Year 8 – HT6

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Knowledge Organisers

Name:

Team:

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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.

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8.25 Factorising Quadratic Expressions

The learning outcomes for this topic are:

- Factorise an Expression into a Single Bracket
- Factorise a Positive Expression into Two Brackets
- Factorise an Expression with Negatives into Two Brackets
- Factorise a Quadratic which is a Difference of Two Squares
- Factorise into Square Brackets
- Factorise a Non-Unitary Quadratic

Key Word	Definition
Factorise	to find expressions or terms which multiply together to give the original expression
Positive	a number which has a value greater than zero
Expression	a set of terms combined using the operations +, -, x or ÷
Square	an item which has been multiplied by itself
Unitary	an expression or equation where the coefficient of the largest power is one
Non-unitary	an expression or equation where the coefficient of the largest power is not one
Difference of two Squares	a type of expression which factorises to give a square term minus another square term

Careers Focus – Where could this take you?

A Ballistics Engineer may factorise quadratic expressions as part of their work to determine the likely path of a projectile, possibly to try to determine where a bullet was fired from and help solve crime.

Additional Resources

MathsWatch: A9, 157

CorbettMaths Videos 117, 118, 119 Worksheets 117, 118, 119

Curriculum Links - Coherence

Required Knowledge:
8.24 Expanding Two or more Brackets
7:13 Simplifying after expanding and factorizing single brackets

Applied to:
9F16 Basic Algebra, Substitution, Expanding Brackets, Factorisation
9H20 Basic Algebra, Factorisation, Quadratic Expansion, Expanding squares

Links across school:
Faxctorising Quadratic Expressions may be used in Physics when find in solutions to SUVAT equations.

Key Concepts

A quadratic expression in maths is an expression including a squared term or square number i.e. a term up to x^2.

The highest power for a quadratic expression is 2.

The general form of a quadratic expression is:

$ax^2 + bx + c$

a is the coefficient (number in front) of the x^2 term

b is the coefficient (number in front) of the x term

c is the constant term (number on its own)

e.g.

$x^2 - 2x + 1$

$2x^2 + 3x - 2$

We factorise quadratic expressions of this sort using double brackets. There are different methods we can use depending on whether the coefficient of x^2 is greater than 1.

To factorise a quadratic expression in the form $x^2 + bx + c$ we need **double brackets**. Factorisation into double brackets is the reverse process of expanding double brackets.

In this case, the coefficient (number in front) of the x^2 term is 1 (a=1). These are known as monic quadratic.

Factorising

$$x^2 + 6x + 5 \equiv (x + 5)(x + 1)$$

Expanding brackets

In order to factorise a **quadratic** algebraic expression in the form $x^2 + bx + c$ into double brackets:

1. Write out the factor pairs of the last number (c).
2. Find a pair of factors that + to give the middle number (b) and × to give the last number (c).
3. Write two brackets and put the variable at the start of each one.
4. Write one factor in the first bracket and the other factor in the second bracket. The order isn't important, the signs of the factors are.

Concept – what it is	Non-Concept – what it isn't
Factorise $x^2 + 5x + 6$ In this question, we are looking to find a pair of numbers which add to 5, and multiply to make 6. Numbers which solve both are 3 and 2, so the solution is (x+2)(x+3) Your can check by multiplying out the brackets which gives $x^2 + 3x + 2x + 6$, which simplifies to $x^2 + 5x + 6$	Make sure you look for pairs of numbers which multiply to give the number part, and add to give the 'x' coefficient, and not the other way around. Don't get confused by expressions such as $x^2 + 16$. This is not a difference of two squares type as the number has a positive coefficient, so it cannot be factorised. $(x+4)(x+4) = x^2 + 4x + 4x + 16$ $=x^2 + 8x + 16$
Standard Examples	**Non-Standard Examples**
Factorise $x^2 - x - 12$ In this question, we are looking to find a pair of numbers which multiply to make – 12, and add to make -1. Numbers which satisfy both are -4, and + 3, so the solution is (x+3)(x-4) Checking by multiplying out the brackets gives $x^2 - 4x + 3x - 12$, which simplifies to $x^2 - x - 12$	Factorise $x^2 - 16$ In this question, we are looking to find a pair of numbers which multiply to make – 16, and add to make 0. Numbers which satisfy both are +4 and – 4, so the solution is (x+4)(x-4) Checking by multiplying out the brackets gives $x^2 - 4x + 4x - 16$, which simplifies to $x^2 - 16$

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- Factorise into Square Brackets
- Factorise a Non-Unitary Quadratic

Useful Formulae and Hints

If the coefficient of x^2 is 1, when factorising, you are trying to find a pair of numbers which multiply together to give the number part, and add together to give the 'x' coefficient.

This means that if both signs are positive in the quadratic, you are looking for two positive numbers,

If the sign in front of the number part of the quadratic is negative, you will be looking for positive and a negative number,

If the sign in front of the number part if positive, and the coefficient of 'x' is negative, then you are looking for two negative numbers to complete the brackets.

If there is no 'x' part at all, then you are looking for positive and negative pair which square to give the negative of the number part.

GCSE Questions

Factorise $x^2 + 5x + 6$

.....

(2)

Factorise $x^2 + 9x + 20$

.....

(2)

Factorise $x^2 - 7x + 12$

.....

(2)

Factorise $y^2 - 9y + 14$

.....

(2)

Factorise $x^2 + x - 6$

.....

(2)

Factorise $x^2 - 2x - 24$

.....

(2)

Factorise $x^2 - 25$

.....

(2)

Factorise $y^2 - 9w^2$

.....

(2)

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8.26 Pythagoras's Theorem

The learning outcomes for this topic are:

- Find a Longer Side using Pythagoras's Theorem
- Find a Shorter Side using Pythagoras's Theorem
- heck if a Triangle is Right-Angled using Pythagoras's Theorem
- Use Pythagoras with Isosceles Triangles
- Solve Real Life Problems with Pythagoras
- Use Pythagoras on Triangles with Algebraic Side Lengths

Key Word	Definition
Pythagoras	a method for finding missing sides in right-angled triangles
Hypotenuse	the longest side in a right-angled triangle
Shorter	an item which is not as long as another item
Perpendicular	a line which is at right-angles to another line
Right-angle	an angle of 90^o
Isosceles	a triangle which has exactly two equal sides
Coordinate	a single point on a set of axes

Careers Focus – Where could this take you?

A Land Agent may use Pythagoras in the course of his work to help to estimate the lengths of fields or properties, to determine the length of boundaries or even to estimate the length of paths across fields.

Additional Resources

MathsWatch: G30, 150a, 150b

CorbettMaths Videos 257, 260, 261 Worksheets 257, 260, 261

Curriculum Links - Coherence

Required Knowledge:
7:12 Substitution and using and writing Formulae
8:14 Rearranging formulae

Applied to:
10F20 Pythagoras's Theorem, Real Life, Isosceles Triangles
10H3 Pythagoras, Real Life, Isosceles, 3D

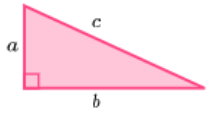
Links across school:
Pythagoras may be used in Geography in map reading to try to estimate the exact distance between 2 points where the difference in longitude and latitude are known.

Key Concepts

Pythagoras theorem states that the square of the longest side of a right angled triangle (called the hypotenuse) is equal to the sum of the squares of the other two sides.

Pythagoras theorem is:

$a^2 + b^2 = c^2$

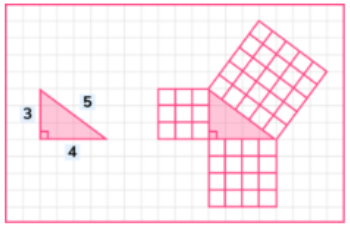


Side c is known as the **hypotenuse**, which is the longest side of a right-angled triangle and is opposite the right angle.
Side a and side b are known as the **adjacent** sides because they are adjacent (next to) the right angle.

If we know any **two sides** of a **right angled triangle**, we can use Pythagoras theorem to work out the length of the **third side**.

We can only use Pythagoras theorem with **right-angled triangles.**

E.g.
Let's look at this right-angled triangle:



We can see that three squares have been drawn next to each of the sides of the triangle.
The area of the square with side length $3 = 3 \times 3 = 3^2 = 9$
The area of the square with side length $4 = 4 \times 4 = 4^2 = 16$
The area of the square with side length $5 = 5 \times 5 = 5^2 = 25$
We can see that when we **add together** the **areas** of the **squares** on the **two shorter sides** we get the **area** of the **square** on the **longest side**.

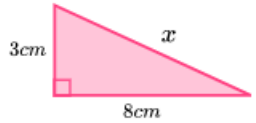
$9 + 16 = 25$

We can see that when we **square the lengths** of the **two shorter sides** of a right angled triangle and **add** them together, we get the **square** of the **longest side**.

$3^2 + 4^2 = 5^2$

Concept – what it is

Find x and give your answer to 2 decimal places.



$a^2 + b^2 = c^2$

$3^2 + 8^2 = x^2$

$x^2 = 3^2 + 8^2$

$x^2 = 9 + 64$ $\quad x = \sqrt{73} = 8.5440037\ldots$

$x^2 = 73$ The final answer is:

$x = \sqrt{73}$ $\quad x = 8.54$cm to 2 decimal places

Non-Concept – what it isn't

You can only use Pythagoras's theorem on right angled triangles.

Make sure you know if you are finding the longer side (adding the squares), or a shorter side (subtracting the squares)

When working with an isosceles triangle, remember to only use half of the length of the side which is a different length in any calculations to form the right angled triangle

Standard Examples

Find x and give your answer to 3 significant figures:

$a^2 + b^2 = c^2$

$x^2 + 11^2 = 20^2$

$x^2 + 121 = 400$

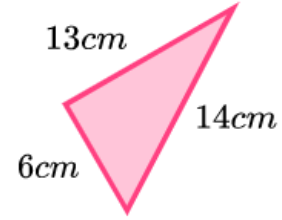
$x^2 = 400 - 121$ $\quad x = \sqrt{279} = 16.70329\ldots$

$x^2 = 279$ The final answer is:

$x = \sqrt{279}$ $\quad x = 16.7$cm to 3 significant figures

Non-Standard Examples

Does the triangle have a right angle?



If it has a right angle, $a^2 + b^2 = c^2$, so

$6^2 + 13^2$ would have to equal 14^2,

$36 + 169 = 205$, and not 196, so the triangle doesn't have a right angle.

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8.26 Pythagoras's Theorem

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- heck if a Triangle is Right-Angled using Pythagoras's Theorem
- Use Pythagoras with Isosceles Triangles
- Solve Real Life Problems with Pythagoras
- Use Pythagoras on Triangles with Algebraic Side Lengths

Useful Formulae and Hints

You can only use Pythagoras's theorem on right angled triangles.

Identify the hypotenuse at the start of the question and identify whether you are finding a longer side, or a shorter on, so you know whether you will be adding the squares or subtracting them.

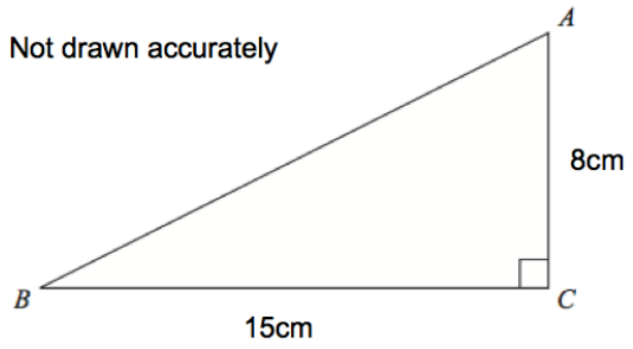
Ensure you only use half of the 8cm length in the isosceles triangle question as this will create your right angled triangle and allow you to use Pythagoras.

On the trapezium question, divide the shape up into a rectangle and a right angled triangle and remember that the height of the triangle is the same as the rectangle.

When you have found the missing length of the triangle, don't forget to add on the length of the rectangle to get full length BC.

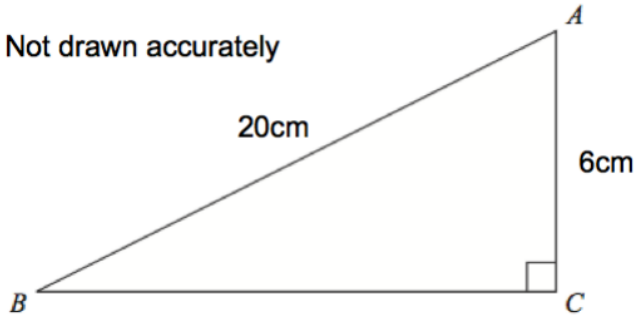
Ensure you give any answers to the accuracy stated in the question or you will drop a mark even if your working is correct.

GCSE Questions



ABC is a right-angled triangle.
AC = 8cm.
BC = 15cm.

Calculate the length of AB.



ABC is a right-angled triangle.
AC = 6cm.
AB = 20cm.

Calculate the length of BC.
Give your answer correct to 1 decimal place.

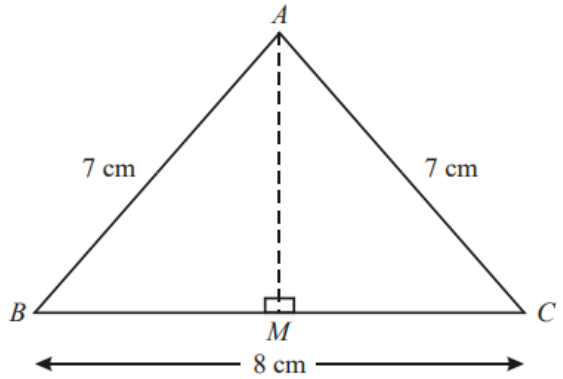


Diagram **NOT** accurately drawn

Work out the length, in centimetres, of *AM*.
Give your answer correct to 2 decimal places.

