Year 8

Newsome Academy
Everyone Exceptional Everyday

Knowledge Organisers

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.

The learning outcomes for this topic are:
- Identify lines of symmetry in a shape
- Recognise the order of rotational symmetry
- Draw shapes with a number of lines of symmetry

- Draw shapes with an order of rotational symmetry
- Draw shapes satisfying both a given number of lines and order of rotational symmetry
- Use the symmetry properties of special quadrilaterals

Key Word	Definition
Polygon	A 2D shape with straight edges
Symmetry	Being made up of identical parts
Reflect	To mirror/flip an object
Rotate	To turn/spin an object
Rotational Symmetry	When a shape looks the same following a rotation
Order	Number of times
Mirror line	Fold line where two parts of a shape would match
Regular	All side lengths and angles are equal

Careers Focus – Where could this take you?

Stained glass artists will create geometric patterns that often employ symmetry in their designs.

Additional Resources

MathsWatch: G3 , G7 , 11

Corbett Maths: Videos 316 , 317 ; Worksheets 316 , 317

Curriculum Links - Coherence

Required Knowledge:
- 7.09 Graphs of linear equations
- 7.20 Measuring and drawing angles
- 7.22 Properties of triangles and quadrilaterals

Applied to:
- 8.02 Reflection and rotations
- 8.19 Interior and exterior angles
- 9H19 Angles in polygons
- 10F01 Translation, reflection and rotation
- 11H.03 Trigonometric graphs

Links across school:
- Culture (Art)
- Pop Art Portraits (Photography)
- Applying Choreographic Skills (Performing Arts)

Key Concepts

Quadrilateral	Figure	Properties
Rectangle		• 4 right angles • 2 pairs of parallel sides • 2 lines of symmetry • rotational symmetry of order 2
Square		• 4 right angles • 4 congruent sides • 4 lines of symmetry • rotational symmetry of order 4
Trapezoid		• 1 pair of parallel sides • Isoceles triangles have 1 pair of congruent sides
Parallelogram		• 2 pairs of parallel sides • 2 pairs of congruent sides
Rhombus		• 4 congruent sides • 2 lines of symmetry • rotational symmetry of order 2
Kite		• 2 pairs of congruent sides • 1 line of symmetry

Lines of symmetry are the number of *'mirror lines'* in a shape. Remember that **regular polygons** have the same number of lines of symmetry as they have sides.

The **order of rotational symmetry** is the number of times a shape looks identical to it's starting position during a full 360 degree turn. All shapes have an order of at least 1.

Concept – what it is	Non-Concept – what it isn't

X Vertical Line Symmetry   X Horizontal Line Symmetry   X Diagonal Line Symmetry

For any parallelogram, it is impossible to construct a line that passes through the center of the figure and cuts the image in half, where each side is a mirror image of the other.

SYMMETRIC

ASYMMETRIC

Standard Examples	Non-Standard Examples

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

Newsome Academy
Everyone Exceptional Everyday

8.01 Lines and rotational symmetry

The learning outcomes for this topic are:
- Identify lines of symmetry in a shape
- Recognise the order of rotational symmetry
- Draw shapes with a number of lines of symmetry
- Draw shapes with an order of rotational symmetry
- Draw shapes satisfying both a given number of lines and order of rotational symmetry
- Use the symmetry properties of special quadrilaterals

Useful Formulae and Hints

Lines of symmetry = mirror lines

Try folding the shape along the line (using tracing paper) to check the edges 'match up'.

All shapes have at least order of rotational symmetry 1.

Regular polygons have the same number of sides as lines of symmetry and rotational symmetry.

Use tracing paper to check how many times the shape looks the same in a 360 degree turn.

Trapeziums and parallelograms have no lines of symmetry. (Isosceles trapeziums have one line of symmetry).

GCSE Questions

5 A shape is drawn on a one-centimetre grid.
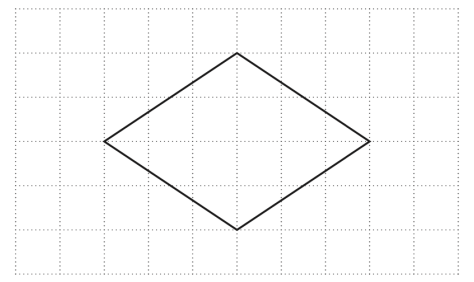
(a) Ring the mathematical name of the shape.

Pentagon   Square   Octagon   Rhombus   **[1]**

(b) How many lines of symmetry does the shape have?

(b) .... **[1]**

(c) Work out the area of the shape.

(c) .... cm² **[2]**
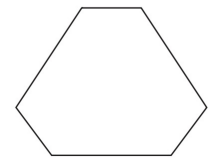

(b) Here is a rectangle.

(i) On the diagram, draw the rectangle's two lines of symmetry. **[1]**

(ii) The rectangle has rotation symmetry of order 2.

Amaya says

A rectangle is the only quadrilateral that has rotation symmetry of order 2.
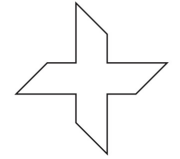
Is she correct?
Show how you decide.

.... **[2]**

---

2 (a) Write down the number of lines of symmetry of this hexagon.

(a) .... **[1]**

(b) Write down the order of rotation symmetry of this shape.

(b) .... **[1]**

(c) A triangle has just one line of symmetry.

Write down the mathematical name of this type of triangle.

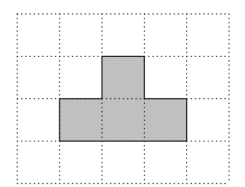(c) .... **[1]**

(d) Sara says

All parallelograms have 2 lines of symmetry and rotation symmetry of order 2.

Explain why Sara is not correct.

---

5 A shape is drawn on a one-centimetre grid.

(a) Find the perimeter of the shape.

(a) .... cm **[1]**

(b) How many lines of symmetry does the shape have?

(b) .... **[1]**

Newsome Academy
Everyone Exceptional Everyday

8.02: Reflections and Rotations

The learning outcomes for this topic are:
- Rotate objects by a multiple of 90 degrees
- Reflect objects in horizontal or vertical lines
- Rotate a shape around a point
- Reflect a shape in y = x or y = -x
- Perform a combination of reflections and rotations
- Describe a rotation

Key Word	Definition
Reflect	flip/mirror a shape
Rotate	turn/spin a shape
Centre	the point which a shape is rotated around
Degree	the measurement of an angle, 360 in a full turn, 180 in a half turn and 90 in a quarter turn
Clockwise/Anticlockwise	in a circular motion in the same/opposite direction as clock hands move
Origin	the coordinate (0 , 0)
Horizontal	sideways/left to right
Vertical	up and down
Combination	more than one, performed one after another
Describe	state the type of transformation and the key features e.g. angle, centre, direction

Careers Focus – Where could this take you?

Optometrists use reflections and mirrors in their work testing eye-sight and supporting patients with their vision and optical health.

Additional Resources

MathsWatch: G4A , G4B , G6 , 48 , 49

Corbett Maths: Videos 272 , 273 , 274 , 275 ; Worksheets 272 , 273 , 274 , 275

Curriculum Links - Coherence

Required Knowledge:
- 7.09 Graphs of linear equations
- 7.20 Measuring and drawing angles
- 8.01 Lines and rotational symmetry

Applied to:
- 9H.17 Combining transformations
- 10F.02 Combinations of transformations
- 10F.22 Congruency and similarity
- 10H.05 Similar triangles
- 11H.07 Graph transformations

Links across school:
- Applying Choreographic Skills (Performing Arts)
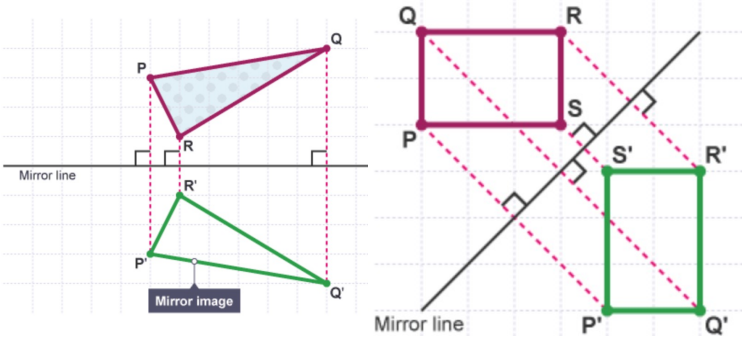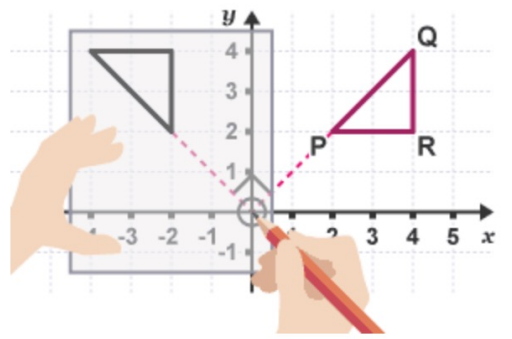- Pop Art Portraits (Photography)
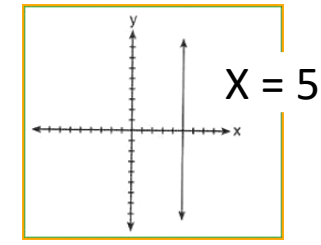
Key Concepts

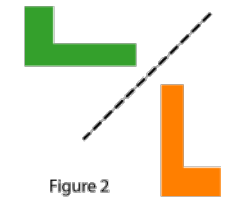**Using tracing paper**
Rotation
- *Trace the shape*
- *Put your pencil on the centre of rotation*
- *Spin the tracing paper*
- *Draw the shape in the correct position*

Reflection
- *Trace the shape and the mirror line*
- *Flip the tracing paper*
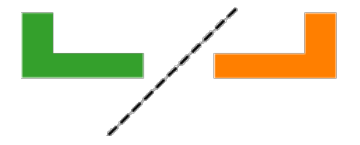- *Match the mirror line back up*

Mirror line

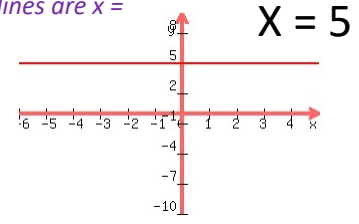Mirror image

Mirror line

Concept – what it is	Non-Concept – what it isn't
Figure 2	*Diagonal lines do not reflect shapes 'across' or 'up and down'*
X = 5	*Horizontal lines are y = and vertical lines are x =* X = 5
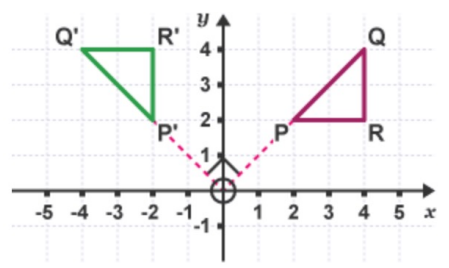
Standard Examples	Non-Standard Examples
Describe the single transformation mapping triangle PQR to P'Q'R'. *Rotation (1 mark)* *90 degrees anticlockwise (1 mark)* *Around the centre (0 , 0) (1 mark)*	The square ABCD is transformed by a combined transformation of a reflection in the line x = -1 and a rotation. Under the combined transformation, two vertices of the square are invariant. Describe fully one possible transformation. *Invariant = stay in the same place.* *Would rotate 180 degrees about (-1,2) or (-1,4)*
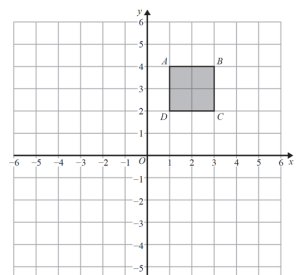
Newsome Academy
Everyone Exceptional Everyday

8.02: Reflections and Rotations

The learning outcomes for this topic are:
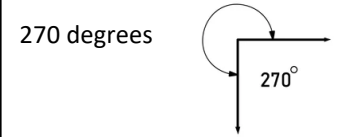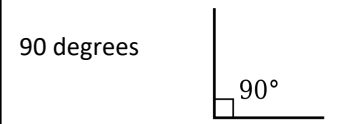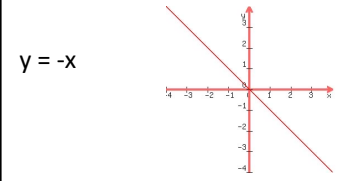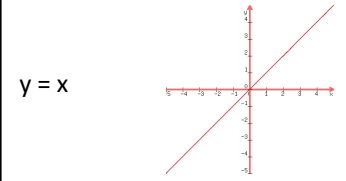- Rotate objects by a multiple of 90 degrees
- Reflect objects in horizontal or vertical lines
- Rotate a shape around a point
- Reflect a shape in y = x or y = -x
- Perform a combination of reflections and rotations
- Describe a rotation

Useful Formulae and Hints

$y = x$

$y = -x$

90 degrees

$90°$

180 degrees

$180°$

270 degrees

$270°$

Clockwise/Anticlockwise

Clockwise   Anti-Clockwise
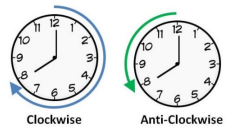
GCSE Questions

2 **(a)** Reflect the triangle in the mirror line.

mirror line

[2]

8 Triangle **T** is drawn on a coordinate grid.

(a) Rotate triangle **T** through 180° about (0, 0).
Label your image **A**. [2]

(b) Reflect triangle **T** in the line $x = -1$.
Label your image **B**. [2]

11 Triangles **A** and **B** are drawn on the coordinate grid.

(a) Describe fully the **single** transformation that maps triangle **A** onto triangle **B**.

....

.... [3]

(b) **(i)** On the grid, reflect triangle **A** in the line $x = 0$.

Label the image **C**. [2]

8 **(a)** Shape **G** is drawn on the grid.

