospitals, trees planting, careers fair etc."

Challenge Activities

- Explain the stories behind the festivals of Holi and Navrati. Why are they important to Hindus today?
- Can you name any other sacred events within a life of a Hindu?
- Create a leaflet for someone to explain the key practices of Hinduism.
- Research the different Gods/Goddesses in Hinduism and create flash cards.
- Make your own puja tray and take a picture of it.

Don't forget!
Point
Explain
Evidence (Quote)

Topic Links

This topic links to other RE topics such as

- Sikhism
- Buddhism

Cross curricular subjects include:

- Geography

We will also be practising how to

- Argue a point and practise our Voice 21
- Participate in debates
- Write PEE sentences/how to answer exam questions

Additional Resources

To further practise and develop your knowledge see:

https://www.bbc.co.uk/bitesize/topics/zh86n39/articles/z4qqy9q

https://www.bbc.co.uk/religion/religions/hinduism/ritesrituals/weddings.shtml

Year 7 Ethics - Justice

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

- Explain what is Justice
- Identify the difference between Absolute & Relative poverty
- Identify key people who have fought for justice
- Research a key person who has fought for justice
- Identify the link between poverty in injustice
- Identify two charities, Christian Aid & Muslim Aid and how they help individuals around the world

Keyword	Definition
Justice	The quality of being fair and reasonable
Absolute Poverty	This is when household income is below a certain level. This makes it impossible for the person or family to meet basic needs of life including food, shelter, safe drinking water, education and healthcare.
Relative Poverty	This is when households receive 50% less than any average household. So, they do have some money but still not enough money to afford anything above the basics.
Injustice	A lack of fairness and justice
Fairtrade	Fairtrade aims to ensure a set of standards are met in the production and supply of a product or ingredient. Fairtrade means workers' rights, safer working conditions and fair pay.
Social Justice	Everyone deserves an equal chance and opportunity.
Ahimsa	Hindu and Buddhist belief to respect all living things and a belief in non-violence.
Equality	Everyone is treated equally regardless of who they are.

Key Concepts

Justice in the UK means that everyone should be treated fairly and equally under the law, regardless of their background or circumstances. It is the responsibility of the government to ensure that the legal system is fair and impartial, and that everyone has access to justice. This means that if someone breaks the law, they will be held accountable and punished appropriately. It also means that people have the right to defend themselves and to have a fair trial.

"Access to justice is a fundamental human right."

Absolute poverty Absolute poverty is when a person or family doesn't have enough money to afford the basic things they need to survive, like food, clean water, shelter, and clothing. It means they are living in very difficult and sometimes dangerous conditions, and they may not have access to things like healthcare or education. This kind of poverty can be very hard to escape from, and it affects millions of people around the world. The standards set for absolute poverty are the same across countries.

When it was established in 1990, the World Bank set the global absolute poverty line as living on less than $1 a day.

Relative poverty is a situation where someone's income or living conditions are not as good as other people in their society. For example, a family may have a home and enough food to eat, but they might not be able to afford some things that most other people in their community can, like the internet, new clothes, transport fares. This can make them feel left out or different from their peers, and it can make it hard for them to participate in some activities or events or even find a job. Relative poverty is about not having the same things as the people around you, even if you have enough to get by. Relative poverty is considered the easiest way to measure the level of poverty in an individual country but it changes from country to country.

Year 7 Ethics - Justice

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

- Explain what is Justice
- Identify the difference between Absolute & Relative poverty
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- Identify two charities, Christian Aid & Muslim Aid and how they help individuals around the world

Key Concepts

Mohandas Gandhi believed in nonviolent resistance, which means he promoted peaceful ways of protesting against unfair treatment. He led peaceful protests, boycotts, and strikes to challenge British rule and fight for Indian independence such as the Salt March.
He also advocated for the rights of the poor and the untouchables, who were considered to be of a lower caste in Indian society.
Gandhi is known for his philosophy of "satyagraha," which means "truth-force" or "soul-force."
He believed in the power of truth and love to overcome injustice, and he worked to inspire people to act with compassion and kindness towards others.

Dr. Martin Luther King Jr. was a leader in the Civil Rights Movement in the United States during the 1950s-60s. He believed in nonviolent protest, which means that people could peacefully speak out against injustices, discrimination, and segregation.
Dr. King was a powerful speaker, and he used his words to inspire people to work together to bring about change. He organised protests and boycotts to draw attention to the unequal treatment of Black people in America. He helped to push for new laws that protected people's civil rights.
He was awarded the Nobel Peace Prize for his work in promoting peace and justice.

Mother Teresa was a Catholic nun who dedicated her life to helping the poor and sick in India. She spent many years teaching in India before starting her own order, the Missionaries of Charity, in 1950. They provided food, shelter, and medical care to the poorest and most vulnerable members of society, including the sick, dying, and disabled.
Mother Teresa is remembered for her compassion and selflessness. She believed that everyone, regardless of their background or circumstances, deserved love and respect. She was awarded the Nobel Peace Prize in 1979 for her humanitarian work.

Malala Yousafzai is a Pakistani activist and the youngest person to ever win the Nobel Peace Prize. She was born in 1997 in Pakistan and grew up in a region where the Taliban, a militant group, had banned girls from attending school.
When Malala was11 years old, she began speaking out publicly against the Taliban's rule and advocating for girls' right to education. She wrote a blog about it, which brought international attention to the situation.
However, this also made her a target for the Taliban.
In 2012, Malala was shot by a Taliban gunman while on her way to school. She survived the attack and continued her advocacy for girls' education from the United Kingdom.

Christian Aid is a charity that works to help people who are living in poverty around the world. They work with communities in some of the poorest countries in the world to provide support and assistance. They help to fund programs that provide food and clean water, build schools and clinics, and provide emergency aid in times of crisis, such as natural disasters or conflict.
One of the things that sets Christian Aid apart is that they help communities find long-term solutions to poverty. This means that they work with people to identify the root causes of poverty and help them find sustainable ways to improve their lives. It is inspired by Christian values of compassion, justice, and equality, and they work to make the world a better place by helping those in need.

Muslim Aid is a charity that works to help people in need around the world. They are inspired by Islamic values of compassion, generosity, and service to others.
Muslim Aid provides assistance in a variety of ways, including emergency relief, education, healthcare, and development projects. They work in some of the poorest and most vulnerable communities in the world, including those affected by natural disasters, conflict, and poverty.
They work with local communities to provide assistance. They believe that this helps to ensure that their work is effective, sustainable, and respectful of local culture and customs.
Muslim Aid is dedicated to helping people regardless of their race, religion, or background. They believe that all people have the right to live with dignity and respect.

Year 7 Ethics - Justice

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

- Explain what is Justice
- Identify the difference between Absolute & Relative poverty
- Identify key people who have fought for justice
- Identify the link between poverty in injustice
- Identify two charities, Christian Aid & Muslim Aid and how they help individuals around the world

Retrieval Practice

Questions	Answers
What does Justice mean?	Justice means the quality of being just. Justice helps us to figure out what is fair, what is right and wrong.
Define the term relative poverty.	Relative poverty is when someone has some necessities to live life. less than any average household. So, they do have some money but still not enough money to afford anything above the basics.
What does absolute poverty mean?	Absolute poverty means when someone cannot afford/ meet the basic needs of life including food, shelter, safe drinking water, education and healthcare.
What does UN stand for?	UN is short for United Nations.
What is Gandhi famous for?	Non-violence protests.
What did Martin Luther King Jr. stand up for and why?	Martin Luther King Jr stood up for the rights of black people.
Who was Mother Teresa?	Mother Teresa was a Catholic nun and missionary. She is famous for helping the poor, hungry and sick people of India.
What is fairtrade?	Fairtrade aims to ensure a set of standards are met in the production and supply of a product or ingredient. Fairtrade means workers' rights, safer working conditions and fair pay.

Career Focus - Where could this take you?

I volunteer for a charity, I might help out in many different ways. I could help at a food bank by sorting and packing food for people who need it, or I could help at a homeless shelter by serving meals and talking to people who are staying there. Sometimes, I might help raise money for the charity by organising a fundraising event or doing a sponsored run.

Challenge Activities

- Write down three points that suggest someone is in absolute poverty. Explain the points in detail
- Create a poster on your own charity. How can the charity help someone and explain the key beliefs/values of the charity (who is it aimed at)
- Research one historical figure from the knowledge organiser. Create a fact file on the chosen individual or group.