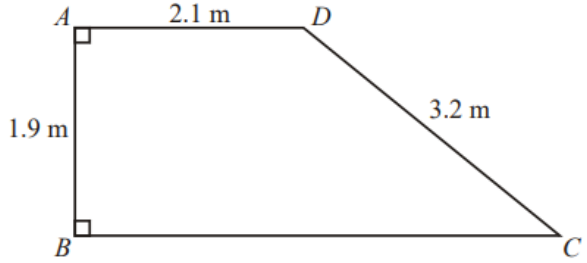


Diagram **NOT** accurately drawn

ABCD is a trapezium.
AD is parallel to *BC*.
Angle *A* = angle *B* = 90.
AD = 2.1 m, *AB* = 1.9 m, *CD* = 3.2 m.

Work out the length of *BC*.
Give your answer correct to 3 significant figures.

8.27 Direct Proportion and Graphs

The learning outcomes for this topic are:

- Solve Simple Direct Proportion Problems by Multiplying by an Integer
- Solve Simple Direct Proportion Problems by dividing by an Integer
- Complete a Table of Values for Two Quantities in Direct Proportion
- Draw a Direct Proportion Graph from a Table of Values
- Find Values using the Unitary Method
- Find a Constant of Proportionality and use to Find Missing Values for Direct Proportion

Key Word	Definition
Proportion	a fair share of an amount divided according to criteria
Direct	where one item changes in proportion with another
Origin	the point (0,0) on a set of axes
Straight	a line which points in a single direction for it's whole length
Multiply	repeated addition of a number
Divide	repeated subtraction of a number
Graph	a pictorial representation of how variables interact
Unitary	an expression or equation where the coefficient of the largest power is one
Equation	a formula stating that two expressions are equal

Careers Focus – Where could this take you?

A Chef may use direct proportion to determine the amount of ingredients required to make different numbers of dishes.

Additional Resources

MathsWatch: R8

CorbettMaths Videos 254, 256 Worksheets 254, 256

Curriculum Links - Coherence

Required Knowledge:
8:12 Unit Cost and Best Buys

Applied to:
8:28 Inverse Proportion and Graphs
10F22 Congruent Triangles and Similarity
10H5 Similar Triangles, Congruency, Area and Volume of Similar shapes

Links across school:
Direct proportion may be used in chemistry to scale up or down the amount of chemicals used in an experiment to produce different amounts of products.

Key Concepts

Direct proportion is a type of proportionality relationship. For direct proportion, as one value increases, so does the other value and conversely, as one value decreases, so does the other value.

The symbol $\propto$ represents a **proportional relationship**.

If y **is directly proportional to** x, we can write this relationship as:

$y \propto x$

Direct proportion is useful in numerous real life situations such as exchange rates, conversion between units, and fuel prices.

The **direct proportion formula** allows us to express the relationship between two variables, using an equivalence relationship; the formula contains an equals symbol (=) instead of the proportionality symbol ($\propto$).

When y is directly proportional to x, the value of $y \div x$ is a constant value. This is known as the **constant of proportionality** and we use the letter k to denote this number.

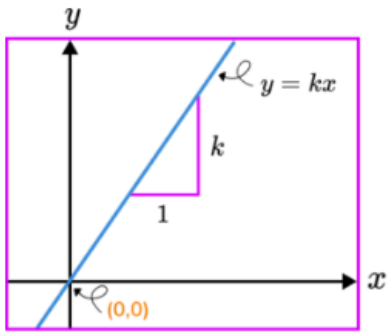
Given that $k = y \div x$, we can rearrange this formula to make y the subject, and hence obtain the standard format of the direct proportion formula:

$y = kx$

Proportional relationships can also be represented graphically.

If we sketched the straight line graph for the equation $y = kx$, the line must go through the origin $(0, 0)$ as the value of the y-intercept is 0, and the gradient of the line is equal to the value of k.

Step-by-step guide: y=mx+c.



Concept – what it is

Example – a baker uses 600g of flour to make 12 cakes, how much will he use to make 20 cakes?

Find out the amount of flour for 1 cake.

600 ÷ 12 = 50g

Then find the amount in 20 cakes

50 x 20 = 1000g or 1Kg

Non-Concept – what it isn't

Ensure you know whether the relationship between the variables is that of direct proportion where one increases as the other increases or that of inverse proportion where one decreases as the other increase.

You can only use multiplication or division with proportion in order to maintain the relationship between variables – doing to one variable exactly what you did to the other. Don't be tempted to add or subtract.

Standard Examples

When going on holiday, I exchanged £400 for $460. if the exchange rate stays the same, how many pounds will I get for the $92 I returned with?

Find the exchange rate.

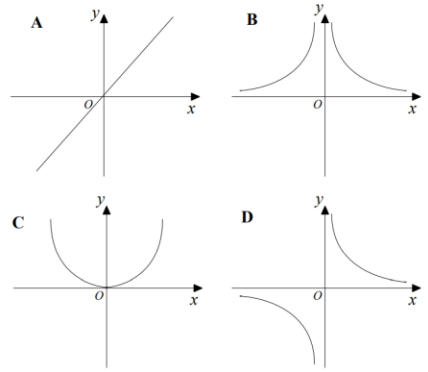
460 ÷ 400 = 1.15 $/£

Calculate the pounds for $92

$92 ÷ 1.15 = £80

Non-Standard Examples

Which of the following graphs shows direct proportion?



A – it is a straight line with a positive gradient, passing through the origin.

8.27 Direct Proportion and Graphs

The learning outcomes for this topic are:

- Solve Simple Direct Proportion Problems by Multiplying by an Integer
- Solve Simple Direct Proportion Problems by dividing by an Integer
- Complete a Table of Values for Two Quantities in Direct Proportion
- Draw a Direct Proportion Graph from a Table of Values
- Find Values using the Unitary Method
- Find a Constant of Proportionality and use to Find Missing Values for Direct Proportion

Useful Formulae and Hints

Often it is a good idea to find the cost of one item, or the cost of one hour's work as a first step in this type of question.

If there is a common factor between what you know and what you are finding, using this value as a stepping stone can make the calculations simpler.

A direct proportion graph looks like a straight line with a positive gradient which passes through the origin.

To find a constant of proportionality, replace the $\propto$ symbol with =k and substitute a pair of values for 'x' and 'y'. Solve and k is your constant.

GCSE Questions

Keith buys 6 pencils for 90p

(a) How much does one pencil cost?
(b) How much would five pencils cost?
(c) How much would eleven pencils cost?

A plumber charges £140 for a 4 hour job.

How much does the plumber charge for a 3 hour job?

Rebecca is making Chilli Con Carne.
Here is a list of ingredients to serve 6 people.

Rebecca wants to make enough Chilli Con Carne for 4 people.

How much of each ingredient does Rebecca need?

serves 6
1.2kg mince
420g tomatoes
3 chillies
600g kidney beans

y is directly proportional to the square of x.
When y = 24, x = 2.

Find the value of y when x = 4.

y = ...
(3)

Copy and complete each table using the statement beside it.

(a)

x	8	10	15	22
y	24			

$y \propto x$

(b)

p	5	7	9	11
q		42		

$q \propto p$

8.28 Inverse Proportion and Graphs

The learning outcomes for this topic are:

- Solve Simple Inverse Proportion Problems by Multiplying by an Integer
- Solve Simple Inverse Proportion Problems by Dividing by an Integer
- Complete an Table of Values for Two Quantities in Inverse Proportion
- Draw an Inverse Proportion Graph from a Table of Values
- Find Values using the Unitary Method
- Find a Constant of Proportionality and use to Find Missing Values for Inverse Proportion

Key Word	Definition
Proportion	a fair share of an amount divided according to criteria
Inverse	an action which undoes a previous action
Curve	a smooth line which isn't straight
Reciprocal	a number which multiplies by another number to make one
Multiply	repeated addition of a number
Divide	repeated subtraction of a number
Graph	a pictorial representation of how variables interact
Unitary	an expression or equation where the coefficient of the largest power is one
Equation	a formula stating that two expressions are equal

Careers Focus – Where could this take you?

A Human Resources Manager may use Inverse Proportion to try to determine how many people to schedule onto different jobs in order to complete them in the required time.

Additional Resources

MathsWatch: R13, 199

CorbettMaths Videos 255 Worksheets 255

Curriculum Links - Coherence

Required Knowledge:
8:12 Unit Cost and Best buys
8:27 Direct Proportion and Graphs

Applied to:
10F22 Congruent Triangles and Similarity
10H5 Similar Triangles, Congruency, Area and Volume of Similar shapes

Links across school:
Inverse Proportion may be used in physics as a way to simplify certain Speed, Distance, Time problems.

Key Concepts

Inverse proportion is a type of **proportionality** relationship. If two quantities are inversely proportional then as one quantity increases, the other decreases.

An example of inverse proportion would be the hours of work required to build a wall. If there are more people building the same wall, the time taken to build the wall reduces.

Conversely, an example of **direct proportion** would be that the area of a circle is directly proportional to its radius.

Inverse proportion is also known as **indirect proportion** or **inverse variation**.

Inverse proportion is applied to real life problems such as the speed of a moving object, determining whether an item will float or sink in water, or the time taken to complete a finite task whereas direct proportion is useful in numerous real life situations such as exchange rates, conversion between units, and fuel prices.

To determine the value of a variable that is inversely proportional to another, we need to determine the relationship between the two variables and then use this to find our unknown value.

Similar to a directly proportional relationship, we need to determine the constant of proportionality, k.

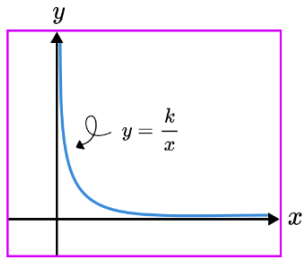
The symbol $\propto$ is the proportionality symbol and it represents a proportional relationship between two variables. If it is inversely proportional to x, we write this relationship as $y \propto \frac{1}{x}$.

This relationship can be described using an equivalence relationship. When y is inversely proportional to x, the value of $x \times y$ is a constant value. This value is the constant of proportionality and we use the letter k to denote this value. Using a formula, we have $k = xy$.

Rearranging this formula to make y the subject, we obtain the inverse proportion formula,

$y = \frac{k}{x}$.

Proportional relationships can also be represented by graphs. If we sketched a graph of the line $y = \frac{k}{x}$, as x increases in size, k is being divided by a larger number and so the result is a value y that gets increasingly smaller. This gives us the curved line graph of the reciprocal function.



Concept – what it is

Example – It takes 8 people 6 hours to build a wall, how long would it take 3 people to build the same wall.

Find the total amount of time needed for the job.

8 x 6 = 48 hours

Divide the total time by the number of people available

48 ÷ 3 = 16 hours

Notice that as the number of people decreases, the time increases.

Non-Concept – what it isn't

Ensure you know whether the relationship between the variables is that of direct proportion where one increases as the other increases or that of inverse proportion where one decreases as the other increase.

Standard Examples

Given that y is inversely proportional to x, calculate the missing value of y in the table below.

x	3	12
y	20	

As $y \propto \frac{1}{x}$, we can write the formula $y = \frac{k}{x}$.

Substituting a known pair of values $(3, 20)$, we can say,

$20 = \frac{k}{3}$

$20 \times 3 = k$

$k = 60$

Now we have the equation $y = \frac{60}{x}$. Substituting $x = 12$ into the equation to calculate the value for y, we have

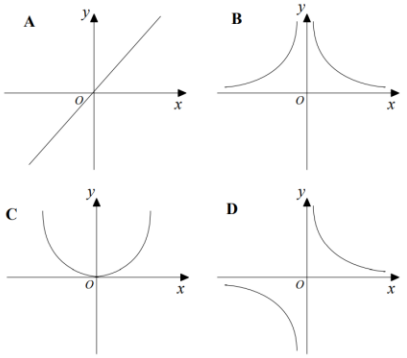
$y = \frac{60}{12}$.

Dividing 60 by 12, we have $y = 5$.

Notice that as the value for x increased, the value for y decreased.

Non-Standard Examples

Which one of these graphs shows inverse proportion?



Graph D is the answer as it

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8.28 Inverse Proportion and Graphs

The learning outcomes for this topic are:

- Solve Simple Inverse Proportion Problems by Multiplying by an Integer
- Solve Simple Inverse Proportion Problems by Dividing by an Integer
- Complete an Table of Values for Two Quantities in Inverse Proportion
- Draw an Inverse Proportion Graph from a Table of Values
- Find Values using the Unitary Method
- Find a Constant of Proportionality and use to Find Missing Values for Inverse Proportion

Useful Formulae and Hints

For simple examples, it is often easier to find a total time taken, by multiplying the number of people by the time they each spend in the first situation. Then divide this total by the part you know (the number of people or the time they each spend) from the second situation.

People x Time = Constant (for the first 2 boxes)

Power x Time = Constant (for the 3rd box)

When filling in a table, start from the column where you know the value of both variables, and substitute these into the y=k/x formula to find k

GCSE Questions

1. It takes 4 people 5 days to cut a hedge. How long will it take:
   (a) 1 person? (b) 10 people?
2. 3 examiners take 12 hours to mark some exam papers.
   How long would it take 4 examiners?
3. An amount of hay is enough to feed 5 horses for 8 days.
   How many days will the same amount of hay feed 4 horses?
4. 6 computers process a certain amount of information in 6 hours.
   How long will it take 9 computers to process the same amount of information?
5. A factory uses 3 machines to complete a job in 6 hours.
   If 2 extra machines are used, how long will the job take?
6. 6 people take a total of 1 hour to inflate some balloons.
   How many minutes will it take 8 people to inflate the same number of balloons.

The number of days, D, to complete research is inversely proportional to the number of researchers, R, who are working.

The research takes 125 days to complete is 16 people work on it.

Find how many people are needed to complete the research in 40 days.

The time taken, t seconds, that it takes a water heater to boil water is inversely proportional to the power, p watts, of the water heater.

When P = 2000W, T = 252 seconds.

Find the time it takes to boil water when P = 800W

.....seconds
(3)

Use the relationship given beside each table to complete a copy of the table.