G

A.

Rotate shape **G** by 180° about the point A. [2]

Newsome Academy
8.03: Equivalent Fractions

The learning outcomes for this topic are:
- Simplify fractions
- Find equivalent fractions
- Compare fractions using diagrams
- Convert a mixed number into an improper fraction
- Convert an improper fraction to a mixed number
- Use equivalent fractions to compare or order a list

Key Word	Definition
Simplify	an equivalent fraction with lower numbers
Equivalent	two fractions that represent the same proportion
Numerator	the top number in a fraction
Denominator	the bottom number in a fraction
Mixed Number	a whole part and a fraction
Improper	a fraction with a larger numerator than denominator
Proper	a fraction with a larger denominator than numerator
Sum	total / addition
Difference	the distance between two numbers / subtraction
Simplest Form	when a fraction has no common factor in the numerator and denominator
Unit fraction	a fraction with a numerator of 1

Careers Focus – Where could this take you?

Pharmacists use equivalent fractions to decide how much medication to give a person based on their height, weight etc

Curriculum Links - Coherence

Required Knowledge:
- 7.02 Multiplying and dividing integers
- 7.18 Simplifying ratios

Applied to:
- 8.04 Adding and subtracting fractions
- 8.05 Multiplying and dividing fractions
- 9F.18 Ratio
- 10F.05 Expectation and outcomes
- 10F.09 Writing a quantity as a percentage of a number
- 10F.22 Similarity
- 10H.05 Similar triangles
- 10H.14 Surds
- 11H.08 Algebraic Fractions

Links across school:
- UK Population Distribution (Geography)

Key Concepts

$$\frac{24}{36} = \frac{24 \div 3}{36 \div 3} = \frac{8}{12} = \frac{4 \div 4}{12 \div 4} = \frac{2}{3}$$

A whole number can be written as $\frac{2}{2}$, $\frac{3}{3}$, $\frac{4}{4}$, etc.

So $1\frac{2}{3}$ can be written as:

$$\frac{3}{3} + \frac{2}{3} = \frac{5}{3}$$

$$\frac{17}{5} = \frac{5}{5} + \frac{5}{5} + \frac{5}{5} + \frac{2}{5} = 3\frac{2}{5}$$

Another way to convert an improper fraction is to find how many whole numbers you get, by using a division.

For example let's convert $\frac{17}{5}$ to a mixed number again.
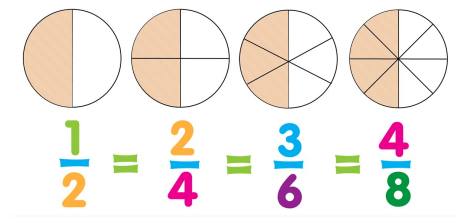
We start by dividing the top number by the bottom number.

17 divided by 5 is 3 remainder 2.

So the whole number part is 3, and the remainder 2 means there are $\frac{2}{5}$ left over.

So the answer is $\frac{17}{5} = 3\frac{2}{5}$

Concept – what it is

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$$

$$6\frac{3}{5} = \frac{6 \times 5 + 3}{5} = \frac{33}{5}$$

Non-Concept – what it isn't

You should be multiplying and dividing the fraction, not adding.

$$\frac{1}{2} = \frac{2}{3} = \frac{3}{4} = \frac{4}{5}$$

Multiply the denominator, not the numerator.

$$6\frac{3}{5} = \frac{6 \times 3}{5} = \frac{18}{5}$$

Standard Examples

Fully simplify $\frac{45}{75}$

$$\frac{45 \div 5}{75 \div 5} = \frac{9}{15} = \frac{9 \div 3}{15 \div 3} = \frac{3}{5}$$

Which fraction is bigger, $\frac{3}{5}$ or $\frac{4}{7}$

$$\frac{3 \times 7}{5 \times 7} = \frac{21}{35} \qquad \frac{4 \times 5}{7 \times 5} = \frac{20}{35}$$

$\frac{3}{5}$ *is bigger*.

Non-Standard Examples

Fully simplify $\frac{4a}{12a}$

$$\frac{4a \div a}{12a \div a} = \frac{4}{12} = \frac{4 \div 4}{12 \div 34} = \frac{1}{3}$$

Find a fraction between, $\frac{3}{5}$ and $\frac{4}{7}$

$$\frac{3 \times 7}{5 \times 7} = \frac{21}{35} \qquad \frac{4 \times 5}{7 \times 5} = \frac{20}{35}$$

$$\frac{20.5}{35} = \frac{41}{70} \ or \ \frac{205}{350}$$

The learning outcomes for this topic are:
- Simplify fractions
- Find equivalent fractions
- Compare fractions using diagrams
- Convert a mixed number into an improper fraction
- Convert an improper fraction to a mixed number
- Use equivalent fractions to compare or order a list

Useful Formulae and Hints

Find the lowest common multiple of the two denominators to find a common denominator

You can match the numerators to a common numerator if you are just trying to compare fractions.
E.g. 4/7 < 6/7 and 24/42 < 24/28

The larger the numerator the larger the size of the fraction (if the denominators are the same).
The smaller the denominator the larger the size of the fraction (if the numerators are the same).

Don't forget to try factors other than 2 when simplifying fractions. It's a good idea to work through the lowest prime numbers, checking if 2 , 3 , 5 , 7 or 11 are factors.

Fractions should not have decimals on their numerator or denominator. Find an equivalent fraction with integers (whole numbers).

Additional Resources

MathsWatch: N23B , N23C , N34 , 25 , 26 , 70

Corbett Maths: Video 135 , 139 , 140 , 144 , 146 ; Worksheet 135 , 139/140 , 144 , 146

GCSE Questions

(b) Show that $\frac{4}{5}$ is bigger than $\frac{7}{9}$.

....

.... **[2]**

(c) Find a fraction which is bigger than $\frac{1}{5}$ and smaller than $\frac{1}{4}$.

(c) .... **[2]**

(c) Find a fraction which is bigger than $\frac{3}{7}$ and smaller than $\frac{4}{7}$.

(c) .... **[2]**

(b) The fraction $\frac{n}{16}$ is between $\frac{1}{4}$ and $\frac{1}{2}$,

Write down all the possible values of n.

(b) .... **[2]**

3 (a) Complete each statement.

(i) $\frac{3}{7} = \frac{\ldots\ldots}{28}$ **[1]**

(ii) $4\frac{1}{2} = \frac{\ldots\ldots}{2}$ **[1]**

3 (a) Complete each statement by writing the missing value in the box.

(i) $\frac{1}{3} = \frac{2}{\square}$ **[1]**

(ii) $1\frac{1}{7} = \frac{\square}{7}$ **[1]**

3 Complete each statement by writing the missing value in the box.

(a) $\frac{2}{5} = \frac{4}{\square}$ **[1]**

(b) $2\frac{1}{3} = \frac{\square}{3}$ **[1]**

11 (a) Liu has a bag only containing red grapes and green grapes.

$\frac{4}{9}$ of the grapes are red.

If there are 8 red grapes in the bag, how many grapes are green?

(a) .... **[3]**

(b) Sophia has a different bag only containing red grapes and green grapes.

The number of grapes in her bag is different, but $\frac{4}{9}$ of the grapes are also red.

She picks out a red grape from her bag and eats it.

$\frac{3}{7}$ of the remaining grapes in her bag are red.

How many of the remaining grapes in her bag are red and how many are green?

(b) .... red grapes

.... green grapes **[2]**

The learning outcomes for this topic are:
- Add two fractions with common denominators
- Subtract two fractions with common denominators
- Add and subtract fractions with different denominators (one multiple)
- Add and subtract fractions with different denominators (two multiples)
- Add and subtract mixed number fractions
- Solve worded problems with addition and subtraction of fractions

Key Word	Definition
Numerator	the top number in a fraction
Denominator	the bottom number in a fraction
Sum	total / addition
Difference	the distance between two numbers / subtraction
LCM	lowest common multiple – the smallest number that is a multiple of two numbers
Mixed Number	a whole part and a fraction
Improper	a fraction with a larger numerator than denominator

Careers Focus – Where could this take you?

Chemists frequently work with fractions when forming different compounds and solutions.

Additional Resources

MathsWatch: N36 , N41 , 71

Corbett Maths: Videos 132 , 133 ; Worksheets 132 , 133

Curriculum Links - Coherence

Required Knowledge:
- 7.01 Adding and subtracting integers
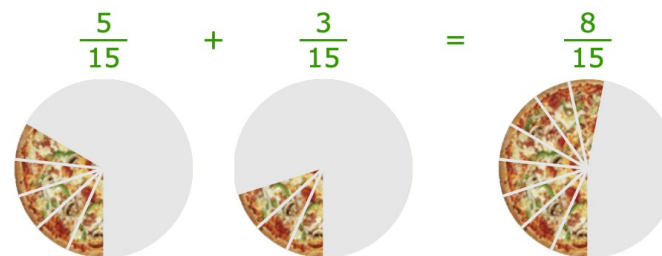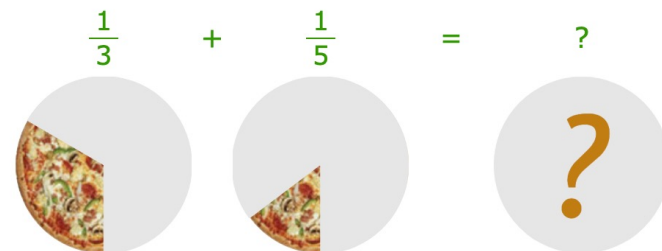- 7.02 Multiplying and dividing integers
- 8.03 Using equivalent fractions

Applied to:
- 10F04 Calculating probabilities
- 10F23 Tree diagrams
- 10H06 Experimental probability
- 10H21 Tree diagrams
- 11H.08 Algebraic Fractions

Links across school:
- Basic kitchen skills (Food Tech)
- Quantitative chemistry and energy (Science

Key Concepts

$$\frac{1}{3} \quad + \quad \frac{1}{5} \quad = \quad ?$$

$$\frac{5}{15} \quad + \quad \frac{3}{15} \quad = \quad \frac{8}{15}$$

$$3\frac{2}{3} - 1\frac{4}{5} = \frac{11}{3} - \frac{9}{5}$$

$$= \frac{55}{15} - \frac{27}{15} = \frac{28}{15} = 1\frac{13}{15}$$

$$5 - \frac{3}{4} = \frac{5}{1} - \frac{3}{4} = \frac{20}{4} - \frac{3}{4} = \frac{17}{4}$$

Concept – what it is

$$\frac{1}{2} + \frac{1}{3} = ?$$

$$\frac{1}{2} \frac{\times 3}{\times 3} = \frac{3}{6} \qquad \frac{1}{3} \frac{\times 2}{\times 2} = \frac{2}{6}$$

$$\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$$

Non-Concept – what it isn't

You cannot just add the numerators, add the denominators..

$$\frac{2}{3} + \frac{5}{7} = \frac{2+5}{3+7} = \frac{7}{10}$$

We need common denominators not common numerators.

$$\frac{4}{7} + \frac{3}{7} = \frac{12}{21} + \frac{12}{28}$$

$$= \frac{12}{49}$$

Standard Examples

$$\frac{7}{10} - \frac{2}{5}$$

$$\frac{7}{10} - \frac{4}{10} = \frac{3}{10}$$

Non-Standard Examples

$$\frac{3}{4} - ? = \frac{1}{28}$$

$$\frac{21}{28} - ? = \frac{1}{28} \qquad ? = \frac{20}{28} = \frac{5}{7}$$

$$\frac{1}{3} + \frac{6}{n} = 1 \qquad \frac{1}{3} = \frac{2}{6} = \frac{3}{9}$$

$$\frac{3}{9} + \frac{6}{9} = \frac{9}{9} = 1 \qquad n = 9$$

Newsome Academy
Everyone Exceptional Everyday

8.04 Adding and Subtracting Fractions

The learning outcomes for this topic are:
- Add two fractions with common denominators
- Subtract two fractions with common denominators
- Add and subtract fractions with different denominators (one multiple)
- Add and subtract fractions with different denominators (two multiples)
- Add and subtract mixed number fractions
- Solve worded problems with addition and subtraction of fractions

Useful Formulae and Hints

Only add or subtract fractions once you have found a **common denominator**

The **numerators** get added/subtracted, not the denominators. It helps to read the question aloud: "one seventh plus five sevenths equals six sevenths", the thing you are counting has not changed, just how many of them you have.

Try to find the **lowest common denominator** so that the numbers you are working with are as small as possible. It should save time simplifying the answer.

You don't have to convert mixed numbers when you are **adding**. You can add the whole numbers and fractions separately.

GCSE Questions

2 (a) Work out $\frac{2}{7} + \frac{1}{7}$.

(a) .... [1]

2 (a) Work out.

(i) $6\frac{1}{2} + \frac{3}{4}$

(a)(i) .... [1]

13 (a) Calculate.

$\frac{3}{5} + \frac{5}{8}$

Give your answer as a mixed number in its simplest form.

(a) .... [3]

7 Work out the following, giving each answer as a fraction.

(a) $1\frac{3}{4} + \frac{1}{2}$

(a) .... [1]

3 Work out $4\frac{1}{5} - 2\frac{2}{3}$

Give your answer as a mixed number.

(Total for Question 3 is 3

(b) Work out.

$\frac{2}{3} - \frac{1}{5}$

(b) .... [2]

1 (a) Work out $2\frac{1}{7} + 1\frac{1}{4}$

....