Topic Links

This topic links to other RE topics and cross curricular subjects such as

- Key people
- Sikhism/Islam/Christianity
- History
- Business

We will also be practising how to

- Argue a point and practise our Voice 21
- Participate in debates
- Write PEE sentences/how to answer exam questions

Additional Resources

To further practise and develop your knowledge see:

https://www.bbc.co.uk/bitesize/guides/zdrxbdm/revision/11

https://www.nspcc.org.uk/

https://www.christianaid.org.uk/

https://islamicaid.com/

Religious Studies

Key Concepts

SIX WORLD RELIGIONS (spellings vary)

Religion name	Follower	SYMBOL	NAME OF GOD/GODS	COUNTRY OF ORIGIN	FOUNDER /MESSENGER	HOLY BOOK/S	PLACE OF WORSHIP	MAIN FESTIVALS	Denominations /schools/type/	Followers in the UK (approx.)	Followers in the world (approx.)
BUDDHISM	Buddhist	 Dharmachakra	none	India (Today in Nepal)	Siddhartha Gotama (The Buddha)	Tripitaka	Temple Shrine room Vihara	Wesak Dharma day	Theravada Mahayana Zen Triratna Pure Land	98,000	376 million
HINDUISM	Hindu	 Om/Aum	Brahman (Shiva Vishnu Brahma)	Indus Valley	none	Vedas Bhagavad Gita Mahabharata	Mandir Temple	Holi Diwali		272,000	1 billion
CHRISTIANITY	Christian	 Cross	God	Palestine Israel	Jesus of Nazareth	Bible	Church Cathedral	Easter Christmas	Catholic Eastern Orthodox Church of England Baptist Quaker	30 million	2.2 billion
JUDAISM	Jew	 Star of David	G_d	Israel	Abraham	Torah Tenakh	Synagogue	Rosh Hashanah Pesach Yom Kippur	Hasidic Orthodox Reform Liberal	214,000	14 million
SIKHISM	Sikh	 The Khanda	God Waheguru	Punjab, India	Guru Nanak The ten Gurus	Guru Granth Sahib	Gurdwara	Vaisakhi Diwali	Sahajdhari Amritdhari	239,000	23 million
ISLAM	Muslim	 Five pointed star & crescent moon	Allah (God)	Saudi Arabia	Muhammad (pbuh)	Quran	Mosque	Eid-ul-Fitr Eid-ul-Adha	Sunni Shi'a Sufi	1,278,000	1.6 billion

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)

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

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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 7 Mon Temps Libre

Newsome Academy
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The aims of the sequence of learning are to ensure that all students can:
- say what sports people play
- say what activities people do.
- talk about the weather
- ask and answer simple questions.
- use more complex structures with time phrases.

Keywords/ phrases

Qu'est-ce que tu aimes faire *What do you like doing*	le week-end? *at the weekend?* avec tes amis? *with your friends?* quand il pleut? *when it rains?* sur ton portable? *on your phone?*

J'adore	bloguer *blogging*
J'aime	écouter de la musique *listening to music*
Je n'aime pas	envoyer des SMS *sending texts*
Je déteste	partager des photos *sharing photos*
	partager des vidéos *sharing videos*
	prendre des selfies *taking selfies*
	regarder des films *watching films*
	tchatter *chatting (online)*

Key Concepts

Tu fais du sport? Do you do sport?

Je fais	I do	Nous faisons	We do
Tu fais	You do	Vous faites	You do
Il/ elle/on fait	He/ she does/we do	Ils/ elles font.	They do

du skate **du** patin à glace **du** théâtre **du** vélo **du** ski **du** judo	**de la** cuisine **de la** danse **de la** gymnastique **de la** natation
de l'athlétisme **de l'**équitation	**des** randonnées

Tu est sportif / sportive? - Are you sporty?

Je joue	I play	Nous jouons	We play
Tu joues	You play	Vous jouez	You play
Il/ elle/on joue	He/ she/ we play	Ils/ elles jouent	They play

au basket / billard - basketball / snooker
au football (foot) / rugby - football / rugby
au hockey / tennis - hockey - hockey / tennis
au handball - handball
à la pétanque/aux boules - boules
aux cartes - cards
aux échecs - chess

Talking about the weather

il fait beau
the weather's fine
il fait mauvais
the weather's bad
il fait chaud - it is hot
il fait froid - it is cold

il y a du soleil - it is sunny
il y a du vent - it is windy
il pleut - it is raining
il neige - it is snowing

Key sounds

ai

vrai ✓	maison 

tion

natation 	équitation 

Year 7 Mon Temps Libre

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

- say what sports people play
- say what activities people do.
- talk about the weather
- ask and answer simple questions.
- use more complex structures with time phrases.

Retrieval Practice

Questions	Answers
Quel temps fait-il?	Aujourd'hui **il fait beau.**
Tu es sportif? Tu es sportive?	**Oui –** je joue **au golf** et le weekend je joue **au foot.**
Qu'est-ce que tu fais le weekend?	Je fais **de la danse** et je fais aussi **de la natation.**
Quand est-ce que tu fais **du cyclisme?**	Je fais **du cyclisme tous les weekends.**
Qu'est-ce que tu aimes faire?	J'aime **prendre les selfies** et **partager les photos.**
Qu'est-ce que tu n'aimes pas faire?	Je n' aime pas **regarder les films** et **bloguer.**
Pourquoi?	Je pense que c'est **chouette** 😍 **nul** 😟
Est-ce que tu aimes **écouter de la musique?**	Oui j'adore **écouter de la musique. C'est formidable.**
Qu'est-ce que tu fais **quand il pleut?**	**Quand il pleut je joue aux cartes.**

Career Focus - Where could this take you?

I am a games designer. I am lucky because I can work all over the world. FIFA employ lots of people to watch football games and collect statistics about the games. Then we turn that into the game that lots of people play at home.

Challenge Activities

1. Create a plan for the weekend. Include the day in French and say what you will do if the weather is good and bad.
2. Research what the most popular hobbies of French students in Year 7.
3. Complete the Languagenut activities.
4. Design a poster for extra-curricular activities at school. Make sure that you include the day of the week, the activity and your opinion.

Topic Links

This topic links to:

- Unit 1 – moi
- Likes and dislikes
- Healthy Lifestyles.

Additional Resources

To further practise and develop your knowledge see:

- Sentence Builders
- Oak academy.

Your teacher can remind you of your login.

Year 7 French – Essential Grammar and Vocabulary

Greetings

Bonjour – Good morning
Salut – hello
Bonsoir – good evening

Au revoir – Goodbye
À plus – See you later

Comment tu t'appelles ? What's your name?

Je m'appelle – I am called

Pleasantries

(Comment) ça va? How are you ?

ça va très bien merci – I'm very well thank you

ça va – ok
ça va mal – Bad

1. Quel âge as-tu – How old are you ?
Tu as des frères ou des soeurs ? –Have you got any brothers or sisters?

Key verbs – avoir

Avoir – to have
J''ai – I have
Tu as – you have
Elle/ il a – she/he has

Nous avons – we have
Vous avez – you have
Elles/ils ont – they have

_____ ans – _____ years old

une soeur– a sister
un frère– a brother
une demi-soeur– a stepsister / half-sister
un demi-frère – a stepbrother / half-brother
trois soeurs – three sisters

Je n'ai pas de frères ou soeurs – I haven't got any brothers or sisters
Je suis fils/fille unique I am an only child

3. Qu'est-ce que tu aimes ?

Key verbs – opinions

J'aime – I like
Je n'aime pas – I don't like

J'adore – I love
Je déteste – I hate

Il /elle aime – he/she likes

le sport – sport
le collège – school

la danse – dance
la musique – music

les araignées – spiders
les glaces – ice creams

C'est – it's ...
sympa – nice
cool
moderne
nul – rubbish
triste –sad
démodé – old-fashioned

Let's show off!

J'aimerais avoir – I'd like to have
Je pense que – I think that
A mon avis – In my opinión
Personellement – personally

2. Qu'est-ce qu'il y a sur la photo?
What's in the photo?

Describing a photo

Il y a – There is/are

un tableau – a board
un ordinateur – a computer

un/ une professeur – a teacher
une porte – a door
une fenêtre – a window

des tables – some tables
des chaises – some chairs
des élèves – some pupils
des cahiers – some exercise books

WAGOLL
Look at this model text about yourself – do you think you could replicate it with your own information?

Bonjour, je m'appelle **Marc**	Hello. My name is **Marc**
et j'ai **onze** ans.	and I am **11** years old.
Mon anniversaire est le **quatre mai**.	Also, my birthday is the **4th** of **May**.
Je suis très **sympa**	I am very **nice**
y assez **intelligent**	and quite **clever**
mais je ne suis pas **patient**.	but I'm not **patient**.
J'ai **une soeur**	I have a **sister**
mais elle est **méchante**.	but she is **naughty**.
J'aimerais avoir **un frère!**	I would like to have a **brother**!
J'adore **la danse**	I love **dance**
parce que c'est **amusant**	because it's **fun**
Tu aimes **le sport**?	Do you like **sport**?

	indefinite article	definite article
masculine singular	***un*** (a / an) ➡	***le*** / ***l'*** (the)
feminine singular	***une*** (a / an) ➡	***la*** / ***l'*** (the)
plural	***des*** (some) ➡	***les*** (the)

4. Tu es comment? What are you like ?

Key verbs être

être – to be
Je suis – I am
Tu es – you are
Elle/ il est – she/he is

Nous sommes – we are
Vous êtes – you are
Elles/ils sont – they are

Je ne suis pas – I'm not

très – very
trop – too
assez – quite
un peu – a bit

amusant / amusante – fun
arrogant / arrogante – arrogant
méchante / méchante – naughty
patient / patiente – patient
intelligent / intelligente – intelligent
petit / petite – small
grand / grande – tall
bavard / bavarde – chatty
fort / forte – strong
timide – shy

5. C'est quand ton anniversaire? When is your birthday ?

Mon anniversaire c'est le... – my birthday is the...