(a)

x	10	20	25	50
y	10			

$y \propto \frac{1}{x}$

(b)

p	32	8	4	$\frac{1}{2}$
q	2			

$q \propto \frac{1}{p}$

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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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Year 8 Poetry

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

- complete an in-depth study of a range of poems– show understanding of themes and viewpoint
- Analyse language and structure
- show understanding of context – when and where it was written/set
- draw on knowledge of literary and rhetorical devices in their writing
- write a critical response use Standard English and formal structure

Tier 2 Vocabulary

Amnesty – to be forgiven without punishment, to stop something and offer forgiveness (noun/verb)
Discrimination – acting in a biased or unfair manner based on a person's qualities (verb/noun)
Citizen – a member of society (noun)
Uphold – to support (verb)
Displacement – to be removed from a familiar situation against your wishes (noun/verb)

Civilian – non-military (adjective)
Convention – an agreed practice (noun)
Slaughter – kill without consideration (verb)
Vow – a sacred promise; to make a sacred promise (noun/verb)
Testament – proof of an event; religious evidence of godly acts; evidence or example of something (noun)

Dismember – to cut into different parts (verb)
Obliterate – to remove from existence; to wipe out (verb)
Massacre – a large scale killing (noun)
Calamity – a disaster (noun)
Disadvantage – a state of being unequal (noun)
Footnote – an afterthought or additional minor idea (noun)
Liberation – freedom or release from a situation or location (noun)
Etiquette – rules of acceptable behaviour in society (noun)

Culture - the characteristics and knowledge of a particular group of people, shown through language, beliefs, festivals, food, social habits, music and arts.
Identity – the sense of being, e.g. who you are

Structural Techniques

Stanza – sections of a poem
Meter – beats or sound patterns in a line
Rhyme – repetition of sounds at the ends of the line (usually) used to link or connect ideas.

Narrative voice – story being told from a specific viewpoint
Syllable – the division of words into a smaller section usually based around vowels
Free verse – poetry that does not rhyme or have a clear rhythm
Monologue – one person's recounting or viewpoint

Quatrain – 4 line stanza
Tercet – 3 line stanza
Volta – the turning point in the narrative
Enjambement – lines in a poem which have no rhyme or punctuation to stop them flowing into the next line

Tone – the emotion shown through choice of words
Atmosphere – the emotional environment
Mood – the general feeling
Punctuation – used to create emphasis or enhance the impact of ideas

Key Concepts

Amnesty International
This is a global movement of over ten million people. Amnesty International is the world's largest grassroots (powered by ordinary people) human rights organisation.

They investigate and expose abuses, educate and mobilise (organise so they may take action) the public, and help transform societies to create a safer, more just world.

In recognition of their valuable work, they received the Nobel Peace Prize. Amnesty International UK is a dual entity(has two parts) comprising of two distinct organisations: the Amnesty International UK Section and the Amnesty International UK Charitable Trust.

Why use poetry to explore culture, identity and protest?

Concise and powerful, poetry is a popular art form at protests and rallies. From the civil rights and women's liberation movements to Black Lives Matter, poetry is commanding enough to gather crowds in a city square and compact enough to demand attention on social media.
Speaking truth to power remains a crucial (important) role of the poet in the face of political and media rhetoric designed to obscure (hide), manipulate, or twist situations.
Poetry calls out and talks back to the inhumane forces that threaten from above. Poetry exposes grim truths, raise consciousness, (awareness) and build united fronts (brings people together).

Amnesty International's Symbol

The logo combines two recognisible images inspired by the Chinese proverb, **" Better to light a candle than curse the darkness."... The barbed wire represents "the darkness" (hopelessness)** of people put in jail where they think nobody remembers they are there.

Year 8 Poetry

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

- complete an in-depth study of a range of poems– show understanding of themes and viewpoint
- Analyse language and structure
- show understanding of context – when and where it was written/set
- draw on knowledge of literary and rhetorical devices in their writing
- write a critical response use Standard English and formal structure

Retrieval Practice	
'Leaving Home' by M Rosen	This is written at the beginning in the first person, to reflect Rosen's own actions. This then changes to the voice of his mother which shows us how important she was to him. Through the mother's voice we hear the concerns of the time and the gap in understanding between the generations.
'I Come From' by D Atta	This is a poem written in the first person reflecting the thoughts of the writer. He uses items from his everyday life to try and find who he is and where he belongs. Here we see a mix of cultural references that reflect his rich heritage.
'First They …' M Niemoller 'First They …' M Burch	These two poems explore the idea of personal protest, plus political and social responsibility. Both refer to injustice and the abuse of power by those gifted with the responsibility of guiding and leading their people. Both use repetition as their main device to emphasise the repeated abuses of those in power against their own people.
'Like an enormous wave' by E Wiezell	This is a poem inspired by a writer from a different culture and tradition of writing (Choi Jung-In). It tries to express the poets view of freedom and the importance it holds for them.

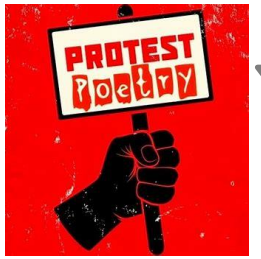
Writing Your Paragraphs

Remember to plan your content before writing. Use SEIZE to help you:
Statement
Evidence
Inference
Zoom (language)
Explain effect

Practice Questions

- How does the poet establish their viewpoint in the beginning of the poem?
- How does the poet change/develop their idea in the middle of the poem?
- How does the poet link the beginning to the end of the poem?

Career Focus - Where could this take you?



Why be a poet? What use is it?
Poetry can be a great outlet for our emotions and help us communicate our feelings in a safe and non-judgmental way. Writing poetry can also be a great way to process our thoughts and feelings about difficult life experiences.
Being a poet allows you expression and can lead to careers in journalism, politics, charity work, counselling, therapy, medicine and public relations!

Challenge Activities

Creative Challenge
Can you design a logo to represent the ideas of justice, fairness and the search for truth?

Reading Challenge:
Explore more poetry that looks at political events:
'Out of the Blue' - S Armitage
'London' – Wordsworth
'Easter 1916' – WB Yeats

Topic Links

This topic links to:

- Literacy
- Politics
- Rule of law and British values
- Emotional and moral intelligence
- Society

Additional Resources

To further practise and develop your knowledge see:

- BBC bitesize
- WWW.amnesty.org.uk
- www.savethechildren.net
- www.libertyhumanrights.org.uk

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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 8 Health & Disease

The aims of the sequence of learning are to ensure that all students:
- **Describe the ways we are protected against disease**
- **Explain the effects of smoking and drugs on heath**

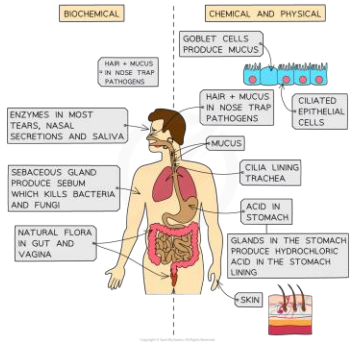
Keyword	Definition
Microbe	Resources which will run out soon. There is a limited supply.
Pathogen	A microbe that causes disease.
Communicable disease	A disease that can be spread from one organism to another.
Virus	Smallest microbe that cause diseases such as colds, flu and HIV. They invade cells and damage them.
Bacteria	Largest microbe that can cause diseases such as food poisoning by releasing toxins.
Fungus	Microbe that causes diseases such as athletes foot. They usually grown on the skin or on the surface of plants.
Protist	Microbe that causes diseases such as malaria. Spread via mosquitos.
Transmission	Methods via which a pathogen can be spread, e.g. air, food,
Natural Defenses	The ways our bodies prevent microbes from entering body.
White blood cells	Found in the blood and tissues and defend against pathogens using antibodies and antitoxins.
Drugs	A substance that has a physiological effect on the body.
Antibiotics	A drug that can be used to kill bacterial infections.
Nicotine	The addictive substance in cigarettes and vapes.
Tar	Sticky substance found in cigarette smoke that can cause cancer.

Key Concepts

Microbes and Disease

Nobody likes getting ill.
To better avoid diseases, we need to understand what causes and how our bodies try and defend us from them.
This includes the skin, acid in Stomach, tears, mucus and saliva.

A microbe that causes disease is known as a pathogen.



Painkillers vs Antibiotics

Painkillers do not treat the cause of the illness (destroy the pathogen) as they only treat the symptoms. For example, paracetamol will reduce the temperature of the body and numb the pain from headaches etc.

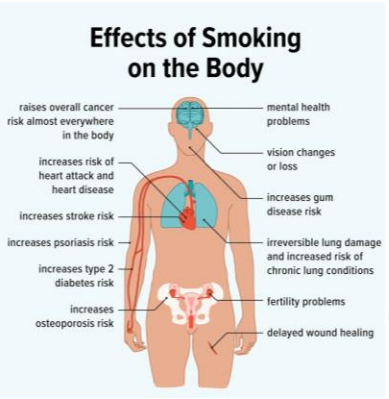
Antibiotics treat the cause of the disease as they destroy bacteria. However, they cannot be used to treat viral diseases as the viruses hide inside our cells and make them more difficult to treat.

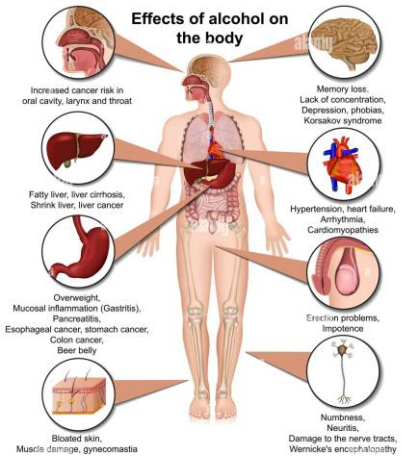
Drug Development

There are 3 main stages in drug testing.
Preclinical testing
1. Tested on human cells and tissues.
2. Tested on living animals.

Clinical testing
3. Tested on healthy volunteers and then tested on people with the illness.

Smoking & Alcohol Effects





Effects of Drug Abuse

A drug is any substance that affects the way a body functions.

A depressant slows down messages in the nervous system, which includes the brain, spinal cord and other nerves. This often makes you feel less alert and lengthens reaction times. Examples of depressants include alcohol, aerosols, heroin, cannabis.
Some of the long-term effects of depressants on the body include damage to the liver, brain and heart.

Stimulants speed up messages in the nervous system. This makes you feel more alert and shortens reaction times. Examples of stimulants include nicotine, caffeine, ecstasy, amphetamines.
they can also cause headaches, nervousness and difficulty sleeping. Long term effects include loss of memory and concentration and can bring an increased risk of mental health issues.

Year 8 Health & Disease

Newsome Academy
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The aims of the sequence of learning are to ensure that all students:
- **Describe the ways we are protected against disease**
- **Explain the effects of smoking and drugs on heath**

Retrieval Practice

Questions	Answers
What is a pathogen?	A microbe that causes disease.
What are the 4 types of microbes that can cause disease?	Bacteria, Virus, Fungus and Protist
How does our body help to prevent infections?	Through natural defenses such as the skin, tears, saliva, acid in stomach and cilia.
What is a white blood cell?	A cell found in the blood and tissues and defend against pathogens using antibodies and antitoxins.
What are painkillers?	Drugs used to treat the symptoms of disease.
What are antibiotics?	Drugs used to treat bacterial infections.
What are the 3 stages of drug development?	1. Tested on human cells and tissues. 2. Tested on living animals. 3. Tested on healthy volunteers and then tested on people with the illness.
What is a stimulant?	A drug that speeds up messages in the nervous system.
What is a depressant?	A drug that slows down messages in the nervous system.
What are the effects of smoking?	Increased risk of cancer, heart disease, infertility, type 2 diabetes, stroke and mental health problems.
What chemical is addictive in tobacco?	Nicotine
Why are the effects of alcohol abuse?	Increased risk of cancer, liver damage, high blood pressure, memory loss, bloating and overweight.

Career Focus - Where could this take you?

I am a physiotherapist. I treat patients that have injury or illness that affects their movement. This could be due to problems with their muscles, joints or bones. I use manual therapy of the body and advise on exercises to improve mobility and manage the pain a patient may be experiencing. I work in a variety of locations such as hospitals, health centers, GP practices, sports centers and even workplaces.
The skills I need for this role include good communication, and a caring and calm nature. To qualify as a physiotherapist, you need a degree which can be gained at university or by doing an apprenticeship.

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 career physiotherapist and find out more about what they do. How much is their salary and what routes are there to become one?
4. Produce a fact file on the risks of smoking, alcohol and drug abuse.
5. Research some of the drugs that have been developed for diseases in recent years. Produce a ppt or video explaining the process of drug development and the stages.

Topic Links

This topic links to:
- Organisation
- Cells
- RHSE

We will also be practising how to
- Evaluate data
- Design a leaflet to inform people about the risks of smoking and alcohol

Additional Resources

To further practise and develop your knowledge see:

Educake - https://www.educake.co.uk/
BBC Bitesize - https://www.bbc.co.uk/bitesize/guides/zgqhcj6/revision/2
YouTube Cognito - https://www.youtube.com/watch?v=PDeiRlQvWnM

Year 8 Biodiversity

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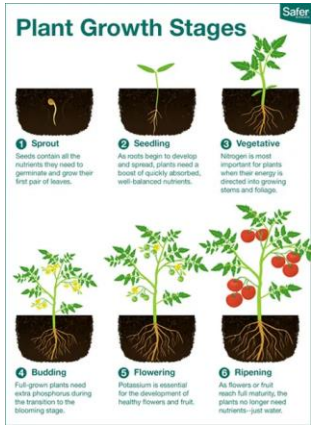
The aims of the sequence of learning are to ensure that all students:
- **Describe how chicks develop and hatch**
- **Explain ways to make Newsome a greener place**

Keyword	Definition
Species	A **species** is a group of organisms that interbreed to produce fertile offspring.
Biodiversity	The variety of living species living in an ecosystem.
Community	Where differences between living things can only be grouped into categories.
Ecosystem	All the living and non-living things that interact in a particular environment.
Interdependence	When organisms depend on one another for survival.
Photosynthesis	The process by which green plants and algae use sunlight to make glucose.
Greenhouse gases	Gases in the atmosphere that trap heat, e.g. carbon dioxide.
Global warming	The current rise in temperature of the Earths air and oceans.
Hen/Rooster	Female = Hen Male = Rooster
Fertile egg	Egg that has been fertilised by rooster and can produce a chick.
Embryo	An unborn or unhatched offspring.
Air sac	Air bubble at blunt end of egg.
Incubator	Controls temperature of eggs.
Dander	Covering on feathers of newly hatched chicks.
Brooder	House to keep chicks warm.