(2)

Newsome Academy
Everyone Exceptional Everyday

8.05: Multiplying and Dividing Fractions

The learning outcomes for this topic are:
- Multiply a pair of proper fractions
- Divide a pair of proper fractions
- Multiply a fraction and an integer
- Divide a fraction and an integer
- Multiply or divide a pair of mixed number fractions
- Solve worded problems involving multiplying and dividing fractions

Key Word	Definition
Numerator	the top number in a fraction
Denominator	the bottom number in a fraction
Product	multiplication i.e. product of 3 and 4 is 3 x 4 = 12
Quotient	the answer to a division
LCM	lowest common multiple – the smallest number that is a multiple of two numbers
Mixed Number	a whole part and a fraction
Improper	a fraction with a larger numerator than denominator
Reciprocal	two numbers with a product of 1

Careers Focus – Where could this take you?

Set designers use a mathematical formula involving multiplication of fractions to create forced perspective.

Additional Resources

MathsWatch: N37a , N37b , N42a , N42b , 73 , 74

Corbett Maths: Videos 134 , 142 ; Worksheets 134 , 142

Curriculum Links - Coherence

Required Knowledge:
- 7.02 Multiplying and dividing integers
- 8.03 Using equivalent fractions

Applied to:
- 10F04 Calculating probabilities
- 10F23 Tree diagrams
- 10H06 Experimental probability
- 10H21 Tree diagrams
- 11H.08 Algebraic Fractions

Links across school:
- Basic kitchen skills (Food Tech)
- Quantitative chemistry and energy (Science

Key Concepts

$$1\frac{3}{4} \times 2\frac{1}{2} = ?$$

$$1 \times 4 + 3 = 7$$
$$2 \times 2 + 1 = 5$$

$$\frac{7}{4} \times \frac{5}{2} = \frac{35}{8} = 4\frac{3}{8}$$

$$\frac{5}{12} \div \frac{3}{4} = \frac{5}{12} \div \frac{9}{12} = \frac{5 \div 9}{12 \div 12} = \frac{5}{9}$$

Common Denominator

Don't forget that multiplication is commutative (the order doesn't matter) e.g. 2 x 3 = 6 and 3 x 2 = 6.
We can use this to simplify fractions before we multiply.
For example

$$\frac{24}{25} \times \frac{35}{48} = \frac{35}{25} \times \frac{24}{48}$$

$$\frac{35}{25} = \frac{7}{5} \ and \ \frac{24}{48} = \frac{1}{2}$$

$$so \ the \ question \ is \ just \ \frac{7}{5} \times \frac{1}{2} = \frac{7}{10}$$

Concept – what it is

$$\frac{5}{7} \times \frac{3}{11} = \frac{5 \times 3}{7 \times 11} = \frac{15}{77}$$

$$4\frac{1}{2} \times 3\frac{2}{5} = \frac{9}{2} \times \frac{17}{5} = \frac{153}{10}$$

$$= 15\frac{3}{10}$$

$$\frac{4}{7} \div \frac{5}{9} = \frac{4}{7} \times \frac{9}{5} = \frac{36}{35}$$

Non-Concept – what it isn't

We don't need to find a common denominator; it makes the arithmetic more difficult.

$$\frac{5}{7} \times \frac{3}{11} = \frac{35}{77} \times \frac{21}{77}$$

You cannot separate the whole number and the fraction parts.

$$4\frac{1}{2} \times 3\frac{2}{5} = 4 \times 3 + \frac{1}{2} \times \frac{2}{5}$$

$$12 + \frac{2}{10} = 12\frac{2}{10}$$

We multiply by the reciprocal of the second fraction, not the first.

$$\frac{4}{7} \div \frac{5}{9} = \frac{7}{4} \times \frac{5}{9} = \frac{35}{36}$$

Standard Examples

Work out $\frac{3}{5} \times \frac{2}{3}$.

$$\frac{3}{5} \times \frac{2}{3} = \frac{3 \times 2}{5 \times 3} = \frac{6}{15}$$

Work out $\frac{3}{5} \div \frac{2}{3}$.

This is the same as $\frac{3}{5} \times \frac{3}{2}$

$$\frac{3}{5} \times \frac{3}{2} = \frac{3 \times 3}{5 \times 2} = \frac{9}{10}$$

Non-Standard Examples

Find $\frac{1}{3} - \left(\frac{1}{3} \times \frac{1}{3}\right) + \left(\frac{1}{3} \div \frac{1}{3}\right)$

$$\frac{1}{3} - \frac{1}{9} + 1 = \frac{3}{9} - \frac{1}{9} + \frac{9}{9}$$

$$= \frac{11}{9} = 1\frac{2}{9}$$

Newsome Academy
Everyone Exceptional Everyday

8.05: Multiplying and Dividing Fractions

The learning outcomes for this topic are:
- Multiply a pair of proper fractions
- Divide a pair of proper fractions
- Multiply a fraction and an integer
- Divide a fraction and an integer
- Multiply or divide a pair of mixed number fractions
- Solve worded problems involving multiplying and dividing fractions

Useful Formulae and Hints

All integers can be written as fractions, they are just divided by 1.

E.g. $3 = \frac{3}{1}$

Reciprocals have a product of 1. For fractions, this means the reciprocal is the '**flipped**' version of the fraction.

E.g. $\frac{5}{7}$ has a reciprocal of $\frac{7}{5}$ because

$$\frac{5}{7} \times \frac{7}{5} = \frac{5 \times 7}{7 \times 5} = \frac{35}{35} = 1$$

Dividing is the same as **multiplying by the reciprocal**.

E.g.

$$\frac{3}{5} \div \frac{7}{8} = \frac{3}{5} \times \frac{8}{7} = \frac{24}{35}$$

Dividing can also be done with a **common denominator**.

E.g.

$$\frac{3}{5} \div \frac{7}{8} = \frac{24}{40} \div \frac{35}{40}$$

$$= \frac{24 \div 35}{40 \div 40} = \frac{24 \div 35}{1}$$

$$= 24 \div 35 = \frac{24}{35}$$

GCSE Questions

(b) Work out $1\frac{1}{5} \div \frac{3}{4}$

Give your answer as a mixed number in its simplest form.

....

(2)

(Total for Question 1 is 4 marks)

9 Work out $3\frac{1}{2} \times 1\frac{3}{5}$

Give your answer as a mixed number in its simplest form.

....

(Total for Question 9 is 3 marks)

2 Work out.

(a) $\frac{1}{2}$ of 12

(a) .... [2]

(b) $8 \times \frac{1}{5}$

Give your answer as a mixed number.

(b) .... [2]

(c) Isaac and Maya eat part of a pizza.

Isaac eats $\frac{1}{6}$ of the pizza.

Maya then eats $\frac{3}{5}$ of the **remaining** pizza.

What fraction of the original pizza is left?

(c) .... [4]

2 Show that $2\frac{1}{3} \times 3\frac{3}{4} = 8\frac{3}{4}$

(Total for Question 2 is 3 marks)

3 Work out $1\frac{3}{4} \times 1\frac{1}{3}$

Give your answer as a mixed number.

....

(Total for Question 3 is 3 marks)

17 James works from 2pm until 8.30pm on both Thursday and Friday.
He is paid £12 per hour.

On Saturday he is paid $1\frac{1}{2}$ times this hourly pay.

He works for 5 hours on Saturday.

Calculate how much James earns **in total** for these three days.

£ .... [6]

14 Work out $\frac{2}{15} \times \frac{15}{22}$.

Give your answer in its lowest terms.

.... [2]

(b) $\frac{3}{8} \div 2$

.... [1]

(c) $\frac{1}{3} \times \frac{1}{2}$

.... [1]

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.

Newsome Academy — Everyone Exceptional Everyday

Year 8 'Macbeth'

The aims of the sequence of learning are to ensure that all students:
- complete a Macbeth Project with key scenes in a creative way
- Write for a range of purposes and audiences
- Summarise and analyse the devices used for effect on audience
- Link to prior knowledge of literary and rhetorical devices from their reading to enhance their writing.

Keyword	Definition
Monarch	ruler of a country
Monarchy	a system of rule with one chosen pardon at the head until death or abdication
Abdicate	to give up ruling a country by choice
Reign	the time they rule the country
Context	how something fits in to either a time, fashion, type of category
Destiny	the idea that you will achieve a specific goal in your lifetime
Regicide	the killing of a monarch
Patriarchy	male dominant ruling
Thane	lord
Prophecy	a prediction made about the future that is expected to come true
Theme	mini topics that appear throughout the whole of the play
Structure	how the story or characters change and develop through the text
Imagery	language used to help you visualise or 'see' what is happening.
Soliloquy	when a character speaks their inner thoughts aloud to allow the audience to more fully understand their thoughts and feelings.
Trait	a characteristic or feature of a place, person, event
Transpose	to exchange places

Key Concepts

Key 10 quotes

- Fair is foul, and foul is fair:
- Hover through the fog and filthy air A1,s1
- Whose horrid image doth unfix my hair
- And my seated heart knock at my ribs,
- Against the use of nature? A1,s3.
- Unsex me here A1, s4.
- Dark night strangles the travelling lamp A2,s4
- A falcon, towering in her pride of place,
- Was by a mousing owl hawk'd at and kill'd A2,s4
- O, full of scorpions is my mind, dear wife! A3,s2
- But float upon a wild and violent sea A4,s2
- Out, damned spot! Out, I say! A5,s1
- Foul whisperings are abroad,: unnatural deeds
- Do breed unnatural troubles: infected minds A5,s1
- To-morrow, and to-morrow, and to-morrow A5,s5

Characters

Macbeth
Lady Macbeth
Witches x3
Banquo (& ghost)
King Duncan
Macduff
Malcolm
Donalbain
Ross
Macduff and his Lady
Doctor

Themes

- **Bravery** - to act when afraid
- **Nature** - the features and products of the earth
- **Magic -** a paranormal force
- **Female power -** the use of influence by women
- **Male power -** the use of influence by men
- **Manipulation and deceit -** to make others act in a way you want; to use untruths and obscure truths
- **Fate and destiny -** a prediction made that is expected to come true; something you can alter about your future but that you are likely to achieve.
- **Betrayal -** acting in a disloyal way against someone who trusts you.
- **Justice -** fairness, to be unbiased, what is considered right and true.

Theories

- **Superstition** - a belief in omens and signs that cannot proven through logic or science.
- **Fate** - a belief in a foreseen outcome.
- **Patriarchy** - the practice of granting males absolute power over family and community as a whole.
- **Imperialism and colonialism** - the practice of spreading English power and influence by economic or political power over other countries.

Year 8 'Macbeth'

Newsome Academy
Everyone Exceptional Everyday

The aims of the sequence of learning are to ensure that all students:
- complete a Macbeth Project with key scenes in a creative way
- Write for a range of purposes and audiences
- Summarise and analyse the devices used for effect on audience
- Link to prior knowledge of literary and rhetorical devices from their reading to enhance their writing.

Context

Queen Elizabeth (1533-1603) was one of the most successful monarchs in British history. She was superseded by **King James 1566-1625**.

England was a significant power in military and economic terms.
Superstition and religion were the core beliefs of the people.
Women had less rights than men and the country followed the ideas of patriarchy.

Elizabeth was known for her Military success.

James was known for creating peace between Spain and England. He was also known for publishing the bible in English (previously it was in Latin).

In America the first English settlers were creating Jamestown.
The first African slaves are brought to Jamestown.
In 1692 the Salem Witch Trials occur.
The East India company was established who traded between England and India. They spread English values, social structures and business ethics (Imperialism) to India.

Retrieval Practice

Questions	
How does Shakespeare present ambition in Macbeth?	• A01: Clarity of argument. • A02: Analysing the methods of a writer- language, structure and form. • A03: Socio-historical context, genre, cross-referencing across a text and different audience perspectives. • A04: Spelling, punctuation and grammar.
How does Shakespeare present women in Macbeth?	
How does Shakespeare present Banquo and justice in Macbeth?	

Model Response and Assessment

Example Level 6 paragraph
Shakespeare clearly wants to show Lady Macbeth as a conflicted character. She is driven and ambitious and is willing to commit regicide to get what she wants. However, she also struggles with a guilty conscious and is ultimately psychologically broken by her remorse. At the start of the play she defies the contemporary fear of witchcraft and calls on evil spirits to 'unsex me here' and 'take my milk for gall'. On the hand, Shakespeare's use of imperatives highlight her strength and determination. On the other, they illustrate a desperation in the character. This need to change herself and remove the caring, maternal 'milk' may in fact foreshadow her inability to 'stop up th'access and passage to remorse.' Although Lady Macbeth may be presented as strong and a key catalyst for Duncan's death at the start of the play, by the end she is weak and overcome by guilt. She seems to be admitting this vulnerability when she imagines seeing blood on her 'little' hand in Act 5, Scene 1. Ultimately, Shakespeare is presenting a character who cannot free herself from Christian guilt, even with the help of the supernatural. She may be powerful, but she is not free of remorse and this is her downfall.

Career Focus - Where could this take you?

As an **MP (Member of Parliament)**, I represent my constituents in my area. I help local people by doing things like debating in parliament, raising the profile of local issues on social media, lobbying organization, asking questions during Prime Minister's Questions (PMQs) and being involved in committees which scrutinise new legislation or question the work of the government.

Topic Links

This topic links to:
- History: Tudors and Stuarts, British Monarchy
- RE: Christian expression

Additional Resources

To further practise and develop you knowledge see:
- Shakespeare shorts here
- Animated play in 8 parts click here
- Audio Book please click here
- Mr Bruff characterisation click here
- Macbeth Revision Tutorial click here

Science

Our students will:

➢ develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics

➢ develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them

➢ are equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.