1 premier	11 onze	21 vingt et un
2 deux	12 douze	22 vingt-deux
3 trois	13 treize	23 vingt-trois
4 quatre	14 quatorze	24 vingt-quatre
5 cinq	15 quinze	25 vingt-cinq
6 six	16 seize	26 vingt-six
7 sept	17 dix-sept	27 vingt-sept
8 huit	18 dix-huit	28 vingt-huit
9 neuf	19 dix- neuf	29 vingt-neuf
10 dix	20 vingt	30 trente
		31 trente et un

janvier – January
février – February
mars – March
avril – April
mai – May
juin – June
juillet– July
août – August

septembre – September
octobre – October
novembre –November
décembre – December

NO capital letters for months in French!

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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

7 - How Computers Work

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

- Demonstrate knowledge of computing fundamentals by describing the history of computers, the IPOS cycle, the role of different component, types of software and different types of printers in use
- Demonstrate knowledge of binary conversion by converting between binary code and denary numbers
- Demonstrate knowledge and understanding of basic programming terms by explaining the connection between algorithms, functions and programming
- Apply knowledge from this unit to accurately describe some keywords

Keyword	Definition
IPOS Cycle	Known as 'information processing cycle', IPOS (input, processing, output, and storage) is a series of events that allow a computer to work like it does.
CPU	The Central Processing Unit. It calculates and processes information (instructions) sent from input/output devices.
Storage Capacity	Storage capacity refers to how much disk space one or more storage devices provides. For example, a 500GB hard drive has a storage capacity of 500 gigabytes.
Computer Component	With hardware, a component or part is one hardware unit designed to connect to and function as part of a larger system. For example, CPU, RAM, SSD drive work together and can be considered as computer components.
System Software	A type of computer program that is designed to control how a computer works. e.g. operating systems and utility programs.
Binary Code	It is a coding system using the binary digits 0 and 1. It can represent a letter, digit, or other character in a computer device. A computer converts every instruction into a binary code.
Bits	A bit (binary digit) is the smallest unit of data that a computer can process and store. A bit is always in one of two physical states (on/off, yes/no, true/false etc...) - represented by a single binary value, usually a 0 or 1.
Bytes	In most computer systems, a byte is a data measurement unit that contains eight bits, or a series of eight zeros and ones. A single byte can be used to represent 256 different values such as lowercase letters, uppercase letters, numbers and symbols etc...
Algorithm	A detailed list of steps to help write a program. This is written in a term known as 'Human Language'.
Programming	Making the switch from listing steps in detail as an algorithm to encoding (creating code) them. This is written in a term known as 'Machine Language'.
Function	Functions are mini programs that you can use over and over inside of your bigger program.

Key Concepts

Binary to Denary Conversion (5-Bit Binary)

16	8	4	2	1
0	0	1	0	1

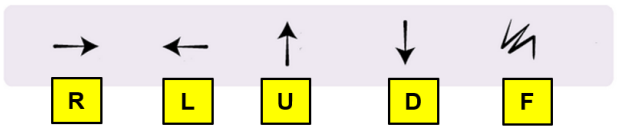
0 + 0 + 4 + 0 + 1

00101 = 5 (Denary)

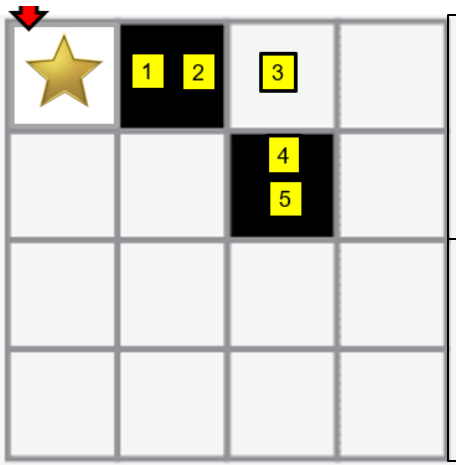
1. Make sure you are aware of the number of bits involved in the conversion (count binary length)
2. Write down the decimal number place values above the binary number
3. Convert each binary digital from left to right (starting with largest decimal)
4. Add up the values of the decimal numbers where the binary digital '1' has been used

e.g. 00101 = 4+1 = 5

Algorithm vs Programming



Key



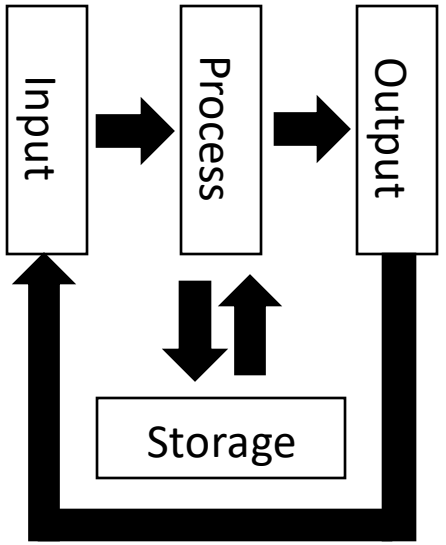
Algorithm (Instructions)

1. Move One Square Right
2. Fill In Square with Colour
3. Move One Square Right
4. Move One Square Down
5. Fill In Square with Colour

Programming (Encoding)

1. [R]
2. [F]
3. [R]
4. [D]
5. [F]

IPOS Cycle



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7 - How Computers Work

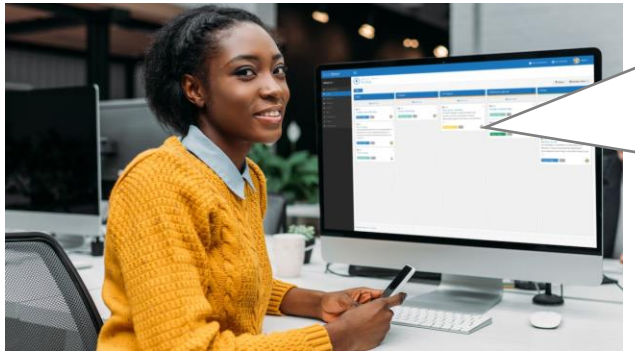
The aims of the sequence of learning are to ensure that all students:

- Demonstrate knowledge of computing fundamentals by describing the history of computers, the IPOS cycle, the role of different component, types of software and different types of printers in use
- Demonstrate knowledge of binary conversion by converting between binary code and denary numbers
- Demonstrate knowledge and understanding of basic programming terms by explaining the connection between algorithms, functions and programming
- Apply knowledge from this unit to accurately describe some keywords

Retrieval Practice

Questions	Answers
What is the difference between an input and an output device?	An input device is a piece of computer hardware equipment that converts physical input data into binary code for the computer to understand e.g. keyboard An output device is something a computer uses to convert processed instructions into a format a human can see or notice e.g. monitor
What are the roles of a RAM and ROM in a computer	ROM: Read-only memory is non-volatile memory that permanently stores instructions for your computer RAM: Random access memory is volatile (deletes when computer turned off) memory that temporarily stores the files you are working on
Give two examples of Application Software and System software	Application: Word Processing software (e.g. MS Word) and Web Browser (e.g. Google Chrome) System Software: Operating System (e.g. iOS) and Anti-virus software (e.g. McAfee)
Describe three different types of printers	1. Dot-matrix: Pattern of dots used when creating the paper printout 2. Inkjet: The ink-jet squirts tiny droplets of ink onto the surface of the paper 3. Laser: It creates marks on paper using a fine dust called toner. A laser is used to make the toner stick to the required parts of the paper
How does a computer understand the instructions given by different software and applications?	A computer converts every instruction into a binary code. It is a coding system using the binary digits 0 and 1. It can represent a letter, digit, or other character in a computer device
What are the main differences between an 'Algorithm' and 'Programming'?	Algorithms are a detailed list of steps to help write a program. This is known as 'Human Language'. Programming is making the switch from listing steps in detail as an algorithm to encoding (*creating code*) them. This is known as 'machine language'.
Why are Functions used in a program?	• It makes it easier and less time consuming to write larger programs • It reduces the errors in a program as you have to write less new code • It is easier to find errors as you have to test less new code (quicker debugging) • It is easier to link parts of the program to other parts (modules)

Career Focus - Where could this take you?



I am a **Digital Product Owner (DPO)** and lead a team of specialists to build online products and services for customers. One of my responsibilities include looking at user feedback to help improve the product.

Challenge Activities

1. Create a step-by-step tutorial document that explains how to convert from Binary to:
   A) Denary B) Hexadecimal C) ASCII

2. Create a poster or presentation on MS PowerPoint that provides information about 'IPOS cycle' – including the following points:
   A) What is the IPOS cycle? B) What does it do? C) Examples of input and output devices

3. Create a short vlog about Netiquette. In the vlog, explain the following:
   A) What is Netiquette? B) Why it is important? C) Some important rules to follow D) Any other interesting information about Netiquette.

Topic Links

- Computing Curriculum:

(3.4) How to carry out simple operations on binary numbers (3.5) How components and systems communicate with each other (3.6) Understand how instructions are stored and executed

- Other links:

Math's (Inference & Arithmetic) and English (Promote communication skills & prevent miscommunication)

Additional Resources

To further practise and develop your knowledge see:
-Input, Process, Output and Storage
https://www.youtube.com/watch?v=DKGZlaPlVLY&t=76s
-The Binary System
https://www.youtube.com/watch?v=sXxwr66Y79Y
-What are Functions?
https://www.youtube.com/watch?v=5tmtBjdw62w

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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.