Key Concepts

Growing Plants

Plants' lives may be as short as a few weeks or months, but they go through distinct changes as they grow, just as people do. The stages that plants go through are from seed to sprout, then through vegetative, budding, flowering, and ripening stages. Similarly, the nutritional needs of people and plants change as they grow. This graphic shows how a plant develops (in this case, a tomato) and highlights the changing nutrient needs for plants as they grow.



Making Newsome Greener

At Newsome Academy we will be focusing on ways to make our school and the local community a greener, more biodiverse place. Being greener is important because it helps us understand the importance of natural resources and helps us to protect the environment.
The ways schools can become a greener more sustainable place include:

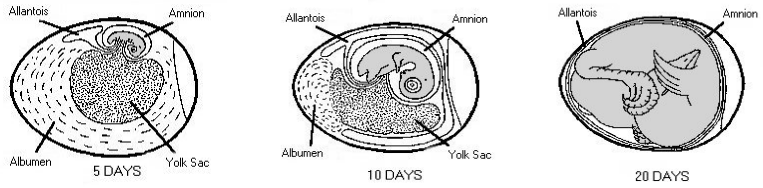
1. Reduce the use of resources
2. Reuse every possible resource
3. Recycle everything you can
4. Install a school garden
5. Create an in-school compost bin
6. Get parents and the neighbourhood involved

Eco-Schools

Over the next few week we will be getting some of these things started. We cannot wait for your help and your ideas!
Let's make our school a greener place for everyone!

Chick development

This half term we are hatching eggs!
The fertilised eggs will be developing and hatching in the incubator located in science.
This is what is happening inside the egg as they develop:



Hatching eggs

Chicks hatch after 21 days. At the end of the chick's beak is a bump called the 'egg tooth.' The chick uses the egg tooth to tap the shell to make a tiny hole then break the shell. This is called 'pipping.'

When the chick comes out of the shell it is wet and very tired, so it lies down to rest. As it dries, a sheath over its feathers breaks away. This is called 'Dander'. The chick then begins to fluff up.
*Chicks do not need feed or water for the first 24– 48 hours as they are utilizing the yolk which was ingested while in the egg.

Year 8 Biodiversity

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The aims of the sequence of learning are to ensure that all students:
- **Describe how chicks develop and hatch**
- **Explain ways to make Newsome a greener place**

Retrieval Practice

Questions	Answers
What is biodiversity?	The variety of living species living in an ecosystem.
Why is biodiversity important?	Stops species from becoming endangered or extinct.
What is sustainability?	Fulfilling the needs of current generations without compromising the needs of future generations
What can we do to make Newsome a greener more sustainable school?	1. Reduce the use of resources 2. Reuse every possible resource 3. Recycle everything you can 4. Install a school garden 5. Create an in-school compost bin 6. Get parents and the neighbourhood involved
Why is being greener and sustainability important?	Helps us understand the importance of natural resources and helps us to protect the environment.
What are the stages of plant growth?	1.Sprouting 2. Seedling 3. Vegetative 4. Budding 5. Flowering 6. Ripening
What process involves plants taking in carbon dioxide from the air?	Photosynthesis.
Why is this process important to reduce global warming?	Photosynthesis takes in carbon dioxide and releases oxygen. Carbon dioxide is a greenhouse gas and contributes to global warming.
How many days does it take for chicks to fully develop?	21 days
What do chicks use to break the shell and hatch?	They have a bump at the end of their beaks called the egg tooth.
Why don't chicks need to get or drink for the first 24-48 hours?	They have ingested (eaten) the yolk that was in the egg so their stomachs are full.

Career Focus - Where could this take you?

I am a nature conservation officer. The aim of my job is to protect environments and the living things in them, for example in woodlands, grassland and coastal areas.
Part of my role is to educate people about conservation and encourage people to use the areas. I also must put plans in place to maintain the range of living things in the environment, so biodiversity is kept high.
I usually work for a charity, local authority, business or public body and my responsibilities include carrying out surveys, organising volunteers, developing conservation plans building relationships with partner organisations and educating.

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 links between information.
3. Produce a fact file or a poster about the development of chicks .
4. Construct a list of ways Newsome can be more sustainable. Explain how students could help to make sure this happens and is maintained.
5. Write a letter to Mr Watkin to explain why we should make Newsome Academy a greener school. Include some of your own ideas!
6. Research about other careers linked to biodiversity – zoologist, marine biologist, horticulturist, florist, environmental scientist.

Topic Links

This topic links to:
- Photosynthesis
- Life diversity
- Reproduction

We will also be practising how to
- Grow plants
- Treat living organisms with respect

Additional Resources

To further practise and develop your knowledge see:

Educake - https://www.educake.co.uk/
BBC Bitesize - https://www.bbc.co.uk/bitesize/topics/zt3k96f/articles/zwjdkty
YouTube Cognito - https://www.youtube.com/watch?v=obb-ZHqBw10

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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 8 Our Warming Planet

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

- Describe the greenhouse effect
- Explain the causes of the enhanced greenhouse effect
- Describe the impacts of climate change on the planet
- Explain how the impacts of climate change can be reduced

Keyword	Definition
Adaptation	Actions taken to adjust to natural events such as climate change, to reduce potential damage, limit the impacts, take advantage of opportunities, or cope with the consequences.
Enhanced Greenhouse effect	The warming of the Earth's atmosphere due to human activity increasing the layer of greenhouse gases.
Greenhouse effect	A natural process that traps heat in the atmosphere
Greenhouse Gases	Gases in the earth's atmosphere that trap heat
Long-wave radiation	Energy that is radiated outward by the Earth (land and sea)
Mitigation	Action taken to reduce or eliminate the long-term risk to human life and property from climate change
Short-wave radiation	Solar energy that enters our atmosphere in the form of ultraviolet rays and visible light.

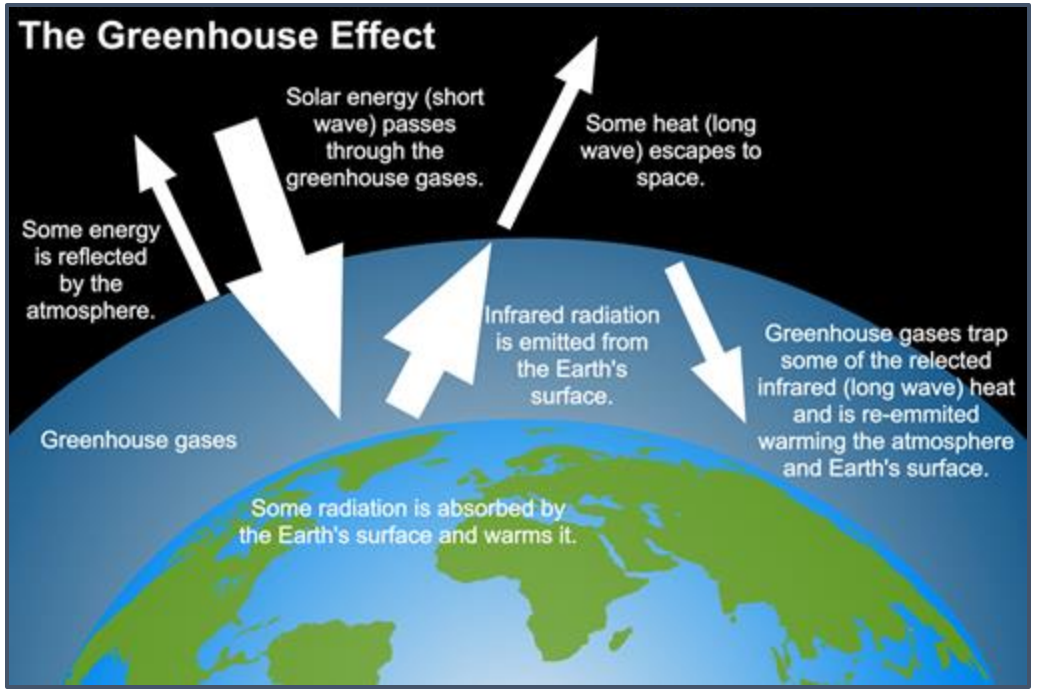
Key Concepts

The Greenhouse effect

The Greenhouse effect is a naturally occurring phenomenon that keeps the Earth warm enough for life to exist. It is estimated that the Earth would be 33° colder without the greenhouse effect.

Like a greenhouse, the atmosphere allows most of the heat from the Sun to pass through it to warm the Earth's surface. Gasses then trap some reflected energy as glass does in a greenhouse.

The Sun's short-wave solar radiation enters the atmosphere. The heat is reflected from the surface of the Earth as long-wave radiation. The natural layer of greenhouse gases allows some heat to be reflected out of the Earth's atmosphere, but some heat is trapped by CO_2 and methane, keeping temperatures warm enough for life on Earth.



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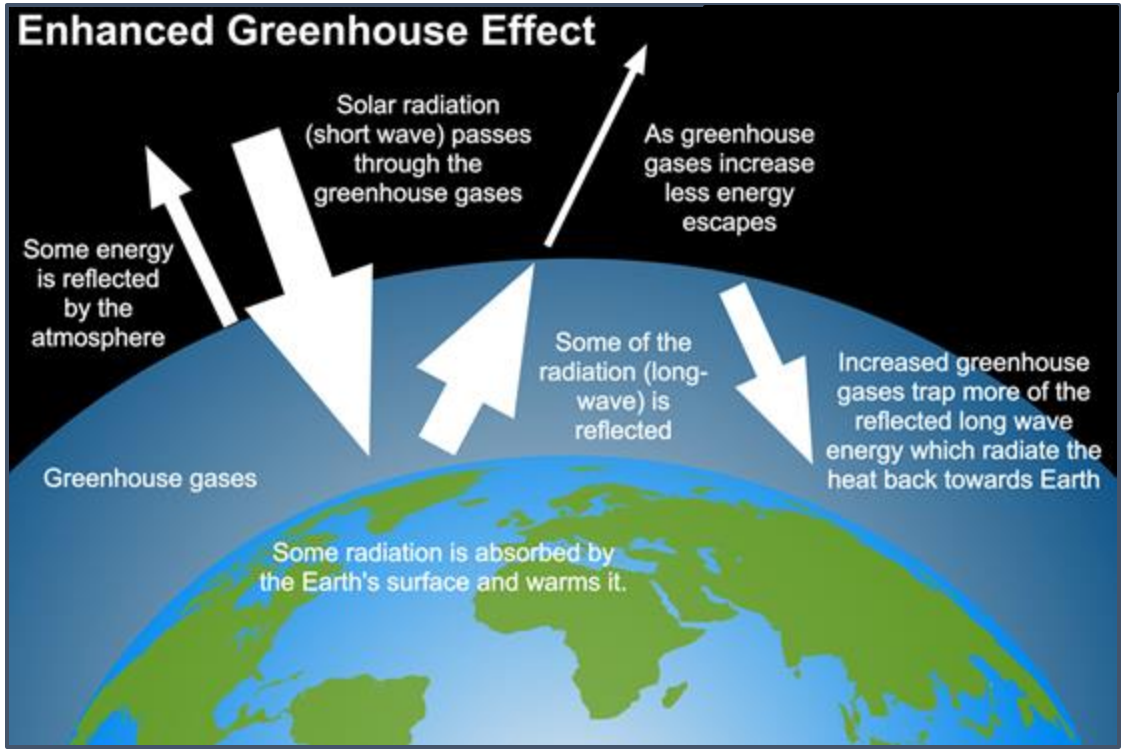
Key Concepts

The Enhanced Greenhouse effect

The enhanced greenhouse effect involves human activity increasing the layer of greenhouse gases which naturally exists. Activities that generate greenhouse gases include burning fossil fuels, transport, agriculture and deforestation. Less heat escapes the from the Earth's atmosphere and more is trapped by the thicker layer of greenhouse gases, leading to higher temperatures.



Human Causes of climate change

Human activities increase the volume of greenhouse gasses in the atmosphere leading to the enhanced greenhouse effect because increased greenhouse gases trap more of the infrared heat reflected by the surface of the Earth. Average global temperature increases due to this causing climate change. These include:

- Burning fossil fuels - When coal, oil and gas are burned, carbon dioxide is released into the atmosphere

- Agriculture - Increased pastoral (animal) farming leads to more methane being released into the atmosphere

- Deforestation - Trees absorb carbon dioxide during photosynthesis. When trees are cut down, less carbon dioxide will be absorbed, leading to increased concentrations in the atmosphere.

Evidence for climate change

Tree Rings – Each year a tree grows, it forms a new ring. The thicker the ring, the warmer and wetter the climate for that year - showing how climate changes over time.

Ice Cores – Taken from ice caps by drilling into the ice. They can go back over 800,000 years. Trapped air bubbles tell us the temperature it was in each year.

Year 8 Our Warming Planet

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- Describe the greenhouse effect
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- Describe the impacts of climate change on the planet
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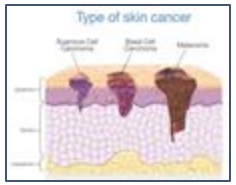
Key Concepts

Effects of Climate Change

Social effects:

- Increased risk of disease such as skin cancers
- Crop yields affected – maize will decrease by up to 12% in South America.
- Drought reduces food and water supplies in sub-Saharan Africa. Water scarcity in the south and southeast of the UK.
- Flood risk increases, 70% of Asia at increased risk of flooding, e.g. 2022 Pakistan floods.
- Extreme weather events become more intense, e.g. tropical storms



Environmental effects:

- Increased drought and risk of forest fires.
- Sea level rise includes flooding and erosion.
- Change in climate affects ecosystems.
- Coral bleaching and decrease in biodiversity.