Newsome Academy
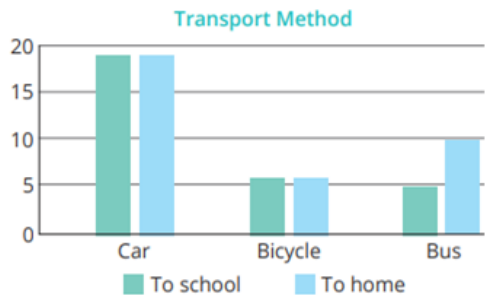*Everyone Exceptional Everyday*

Year 8 Scientific Skills

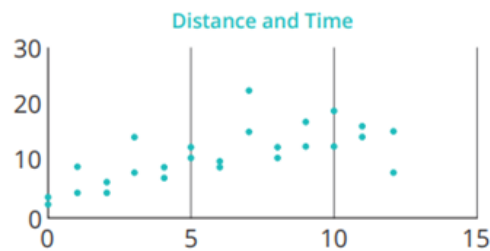The aims of the sequence of learning are to ensure that all students are able:
- to recall scientific knowledge from year 7
- to confidently use the scientific method to get valid results and be able to make conclusions
- to display data and make valid conclusions
- to evaluate investigations

Keyword	Definition
Prediction	What you think will happen and why.
Hypothesis	An idea that can be tested using experiments.
Independent Variable	The variable that you change.
Dependent Variable	The variable that you measure (your results)
Control Variables	The variables that could influence the results so are kept the same.
Hazard	Is something that can cause harm to someone.
Risk Assessment	Identifies hazards, the harm they can do and how to minimise the risks.
Method	Step by step instructions how to carry out practical.
Conclusion	An explanation of what you found out
Evaluation	When you consider the quality of the data and how the investigation could be improved.
Accurate	When the data is close to the true value.
Precise	When the repeated data is similar (close to the mean).
Reproducible	Same results obtained by different people.
Anomaly	A result that doesn't fit the pattern.

Key Concepts

Laboratory Safety Rules

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

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

What is STEM learning?

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

The Scientific Method

Step 1 - Observe and ask questions
When you ask a question about something that you observe: How, What, When, Who, Why, or Where?
Step 2 - Research
To help you find the best way to do things and ensure that you don't repeat mistakes from the past.
Step 3 - Construct a hypothesis
This a statement that you can test. Your evidence will allow you to either accept or reject the hypothesis.
Step 4 - Test the hypothesis
Plan experiments making sure you have clear independent, dependent and control variables. Then carry out experiment(s) to test the hypothesis and record data.
Step 5 - Analyse data and make conclusions
Organise data in ways to make it easier to understand (e.g. graphs) and check against hypothesis.
Step 6 - Share results
Results from experiments are shared with other scientists so they can evaluate the findings themselves.

Evaluating Data

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

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

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

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

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

Types of errors

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

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

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

Newsome Academy — Everyone Exceptional Everyday

Year 8 Scientific Skills

The aims of the sequence of learning are to ensure that all students are able:
- to recall scientific knowledge from year 7
- to confidently use the scientific method to get valid results and be able to make conclusions
- to display data and make valid conclusions
- to evaluate investigations

Displaying Data - Graphs

Bar graph – used with categorical data.
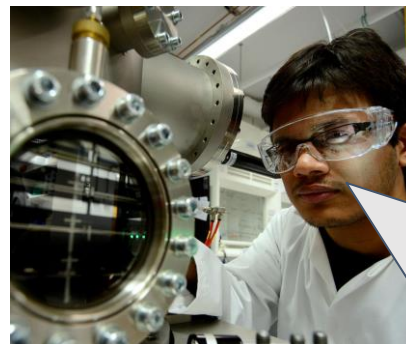
Transport Method

Scatter graph – used with continuous data.

Distance and Time

Career Focus - Where could this take you?

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

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

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

Retrieval Practice

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

Challenge Activities

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

Topic Links

This topic links to all scientific topics such as
- Pure substances
- Waves (sound and light)
- Life Diversity

We will also be practising how to
- Evaluate our investigations
- Write a research article to communicate your findings

Additional Resources

Educake - https://www.educake.co.uk/
BBC Bitesize -
https://www.bbc.co.uk/bitesize/topics/zsg6m39
https://www.bbc.co.uk/bitesize/topics/zsg6m39/articles/z4pjdp3
YouTube -
https://www.youtube.com/watch?v=yi0hwFDQTSQ

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.

The learning outcomes for this topic are :
- Talking about holidays in the past.
- Using the past tense of avoir and etre verbs.
- Using negatives in the past tense.
- Asking and answering questions.
- Using the present and past tense together.

Newsome Academy — Everyone Exceptional Everyday

Keywords - Questions

voice 21

French	English
Tu as combien de vacances et quand?	How much holiday do you have and when?
J'ai **six** semaines de vacances **en été**	I have **6** weeks i**n summer.**
Tu es où en vacances?	Where are you on holiday?
Je suis **au bord de la mer** avec **mes parents.**	I'm **at the seaside** with **my parents.**
Tu as passé de bonnes vacances?	Did you enjoy the holidays?
Oui je suis allé **en espagne avec ma famille.**	Yes I went to **Spain with my parents.**
Qu'est-ce que tu as fait?	What did you do?
J'ai **vu un spectacle.** Je n'ai pas **nagé dans la mer.**	I **saw a show** I didn't **swim in the sea.**
C'était comment?	What was it like?

Key Concepts- Grammar

The Past Perfect tense – to talk about a completed action in the past, e.g. I have eaten the pizza/ I ate the pizza.

To form the past perfect tense, you need:

1. Part of the verb **AVOIR** (most verbs) or **ETRE** (Mrs Vandertramp + Reflexive Verbs)

2. A **Past Participle**

To form the past participle:

	-er	-ir	-re
	Remove –**er** Add -**é**	Remove -**r**	Remove –**re** Add -**u**
	jouer → (j'ai) joué	finir → (j'ai) fini	vendre → (j'ai) vendu

Example avoir verb:

regard**er** → regard**é**

j'**ai** regardé	I watched
tu **as** regardé	you (singular) watched
il/elle/on **a** regardé	he/she / we watched
nous **avons** regardé	we watched
vous **avez** regardé	you (plural or polite) watched
ils/elles **ont** regardé	they watched

Example être verb:

aller	to go
je suis **allé(e)**	I went
tu es **allé(e)**	you (singular) went
il est **allé**/elle est **allée**	he/she went
on est **allé(e)s**	we went
nous sommes **allé(e)s**	we went
vous êtes **allé(e)(s)**	you (plural or polite) went
ils sont **allés**/elles sont **allées**	they went

Present Tense

Je vais	I go
Je mange	I eat
Je visite	I visit
Je bois	I drink
Je nage	I swim
J'achète	I buy
Je fais	I do / make
C'est… (opinion)	It is (opinion)

Past Perfect Tense

Je suis allé	**I** went
J'ai mangé	**I** ate
J'ai visité	**I** visited
J'ai bu	**I** drank
J'ai nagé	**I** swam
J'ai acheté	**I** bought
J'ai fait	**I** did /made
C'était… + opinion	It was….. + opinion

Auxiliary	Past Participle	How? Comment?	Where? Où?
J'ai		en avion.	au bord de la mer.
Tu as		en bateau.	à la montagne.
On a	voyagé	en bus.	à la campagne.
Nous avons		en car.	
Vous avez		en train.	en colo (en colonie de vacances).
Ils/Elles ont		en voiture.	chez mes grands-parents.

Year 8 - Les vacances

Newsome Academy — Everyone Exceptional Everyday

The learning outcomes for this topic are :
- Talking about holidays in the past.
- Using the past tense of avoir and etre verbs.
- Using negatives in the past tense.
- Asking and answering questions.
- Using the present and past tense together.

Retrieval Practice

Questions	Answers
Où habites-tu?	J'habite à Huddersfield en Angleterre..
Tu as combien de vacances et quand?	J'ai **six** semaines de vacances **en été** Nous avons **deux** semaines de vacances **à Noël.**
Tu es où en vacances?	Je suis **au bord de la mer** avec **mes parents.**
Tu as passé de bonnes vacances?	Oui je suis allé **en espagne avec ma famille.**
Qu'est-ce que tu as fait?	j'ai **acheté des souveniers.** C'etait **génial.**
Tu es allé où?	Je suis allé **en espagne.**
Qu'est-ce que tu n'as pas fait?	Je n'ai pas **mangé au restaurant.**
Tu as voyagé comment?	J'ai voyagé **en avion.**
C'etait comment?	C'était **assez bien.**

Career Focus - Where could this take you?

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

Challenge Activities

1. Make flashcards for the questions and answers.
2. Use Languagenut to practise the past tense verbs.
3. Create a postcard sent from a real or imaginary holiday. Say where you usually go, where you went last time, how you travelled, what you did there and what you thought about it.

Topic Links

This topic links to other French topics such as
- Freetime - last weekend.
- Food and drink.
- Countries and nationalities.

This topic also links to :
- Geography

Additional Resources

To further practise and develop you knowledge see:

Languagenut – www.languagenut.com

Active Learn - www.pearsonactivelearn.com

You can ask your teacher if you have forgotten your username and password.

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 Population

Newsome Academy
Everyone Exceptional Everyday

- To understand the key terms of the topic
- To know the population distribution of the world
- To understand what the term life expectancy means and how it is changing and why?
- To understand the problems, might a country face if its population keeps rising or keeps falling

- To give detail on the UK's population
- To give detail on the world's rising population has an impact on Earth and on other species.

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

Key Concepts

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

Key
- Sparsely populated
- Moderately populated
- Densely populated
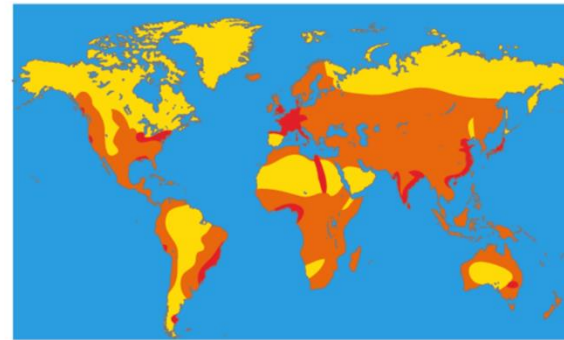
The size of the world population over the last 12,000 years
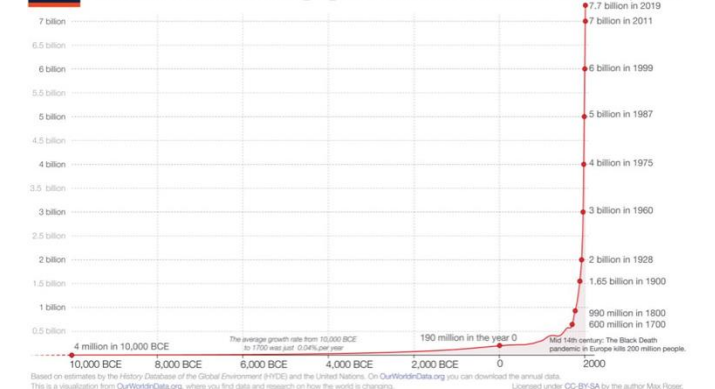
Population changes
The world's population does not stay the same. During the 1st century AD, the world population was about 300,000 people. The current population is over 7 billion, and most of the growth has taken place within the last 100 years.

What causes population to change?
- births
- deaths
- migration

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

Year 8 Population

- To understand the key terms of the topic
- To know the population distribution of the world
- To understand what the term life expectancy means and how it is changing and why?
- To understand the problems, might a country face if its population keeps rising or keeps falling

- To give detail on the UK's population
- To give detail on the world's rising population has an impact on Earth and on other species.

Key Concepts

Population Pyramids

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

What does this mean?

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

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

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

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

Kenya 2011

Key
Male   Female
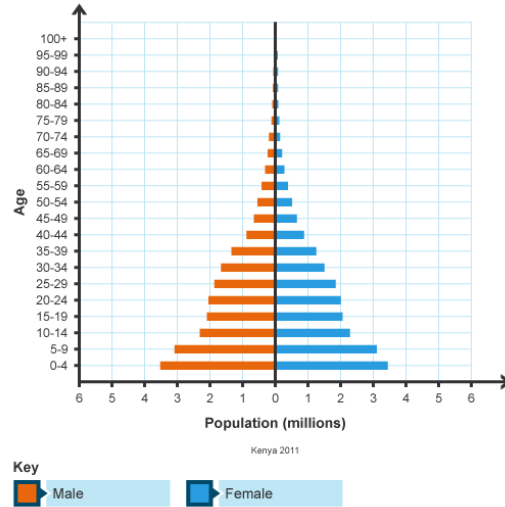
Factors affecting population density

Factors that can lead to dense populations include:

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

Factors that can lead to sparse populations include:

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

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

UK Population
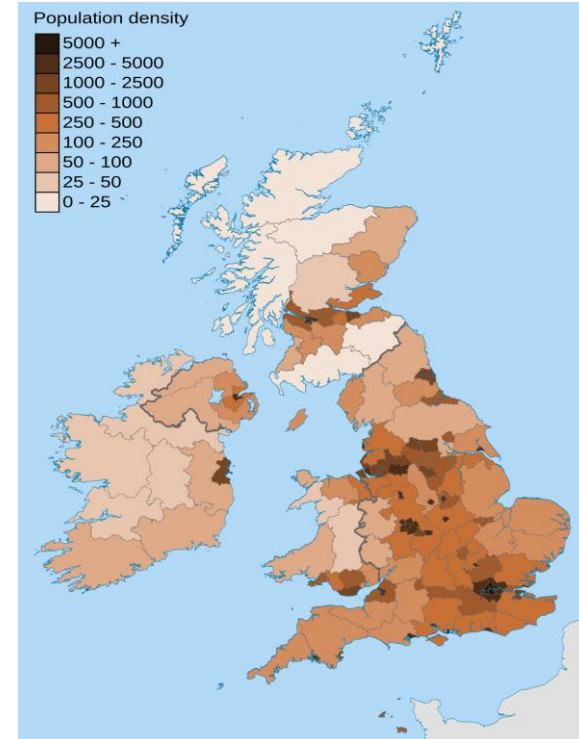
Population density
5000 +
2500 - 5000
1000 - 2500
500 - 1000
250 - 500
100 - 250
50 - 100
25 - 50
0 - 25

Newsome Academy
Year 8 Population

- To understand the key terms of the topic
- To know the population distribution of the world
- To understand what the term life expectancy means and how it is changing and why?
- To understand the problems, might a country face if its population keeps rising or keeps falling

- To give detail on the UK's population
- To give detail on the world's rising population has an impact on Earth and on other species.