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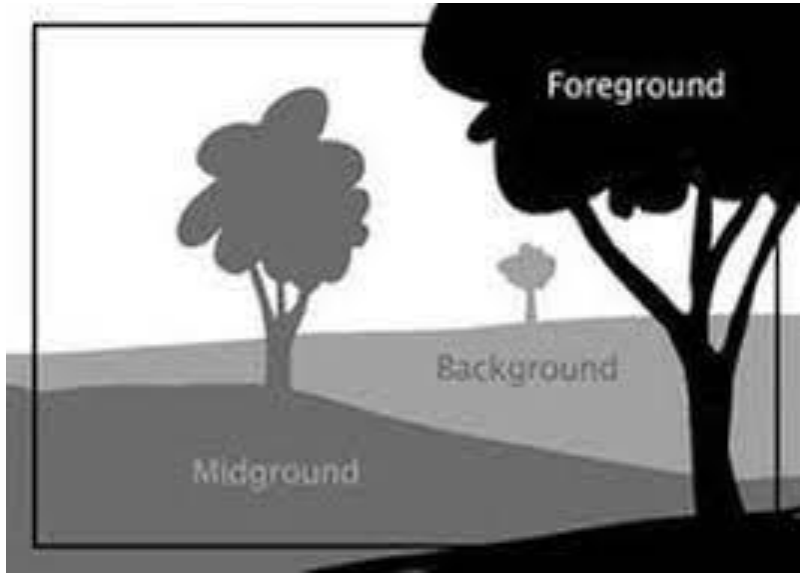
Year 7 Pop Art

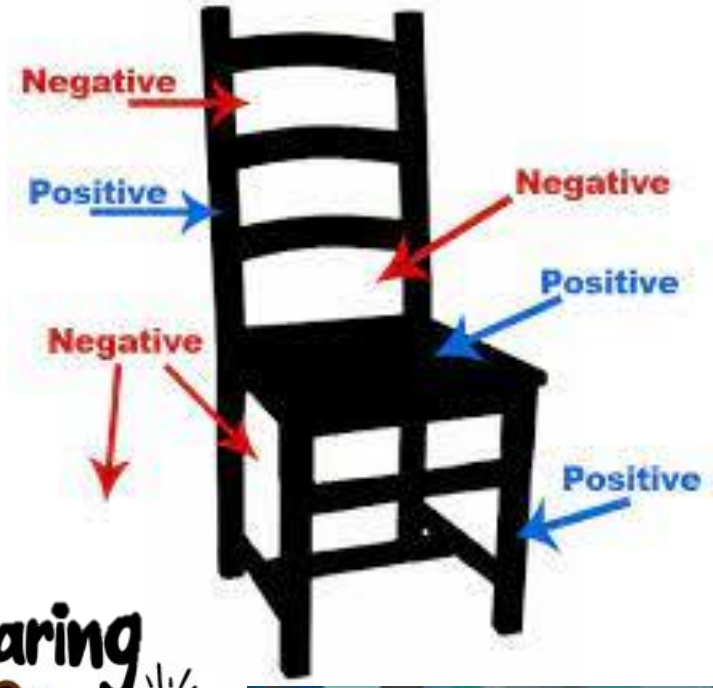
The aims of the sequence of learning are to ensure that all students:

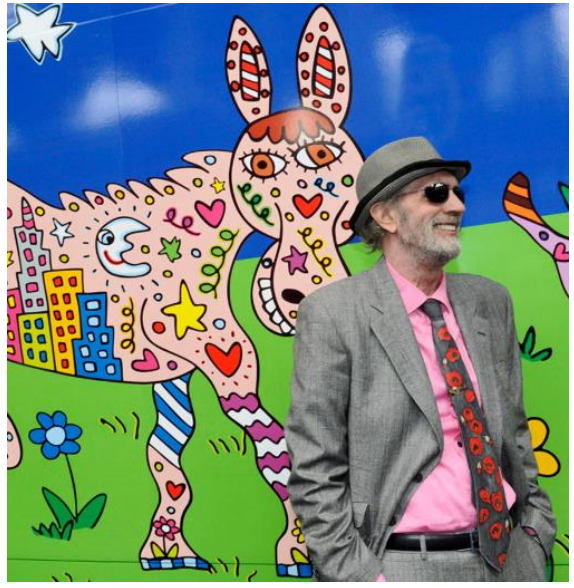
- Learn about the work of Keith Haring.
- Learn about the work of James Rizzi
- Learn about focal point and why it is important.
- Learn about foreground, middle ground and background in art.
- Learn about positive and negative shape.
- Learn how to present work in a creative and imaginative way.

Keyword	Definition
Focal point	The area of a picture that attracts the eye.
Positive shape	Positive shapes represent solid objects.
Negative shape	Negative shape is the space around an object.
Foreground	The area of the picture nearest to the viewer.
Middle ground	The space that naturally occurs between the foreground and the background .
Background	The part of an artwork representing what lies behind objects in the foreground.
Pop Art	Movement that emerged in the mid to late 1950s. Artists included imagery from popular and mass culture
Keith Haring	American artist whose work emerged from the New York City graffiti subculture of the 1980s.
James Rizzi	American artist whose work has an instantly recognisable childlike quality.

Key Concepts







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Retrieval Practice

Questions	Answers
What government initiative uses Keith Haring style artwork in its promotional content?	
How would you describe objects that are in the foreground of a piece of artwork?	They are bigger than objects in the middle ground and background. Details can be seen easily and colours are bold.
How do objects in the background of a picture appear?	They are smaller than objects in the middle ground and foreground. Fewer details can be seen and colours are muted.
What are the characteristics of James Rizzi's work?	Much of his work is inspired by New York City. He paints buildings that have human characteristics (faces), and it resembles children's drawings.
What is a landmark?	A building or an object that is instantly recognisable and lets people know where they are. E.g. The Empire State Building in New York City

Career Focus - Where could this take you?

My job is a **tattoo artist**. I research and produce designs based on clients' ideas. I am a specialist in the application of permanent designs and artwork on the skin using specialized tools, such as tattoo machines or handheld needles.

Challenge Activities

Try some of these drawing tasks at home:

Watch these dance moves then draw them in the style of Keith Haring
(3) Best of Favorite Dance Moves – YouTube

Create your own positive and negative art pieces
(3) Art lesson online: Make outstanding art with positive & negative space! Great at home or in school. - YouTube

Create a James Rizzi inspired piece of work based on your local area or a city of your choice.

Topic Links

This topic links to:

- Geography – famous landmarks and buildings.
- Food technology – Healthy eating.
- Physical Education – Promotion of exercise for maintaining health.

Additional Resources

To further practise and develop your knowledge see:

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

https://www.youtube.com/watch?v=lHBm8_ooPVo

https://www.youtube.com/watch?v=5nzdtFBbrCQ

Year 7 Textiles

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

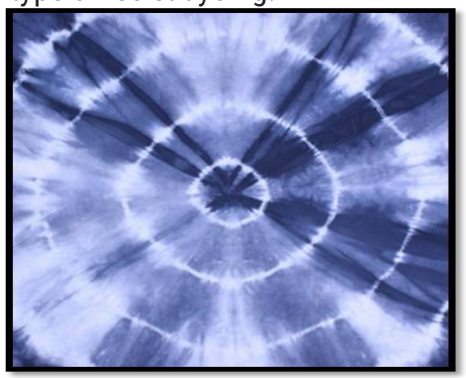
- Explain how a resist method of dyeing is created.
- Demonstrate safe use of tools and equipment.
- Rank Fibres in order of environmental impact.
- Justify the importance of sustainability within Textile manufacture.
- Calculate the costings of materials and production
- Explain the lifecycle of a cotton T-shirt
- Demonstrate a clear understanding of the manufacturing Process

Keyword	Definition
Machine	An apparatus using or applying mechanical power and having several parts.
Fabric	Cloth or other material produced by weaving or knitting fibres
Natural	Existing in or caused by nature; not made or caused by humankind
Fibres	A thread or filament from which a vegetable tissue, mineral substance, or textile
Resist	Withstand the action or effect of:
Textiles	A type of cloth or woven fabric
Aesthetics	A set of principles concerned with the nature and appreciation of beauty
Seam Allowance	Seam allowance is the extra fabric between the seamline and the edge of the fabric when two (or more) pieces of fabric are sewn together.
Design	A plan or drawing produced to show the look and function or workings of a building, garment, or other object before it is built or made
Needle	A very fine slender piece of metal with a point at one end and a hole or eye for thread at the other, used in sewing
Organic	Relating to or derived from living matter
Cotton	A soft white fibrous substance that surrounds the seeds of a tropical and subtropical plant and is used as textile fibre and thread for sewing
Fastening	A device that closes or secures something:
Equipment	The necessary items for a particular purpose:
Decorative	Serving to make something look more attractive, ornamental

Key Concepts

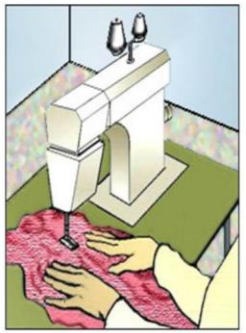
Tie Dye

Resist dyeing is a technique of colouring yarn or fabric in order to create a pattern by resisting certain areas, so that only the unblocked areas receive colours. Resist materials including thread, wax, rice or mud paste are used in this dyeing process on the basis of the patterns. Tie-dye method is a type of resist dyeing.



Health and Safety — Sewing Machines

- Only use sewing machines in a designated area of the classroom.
- Unplug the sewing machine when not in use.
- Do not use bent or broken needles.
- Switch off the sewing machine whilst making adjustments in the needle area.
- Keep fingers away from moving parts.
- Make sure foot peddle wiring is tidy and kept away from moving parts.
- Turn off the sewing machine before removing the plug from the socket.
- Make sure the machine is switched off and the foot peddle is packed away when finished.