Mitigation - reducing the causes of climate change by reducing greenhouse gases in the atmosphere

- Alternative Energy Production - Developing renewable energy solutions such as wind, solar and tidal energy reduces our reliance on fossil fuel burning power stations. This helps reduce carbon dioxide emissions being released into the atmosphere

- Planting trees helps reduce the amount of carbon dioxide in the atmosphere as trees absorb it as part of photosynthesis

- International agreements encourage countries to take responsibility for reducing CO2 emissions. Targets are more likely to be met if legally binding e.g., Paris 2015

Adaptation - these strategies do not aim to reduce the impact of climate change but respond to it by reducing its negative effects

- Managing Water Supply - There may be a greater need for developing water transfer schemes. This involves moving water from areas of surplus (more water than is used) to areas of water deficit (not enough water). This can be achieved by building water transfer pipelines. An example of this is the Kielder water transfer scheme in the north-east of England

Year 8 Our Warming Planet

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

- Describe the greenhouse effect
- Explain the causes of the enhanced greenhouse effect
- Describe the impacts of climate change on the planet
- Explain how the impacts of climate change can be reduced

Retrieval Practice

Questions	Answers
What is the greenhouse effect?	A naturally occurring phenomenon that keeps the Earth warm enough for life to exist
What is the enhanced greenhouse effect?	The warming of the Earth's atmosphere due to human activity increasing the layer of greenhouse gases.
Name 2 human causes of climate change	Deforestation and Burning fossil fuels
How do tree rings show evidence of climate change?	The thicker the ring, the warmer and wetter the climate for that year
How does deforestation contribute to climate change?	When trees are cut down, less carbon dioxide will be absorbed,
Give 2 social effects of climate change	More extreme weather and droughts across the world
Give 2 environmental effects of climate change	Coral bleaching and sea level rise
Describe 1 way to mitigate climate change	Developing renewable energy solutions such as wind and solar power to reduce carbon dioxide emissions
How can water transfers help areas adapt to climate change?	It moves water from areas of surplus (more water than is used) to areas of water deficit (not enough water)

Career Focus - Wind Turbine Engineer

I am a **wind turbine engineer.**
It is my job to install wind turbine towers on land or at sea fit electrical and fit/check the mechanical and hydraulic equipment. Often, I must carry out maintenance, find faults and fix them as well as running safety checks on electrical substations and cables. I often work in remote rural areas or at sea, sometimes this may be at height and outdoors in all weathers.

Challenge Activities

- Create a poster or information leaflet about the causes and impacts of global warming
- Produce a passionate speech for to influence the Government which gets them to develop more strategies to reduce global warming
- Create a shoebox model which covers global warming - causes/effects/responses

Topic Links

This topic links to themes in:
Science
GCSE Geography
French/German - environment

Additional Resources

Climate Change

Global Warming

Newsome Academy
Everyone Exceptional Everyday

Year 8: Civil Rights Movement

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

- Explore what life was like in America after slavery was abolished.
- Explain how African-Americans were segregated in America and discriminated against.
- Evaluate the roles of different people and events in the Civil Rights Movement which helped achieve the Civil Rights Act of 1964.
- Consider the difference between the roles of Martin Luther King and Malcolm X in the Civil Rights Movement.

Keyword	Definition
Racism	The belief that people of different races or ethnic groups have different value in society and using this against them.
Prejudice	A preconceived opinion that is not based on reason or actual experience.
Discrimination	Treating one group or person more unfairly than another.
Segregation	The separation of groups of people like black and white people in society.
Integration	Opposite of segregation - the action of bringing together and uniting things fairly.
Jim Crow Laws	A series of laws passed in the southern states to stop equality and enforce segregation in all aspects of life.
NAACP	The National Association of the Advancement of Coloured People.
Political Movement	A collective attempt by a group of people to change government policy or society.
Activism	A type of campaign which uses actions and resources to bring about change.
Boycott	Not using a service or purchasing goods from a company in the hope that the company will change a policy or practice.
Sit-ins	A protest where people sit down and refuse to leave a place.
Supremacy	The belief that a particular group, especially one determined by race, religion, or sex, is superior and should therefore dominate society.
Lynching	The mob killing of a person outside of the law. This was used by the KKK.
Desegregation	A legal process of ending the separation and isolation of different racial and ethnic groups.
Civil Rights	The rights of citizens to equality.

Key Concepts

Jim Crow Laws:
Although slavery had been abolished in 1865, laws in many Southern American states preserved the idea of segregation between black and white people. This was through a set of laws called the 'Jim Crow Laws' which gained their nickname through the minstrel song and performance 'Jump Jim Crow'.
As part of these laws, public transport and facilities were divided between those suitable for white people and those suitable for black people. Black Americans were supposed to use separate train carriages, drinking fountains, public toilets and schools. The facilities provided for black people were almost always inferior to those for the white people. It was also against the law for black and white people to get married.
These laws only existed in the south but the northern states were still rife with inequality, even if this was not enforced in law.

The Ku Klux Klan (KKK):
A racist, anti-Semitic, Protestant group that carried out intimidation and lynching in the USA. They were formed after the American Civil War in 1865 and believed in the idea of 'white supremacy'. At its height, the KKK had 4 million members across the USA. Their distinctive facemasks and practice of burning crosses was designed to intimidate black Americans, Jews, Mexicans, Catholics and any white people who associated with black people.
Some members of the KKK were in senior positions of the police force and government.

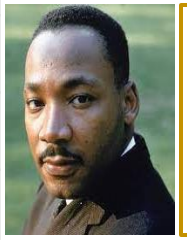
Ku Klux Klan members, 1948

Brown vs Board of Education:
In 1954 the NAACP took the Board of Education in Topeka, Kansas to court to allow an African-American schoolgirl, Linda Brown, to attend a white school as her school was several kilometers away and she had to cross a dangerous railway track to get there. On May 17, 1954, the Court ruled that segregated public schools were unfair and integrated schools should be established across the southern states. The *Brown* case saw the beginning of the civil rights movement, inspiring education reform everywhere and forming the legal means of challenging segregation in all areas of society.

Little Rock Nine:
Despite the NAACP victory in 1954, by 1957 many states had refused to create integrated schools. At the Little Rock school in Arkansas, nine black students were stopped by state troops from entering the school. The official reason for this was that the Governor of Arkansas was concerned for their safety, but a direct order from President Eisenhower stood the troops down, allowing the students to attend their lessons.

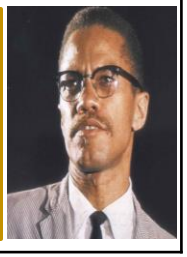
Rosa Parks and the Montgomery Bus Boycott:
On 1st December 1955, Rosa Parks, an African-American woman, decided to take a stand against segregation by refusing to give up her seat to a white man on the bus. Like many of the southern states, Montgomery, Alabama had a segregated bus service with certain seats for white and black people. Rosa's peaceful refusal to follow this system saw her arrested, an act that sparked huge protest. The African-American community in Montgomery formed an action group known as the Montgomery Improvement Association (MIA). This group, led by Martin Luther King Jr. boycotted the bus service for 381 days, which nearly bankrupted the company. This peaceful protest saw the bus company give in, the MIA won a legal battle to have segregation on buses banned throughout the USA.

Freedom Rides:
Many places refused to follow the new integrated bus rules, so peaceful protests by black and white activists began. They rode segregated buses, facing extreme violence - 200 'freedom riders' were jailed! It took pressure from President Kennedy to finally stop segregation on buses.



Martin Luther King Jr:
At an early age, King was inspired by his father's opposition to racial segregation and discrimination. Although he grew up in a system that treated him as inferior, his mother taught him he was "as good as anyone". He is famous for his peaceful protests including; the Montgomery Bus Boycott, his letter from a Birmingham jail, his speeches on Vietnam, his 'I have a dream' speech and his march to protest against voting rights

Malcolm X:
Orphaned at an early age and getting into trouble, Malcolm Little found himself in prison in 1946. During his time in prison, he found Islam and became a member of the Nation of Islam, a political group of Muslims who campaigned for better rights for African-Americans. He believed MLK's soft approach was not working and that African-Americans should use violence if necessary to gain their freedom from white people.



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Year 8: Civil Rights Movement

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

- Explore what life was like in America after slavery was abolished.
- Explain how African-Americans were segregated in America and discriminated against.
- Evaluate the roles of different people and events in the Civil Rights Movement which helped achieve the Civil Rights Act of 1964.
- Consider the difference between the roles of Martin Luther King and Malcolm X in the Civil Rights Movement.

Retrieval Practice

Questions	Answers
What date did Slavery end?	Slavery ended in America on 18th December 1865 as part of the 13th Amendment.
What was the Jim Crow Laws?	A set of laws which were introduced in the Southern States of America to enforce racial segregation.
What laws did the Jim Crow Laws consist of?	Public transport and facilities were divided. Black Americans were supposed to use separate train carriages, drinking fountains, public toilets and schools. Interracial marriage was forbidden.
Why did the Brown vs Board of Education trial take place?	Linda Brown was having to walk miles and across dangerous conditions to get to her school when there was a white school much closer.
Who were the 'Little Rock Nine'?	Nine African-American students who tested the new education system by enrolling in the all-white Little Rock Central High School in 1957.
Who were the KKK and what did they do?	A racist, anti-Semitic, Protestant group that carried out intimidation and lynching in the USA against black Americans, Jews, Mexicans, Catholics and white people who associated with black people.
What happened with Rosa Parks and the Montgomery bus boycott?	Rosa Parks was arrested when she refused to give up her seat on the bus to a white person. As a result a boycott of the busses was arranged in Montgomery and took place for 381 days.
What was Martin Luther King's role in the Civil Rights Movement?	He is famous for his peaceful protests including; the Montgomery Bus Boycott, and his speeches like 'I have a dream'.
What was Malcolm X's role in the Civil Rights Movement?	He had a more radical approach to Martin Luther King and campaigned for better rights for African-Americans. He famously stated 'violence should be met with violence'.
When was the Civil Rights Act passed and what did it state?	The Civil Rights Act was passed in 1964 and prohibited discrimination on the basis of race, colour, religion, sex or national origin.

Career Focus - Where could this take you?

I am a Police Officer: My job is to keep law and order, investigate crimes and try and prevent crimes from happening. I need to ensure that people in society are kept safe and that any unrest is dealt with as soon as possible to prevent further problems arising. To do my job I need to have patience, good negotiation and communication skills, investigation and research skills and I need to be strong just in case criminals try and resist arrest. I also need to have the ability to solve problems.

Challenge Activities

1. Research one of the following 'Civil Rights' activists and create a full fact file about them and their lives. You should include pictures too:
- John Lewis - Ella Baker
- Medgar Evers - Fannie Lou Hamer

2. Write a newspaper article on either the Montgomery Bus Boycott or the Brown vs Board of Education trial. You should include what caused the event, what happened and the outcome. You should also include pictures. Do not just copy and paste from the internet.

3. Write a biography of the life of either Martin Luther King or Malcolm X. You should include their early years and upbringing, their role in the Civil Rights Movement and their influence in America before and after their assassination.

Topic Links

This topic links to other Humanities topics such as:

- The Slave Trade
- Industrial Revolution
- World War One and World War Two
- Africa

Additional Resources

To further practise and develop you knowledge see:

https://www.history.com/topics/black-history/civil-rights-movement

https://bestlifeonline.com/civil-rights-leaders/

https://www.history.com/topics/black-history/montgomery-bus-boycott

https://www.britannica.com/biography/Martin-Luther-King-Jr

https://www.britannica.com/biography/Malcolm-X

Newsome Academy Year 8 Sikhism - Practices

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

- Explain the concept of Sewa
- Give examples of the humanitarian & environmentalist Bhagat Puran Singh & Ravi Singh
- Explain & interpret marriage symbolism; Anand Karaj; Lavan
- Recall, explain & analyse some key Sikh religious festivals; Gurparabs; Vaisakhi & Diwali

Keyword	Definition
Sewa	Helping someone without asking for everything in return.
Khalsa	The word Khalsa means pure. Joining the Khalsa is a sign of commitment in Sikhism.
Formation	This is a group of Sikhs coming together to form the Khalsa community.
Humanitarian	Humanitarian is when a person is devoted to working for the health and happiness of other people.
Gurparabs	Gurparabs are festivals that are associated with the lives of the Gurus. They are happy occasions which are celebrated most enthusiastically by Sikhs. The most important Gurparabs are; The birthday of Guru Nanak, the birthday of Guru Gobind Singh.
Langar	A communion kitchen (free). This is food given or made available to those that need it. Langar is mostly given in Gurudwara's (Sikh temple).
Environmentalist	A person who is concerned about the environment or advocates (speaks out) in order to protect the environment around us.

Key Concepts

Sewa

Sewa means 'selfless service'. It is acting selflessly, helping others in a variety of different ways, without any reward or personal gain. Sewa is a way of life for Sikhs and is part of their daily routine. Sikhs believe that sewa is an act of service towards Waheguru (God).

Sikhs perform sewa in a variety of ways, such as helping the local community, helping at the gurdwara, and cleaning, washing dishes or serving in the langar.

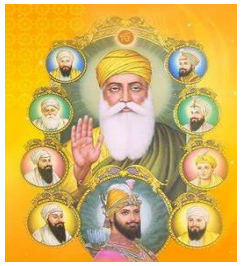
Performing sewa is important for Sikhs because:

- it demonstrates the belief in equality and the importance of all people
- it serves others, showing humility (ie showing that people do not believe they are better than anyone else)
- it shows love for Waheguru – Sikhs believe that Waheguru is present in everyone, and so helping people means helping Waheguru
- it helps Sikhs to move away from the five vices, which are anger, pride, lust, greed and attachment to material possessions.

The Khalsa

The tenth Guru, Gobind Singh, recreated the Sikhs as a military group of men and women called the khalsa in 1699, with the intention that the Sikhs should for ever be able to defend their faith.

Gobind Singh established the Sikh rite of initiation (called khandey di pahul) and the 5K's which give Sikhs their unique appearance.