Retrieval Practice

Questions	Answers
What is Population?	
What is population density?	
What is population distribution?	
What is a sparsely populated are?	
What is a densely populated area?	
What is the fertility rate?	
What is the birth rate and death rate?	
What is a population pyramid?	
What is Life expectancy?	
What is natural increase?	

Career Focus

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

Challenge Activities

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

Topic Links

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

Additional Resources

BBC Bitesize:
https://www.bbc.co.uk/bitesize/topics/zg7nvcwttp://www.worldometers.info/

The Geography resource portal:
https://www.adageogjoe.com/ks3-y7--seven-billion.html

Newsome Academy — Everyone Exceptional Everyday

Year 8 Population

- To understand the key terms of the topic
- To know the population distribution of the world
- To understand what the term life expectancy means and how it is changing and why?
- To understand the problems, might a country face if its population keeps rising or keeps falling

- To give detail on the UK's population
- To give detail on the world's rising population has an impact on Earth and on other species.

Keyword	Definition
Population	Word used to describe a group of people. Populations can exist at many scales,
Population Density:	How crowded or empty a place is (measured in people per square km)
Population Distribution:	The pattern of where people live.
Densely Populated	A crowded area
Sparsely Populated	An empty area
Birth Rate	Is a measure of the number of healthy babies born each year per 1000 people in the population
Death Rate	The number of deaths per year per 1000 people in the population.
Migrant	The permanent movement of people from one place to another.
Push Factor	Negative things that force people to move from one place to another. A push factor may be an earthquake.
Pull Factor	Positive things that attract people to from one place to another place. An example of a pull factor is a place having better job opportunities
Immigrants	People who move into a country from another country
Emigrants	People who move out of a country to live in another country

Key Concepts

Push factors

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

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

Pull factors

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

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

Case Study: Migration to the U.S.A *(Mexico or Puerto Rico)*

Many people have migrated to America to seek a better life, such as people from Mexico and Puerto Rico.

Pull Factors

- Less access to education.
- Higher crime rates and less protection.
- Hot and arid climates
- Easier access to a doctor when needed.
- Higher quality homes and living standards.

However, migrants often face challenges when coming to America. This includes racism, and less desirable jobs.

Newsome Academy
Everyone Exceptional Everyday

Year 8 Population

- To understand the key terms of the topic
- To know the population distribution of the world
- To understand what the term life expectancy means and how it is changing and why?
- To understand the problems, might a country face if its population keeps rising or keeps falling

- To give detail on the UK's population
- To give detail on the world's rising population has an impact on Earth and on other species.

Key Concepts

Migration – *When people move from one place to another.*

Refugees and Asylum Seekers

Refugees:
People who have been forced to move away from their home country and have been granted asylum in another country.

Economic migrants:
A person who has left his or her own country and seeks to find employment in another country.

Asylum seekers:
A person who has applied for asylum in another country

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

Case Study: China's One Child Policy

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

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

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

Year 8 Population

- To understand the key terms of the topic
- To know the population distribution of the world
- To understand what the term life expectancy means and how it is changing and why?
- To understand the problems, might a country face if its population keeps rising or keeps falling

- To give detail on the UK's population
- To give detail on the world's rising population has an impact on Earth and on other species.

Newsome Academy
Everyone Exceptional Everyday

Retrieval Practice

Questions	Answers
What is a 'migrant'?	
Name 2 push factors	
Name 2 pull factors	
Name the positive effects on a country due to migration	
Name the negative effects on a country due to migration	
What was Enrique trying to do? And why?	
Describe the problems caused by China's population policy	
Explain why there are concerns about the effects of China's family planning policy	
Explain why there is a gender imbalance in China	
Give two benefits of the policy and briefly explain one	

Career Focus - Where could this take you? Executive Officer - Health Analysis and Pandemic Insight

As an apprentice at the Office for National Statistics, I have had the opportunity to develop a range of different skills in data science, an area which I had limited experience in before joining the scheme. The combination of learning theory and in job application has been really valuable.

Challenge Activities

- What are the main reasons for internal migration?
- What are the main reasons for international migration?
- What impact will the migration of people to the USA have on Mexico?
- Suggest why the birth rate in many poor countries is falling.
- Describe the features of China's family planning policy since the 1990s

Topic Links

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

Additional Resources

BBC Bitesize:
https://www.bbc.co.uk/bitesize/topics/zg7nvcw

The Geography resource portal:
https://www.adageogjoe.com/ks3-y7--seven-billion.html

https://www.adageogjoe.com/ks3-y7--seven-billion.html

Year 8
The Tudors

Newsome Academy — Everyone Exceptional Everyday

The learning outcomes for this topic are:

Enquiry Question – Who were the Tudors and how did they change England?
- To explain why Henry VII won the Battle of Bosworth and make a judgment on his reign.
- To identify what Catholics and Protestants believed and how they differ.
- explain the reign of Henry VIII and why he is a significant figure in History.
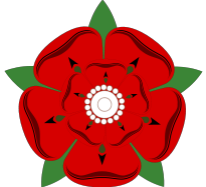
- To evaluate the impact of Henry VIII's break with Rome.
- To explore the religious changes Edward VI made to England.
- To consider what religious changes Mary I made to England and what type of Queen she was.
- To identify different interpretations about Mary I.
- To reach a judgement on whether Queen Mary I was 'bloody' or 'misunderstood' using evidence to support

Keyword	Definition
Tudor	English royal family / dynasty which held the throne from Henry VII in 1485 until the death of Elizabeth I in 1603.
Monarch	A ruler such as a King, Queen or Emperor. - This word is complex in History and you will explore it thoroughly.
Reign	Time during which a Monarch rules.
Heir	A person who has legal claim to a title or throne when the person holding it dies.
Catholic (Roman)	Christian religious beliefs - the Pope is Head of the Church
Protestant	Also Christian; they separated from the Roman Catholic Church in the 16th century. Monarch is Head of the Church.
Significant	Something or someone who is important and remembered.
Divorce	Latin for 'to separate': To legally end a marriage.
Reformation	A religious movement in Europe in the 1500s where its leaders disagreed with the Roman Catholic Church.
Treason	The crime of betraying your country, particularly by attempting to kill or overthrow the Monarch.
Martyr	Someone who dies for their beliefs (often religious).
Bloody	To describe a person as 'bloody' means they are cruel and bloodthirsty. Describing a situation or event as bloody means it was violent and many people were killed.
Misunderstood	Fail to understand correctly or have the wrong impression of.
Judgement	To make a decision carefully, after studying and comparing all evidence that is available
Interpretation	In History this means different versions of the past.
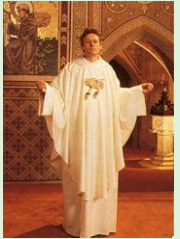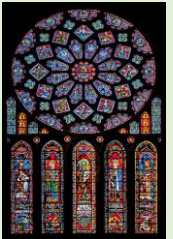
Key Concepts: Tudor Monarchs

Two families at war:

The House of York   VS   The House of Lancaster

Catholics: Protestants:

Key Events between 1485 and 1558

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

The Reformation:
In 1533 Henry VIII 'broke' from the Catholic Church and made himself Head of the Church of England (rather than the Pope, who was the head of the Catholic Church).
Henry VIII did this as the Pope would not let him divorce his wife.
As part of the reformation Henry VIII closed down the monasteries, often selling their belongings and land (dissolution of the monasteries).

Mary I's burning of Protestants:
During her 5 year reign, Mary I earned the nickname 'Bloody Mary' due to burning hundreds of Protestants at the stake for their religious beliefs.

Henry VII (1485 - 1509)
- Henry Tudor started the Tudor Dynasty after defeating Richard III.
- Married Elizabeth of York.
- Created the Tudor Rose.

Henry VIII (1509 - 1547)
- Had 6 wives and 3 children.
- Created the Church of England after his break from Rome.
- Had an expensive lifestyle.

Edward VI (1547 - 1553)
- Became King at the age of 9.
- Died aged 15, of Tuberculosis.
- His Uncle Edward Seymour and later John Dudley were his 'Lord Protector'.

Mary I (1553 – 1558)
- England's first female Monarch.
- Married Prince Philip of Spain.
- Killed about 300 Protestants for their religious beliefs.

Elizabeth I (1558 – 1603)
- Longest reigning Tudor Monarch.
- Defeated the Spanish Armada in 1588.
- Never Married.
- *We will learn more about Elizabeth I next Half Term.*

Year 8 The Tudors

Newsome Academy
Everyone Exceptional Everyday

The learning outcomes for this topic are:

Enquiry Question – Who were the Tudors and how did they change England?

- To explain why Henry VII won the Battle of Bosworth and make a judgment on his reign.
- To identify what Catholics and Protestants believed and how they differ.
- To explain the reign of Henry VIII and why he is a significant figure in History.

- To evaluate the impact of Henry VIII's break with Rome.
- To explore the religious changes Edward VI made to England.
- To consider what religious changes Mary I made to England and what type of Queen she was.
- To identify different interpretations about Mary I.
- To reach a judgement on whether Queen Mary I was 'bloody' or 'misunderstood' using evidence to support

Retrieval Practice:

Questions:	Answers:
Who did Henry Tudor defeat at the Battle of Bosworth and what 'House' was he from?	
What was the name of Henry VII's wife and his **first** born son?	
Who was the founder of the Protestant Reformation and where was he from?	
Tell me **two** differences between Catholics and Protestants in the 16th Century:	
What was the name of Henry VIII's **first and second** wives?	
Tell me **one** reason Henry VIII broke from Rome:	
What did Edward VI do to the Catholic rebels?	
What was the name of the '9 day Queen' and what happened to her?	
Tell me **one** way Mary I can be seen as 'bloody' and **one** way she can be seen as 'misunderstood'	
Who was the heir to the throne after Mary I and what religion was she?	

Career Focus - Where could this take you?

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

Challenge Activities

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

Topic Links

This topic links to other humanities topics such as:
- The makeup of the UK
- Christianity
- Elizabethan England

We will also be practicing how to
- Create a balanced argument

Additional Resources

The Tudors:
https://www.royal.uk/tudors

The Reformation:
https://www.history.com/topics/reformation/reformation
https://www.youtube.com/watch?v=1qeRj_qfNM0

Newsome Academy — Everyone Exceptional Everyday

Year 8 Christian Expression

The learning outcomes for this topic are:
- To explain the benefits of prayer
- To compare different types and benefits of prayer
- Explore the features of churches and explain how they help different Christian expressions of their faith and spirituality

Keyword	Definition
Prayer	Communicating with God
Liturgical/Structured prayer	A church service that follows a set structure or ritual.
Informal prayer	Spontaneous prayers often spoken from the heart which are personal and unique to the person/people at the time
Meditation	Contemplation or reflection
Worship	Showing adoration, reverence, offering praise to God
Church	A building for public Christian worship. pand the whole body of Christian believers; Christendom.
Infant Baptism	Sacrament of initiation of babies and young children into the Church
Adult/Believers Baptism	Initiation into the Church, by immersion in water, of people old enough to understand the ceremony/rite and willing to live a Christian life.
Mission	The duty of Christians to spread the Gospel (the good news about Jesus)
Missionary	A person sent on a religious mission, especially to promote Christianity in a foreign country through preaching or charitable work
Evangelism	Preaching the gospel (the good news about God) to convert people to the Christian faith
Agape	The highest form of love

Key Concepts

Key features of a church: font, pulpit, altar, pews, statues, stained glass windows

Quakers
- Began in the 1650's as a breakaway movement.
- Originally the aim was to purify the faith which they believed had become abandoned and meddled with.
- Quakers often refer to themselves as friends.
- They are followers of Christ.
- They do not believe in celebrating the Eucharist or any of the Christian sacraments celebrated in other churches.
- Quakers believe that God will speak directly to us, so there is no need for priests or anyone to act as a go-between.
- Quakers normally worship in meeting houses.
- When no one is speaking, the meeting is conducted in silence.
- There may be hymns, bible readings and silent worship.
- There are about 17,000 Quakers in Britain today.
- Many Quakers feel that they have a social responsibility to make the world a better place. For this reason, many of the businesses that were set up at this stage also had important links to the wider community.

Arguments for infant baptism:
- Babies won't have any sins to wash away
- Babies will be too young to understand the meaning of baptism
- Babies will have Godparents
- Babies won't be able to follow the rules of their religion until they are older

Arguments for adult baptism:
- Adults will have sins to wash away
- Adults can make the choice themselves
- Adults better understand what baptism is about
- Adults will be able to better follow the rules of their religion

The Eucharist
The Eucharist is one of the Sacraments which many Christians celebrate. It is inspired by Jesus' actions at the Last Supper, particularly his request that Christians eat bread and drink wine in memory of him. The sacrament is performed to remember Jesus but also to gain God's grace.

Prayers and readings are said that remind Christians of the Last Supper. Bread and wine is blessed (consecrated). Each member of the congregation eats a piece of bread and drinks a sip of wine.

Catholics believe in Transubstantiation: when the priest blesses the bread and wine it becomes the actual body and blood of Jesus.