NATURAL FIBRES

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Year 7 Tool Roll Project

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

- Explain how a resist method of dyeing is created.
- Demonstrate safe use of tools and equipment.
- Rank fibres in order of environmental impact.
- Justify the importance of sustainability within textile manufacture.
- Calculate the costings of materials and production
- Explain the lifecycle of a cotton T-shirt
- Demonstrate a clear understanding of the manufacturing process

Retrieval Practice

Questions	A1	A2	A3	A4	A5
A. How is cotton produced?	From a plant	From a factory	From Coal & oil	From Aldi	From a tree
B. Where does Silk come from?	A rabbit	A moth	A butterfly	A worm	A cow
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. What are Fibres?	A thin thread of a natural or synthetic substance	A source of material	An origin of cotton	A type of synthetic fibre	A fraying edge
E. What is Tie Dye?	A method of adding colour to fabric with paint	A Type of Resist Dyeing	A type a pattern dyeing	A type of printing	A type of fabric testing
F. What physical properties do fabrics have? (select more than 1)	Stretchy	Soft handle	Creases easily	Stiff	Strong

Which questions did you get wrong?	Quick Corrections (bridge learning gaps & misconceptions)

Career Focus - Where could this take you?

Textile designers create designs for knitted, printed and woven textiles.
Textile design can include designing:

- textiles for clothing and accessories
- fabrics and furnishings
- printed, paper-based products

You will need a foundation diploma in Art & Design or A level equivalent, Kirklees College offer a Level 1-3 in Art and Design and Leeds City College offer a Level 3 diploma in Fashion and Textiles, you will need 4 GCSE grades 4 and above including maths and English.
Salaries usually range from around £13,000 to £40,000 a year.

Challenge Activities

Properties _____

Suggested Fibre Type _____

Product Type _____

Properties _____

Suggested Fibre Type _____

Product Type _____

Topic Links

This topic links to:

- Science- How fibre properties are created and used.
- English- Subject specific Vocabulary knowledge, understanding and spelling.
- Maths - Material costings and standard measurements in length.

Additional Resources

To further practise and develop your knowledge see:

- The ONLY textiles recycling video YOU NEED TO WATCH – YouTube
- How to Tie-Dye at Home Like a Pro - Try These 5 Easy Techniques! – YouTube
- Classification Of Textile Fibers - Sources Of Textile Fibre – YouTube
- Fairtrade - How Cotton Is Produced - YouTube

Year 7 Resistant Materials

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

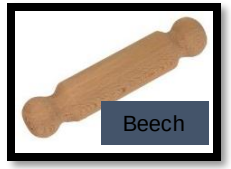
- Demonstrate safe use of tools and equipment.
- Explain a range of Decorative Techniques
- Rank Smart Fibres in order of environmental impact.
- Annotated a range of design ideas which include moral and cultural issues.
- Demonstrate an understanding of smart materials.

Keyword	Definition
Timber	**Timber** refers specifically to unprocessed wood fibre, such as cut logs or standing trees that have yet to be cut.
Softwood	Softwood is wood from gymnosperm trees such as conifers.
Hardwoods	Hardwood is wood from dicot trees. These are usually found in broad-leaved temperate and tropical forests.
Butt Joint	A butt joint is a technique in which two pieces of material are joined by simply placing their ends together without any special shaping.
Scroll Saw	A scroll saw is a small electric or pedal-operated saw used to cut intricate curves in wood,
Analysis	is the process of breaking a complex topic or substance into smaller parts in order to gain a better understanding of it.
Design Brief	A design brief is a document for a design project developed by a person or team (the *designer* or *design team*) in consultation with the *client/customer*.
Product Analysis	Product analysis involves examining product features, costs, availability, quality, appearance and other aspects.
Ergonomics	Human factors and ergonomics are the application of psychological and physiological principles to the engineering and design of products.
Dowel	A dowel is a cylindrical rod, usually made of wood, plastic, or metal.
Coping Saw	A coping saw is a type of bow saw used to cut intricate external shapes and interior cut-outs in woodworking or carpentry.
Orthographic	Orthographic projection is a means of representing three-dimensional objects in two dimensions.
Design	A design is a concept of either an object, a process, or a system that is specific and, in most cases, detailed.
Function	Means how a product works, what does it do.
Glass Paper	Thick paper which has tiny glass particles glues to the surface, used to sand down rough surfaces in wood,

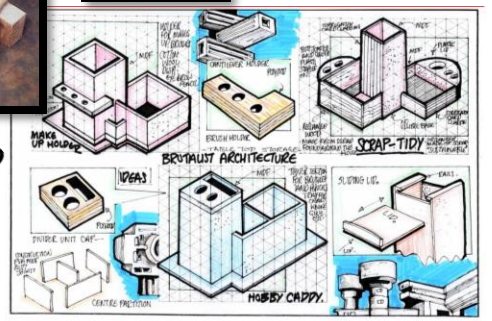
Key Concepts

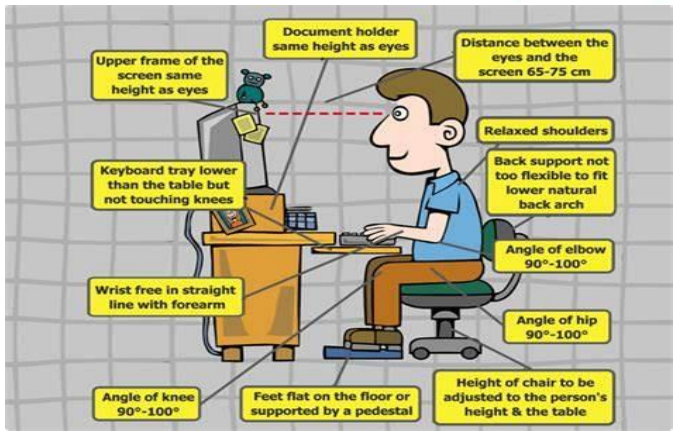
Product Analysis

Material Types



Ergonomics





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Year 7 Desk Tidy Project

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

- Demonstrate safe use of tools and equipment.
- Explain a range of Decorative Techniques
- Rank Smart Fibres 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

Question	A1	A2	A3	A4	A5
A. What is a Design Brief	Story	List	Outline	Prices	Function
B. What is a product analysis?	Function	Research	Aesthetics	Disassembling	Fixing
C. Types of Softwood. (select more than one)	Oak	Pine	Spruce	Teak	Balsa
D. Types of Hardwood. (select more than one)	Teak	Pine	Mahogany	Oak	Balsa
E. What is a consumer?	Maker	Buyer	Designer	User	Maintainer
F. What is ergonomics?	Measurements	Human interaction	Environmental	Costs	Protection

Questions Which you got wrong	Quick Corrections (bridge learning gaps & misconceptions)

Career Focus - Where could this take you?

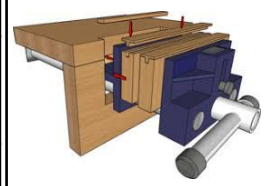
Carpenters apply diverse skills and use various materials and equipment to build or repair houses and other structures, wooden fittings and furniture. If you enjoy creating or restoration work, you may find a career in specialist carpentry a good fit for you.

Kirklees college offer an Onsite Construction: Carpentry and Joinery Level 3 you will need 5 GCSE grades 4 or above must include Maths and English.

Salaries usually range from £25,000-£48,000

Challenge Activities

Can you name the selection of equipment and explain how it is used?



Topic Links

This topic links to:

- Science- How trees are made and fiber properties.
- English- Subject specific Vocabulary knowledge, understanding and spelling.
- Maths- Measurements in cm for practical.

Additional Resources

To further practise and develop your knowledge see:

https://youtu.be/zfK7TLobsv0

https://youtu.be/7LBv2UWOI4Y

https://youtu.be/7s-l3XOobTM

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Year 7 Food Tech

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

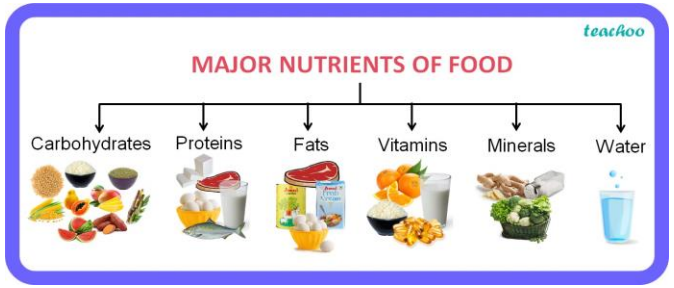
- Use safe and hygienic practices in a working kitchen environment
- Demonstrate sound preparation skills of both equipment and ingredients
- Safely use a range of cooking techniques, appropriate to the task

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

The 4Cs Concept

By practicing the four Cs of food hygiene **cross-contamination, cleaning, cooking and chilling** those working with food can avoid food poisoning and other illnesses.



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Year 7 Food Tech

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

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- Demonstrate sound preparation skills of both equipment and ingredients
- Safely use a range of cooking techniques, appropriate to the task

Key Concepts

Pizza

Ingredients:

2 pitta bread or flour tortilla
100g cheese
1 meat topping i.e. cooked ham or chicken
2 vegetable toppings i.e. half an onion/pepper/3 mushrooms

We will be chopping the toppings and grating the cheese in the lesson.