Newsome Academy Year 8 Sikhism - Practices

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Key Concepts

Bhagat Puran Singh

A Sikh Humanitarian. During the 20th century (and continuing) poverty and homelessness in India was high, there were countless people helpless on the streets. Beggars and the handicapped had littered the streets. "They are helpless and helping them would do no good" was the common belief at the time.
Bhagat Puran Singh proved this belief wrong through a life of service and dedication to these people; he created help for the helpless ... a home for the homeless ... and hope for the ones who had given up on humanity.

Ravi Singh

Much of the hue and cry is over how the organization prioritizes the dispersion of funds to needy families.

Despite all the detraction, the relatively small charity from UK which was founded by Ravi Singh in 1999, has an impressive record of providing humanitarian assistance in over 10 countries ranging from war torn regions such as Kosovo, Afghanistan and Syria, to areas hit by natural disasters such as Pakistan, Turkey, and Haiti.

Significance and influence of the Khalsa

Baisakhi, or **Vaisakhi**, is the festival which celebrates Sikh New Year and the founding of the Sikh community in 1699, known as the Khalsa.
In 1699, Sikhs from all over the Punjab gathered together to celebrate the local harvest festival. Guru Gobind Rai came out of a tent carrying a sword and requested that anyone who was prepared to give up their life for their religion come forward.
A young Sikh came forward and disappeared into the tent with the Guru. Then the Guru reappeared alone with his sword covered in blood and asked for another volunteer. This happened another four times until a total of five Sikhs had gone into the tent with him.
Eventually all five emerged from the tent alive and wearing turbans, along with the panj kakke, or Five k's. These five men became known as the Panj Piare meaning 'Five Beloved Ones'.
Amrit Sanskar, the rite of initiation into the Khalsa, often occurs on Baisakhi, very early in the morning. Amrit Sanskar involves five men, Panj Piare, initiating candidates with sweetened water (amrit) and the candidates commit themselves to observing a daily discipline.

Anand Karaj, the Sikh marriage ceremony, emphasizes the spiritual nature of physical union. Sikh wedding hymns describe the wedded state of the soul bride with the divine groom. Marital bliss and family harmony is exemplified by the Sikh gurus, who entered matrimony and fathered children.

Sikh husband-wife love is modelled on the love between human soul and the Supreme Soul as described in the four ***lavan*** (hymns composed by the Fourth Guru in the Suhi raag section of Guru Granth Sahib). The bridegroom and the bride vow fidelity to each other in the presence of the Guru (Granth Sahib) and the holy congregation. They accept their obligations by bowing before Guru Granth Sahib. The *Anand* marriage is a sacrament and no document is necessary.

Year 8 Sikhism - Practices

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- Explain & interpret marriage symbolism; Anand Karaj; Lavan
- Recall, explain & analyse some key Sikh religious festivals; Gurparabs; Vaisakhi & Diwali

Retrieval Practice

Questions	Answers
What does sewa mean?	Sewa is a key concept in Sikhism. This means helping others without asking for anything in return.
Who created the Khalsa in 1699?	The tenth Guru, Gobind Singh, recreated the Sikhs as a military group of men and women called the khalsa in 1699,
How many Gurus were there?	There were 10 human Gurus in Sikhism, with the last Guru being the Guru Granth Sahib.
What did Bagat Puran Singh do?	Bagat Puran Singh was a humanitarian. He helped the homeless and handicapped people.
Why is the Anand Karaj important in Sikhism?	The Anand Karaj is important in Sikhism as it is the Sikh marriage ceremony. This emphasizes the spiritual nature of physical union.
What are Gurparabs?	Gurparabs are festivals which are associated with the lives of the Gurus.
What is langar?	Langar is when food is available to those in need or those who need it.
Explain what Lavan is in Sikhism.	Lavan is the circiling of the Guru Granth Sahib, total number is 4. The word 'laavan' is a spiritual term used for the union of 'Atma' (Bride) with the 'Parmatma' (Groom).

Career Focus - Where could this take you?

Job Role: Medical humanitarian team leader.

"Hi, my name is Trish Newport and I am a medical humanitarian team leader. I help those that need my professional and medical help in countries where aid is drastically needed. I aid and provide a service where I am at the forefront dealing with patients all day long. Studying religious education at school was an eye opener of how big and respectful and kind this world can be. It has led me to enhance my expertise and knowledge to spread it to those that need it. Some of the skills within Religious Education included; research skills, listening to other people about their problems, discussing case studies on different humanitarians and showing respect when watching other religions and how they practice their faith."

Challenge Activities

- Explain who the 10 Gurus are in Sikhism and their significance.
- Research the 5K's and link it to Sikhs today. What impact do the 5k's have on a Sikh today?
- Create a leaflet for someone to explain the Sikh practices in detail.
- Research the history of Guru Nanak and create a timeline of his journey.
- Create an invitation poster to a Sikh Marriage – research and include key stages within a Sikh wedding ceremony, explain the significance of each stage.

Topic Links

This topic links to other RE topics such as

- Hinduism
- Sikhism
- Buddhism

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/religion/religions/sikhism/history/history_1.shtml#:~:text=The%20Khalsa%20The%20tenth%20Guru%2C%20Gobind%20Singh%2C%20recreated,5%20Ks%20which%20give%20Sikhs%20their%20unique%20appearance.

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

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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 8 La télé et les films.

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

- say what you like to watch and why.
- describe a photograph using simple sentences and opinions.
- understand the story of French film.
- produce a short film review in French.

Key concepts

Talking about TV and film preferences.

	les émissions (f) de …
les comédies (f)	cuisine
les dessins (m) animés	musique
les documentaires (m)	science-fiction
les feuilletons (m)	sport
les infos (f)	télé-réalité
les jeux (m) (télévisés)	
les séries (f) (policières)	

Je regarde.
I watch

J'ai regardé.
I have watched

Je vais regarder.
I am going to watch

Est-ce que tu-aimes regarder les films?

Describing a photo.

Qu'est-ce qu'il y a sur la photo? *What is in the photo?*

Il y a *There is/are*	un garçon. *a boy.*	Il porte *He is wearing*	un chapeau. *a hat.*
	une fille. *a girl.*	Elle porte *She is wearing*	un short. *a pair of shorts.*
			une casquette. *a cap.*
	un bâtiment. *a building.*		
	une maison. *a house.*		
	des arbres. *some trees.*		

Giving more complex opinions about TV and film.

masculine plural	feminine plural	English
*divertissant**s***	*divertissant**es***	entertaining
*intéressant**s***	*intéressant**es***	interesting
*marrant**s***	*marrant**es***	funny
*passionnant**s***	*passionnant**es***	exciting
*plein**s** d'action*	*plein**es** d'action*	full of action
*ennuy**eux***	*ennuy**euses***	boring
*nul**s***	*nul**les***	rubbish
*bête**s***	*bête**s***	stupid
*ridicule**s***	*ridicule**s***	ridiculous

Key sounds

ain /in

train	sapin
	

é(ay)

cinéma	thé
	

Silent final consonant – shhh!

Un fruit	Je bois	Le pied
		

Newsome Academy
Everyone Exceptional Everyday

Year 8 La télé et les films.

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- describe a photograph using simple sentences and opinions.
- understand the story of French film.
- produce a short film review in French.

Retrieval Practice

Questions	Answers
Qu'est-ce que tu regardes à la télé?	Je regarde **une comédie**, car **c'est cool.**
Pourquoi?	Je trouve ça **passionant.**
Qu'est-ce que tu aimes comme film?	Je préfère regarder un film **d'amour** parce que c'est **chouette.**
C'est comment?	À mon avis, c'est divertissant.
Qu'est-ce que tu as regardé recemment?	**Le weekend dernier j'ai regarde un film d'horreur. C'était nul.**
Qu'est-ce que tu vas regarder le weekend?	Je vais regarder **une émission de sport.**
Qu'est-ce qu'il y a sur la photo?	Sur la photo on peut voir **deux filles** et **un garçon.** **Une fille** a les cheveux **longs** et **elle** porte **un t-shirt bleu** et **un jean.** J'aime la photo parce que c'est **super!**

Career Focus - Where could this take you?

I am a television and film producer. I travel around the world to find locations for my shows. I can chat to people from all over the world and I have the opportunity to meet lots of famous actors.

Challenge Activities

1. Watch a French television programme, such as Nouvelle Star or La France a un Incroyable Talent. Can you give your opinion in French?
2. Research what the most popular programmes and films are in France for young people your age. How is this different or is this the same?
3. Complete the Languagenut activities.

Topic Links

This topic links to:

- Expressing likes and dislikes.
- My hobbies.
- Media
- Past tense
- Future tense.

Additional Resources

To further practise and develop your knowledge see:

- Language nut.
- Oak academy.

Your teacher can remind you of your login.

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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

Year 8 - 8.2: Kodu

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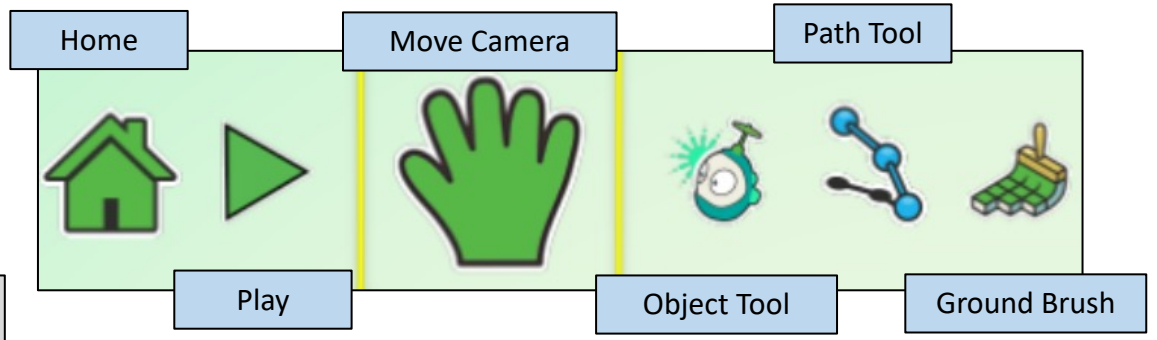
The aims of the sequence of learning are to ensure that all students:

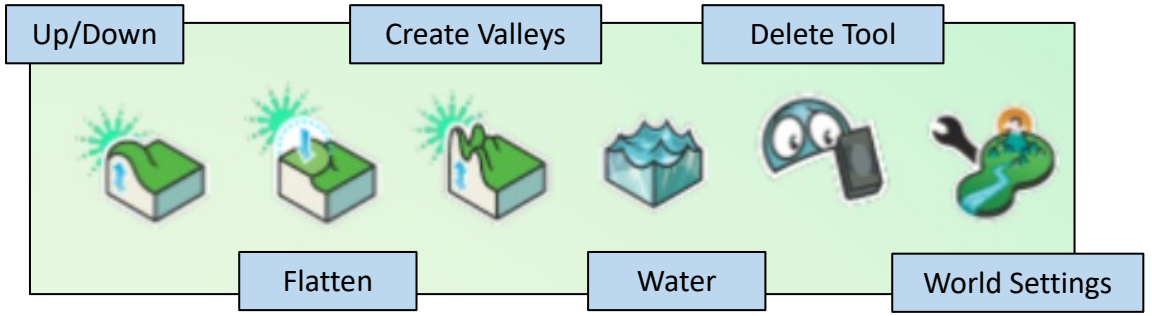
- Describe the Kodu tool bar
- Describe the appropriate use of tiles, rules, scripts and settings in Kodu
- Evaluate the use of tiles, rules, scripts and settings used to create a range of games in Kodu
- Describe the definitions of some keywords in Kodu

Keyword	Definition
Script	The set of instructions used to program in Kodu, usually presented as a collection of tiles that connect with one another using “rules”.
Rule	Each line of a Kodu program is called a rule. Every rule has a WHEN part and a DO part.
Action	The first tile in the DO part of a rule is the action. Examples include "move" and "eat“.
Object	A 3D graphic that can be programmed in the Kodu world.
Tile	Each rectangle that appears in a rule is called a tile. A tile contains a picture and an associated word or phrase.
Sequencing	The specific order in which instructions are performed in a program. If the sequence is incorrect, it may cause errors in a program.
Variable	A variable represents a location in memory. It is used to hold a value which you assign to it. This can change as you play your game, e.g. ‘Points’ = 10
Creatable	Characters that do not exist when you start the game. Instead, they are programmed and spawned by other characters as needed.
Iteration (Loop)	The repetition of a sequence of instructions, e.g. use of ‘Always’ tile in ‘WHEN’ part of a rule.
Condition	The first tile in the WHEN part of a rule is the condition. Examples include "see" and "bump". Conditions can either be true or false, depending on the state of the world.