The Bible
The Bible is the best selling non-fiction book in the world. For Christians, The Bible is God's word, and offers Christians guidance and wisdom. The Christian holy book is the Bible and this is the most important source of authority for Christians, as it contains the teachings of God and Jesus Christ. All Christians, regardless of denomination, regard the Bible as the starting point for guidance about their faith.
The Old Testament is older than the New Testament and is called the Hebrew Bible.
The New Testament is thought to have been written by Christians in the first century AD.
The first story of the New Testament is the birth of Jesus.

Year 8 Christian Expression

Newsome Academy — Everyone Exceptional Everyday

The learning outcomes for this topic are:
- Explain why the Bible is important to Christians
- Describe the differences between the Old and the New Testament
- Explain how Quakers have influenced the lives of others
- Weigh up different types of mission Explain with examples how Christianity became the largest religion in the world

Retrieval Practice

Questions

How do Christians of different denominations express their faith and spirituality through worship and prayer?

What is meant by church?

How do Quakers express their faith and spirituality?

Are churches important in their local communities?

How did Christianity become most followed religion in the world?

What are the benefits of adult vs infant baptism?

Why do people become Christian missionaries?

Career Focus - Where could this take you?

I am a lawyer. RE is an excellent platform for debate which is a key skill for professions in Law.

Challenge Activities

Create a poster to encourage people to attend church. Use what you learnt about prayer to entice people in.

Key quotes:

Therefore go and make disciples of all nations, baptizing them in the name of the Father and of the Son and of the Holy Spirit.

He said to them, "Go into all the world and preach the gospel to all creation.. Mark 16:15

Topic Links

This topic links to other RE topics such as
- Christian Practices
- Judaism

We will also be practising how to
- Argue a point and practise our Voice 21
- Participate in a debate
- Write PEE sentences

Additional Resources

BBC Class clips
https://www.bbc.co.uk/teach/class-clips-video/religious-studies-ks2-what-is-christianity/znshvk7

Youtube
https://www.youtube.com/watch?v=VY-KTQz7DyI

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

The aims of the sequence of learning are to ensure that all students:
- Describe the difference between a 'theme' and 'audience' and complete the top trumps game planning
- Describe how to find appropriate and reliable data from trustworthy online sources

- Analyse a custom template design made using a range of features in MS Publisher
- Evaluate the use of the Mail Merge feature in MS Publisher to create multiple customised Top Trump cards
- Describe how to add and format different types of images on the Top Trump cards

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

Key Concepts
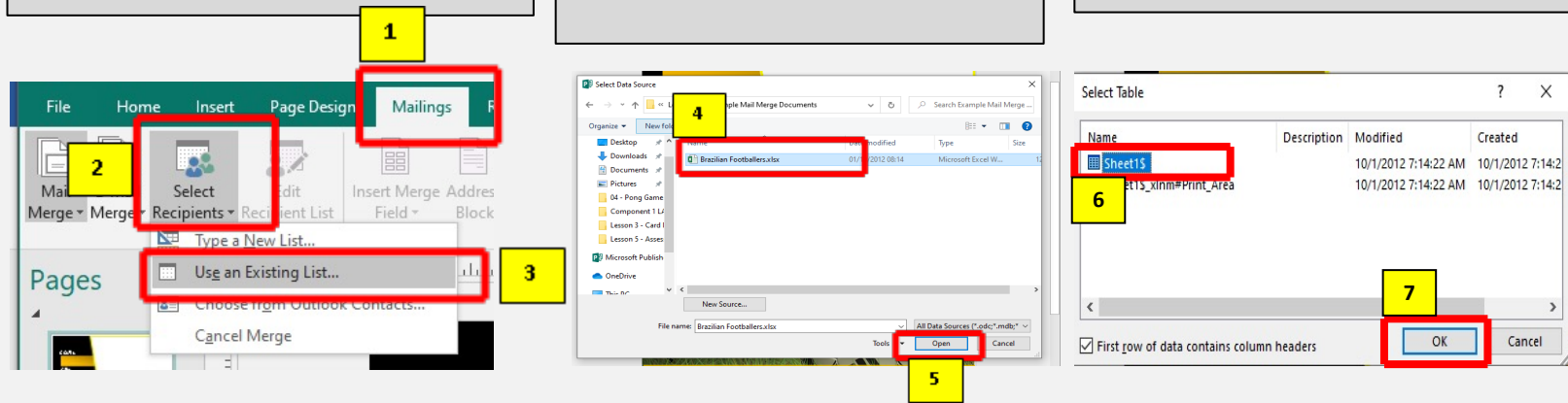
Students will be expected to create a customised set of Top Trumps cards by following design processes inspired by industry experts.

The tasks include collating data from several reliable sources, designing the card layout and using the Mail Merge feature to create each individual card

1. Click the 'Mailings' Tab menu > Select Recipients > Use an Existing List
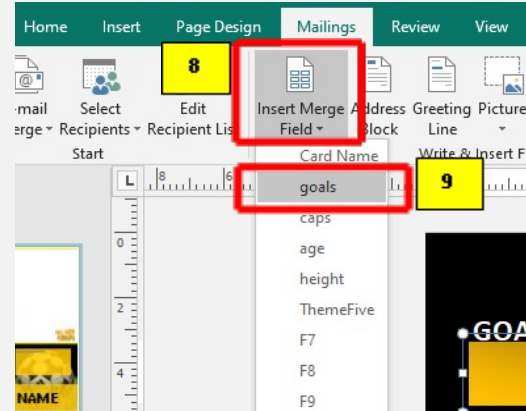
2. Find your Stats Spreadsheet document and then press the 'Open' button

3. Click on the first table option and then press the 'OK' button
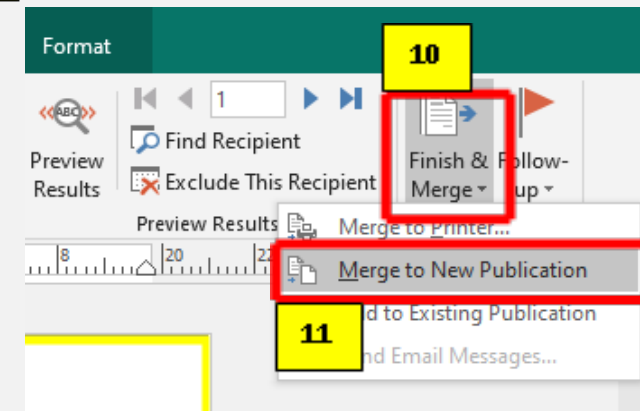
4. Click on the 'Insert Merged Field' button and select the stat name which you want to put inside the Stat 1 box (e.g. Goals stat box)

5. Now click on the 'Finish & Merge' button (on the 'Mailings' tab) and then select 'Merge to New Publication' option

Newsome Academy — Everyone Exceptional Everyday

Year 8 : 8.1 : Top Trumps

The aims of the sequence of learning are to ensure that all students:
- Describe the difference between a 'theme' and 'audience' and complete the top trumps game planning
- Describe how to find appropriate and reliable data from trustworthy online sources
- Analyse a custom template design made using a range of features in MS Publisher
- Evaluate the use of the Mail Merge feature in MS Publisher to create multiple customised Top Trump cards
- Describe how to add and format different types of images on the Top Trump cards

Retrieval Practice

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

Career Focus - Where could this take you?

I am a **graphics designer** and I combine my artistic skills with my computing ability to create high quality art work and designs digitally for companies to use as logos or branding to create their image.

Challenge Activities

1. Describe the steps that you would take to check that the information found on Wikipedia is reliable.

2. Create two more completely different Top Trump card template designs. You need to analyse each template design and then decide which template you would like to use to as the final design. Explain the reasons for the choice of template design.

3. Create a tutorial document to explain all of steps involved in creating a Mail Merge in MS Publisher. This must be suitable for a novice user to easily follow.

Topic Links

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

Additional Resources

To further practise and develop your knowledge see:
- Top Trumps game rules and examples www.toptrumps.com/kids
- YouTube MS Excel Tutorial: youtu.be/k1VUZEVuDJ8
- YouTube MS Publisher Tutorial: youtu.be/StzyBxnhHmE

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.

Newsome ACADEMY Everyone Exceptional Everyday

Year 8 Art Day of the Dead

The aims of the sequence of learning are to ensure that all students:
- Describe the day of the dead festival
- Produce and refine new ideas
- Apply techniques to develop drawing skills
- Synthesise a personal response to art work

Keyword	Definition
Muertos	Spanish for 'dead'
Dia	Spanish for 'day'
Festival	a day or period of celebration, typically for religious reasons
Symbol	a thing that represents or stands for something else, especially a material object representing something abstract.
Printmaking	the activity or occupation of making pictures or designs by printing them from specially prepared plates or blocks.
Tone	the relative lightness or darkness of a colour
Colour	an element consisting of hues, of which there are three properties: hue, chroma or intensity, and value
Composition	Arrangement of elements within a work of art
Personal Response	Creating your own piece of artwork in response to a theme/artists/style

Key Concepts

The Day of the Dead (Spanish: Día de Muertos) is a Mexican holiday celebrated throughout Mexico, and by people of Mexican heritage elsewhere. The multi-day holiday involves family and friends gathering to pray for and remember friends and family members who have died, and helping support their spiritual journey. In Mexican culture, death is viewed as a natural part of the human cycle. Mexicans view it not as a day of sadness but as a day of celebration because their loved ones awaken and celebrate with them

It is colourful, bright and cheery but with a theme of skulls and skeletons. The shapes, colours, forms and patterns of the Day of Dead provide us with lots of inspiration to make our textile art.

Scan the QR Code to take you to the National Geographic websites Top 10 things to know about the Day of the Dead.

SCAN ME

DIA DE LOS MUERTOS

Year 8 Art Day of the Dead

The aims of the sequence of learning are to ensure that all students:
- Describe the day of the dead festival
- Produce and refine new ideas

Retrieval Practice

Questions	Answers
When is the day of the dead?	A Mexican holiday traditionally celebrated on November 1st and 2nd.
What are calaca and calavera?	These are representations of a human skeleton and skull
What is tone?	Tone refers to how light or dark something is. Tones could refer to black, white and the grey tones between. It could refer to how light or dark a colour appears.
What is block colour?	A colour in a single tone, with no variation
What is block print?	This is the process of carving patterns, shapes and designs into a 'block'. The 'block' could be made of wood, lino, metal or polystyrene
What is composition?	This is the arrangement of elements within a work of art

Career Focus - Where could this take you?

I am a **graphic novelist** so I get to spend my day creating new ideas and stories before bringing them to life with my illustrations and storyboards.

Challenge Activities

Scan the QR Code and watch the video about how the film Coco has honoured the day of the dead celebration. Once you have watched the video make a list of the main aspects of the day of the dead celebration and put into your own words how Coco has portrayed the celebration.

SCAN ME

Topic Links

This topic links to:
- MFL – cultural holidays and celebrations
- RE – cultural holidays and celebrations

Additional Resources

To further practise and develop you knowledge see:

the QR Code to take you to a video from The British Museum about the Day of the Dead celebration.

SCAN ME

Year 8 Working with a theme and Stimulus

The aims of the sequence of learning are to ensure that all students:
- Replicate a set phrase of movement
- Select and apply a formation to my performance
- Recognise key dance elements in a performance.
- Recognise elements in a performance and describe them.
- Apply choreographic devices to enhance my choreographed routines

Newsome Academy — Everyone Exceptional Everyday

Keyword	Definition
Choreographic Intention	What it makes the audience think, see and feel
Projection	The energy the dancer uses to connect with and draw the audience in
Dynamics	The quality of the movement
Focus	Where the audience looks
Cannon	One after the other
Facial Expression	Shows the mood of the character
Physical Skill	Is a skill that can be developed over time
Retrograde	Perform the movements backward, like a film on rewind
Repetition	To repeat part of the motif. Either straight after it is performed or later on in the dance.
Accumulation	Dancers gradually joining in with a phrase of movement
Levels	Dancers change the level a movement is performed on
Direction	Performing or travelling the movement facing a different way
Size	To change the size of a motif or movement(small becomes large, large becomes small)
Juxtaposition	Half the group performs one part of the motif while the others perform something different
Canon	Dancers performing the same movements or phrase of movement with a time delay
Mirroring	Like a mirror image. Movement is performed on the left by some and the right by others

Key Concepts

CREATING A DANCE MOTIF

A motif is the main, often recurring theme or element in a movement sequence.

When creating a dance motif always consider:
ACTION   SPACE
DYNAMICS   RELATIONSHIPS

Motifs can be created through the use of 5 basic actions:

1 TRAVELLING — Includes stepping, transferring body weight and sliding.

2 JUMPING — There are various ways of jumping: 2 feet to 2 feet, 2 feet to 1 foot etc.

3 TURNS — 1/4, 1/2, 1/3 or full turns. Turns can be performed as a jump.

4 GESTURES — A body movement that portrays a concept or mood.

5 STILLNESS — A motionless pose during the dance sequence.

All of the above actions can be repeated and varied using different levels, speeds, dynamics and body parts.
A dance phrase is made by developing and combining motifs.

REMEMBER
To add to the effect of the finished dance, incorporate appropriate and complementary Accompaniment, Set, Props & Lighting and Costumes.

Formations in Dance

The way a group of dancers are positioned when they perform is called formation. It is the shape they form.

CIRCLE — The circle is one of the oldest known dance formations. It is often used to express togetherness and protection.

SQUARE — The square is a block formation. The sharp angles give this formation strength.

TRIANGLE — Often used as a travelling formation, a triangle can create a strong, forceful impression.

LINES — Lines are used in many different types of dance, for example, tap dancing, line dancing etc.

To add interest to a group dance, the formations must be varied throughout. Varying the facings can add to the effect.