Equipment:

- Grater
- Vegetable knife
- Chopping board
- Baking tray
- Round bladed knife

Practical skills:

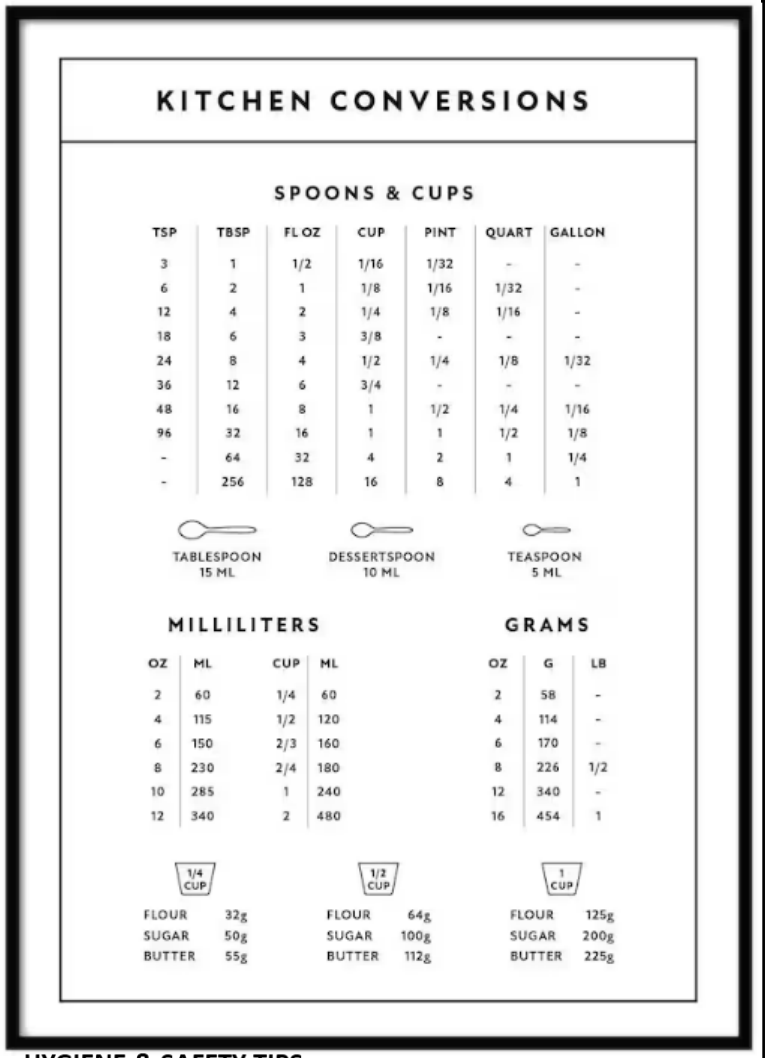
- Weighting & Measuring
- Baking: oven skills
- Timing
- Baking
- Knife skills: preparation of fruit and vegetables

KEY NUTRIENTS

- Carbohydrates starch and sugar
- Fat
- Protein
- Vitamins from the fruit

Method:

1. Preheat oven to 180c
2. Select the correct coloured chopping board and chop you veg and meat using correct methods
3. Grate your cheese into a bowl
4. Using a spoon, spread the passata sauce over the top of your bread and sprinkle on some oregano
5. Spread your toppings evenly across your pizza base
6. Add cheese over your toppings
7. Bake in the oven for 10 minutes.



HYGIENE & SAFETY TIPS

- Wash your hands with warm soapy water before you begin.
- Check gas ovens are lit correctly.
- Use oven gloves when you take tray out of the oven

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Year 7 Food Tech

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- 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

Stuffed Peppers

Equipment:

- Chopping board
- Vegetable knife
- Colander
- Wooden spoon
- Mixing bowl
- Table spoon
- Baking tray

Ingredients

25g couscous (provided by Miss Cole
1 large pepper
40ml boiling water
Stock cube
Spring onion/half red onion
1 tomato or 3 cherry tomatoes
30g grated cheese
Teaspoon parsley

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.
7.	**Preparing, combine and shape:** Techniques to prepare, cook and combine different ingredients.

Method:

1. Preheat oven to 180°c
2. Put your couscous into bowl and cover with 40ml boiling water. Add half of a stock cube and stir once. Cover with a plate.
3. Chop your spring onion, parsley and tomatoes finely.
4. Grate your cheese onto a plate.
5. Very carefully remove the top from your pepper and empty the seeds out. Use a metal spoon to help you scrape the insides out.
6. Mix your vegetables with your couscous and put inside your pepper.
7. Add the cheese on top of the pepper and wrap the pepper in tin foil.
8. Carefully put the pepper into the oven for 20 minutes. A few minutes before the end, very carefully remove the foil so that the cheese bubbles and caramalises

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Year 7 Food Tech

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- Demonstrate sound preparation skills of both equipment and ingredients
- Safely use a range of cooking techniques, appropriate to the task

Retrieval Practice

Questions	Answers
What are 8 tips for healthy eating?	• Base your meals on higher fibre starchy carbohydrates. • Eat lots of fruit and veg. • Eat more fish, including a portion of oily fish. • Cut down on saturated fat and sugar. • Eat less salt: no more than 6g a day for adults. • Get active and be a healthy weight. • Do not get thirsty. • Do not skip breakfast
Why is weighing and measuring important?	Weighing and Measuring for good results in most recipes, accurate weighing and measuring is essential. When you are baking with flour, sugar and liquids, you must measure accurately, or your cooking will be spoiled. If you weigh out too much sugar or too little raising agent, your cakes will not rise or you could spoil the taste and/or texture. Food can be weighed in Grams (g). 1000g = 1 Kilogram (kg). Liquid is measured in Millilitres (ml) or litres (l). 1000ml = 1 Litre(l)
What are the most important health and safety and personal hygiene rules?	• Be aware of sharp equipment such as knives, peelers and graters- store them carefully and use the bridge hold and claw grip when chopping. • Take care with hot equipment and food/ liquids- turn pan handles in, always use oven gloves and avoid splashes when stirring or draining foods. • Wipe up spills quickly so you do not slip over • Be aware of others in the kitchen • Report any accidents to the teacher • Tie hair back • Wash your hands

Career Focus - Where could this take you?

My job is a **food technologist** and I study foods and their nutritional content. I use laboratory skills and techniques to identify nutrients and calorie content of foods.
I need a genuine interest in science and how it is applied to food and cookery,
high standards of cleanliness and the ability to adhere to strict hygiene rules.

Challenge Activities

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

Energy Bar

Home made burgers

Chapatti recipe

For Further 30 minute recipes

Food skills are acquired, developed and secured over time

.

Bridge hold

Claw grip

Topic Links

This topic links to:

- English - relating explicitly to known vocabulary and understanding it with the help of context
- Mathematics - use standard units of mass, length, time, other measures
- Science: Nutrition and digestion RSE - What constitutes a healthy diet
- Physical health and fitness - The characteristics and mental and physical benefits of an active lifestyle.

Additional Resources

To further practise and develop your knowledge see:

Eat well guide Quiz

Eat well guide

Eat well video resource

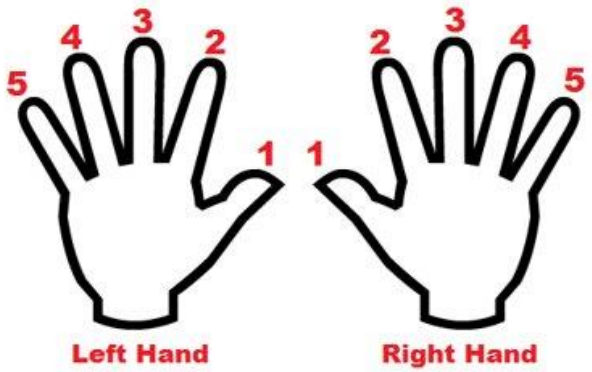
Year 7 Keyboard Skills and Notation

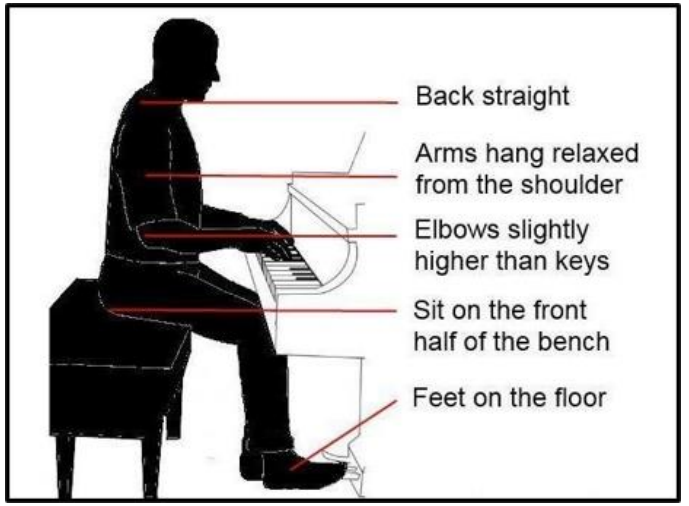
The aims of the sequence of learning are to ensure that all students:

- Develop keyboard skills using correct keyboard technique
- Learn the relevant technical musical vocabulary
- Learn how to read basic pitch notation using the treble and bass clef
- Learn to perform a range of keyboard pieces, demonstrating articulation and expression, as well as technique

Keyword	Definition
Keyboard	a set of keys on a piano or similar musical instrument.
Octave	A range of 8 notes e.g. C to C
Technique	The correct way to carry out a task, such as how to play a musical instrument
Ascending	Pitch going up
Descending	Pitch going down
Stave	The five lines and 4 spaces that all western notation is written
Treble Clef	The treble clef is a tool musicians use to notate pitches above middle C on the piano
Tone/Semi-tone	A semitone (or half step) **is the distance in pitch between a note and its nearest neighbour. E.g. C to C sharp. A tone is two steps**
Scale	An ordered sequence of notes
Fluency	Being able to perform without hesitancy
Sharp	**Higher in pitch by one semitone**
Flat	Lower in pitch by one semitone

Key Concepts





Performing with the correct technique is important as without good technique, you will not be able to play correctly or accurately. Use these images to help you.