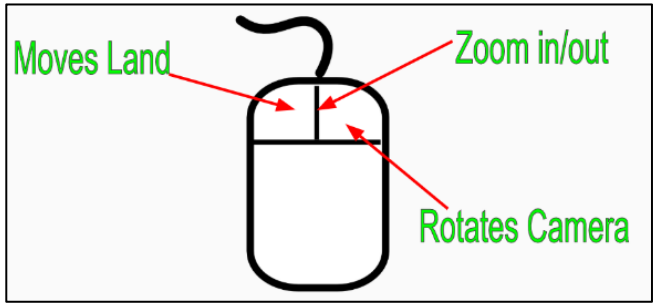
Key Concepts

Kodu Toolbar





Mouse Controls



Object Wheels

Year 8 - 8.2: Kodu

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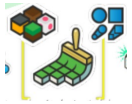
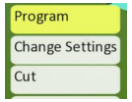
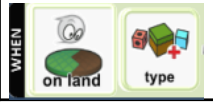
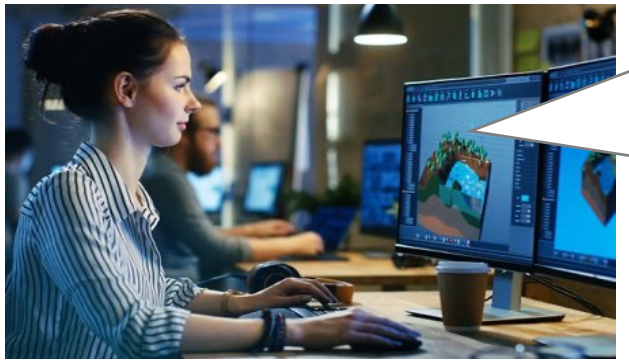
The aims of the sequence of learning are to ensure that all students:

- Describe the Kodu tool bar
- Describe the appropriate use of tiles, rules, scripts and settings in Kodu
- Evaluate the use of tiles, rules, scripts and settings used to create a range of games in Kodu
- Describe the definitions of some keywords in Kodu

Retrieval Practice

Questions	Answers
Describe how to add more land (terrain) on the Kodu world	 Find the tool bar at the bottom of the screen and click on the 'Ground Brush' tool. Select the land type and then left-click to add land.
Describe how to add objects on to your terrain	 Find the tool bar at the bottom of the screen and click on the 'Object Tool'. Click on terrain where you would like to add the object before selecting the object.
Describe how to program an object in Kodu	 Make sure you have clicked on the 'Object Tool' before right-clicking on the object that you would like to program. The press the 'esc' key on the keyboard to return back to the Kodu world
Describe how to play the game that has been created in Kodu	 Find the tool bar at the bottom of the screen and click on the 'Play' tool.
Describe what the 'Path tool' can be used for on Kodu	The path tool can be used to create different types of paths on the Kodu terrain or alternatively an invisible path that moving objects can be programmed to follow
Describe what is meant by the term 'iteration' and how to add iteration (loops) in a Rule.	 When programming an object click on the '+' button on the 'WHEN' section of a Rule (programming line). Select the 'Always' tile to create a loop.
Describe how to program what happens when objects touch a specific type of land on the Kodu world	 When programming an object click on the '+' button on the 'WHEN' section of a Rule. Select the 'On Land' tile and land type before adding tiles to the 'DO' section of a Rule.

Career Focus - Where could this take you?



I am a **Gameplay designer** and work in a team that is responsible for the central part of the game experience – how it plays. My job involves defining the game's structure, its rules, characters, and different modes of play, like story mode or multi-player.

Challenge Activities

1. Create a multiplayer game in Kodu that uses all of the tiles, scripts and techniques you have covered in this unit. Also, research the internet and include the use of new tiles and scripts that have not been covered in this unit.
2. Create a poster on MS PowerPoint that includes one or all of the following details: how to use variables, iteration, and conditional statements on Kodu to create games
3. Create a short vlog about the types of careers you could get into within the gaming industry. Explain what you would need to study at college and university to pursue these career paths

Topic Links

This topic links to:

- Computing Curriculum: Understand how instructions are stored and executed within a computer system
- Mathematics: use of logical inference, problem-solving skills and simple algebra

Additional Resources

To further practise and develop your knowledge see:

- https://www.kodugamelab.com/
- https://www.youtube.com/@KoduTeam

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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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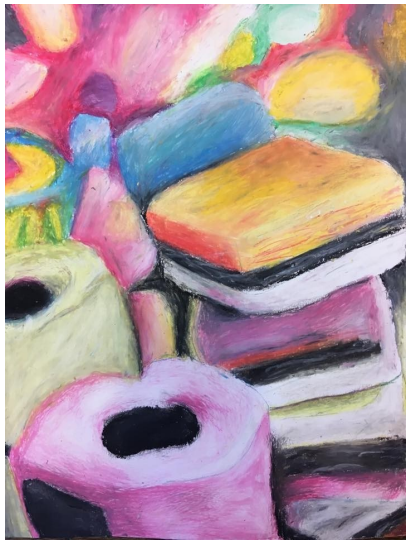
Year 8 Sweet Treats

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

- Develop knowledge of Contemporary artist Sarah Graham.
- Produce observational studies.
- Experiment with a range of media.
- Produce a personal response showcasing an understanding of this style.

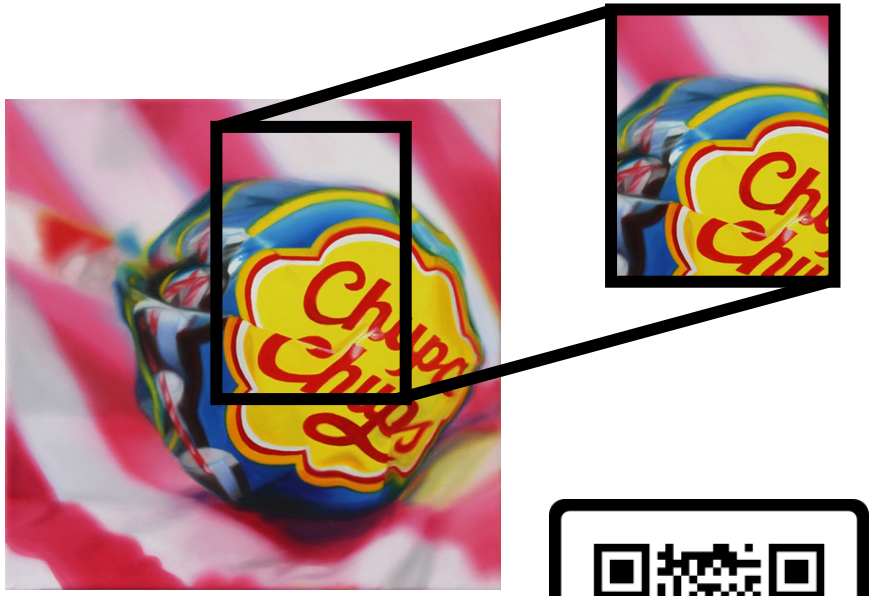
Keyword	Definition
Composition	The arrangement of elements within a work of art.
Realism	Representing a person, location or thing in a way that is accurate and true to life.
Focal Point	The main or principal point of focus.
Contemporary	The term contemporary art is loosely used to refer to art of the present day and of the relatively recent past, of an innovatory or avant-garde nature.
Media	Refers to the materials you use to create your art. Mixed media is artwork in the making of which more than one medium has been employed
View Finder	A viewfinder is a simple square or rectangle cut out of card that you can look through. Using a viewfinder helps you to focus on something and not get distracted by what's around it.

Key Concepts



During this project you will:

- explore the work of contemporary artist Sarah Graham.
- develop observational drawing skills.
- experiment with new media.
- Create your own response to Sarah Graham's work.



SCAN ME

Scan the QR code to watch a timelapse of how Sarah Graham creates her paintings.

SCAN ME

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Year 8 Sweet Treats

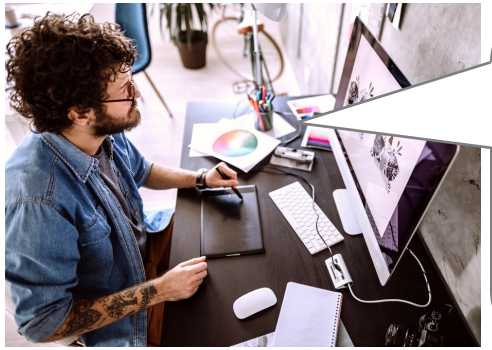
The aims of the sequence of learning are to ensure that all students:

- Develop knowledge of Contemporary artist Sarah Graham.
- Produce observational studies.
- Experiment with a range of media.
- Produce a personal response showcasing an understanding of this style.

Retrieval Practice

Questions	Answers
What is composition?	Composition is the arrangements of elements within a piece of artwork.
What does realism mean in art?	Realism is the Representation of a person, location or thing in a way that is accurate and true to life.
What is a focal point?	A focal point is the main point of focus in an artwork. It is the main part that your eye is drawn to.
What is a contemporary piece of artwork?	The term contemporary art is used to refer to art of the present day and of the relatively recent past.
What is the meant be the term media?	Media refers to the materials you use to create your art. Mixed media is artwork in the making of which more than one medium has been used.
How does using a viewfinder help when creating a piece of artwork?	Using a viewfinder helps you to focus on something and not get distracted by what's around it.

Career Focus - Where could this take you?



I am a **Print Designer** and I create digital patterns for products like fabrics, home goods, packaging and clothing.

Challenge Activities

Look through the examples of Sarah Graham's work and explain what pieces you like/dislike and why you have made these choices. Comment on things like colour, pattern and the style of the work.

SCAN ME

Topic Links

- English - Understanding terminology
- Science – accurate observation skills

Additional Resources

Scan the QR code to watch an interview with Sarah Graham.

SCAN ME

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Year 8 Food Tech

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

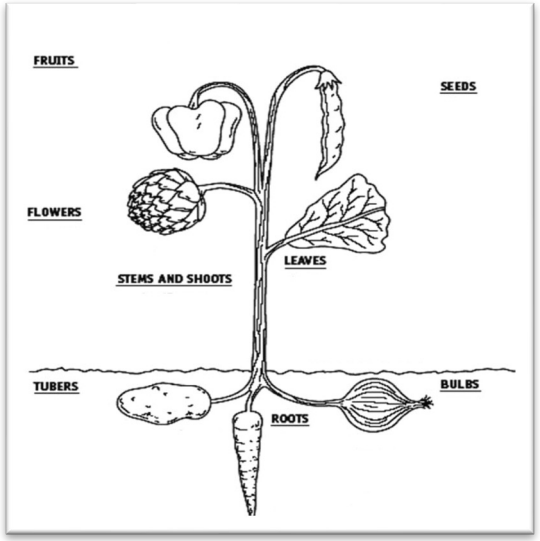
- Learn the basics of health & safety in the kitchen
- Be able to demonstrate a range of cooking skills including mixing, measuring, timing, testing, baking, boiling and frying
- Be able to select and prepare (including chop safely) vegetables and other food types
- Be able to prepare, cook and present a healthy hot meal

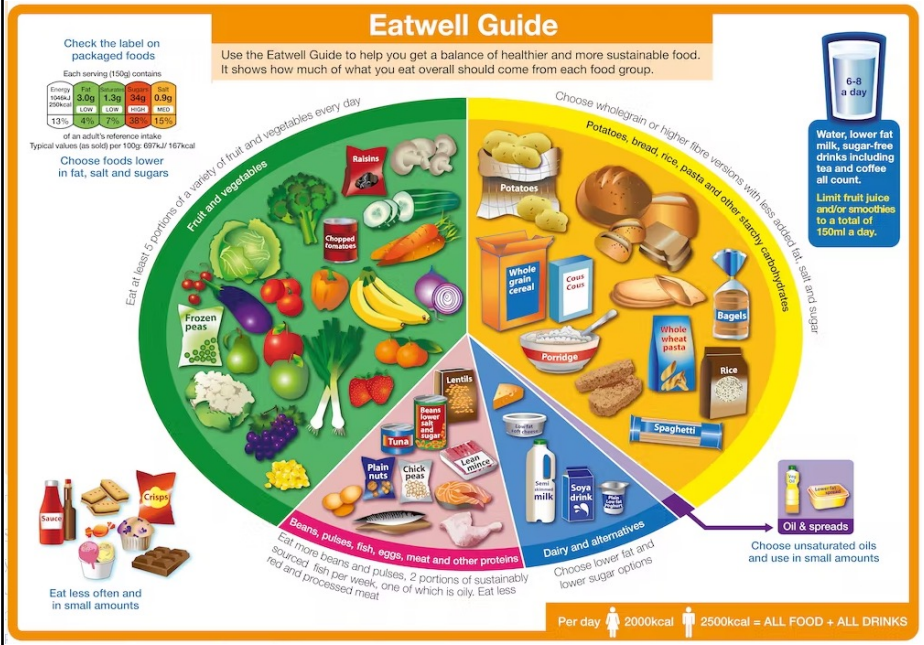
Keyword	Definition
Weighing scales	A tool used to accurately measure the weight/mass of ingredients
Knife	A sharp tool used for cutting food. Different types of knives have different uses, e.g. bread knife, fish knife
Chopping board	Board used for cutting food on to protect work surfaces. Generally made from glass, plastic or wood
Saucepan	A larger pan used for boiling water or making sauces
Frying pan	A frying pan is a flat-bottomed pan used for frying or sautéing food
Grater	A metal tool used for grating food into much smaller pieces
Baking tray	A metal or Pyrex tray used in the oven to cook food on
Cooling rack	A wire rack used to cool food, often baked products
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 8 Food Tech

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

- **Demonstrate the basics of health & safety in the kitchen**
- **Be able to demonstrate a range of cooking skills including mixing, measuring, timing, testing, baking, boiling and frying**
- **Be able to select and prepare (including chop safely) vegetables and other food types**
- **Be able to prepare, cook and present a healthy hot meal**

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) and there are 1000g in a Kilogram (kg). Liquid is measured in Millilitres (ml) or litres
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 **food technologist** and I study foods and their nutritional content. I use laboratory skills and techniques to identify nutrients and calorie content of foods.

Challenge Activities

Try some of these recipes at home
Follow the links

[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 you knowledge see:

[Eat well guide Quiz]

[Eat well guide]

[Eat well video resource]

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Year 8 Music Technology

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

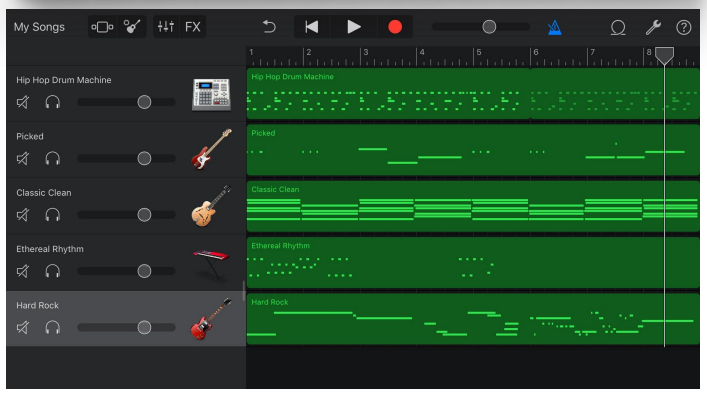
- Learn how to compose a song with a basic structure using audio production software.
- Learn how to record into a Digital Audio Workstation using a midi keyboard.