Year 8 Working with a theme and Stimulus

The aims of the sequence of learning are to ensure that all students:
- Replicate a set phrase of movement
- Select and apply a formation to my performance

- Recognise key dance elements in a performance.
- Recognise elements in a performance and describe them.
- Apply choreographic devices to enhance my choreographed routines

Retrieval Practice

Questions	Answers
What is a motif?	A motif is a movement phrase (A small dance) with an idea that is repeated and developed through the piece.
What is motif development?	Motif development is where you use one of the below to change the original movement. This will allow it to become more interesting
What are the three action developments?	Retrograde, repetition and accumulation
What are the three space developments?	Levels, direction and size
What are the three relationship developments?	Juxtaposition, canon and mirroring

Career Focus - Where could this take you?

My job is **fight choreographer**. I use movement and motifs to choreograph different scenes to ensure they look believable and are engaging whether on screen or in the theatre.

Challenge Activities

Dance Quiz

Choreography - Jay Revell

Choreography - Kyle Hanagami

Topic Links

This topic links to:
- Drama   Performance skills
- PE - Physical skills
- English - Understanding terminology and verbs.
- Maths - Problem solving

Additional Resources

To further practise and develop you knowledge see:
- https://www.aqa.org.uk/resources/dance/gcse/dance/teach/subject-specific-vocabulary
- https://www.onedanceuk.org/wp-content/uploads/2016/03/Motif-and-development-for-NDTA.pdf

Newsome Academy
Everyone Exceptional Everyday

Year 8 Physical Theatre

The aims of the sequence of learning are to ensure that all students:
- develop knowledge of what Drama Elements mean.
- develop drama technique and skills.
- Identify and perform drama

Keyword

Storytelling	Mime
Body Language	Projection
Facial expression	Performance
Characterisation	Volume
Devising	Timing
Gesture	Pause
Space	Pace
Levels	Posture
Improvisation	Hot-Seating
Soundscape	Unison

Key Concepts

Thinking Questions
- How am I showing my character?
- What is my body language?
- How is it different to my normal?
- What is my character feeling?
- Do my facial expressions match this?
- What is my posture like?
- How do I walk? What is my gait like?
- How do I react to the other characters?
- How close do I stand next to others?
- Where is the scene set?
- What sounds are needed in the scene?
- How can I make the sounds?
- How loud, or quiet should they be?

Techniques:
Body as a prop (Using your body to create physical objects, settings and characters)
Characterisation (Making and being in character that is different to yourself)
Posture (How you stand and how that is different to you normally)
Soundscape (Used to add effect and meaning to scenes and on-stage action)

PHYSICAL THEATRE
You will be developing your knowledge and understanding of DRAMA, PHYSICAL THEATRE, STORYTELLING, DEVISING and CHARACTERISATION. These are key drama skills that you will need. We will be creating PHYSICAL PERFORMANCES and characters for improvised performances.

A good physical theatre performance
Will have a range of different believable characters. It will use a set scenario or one you have made up. The audience will be able to understand what is happening and will be engaged by the action and the storyline

Assessment
You will take part in several peer and self assessment tasks over the project, as well as your teacher assessment. receiving feedback from your teacher.
Your assessment for this Topic will be based on creating physical and vocal representations of objects and settings, for the devising of performances, before evaluating them.

Year 8 Physical Theatre

Newsome Academy
Everyone Exceptional Everyday

The aims of the sequence of learning are to ensure that all students:
- **develop knowledge of what Drama Elements mean.**
- **develop drama technique and skills.**
- **Identify and perform drama**

Dramatic Elements

Role & Character
Require actors to identify and portray a person's values, attitudes, intentions and actions.
Role focuses on type and stereotype while characters are detailed and specific.

Relationship
The connections and interactions between people.

Tension
A sense of anticipation or conflict within characters or character relationships.
Problems, surprises and mystery in stories to further the dramatic action and create audience engagement.

Focus
Focus requires you to concentrate the attention on a spatial direction or a point in the space or to direct and intensify attention and frame moments of dramatic action.

Situation
Situation refers to the circumstances the characters are in - the who, what, where, when and what is at stake of the roles/characters.

Time & Place
Time refers to the fictional time in the story or setting.
Place refers to the fictional place in the story or setting that the action occurs in.

Language
The choice of linguistic expression and ideas in drama used to create dramatic action. This includes the vocal skills.

Movement
Movement refers to the physical way in which a character or object transitions through a provided space. It can also refer to stillness. This includes the physical skills.

Mood & Atmosphere
Mood is the feeling or atmosphere that is created by, and emerges through, the dramatic action.
An atmosphere is a surrounding environment or influence.

Symbols
Symbols are what the drama makes you understand. They sum up the meaning of the play, sometimes even on a subconscious level.

Dramatic Action

© Ryan Coates 8th May 2020

Career Focus - Where could this take you?

I am a Physical theatre performer. Knowledge of different movement traditions, such as mime and clowning is very important. Being able to utilize your facial expressions, body language, posture, spatial awareness, and physicality to tell a story is key to engaging the audience.

Challenge Activities

Brainstorm your ideas for a piece of physical theatre you would like to create, based on an activity you have undertaken in a lesson.
Focus on themes and stories you would like to communicate in this practical work.

Structure your ideas by creating a flow chart of the story and highlight key scenes.
Or write a step-by-step list of what should happen in each scene.

Music:
Find a piece of music that represents the theme of your physical theatre piece.
Explain why you chose the piece of music and which part of your work it will be used in.

Topic Links 🔗	Additional Resources 🏠
Dance Physical Education Music English Maths Science Art	If you want to do more and extend yourself in Drama…Explore the Arts as a participant Watch to learn more about physical theatre https://youtu.be/9JzdIPSdAmE?t=1
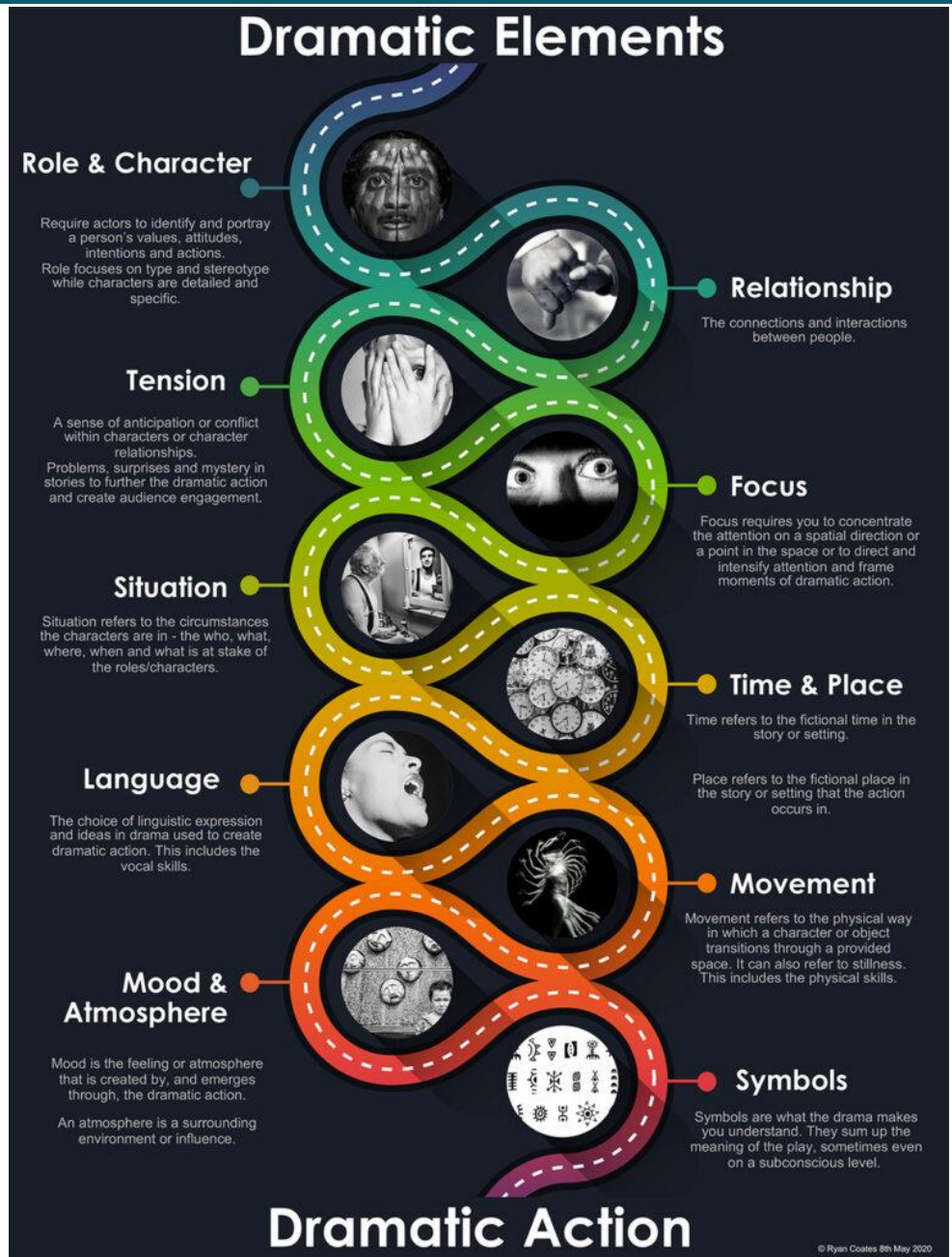
Year 8 Food Tech

Newsome Academy — Everyone Exceptional Everyday

The aims of the sequence of learning are to ensure that all students:
- Define the terms nutrient, macronutrient and micronutrient
- Describe the function of nutrients in the body
- Describe the consequences of an unbalanced diet

Keyword / Definition

Keyword	Definition
Nutrition	The study of what people eat and how nutrients in foods work together in the body
Nutrients	Natural chemical substances in food that are essential for body growth, function and health
Macronutrient	Nutrients that are required in large quantities by the body
Micronutrient	Nutrients that are required in small quantities by the body
Malnutrition	Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients
Mineral	a solid, naturally occurring inorganic substance.
Vitamin	any of a group of organic compounds which are essential for normal growth and nutrition and are required in small quantities in the diet because they cannot be synthesized by the body.

Key Concepts

Micronutrients

Vitamin	Role in the body	Food examples
A	Helps to keep the eyes healthy and strengthen the immune system	Dark green leafy vegetables, carrots, liver
B.	Helps to release the energy from the food we eat	Bread, milk, cereals, fish, meat
C.	Help with skin healing and healthy skin. Help with the absorption of Iron	Fresh fruit, broccoli, tomatoes
D.	Important for absorbing calcium and help with healthy bone structure.	Oily fish, eggs, butter, Sunshine

Nutrients

Macro Nutrient	Role in the body	Food Example
Carbohydrate	The main source of energy for the body	Bread, rice, pasta, potatoes
Protein.	Provides the body with growth and repair	Meat, poultry, beans, eggs, lentils, tofu, fish
Fat	Provides the body with insulation and a small amount protects vital organs. Provides essential fatty acids for the body.	Butter, oil, cheese, cream, nuts, oily fish, crisps

Do you think you have ...

A Food **ALLERGY** OR A Food **INTOLERANCE**

A Food Allergy is a Cellular Immune-mediated reaction. It affects the **Immune System** — Food Allergies Can be Fatal

A Food Intolerance is not an Immune-mediated reaction. It affects the **Digestive System** — Intolerances are Not Life-Threatening

The allergen could be identified in **bold**, highlighted, underlined or in *italics.*

GLUTEN PEANUTS TREE NUTS CELERY MUSTARD EGGS MILK SESAME FISH CRUSTACEANS MOLLUSCS SOYA SULPHITES LUPIN

Year 8 Food Tech

Newsome Academy
Everyone Exceptional Everyday

The aims of the sequence of learning are to ensure that all students:
- Define the terms nutrient, macronutrient and micronutrient
- Describe the function of nutrients in the body
- Describe the consequences of an unbalanced diet

Retrieval Practice

Questions	Answers
What are nutrients?	Nutrients are the building blocks that make up food and have specific and important roles to play in the body. Some nutrients provide energy while others are essential for growth and maintenance of the body.
What do vitamins do?	They help to keep our immune system up and help our body to stay healthy – they are important for body maintenance
What do minerals do?	Help to keep our immune system up and help our body to stay healthy. Vitamins and minerals are Micronutrients.
What is a food allergy?	Food Allergy is an immune reaction by the body against a particular food. Symptoms of a person having an allergic reaction can include: Rash Itchiness Vomiting Swelling of ; lips/face/throat Difficulty breathing If untreated, a person can go into anaphylactic shock and can die from an allergic reaction.
What should you do if someone has an allergic reaction?	If you suspect someone is having an allergic reaction you must seek help. They will either need to take antihistamine if the reaction is mild (e.g. just a skin rash) OR they will need to have adrenaline administered by injection (e.g. by EpiPen) if their reaction is severe - in which case an ambulance must be called.
What are the most common foods that cause allergies?	Foods containing gluten, present in wheat, barley and rye; Crustaceans; Eggs; Fish; Lupin; Peanuts; Soybeans; Milk; Nuts; Molluscs; Celery; Mustard; Sesame seeds; Sulphur dioxide

Career Focus - Where could this take you?

In my role as a **nutritionist** I use nutrition to promote health and manage disease. I help people to plan their diet and nutritional programmes to help them lead healthy lives.

Challenge Activities

Produce an information leaflet to encourage teenagers to eat a wide range of nutrients, include information on malnutrition.

Topic Links

This topic links to:
Science - to be curious about how to maintain a healthy, balanced diet, in both a theoretical and practical context.