Year 7 Keyboard Skills and Notation

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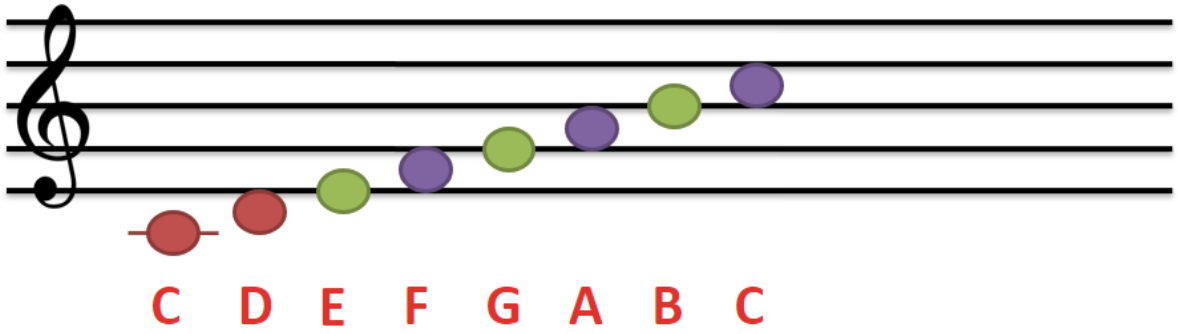
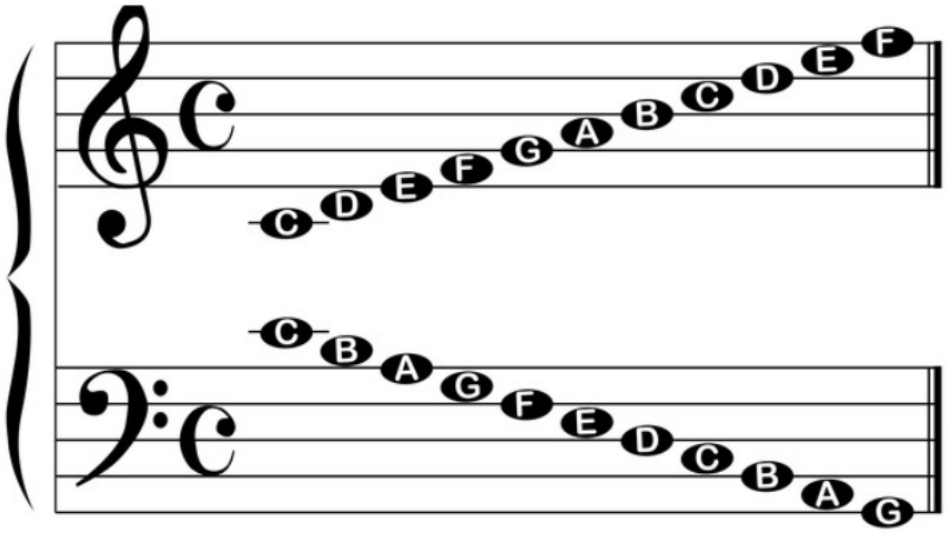
C Major Scale





Treble Clef

Bass Clef

Career Focus - Where could this take you?

I am a piano tuner. Pianos are made up of hundreds of strings and these strings can become lose and go out of tune. I have a range of tools that helps me to retune the strings in the piano. I can also fix parts of pianos to make them playable again. I also can play the piano and have an excellent ear for pitch.

Challenge Activities

Name that pitch! https://www.musictheory.net/exercises/note

Further reading https://www.musicca.com/notes

Another quiz! https://www.musictheoryacademy.com/music-theory-quizzes/

Topic Links

This topic links to
Maths – understanding of pitch requires knowledge of half steps and full steps and the ability to count in different intervals

Science – pitch is a scientific concept. Concert A has a frequency of 440 Hz vibrations per second

Additional Resources

Free sheet music for piano - https://makingmusicfun.net/htm/printit_piano_sheet_music_index

Have a go at writing your own melody - https://www.bbc.co.uk/bitesize/topics/z3dqhyc/articles/z7n2qp3

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Year 7 Net and Wall Games

The aims of the sequence of learning are to ensure that all students:
- Can identify at least three core skills required for net and wall games
- Demonstrate core skills in a practice situation
- Demonstrate core skills in a game situation
- Lead a small group of peers in a skill practice session

Keyword	Definition
Racket	A piece of equipment with a handle, frame and head. This is used to hit the shuttle or ball over the net
Shuttle	A cone shaped object with a cork base. This is hit over the net with the racket.
Net	Rectangular net placed across the court. It divides the court in two.
Court	The playing surface area marked out with lines
Table	The playing surface used to play table tennis
Serve	A shot that is selected to start a game in net and wall activities
Forehand shot	Shot taken with the palm of your hand facing the direction of the stroke

Key Concepts You should already know:- The aim of net and wall games
You will be assessed on:- Understanding - Technique in isolation - Technique in game - Leadership - Attitude to learning

Table Tennis Key Concepts

Ready Position

Players should always be in the ready positon before receiving the ball.

- Knees bent
- Feet shoulder width apart
- Feet shoulder width apart
- Racket should be level with the table and in front of body

Backhand push

- Ready position
- Controlled backswing so your elbow bends inwards towards chest (making an L shape)
- Forward movement comes from the elbow making contact underneath the ball
- Finish by extending your arm in the follow through (changing from an L shape to a I shape)

Forehand Drive

- Ready position
- Controlled backswing, with striking arm opening up extending outwards
- Positive forward movement, arm moves forward and weight transfers from right to left foot
- Strike the ball on top of the bounce
- Follow through the shot, moving upwards and finishes in line with your nose

Backhand serve

- Ready position
- The ball rests in the palm of the resting hand
- Arm moves back towards chest
- Toss the ball up (at least 15cm)
- Forward movement comes from the elbow making contact down on the ball so it bounces on your half of the table first
- Head should be over the ball when making contact
- Follow through by returning to the ready position

Badminton Key Concepts

The Basics

The aim of badminton is to hit the shuttle with your racket so that it passes over the net and lands inside your opponent's half of the court. Whenever you do this, you have won a rally; win enough rallies, and you win the match.

Your opponent has the same goal. He will try to reach the shuttle and send it back into your half of the court. You can also win rallies from your opponent's mistakes: if he hits the shuttle into or under the net, or out of court, then you win the rally.

Scoring
A point is scored when you successfully hit the shuttlecock over the net and land it in your opponent's court before they hit it. A point can also be gained when your opponent hits the shuttlecock into either the net or outside the parameters

To win a game you must reach 21 points before your opponent. If you do so then you will have won that set. If the scores are tied at 20-20 then it comes down to whichever player manages to get two clear points ahead. If the points are still tied at 29-29 then the next point will decide the winner of the set. Winning the overall game will require you to win 2 out of the 3 sets played.

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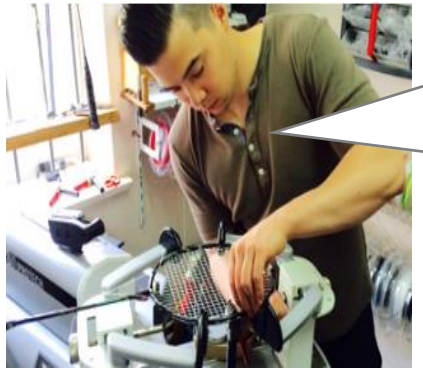
Year 7 Net and Wall Games

The aims of the sequence of learning are to ensure that all students:
• Can identify at least three core skills required for net and wall games • Demonstrate core skills in a practice situation
• Demonstrate core skills in a game situation • Lead a small group of peers in a skill practice session

Retrieval Practice

Questions	Answers
What are some of the core skills needed for attacking in badminton?	1. Smash shot is a core skill. The aim is to hit the shuttle as hard as possible to the oppositions side of the court . 2. The long serve is a core skill for attacking in badminton. The aim is to send the opponent to the back of the court.
What are some of the core skills needed for defending in badminton?	1. The overhead clear shot is used in a rally situation so that you force your opponent to move to the back of the court. 2. The drop shot is a gentle forehand or backhand shot that applies little force to the shuttle, so it drops just over the net.
What are some of the core skills needed for attacking in table tennis?	1. Top spin forehand drive shot is a fast open palm shot facing the direction of the stroke. By placing top spin on the ball, the balls rotation means it travels faster. 2. Back spin forehand or backhand shot is a skill that is designed to slow down the speed of a rally in table tennis.
What are some of the core skills needed for defending in badminton?	1. Backhand push shot and the forehand push shot are two skills designed to slow down the speed of a rally in a game. This gives the person more time to react to the next shot.