Keyword	Definition
DAW (Digital Audio Workstation)	Software used for recording, editing and producing audio files.
Loops	Pre-recorded audio files (either audio or MIDI regions) that can shift in pitch or tempo and that are designed to play repeatedly.
Audio	Sound that has been recorded or transferred to an electrical signal.
Track	The horizontal rows in the Tracks area that you use to organise your music
BPM	Abbreviation for *beats per minute*. Bpm is used to indicate the tempo of a piece of music.
Fade-Out	A fade-out is created by gradually lowering the volume of a track or song to silence, typically at the end of the song.
Metronome	A device that marks regular intervals of time, such as musical beats, by making a sound (usually a beep or click).
MIDI (Musical Instrument Digital Interface).	A device (such as a keyboard) that plugs into a computer.
Structure	Song structure means all the parts of a song. For example, a song can have an intro, a verse, a chorus and an outro. A song can have more than one verse and more than one chorus but will usually only have one intro and one outro.
Screen Control	A control you use to change a different aspect of the track's sound. Screen controls are labelled to help you understand which aspect of the sound each one affects.
Texture	How many instruments are playing at the same time. The fewer instruments playing, the thinner the texture, the more instruments are playing, the thicker the texture becomes.

Key Concepts

A MIDI Keyboard
When you press a key on the keyboard it tells the computer to make a sound.

Tracks
The horizontal rows are Tracks. The green lines and dots are the music that has been recorded using a MIDI Keyboard. Each track is for a different instrument.



Screen Control
A control you use to change a different aspect of the track's sound. They usually look like real-life machines.

The rear of the Mac Computer We need to make sure that the midi keyboard is Plugged into one of the USB ports on the back of the computer.

The USB Ports

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Year 8 Music Technology

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

- Learn how compose a song with a basic structure using audio production software
- Learn how to record into a Digital Audio Workstation using a midi keyboard.

Retrieval Practice

Questions	Answers
In which ways are DAWs more convenient than traditional, analogue methods of recording?	• Portability - People can create music on the move (can be used on laptops, tablets and smart phones). • Cost – many DAWs are available for free. The ones that do cost money are less expensive than all the recording equipment needed to record a song. • Easy to use – For example, loops are a great way for beginners to get started in expressing themselves creatively, without needing to learn how to use complicated technology. • They have lots of features – More advanced users can apply themselves and make some very complicated, creative and interesting music. • You don't have to be able to play a musical instrument to put a song together in a piece of Software!
Why is it important to develop these skills?	• Computer skills are becoming more and more important when it comes to finding a career. • Having transferable skills will also make you much more likely to get a job in the future. • Creating music digitally is another form of creative outlet • Allows you to be musically creative without learning an instrument
What is automation and why is it useful?	• Automation allows you to control effects on an instrument track. • You can control each effect individually (reverb, echo, panning, volume etc.) • You can gradually increase and decrease the effect, remove it completely or make it suddenly increase.

Career Focus - Where could this take you?

My name is Calvin Harris and I'm a DJ and musician. I use music software to write and produce my music. I create the beats, basslines and melodies using music software. I also use it to record other instruments and my vocals. During my live shows I use music software to help add effects to my music, as well as to play backing tracks and other instruments while I sing.

Challenge Activities

- **Add a Drummer to your Garageband Project:**
- https://support.apple.com/en-gb/HT207834

- **Add automation to a Garageband Project:**
- https://producersociety.com/automation-tutorial-ios-garageband/

Topic Links

This topic links to:

- Science – Specifics of sound (such as decibels)
- IT – Use of software and digital interfaces
- Maths – Dividing bars into beats. Measuring songs and sounds using various units.

Additional Resources

To further practise and develop your knowledge see:

- https://support.apple.com/en-gb/guide/garageband/welcome/mac
- https://www.thedomesticmusician.com/how-to-get-your-kids-involved-in-electronic-music-production/

Year 8 Strike and Field

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

- Students can perform basic skills
- Students can identify strengths and weaknesses in their own performance
- Students can evaluate the performance of their peers
- Students can begin to explain why they are aren't successful with specific skills

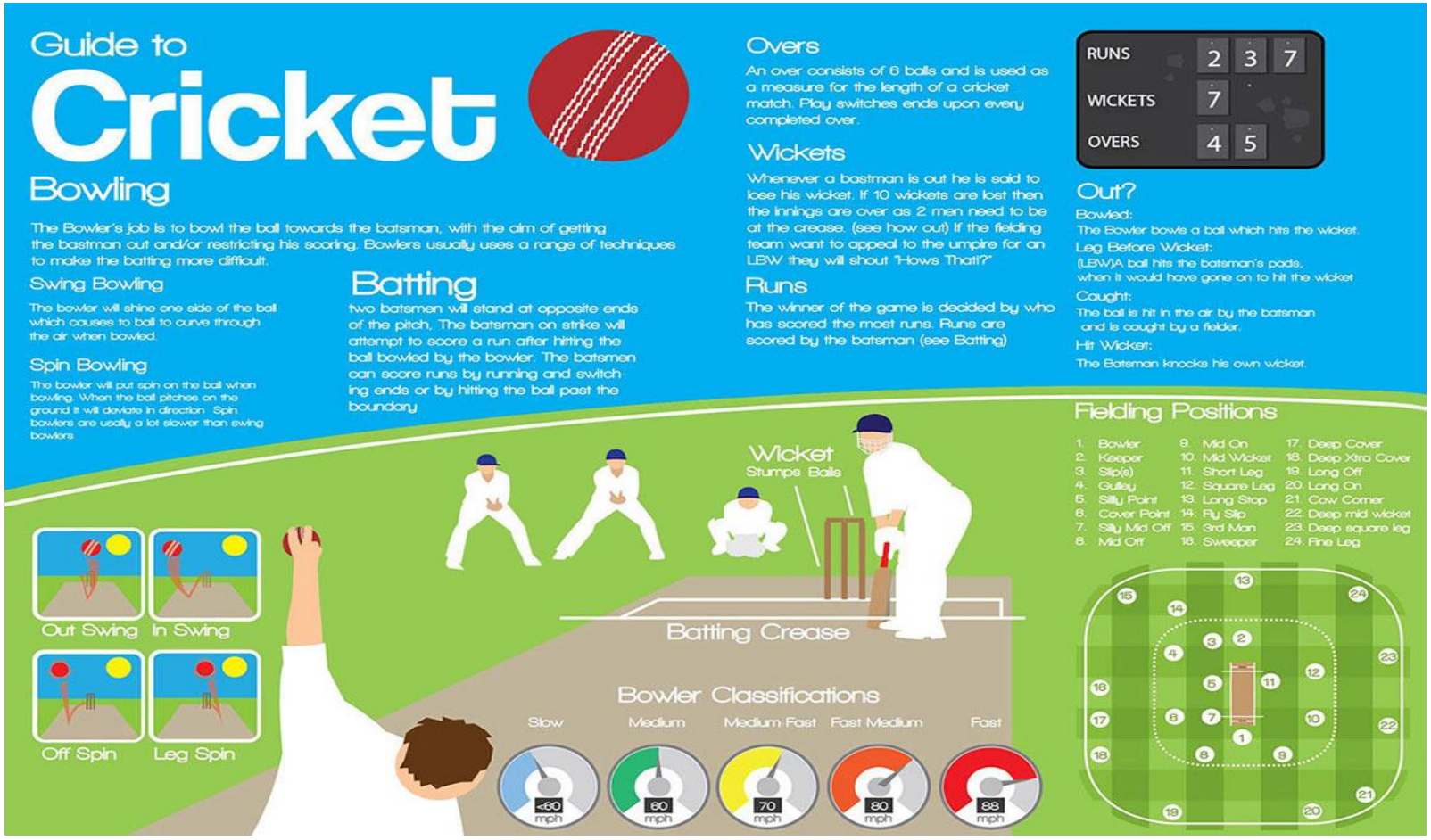
Keyword (Tier 3 subject specific language)	Definition
Power	This is the ability to perform maximum strength and maximum speed of your muscles Power = strength x speed.
Long barrier	A fielding skill where you get in line with the ball coming towards you . You get your whole body behind the ball and make yourself as wide as possible so you can stop the ball going past you.
Reaction Time	The time taken for a person to respond and react to movement (reacting to the ball to hit it with the bat or to react to the ball as a fielder).
Umpire	An umpire in rounders and cricket study and understand game rules that apply to a variety of sports. I Judge gameplay during sporting events to award points and decide results by observing gameplay closely and making calls on what I see.
Drive hitting	A drive shot is a straight-batted shot, played by swinging the bat in a vertical arc through the line of the ball hitting the ball in front of the batsman. This is usually a defending shot to prevent getting out in a game.
No ball	The umpire shall call and signal No ball if a ball which he/she considers to have been delivered, without having previously touched bat or person of the striker, - In cricket also if the ball bounces more than once or rolls along the ground before it reaches the popping crease.
Pull shot	If a bowler bowls a slow ball, the batter has time to move and hit the ball at an angle across their body. This is done to attack the ball so the batter has more time to run to score points

Key Concepts You should already know:- An example of the component of fitness for speed and agility and why they are used in strike and fie sports. You can recall basic batting and bowling and fielding skills with a variety of confidence in a practice situation. You can attempt to take part in a competitive skill situations . You will be assessed on:- Understanding - Technique - Application - Leadership

Strike And Field Key Concepts- Game Play

Retrieval Practice:

Memory recall the following skills for your PE lessons.



Year 8 Strike and Field

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

- Students can perform basic skills
- Students can identify strengths and weaknesses in their own performance
- Students can evaluate the performance of their peers
- Students can begin to explain why they are aren't successful with specific skills

Retrieval Practice:

Memory recall the skill card to help you on how to play rounders in your next PE lesson.

ROUNDERS ENGLAND SIMPLIFIED RULES

ROUNDERS ENGLAND

Teams

- Games are played between two teams. Each team has a maximum of 15 and a minimum of 6 players. No more than 9 players may be on the field at any one time
- If a mixed team—there should be no more than 5 male players
- List of players and substitutes should be submitted to the Umpire prior to play
- Games are usually played over 2 innings
- Players once substituted may return during the game, but batters only in the position of their original number

Batting

- Wait in the backward area well away from 4th post
- If out, wait in the backward area well away from 1st post
- Enter the batting square when called to do so by the Umpire
- You will have one good ball bowled to you
- Batter can use 2 hands
- You can take a no ball and score in the usual way, but once you reach 1st post you cannot return. You cannot be caught out or stumped out at 1st post on a no ball

No balls

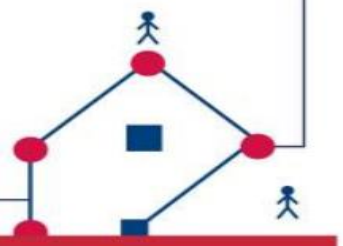
- Not smooth underarm action
- Ball is above head or below knee
- Ball bounces on way to you
- Wide or straight at body
- The Bowler's foot is outside the square during the bowling action

Scoring

- 1 Rounder if ball is hit and 4th post is reached and touched before next ball is bowled
- 1 Rounder if ball is hit and 4th post is reached on a no ball (you can't be caught out on a no ball)
- ½ Rounder if 4th post reached without hitting the ball
- ½ Rounder if ball is hit and 2nd or 3rd post reached and touched before next ball is bowled - but if you continue this run and are put out before reaching 4th post, the score will be forfeited
- Penalty ½ Rounder for an obstruction by a fielder
- Penalty ½ rounder for 2 consecutive no balls to same batter
- 1 Rounder for a backward hit if 4th post reached (you stay at 1st while ball is in the backward area)
- The team with the highest number of Rounders wins
- Penalty ½ rounder to fielding team if waiting batters or batters out obstruct a fielder

Out when

- Caught
- Foot over front/back line of batting square before hitting or missing a ball
- Running inside post (unless obstructed)
- The post you are running to is stumped
- You overtake another batter on the track
- You obstruct (you have right of way on track only)
- Deliberately throw or drop bat
- Side out
- If ordered to make and maintain contact with the post and refuse to do so
- You lose contact with the post:
  - When the bowler has the ball and is in the square (except on an over run)
  - During the bowlers action but before they release the ball



www.roundersengland.co.uk

Career Focus - Where could this take you? Professional biomechanics coach

My role as a biomechanics coach is to record athletes' performances and help them to identify their strengths and areas of development in their practical skills for batting. I then set SMART target to then help them make improvements and re-assess. The aim is to make the people I work with to become better athletes so they can perform to their highest level.

Challenge Activities

Design a rules of the game skill card or a presentation:-
Can you create a resource that shall help a student in your class develop the correct understanding of rules of a strike and fielding sport in your PE lesson. This can be presented to your PE teacher and used in lessons.

Create a crossword or wordsearch key terms activate task:-
This can be used by all students in their PE lessons as memory recall revision task. Use the key words and any other information from the KO pages to develop your answers.

PLEASE USE THE ADDITIONAL RESOURCES TO HELP ON THESE CHALLENGE ACTIVITIES!!!

Topic Links

This topic links to:
- RSHE – Understanding how physical activity can promote CORE soft skills and confidence
- English – understanding and defining key terminology
- Mathematics – problem solving, recording runs and scores and analysing performance. Time keeping
- Voice 21 – Discussing rules of the game, acting as umpires and team teaching in PE lessons

Additional Resources

To further information to develop your knowledge see:

https://www.youtube.com/watch?v=VUZPVlIL57k

https://www.youtube.com/watch?v=AqtpNkMvj5Y

https://www.roundersengland.co.uk/

https://www.ecb.co.uk/

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Usernames and Passwords

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RESPECT | INTEGRITY | TEAMWORK | ASPIRATION

FAIL EARLY - FAIL FORWARD - FAIL OFTEN | SEIZE EVERY MINUTE | BE BRAVE - BE PRESENT - BE YOU

NON NEGOTIABLE EQUIPMENT

BLACK PEN

PURPLE PEN

PENCIL

BONUS ITEMS

HIGHLIGHTER | RUBBER | GLUE STICK | CALCULATOR

RULER

PLACE YOUR EQUIPMENT ON THE PLACEMAT TO SHOW YOUR TEACHER YOU ARE PREPARED AND READY FOR LEARNING