Career Focus - Where could this take you?



I am a professional badminton racket maker. My main job is to repair and re-string professional athletes' rackets. I have to ensure the quality and accuracy with the weight of the racket, balance point, string tension and hand grip.

Challenge Activities

Design a skill card:
This can be used in a PE lesson to help a student to assess their current ability level. Make the skill card to teach the correct way to Serve in either badminton or table tennis.

Create a rules of the game poster:
This can be used by all students in their PE lessons for badminton or table tennis when their role is umpiring a game so that all games can be played fairly, following RITA values.
Your poster should have 3-5 basic rules.

Topic Links

This topic links to:
- Science –The role of the cardiovascular system; the physics of sports
- English –understanding and defining key terminology
- Mathematics –problem solving, recording figures and analysing performance and score keeping
- Voice 21 –coaching peers and explaining rules by officiating

Additional Resources

To further practise and develop your knowledge see:

https://www.badmintonengland.co.uk/

https://www.tabletennisengland.co.uk/

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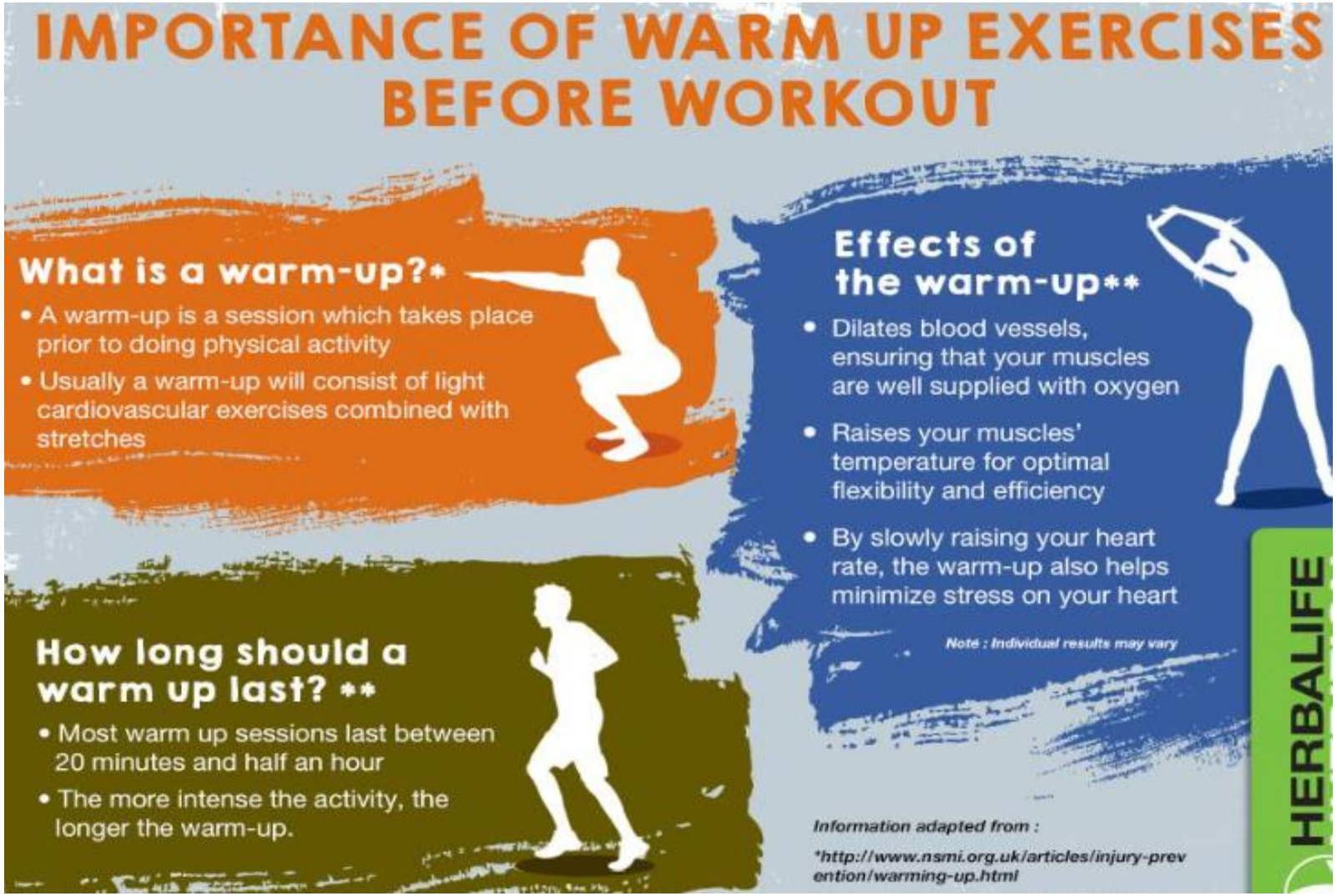
Year 7 Health and Fitness

The aims of the sequence of learning are to ensure that all students:
Being able to demonstrate the: set up, completion and interpretation of fitness tests. Learning about and understanding the components of fitness and how they can be trained. Learning which components of fitness are important to specific types of athlete. Learning about and completing training sessions to train specific components of fitness. Learning how to live a healthy, active lifestyle.

Keyword	Definition
Power	Power = strength x speed. They are used together to move in sport.
Co-ordination	The ability for muscles to move different body parts in time.
Reaction Time	The time taken for a person to react to the movement in sport.
Agility	The ability to change direction at speed.
Balance	The ability to maintain your centre of mass and control without falling over.
Speed	To move quickly in the shortest time over a distance. Speed=distance/time.
Cardiovascular endurance	The ability for the heart and blood vessels to transport oxygenated blood to the working muscles so they work for a long time.
Muscular strength	The maximum force that your muscles can make to move an object.
Muscular endurance	Your muscles can work continuously at a low to medium level 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 person's 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

Health and Fitness Key Concepts



Year 7 Health and Fitness

The aims of the sequence of learning are to ensure that all students:
Being able to demonstrate the: set up, completion and interpretation of fitness tests. Learning about and understanding the components of fitness and how they can be trained. Learning which components of fitness are important to specific types of athlete. Learning about and completing training sessions to train specific components of fitness. Learning how to live a healthy, active lifestyle.

Retrieval Practice:

Use the missing words to complete the fitness testing protocols for the three different tests below.

What is the test protocol?
(Fill in the missing words)

Missing words:
Between,
Side,
Average,
Static,
Tips

Standing Long Jump test

- The athlete chalks the end of his/her finger tips
- The athlete stands _____ onto the wall, keeping both feet remaining on the ground, reaches up as high as possible with one hand and marks the wall with the _____ of the fingers
- The athlete from a _____ position jumps as high as possible and marks the wall with the chalk on his fingers
- The assistant measures and records the distance _____ the two marks
- The athlete repeats the test 3 times
- The assistant calculates the _____ of the recorded distances and uses this value to assess the athlete's performance.

What is the test protocol?
(Fill in the missing words)

Missing words:
Tips,
Extended
Reaches
Average
Shoes

Sit and reach test

- The athlete warms up for 10 minutes and then removes their _____.
- The assistant secures the ruler to the box top with the tape so that the front edge of the box lines up with the 15cm (6 inches) mark on the ruler and the zero end of the ruler points towards the athlete.
- The athlete sits on the floor with their legs fully _____with the bottom of their bare feet against the box.
- The athlete places one hand on top of the other, slowly bends forward and _____along the top of the ruler as far as possible holding the stretch for two seconds.
- The assistant records the distance reached by the athlete's finger _____(cm).
- The athlete performs the test three times.
- The assistant calculates and records the _____of the three distances and uses this value to assess the athlete's performance.

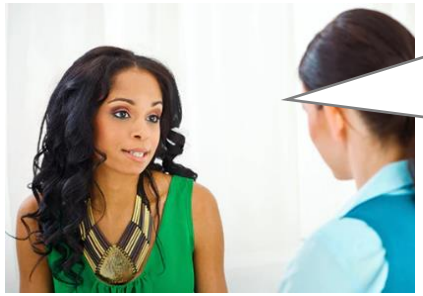
What is the test protocol?
(Fill in the missing words)

Missing words:
Whistle
Warms up
Go
400m
12 minutes

Cooper 12 min run

- The athlete _____ for 10 minutes.
- The assistant gives the command "____", starts the stopwatch and the athlete commences the test.
- The assistant keeps the athlete informed of the remaining time at the end of each lap (_____).
- The assistant blows the _____ when the _____ has elapsed and records the distance the athlete covered to the nearest 10 metres.

Career Focus - Where could this take you?



My career is known as a healthy lifestyle coach. I help people with problems linking to their health. I give advice on how people can change their physical, mental and social health by setting goals and targets for people to achieve.
My job is very rewarding as it makes a positive impact on people's lives.

Challenge Activities

Design a Fitness test knowledge card:-
Can you create a fitness test card that shows the instructions on how to complete the tests and include a picture and diagram to help with your understanding. This could be completed using a computer or on A4 paper.

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

This topic links to:
- RSHE – Understanding physical activity can help with 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 and the reasons why it is important to warm up.

Additional Resources

To further practise and develop your knowledge see:

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

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

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Usernames and Passwords