PE - to promote lifelong participation in physical activity alongside leading creative and healthy active lifestyles. Understanding how your body works, working with others and being physically active are a crucial part of leading a healthy happy life

Additional Resources

To further practise and develop you knowledge see:

Nutrition, digestion and excretion

Healthy diet

Balanced Diet

Newsome Academy — Everyone Exceptional Everyday

Keyword	Definition
Stave	Five lines and four spaces on which we write musical notes
Treble Clef	A musical symbol that indicates the pitches of notes above middle C
Barline	A vertical line that separates bars in music
Pitch	How high or low a sound is
Rest	When we do not play on a beat
Technique	The way in which we play the musical instrument
Fluent	To perform without hesitation
Accuracy	To perform with accurate pitches, rhythms and technique
Walking bassline	A bass pattern used in Blues music where the notes walk up and down the instrument
Improvisation	To make something up as you go along
Work song	A song that is sung whilst people work
Guitar	A string instrument with six strings, used in Blues music
Chord	Two or more pitches at the same time
Minor	A sad sounding chord
Triad	A chord with three notes
Major	A happy and bright sounding chord

Left Hand   Right Hand
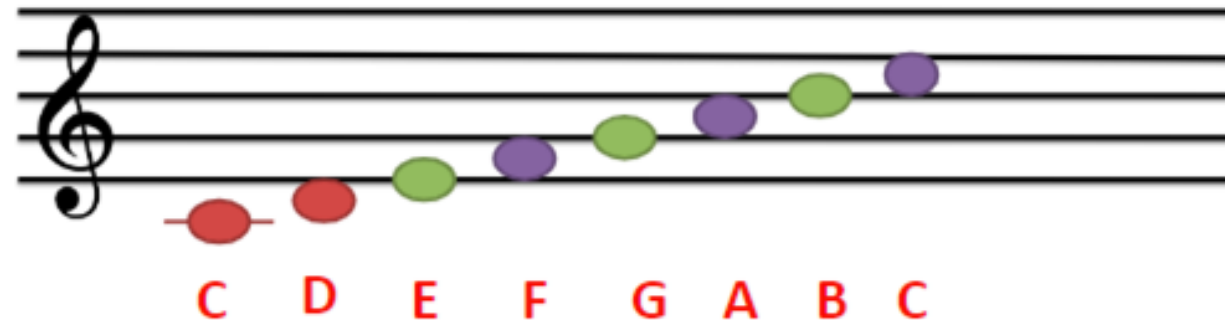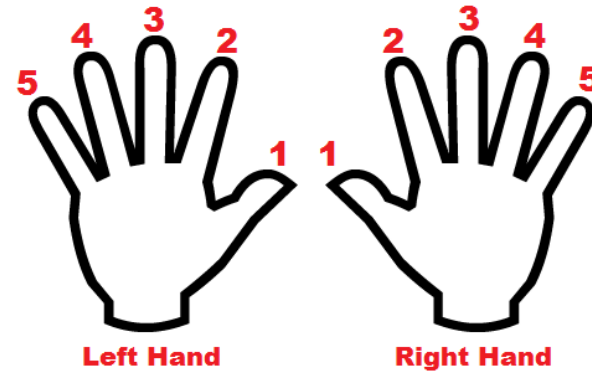
Learning Objectives

Keyboard Skills
What a stave is and how to read basic notation
Keyboard technique including 5 finger position, scales and fingerings
What a chord is a how they are built – the three main Primary chords C, F and G as well as A minor
To perform either the bass line, chords or melody of Stand By me using keyboard technique
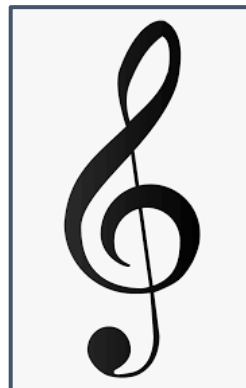
The Blues
Learn and understand how Blues music developed, the typical instruments used and some of the musical features.
Identify musical features within Blues music and explain the musical features that make it Blues music
Perform the 12 bar blues chord sequence accurately, fluently and confidently. I can repeat the 12 bar blues.
Learn how to perform a blues style bass line
Learn what improvisation is and how to do this using the blues scale

C D E F G A B C

Drawing a Treble Clef

THE BLUES SCALE

Remember to use your right hand thumb and middle finger

C Eb F F# G Bb C

12 Bar Blues with a walking bass line

C = C E G
F = F A C
G = G B D

Play the chord with your right hand

Play the bass line with your left hand

Eb   Bb

C	C	C	C
C E G A	Bb A G E	C E G A	Bb A G E
F	**F**	**C**	**C**
F A C D	Eb D C A	C E G A	Bb A G E
G	**F**	**C**	**G**
G B D B	F A C A	C E G E	G B D B

Career Focus - Where could this take you?

I am a professional musician, being proficient on a musical instrument is essential. This comes through lots of practice, and making sure technique is excellent. The ability to read music makes it easier to play different pieces of music more quickly. Otherwise you have to copy what you hear. Some musicians do play by ear, however and many Blues Musicians will have never read music.

Challenge Activities

Work through this worksheet to help you learn the notes on a stave
KEYBOARDSKILLSTHEORY1.docx

And now have a go at this quiz!
Keyboard Topic Quiz

Read this information on a piece of music and listen to it using the following link:
Debussy - La cathédrale engloutie
Think about how Debussy has used the piano to create the *impression* of a sunken cathedral. You can write up your thoughts as a mind map.

Topic Links

Band Skills
Rhythm & Pulse
Geography - understanding the movement of people from Africa to America and other parts of the world
History - learning about the Slave Trade
Literacy - keywords and spellings
Numeracy - Counting, rhythm, understanding patterns

Additional Resources

Listen to these songs:
Stormy Monday - BB King
Crossroad Blues – Robert Johnson
Bessie Smith - Nobody Knows You When You're Down and Out
Billie Holiday - Lady Sings The Blues

Year 8 Exploring World Music Theory

The learning outcomes for this topic are:
- Explore a wide range of music from different cultures.
- Understand scales and be able to use them when composing music

Newsome Academy — Everyone Exceptional Everyday

Keyword	Definition
Scale	A pattern of notes increasing or decreasing in pitch. **T = Whole Tone S = Semitone**
Major Scale	The pattern for the major scale is: T, T, S, T, T, T, S
Minor Scale	The pattern of the minor scale is: T – S – T – T – T – T – S
Pentatonic scale	A scale that uses only five notes. The pentatonic scale uses the root, second, third, fifth, and sixth of a scale
Enharmonic	relating to or denoting notes which are the same in pitch (in modern tuning) though bearing different names (e.g. F sharp and G flat or B and C flat).
Off Beat	When beats 2 and 4 are accented/emphasised.
Drone	A note that is sustained for a long time. Usually quite low in pitch.
Melody	The main tune of a piece of music
Raga	A type of Indian scale
Reggae	A popular style of music from Jamaica

Every culture developed an understanding of music independently. Because of this, some cultures make music differently to the way we do in It's similar to translating a foreign language into one we can understand.

Further Listening

'Norwegian Wood' The Beatles – A western, pop interpretation of a raga.

'Work' (Freemasons Remix) Kelly Rowland – Includes elements of Indian Raga and traditional Indian instruments

'Buffalo Soldier' by Bob Marley and the Wailers

Career Focus - Where could this take you?

At Newsome, British values are the school values. Respect and tolerance are one of those core British values. We can only scratch the surface of some of the unique and vibrant music from different cultures around the world in one unit of work. It is still important that we learn as much as we can. Different people around the world have many different ideas for how to make music. This unit will open you up to a wide variety of different musical styles and challenges and will improve your ability to adapt and improvise.

Topic Links

This topic links to other topics such as:
- Geography
- RSHE – Learning about the cultural, historical and religious background of India, Jamaica and China.
- Drama
- Maths – sequences and patterns in scales

Additional Resources

BBC Bitesize – https://www.bbc.co.uk/bitesize/guides/z6ch8xs/revision/4

Free online djembe lessons and information: https://afrodrumming.com/

Year 8 World Music Theory - Chinese

The learning outcomes for this topic are:
- **Explore a wide range of music from different cultures.**
- **Understand scales and be able to use them when composing music**

Popular Chinese Instruments:
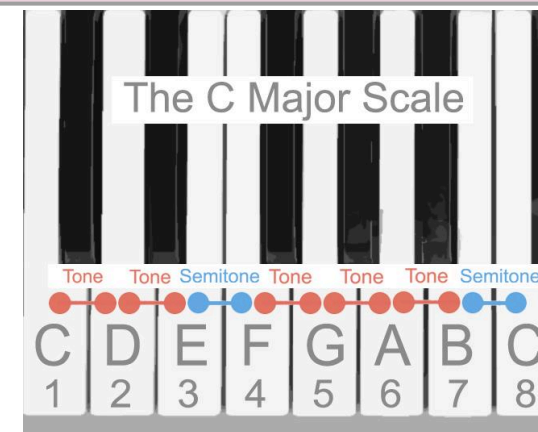
YANGQIN   SHENG   TEMPLE BLOCKS   DIZI

ERHU   SUONA   GONG   PIPA

The Eb and Gb pentatonic scales are the most common scales in traditional Chinese music.

Key Concepts - Scales

The C Major Scale

Tone Tone Semitone Tone Tone Tone Semitone

C D E F G A B C
1 2 3 4 5 6 7 8

A scale is a sequence of notes that go up in pitch. Every scale follows a pattern of steps. The pattern for a major scale is: T, T, S, T, T, T, S

The C Major Pentatonic Scale

C D E F G A C
1 2 3 4 5 6 8

Each step in a scale is called a scale degree. A pentatonic scale is a scale that misses out the 4th and 7th scale degree

🏆 Challenge Activity

Above are some traditional Chinese instruments. Do your own research and see how many more you can discover.

🏆 Challenge Activity

Choose a random letter between A and G. Using the major scale pattern (T,T,S,T,T,T,S) try and figure out the major scale for that note.

Newsome Academy
Everyone Exceptional Everyday

The learning outcomes for this topic are:
- Explore a wide range of music from different cultures.
- Understand scales and be able to use them when composing music

Indian Ragas

Morning raga (Vibhas)
Mood-Loveliness, sound of the early dawn.

Drone notes C, A

C Db E F# A C C C A F# Eb Db C C

Evening raga (Behag)
Mood-peaceful and relaxed.

Drone notes C, G

C E F G B C C C B G F E C C

Night raga (Malakosh)
Mood-peaceful and relaxed.

Drone notes B, E

B D E G A B B B A G E D B B

Key Concepts – Tones and Semitones

Semitones

B to C   F# to G
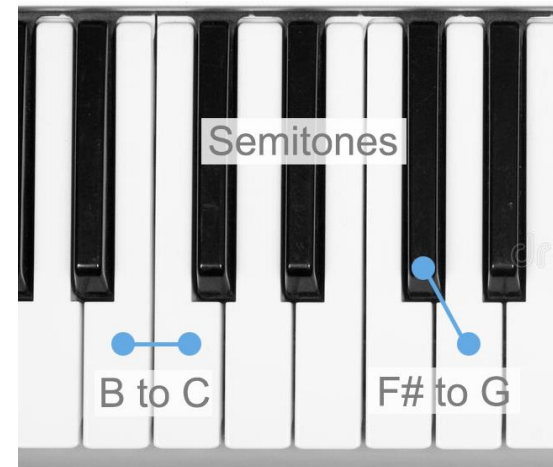
If we move from one key to the very next key on a piano, we call this a semitone (S)

Tones

E to F#   A to B
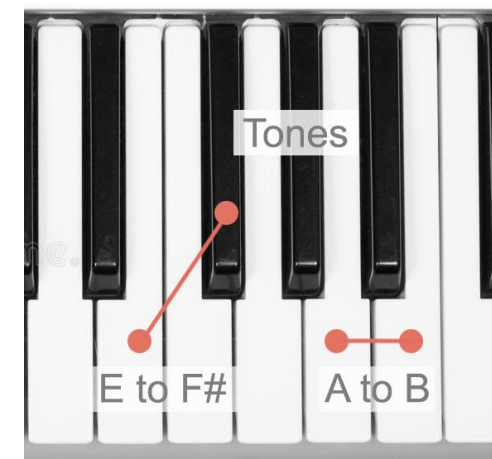
If we move up two keys on a piano we call this a Tone (T)

Newsome Academy
Everyone Exceptional Everyday

Year 8 World Music Theory - Jamaican

The learning outcomes for this topic are:
• Explore a wide range of music from different cultures.
• Understand scales and be able to use them when composing music

The Evolution of Reggae

Mento - 1950s	Ska – Early 1960s	Rocksteady – Late 1960s	Reggae – Late 1960s to 1980s
• Jamaican folk music • Banjo accompaniment • Fast tempo • Lighthearted lyrics • Bass lines played on double bass	• Walking bass line • Electric and brass instruments • Fast tempo • Lyrics about social issues	• Mainly electric instruments • Lots of electric bass riffs • Slow tempo • Drums often miss out the first beat of every bar	• Jamaican folk music • Lots of bass riffs • Slow tempo • Lyrics about social issues, love, peace, religion, war.

'Three Little Birds'
by Bob Marley and the Wailers
Chorus

The Offbeat
In most western music beats 1 and 3 are usually given emphasis. Beats 2 and 4 are called the offbeat. In most Jamaican music (especially reggae) the emphasis is given to beats 2 and 4. In 'Three Little Birds' (left) the chords are placed on beats 2 and 4 to give this song it's typical reggae rhythm.

Further Listening

'You Can Get It If You Really Want It' by Desmond Decker

'Baby I Love Your Way' by Big Mountain. *A reggae cover of a non-reggae song*

'Superman' by Goldfinger. *A more modern genre called ska punk that fuses ska with pop and punk.*

🏆 **Challenge Activities**

Listen to 'I Can't Help Falling in Love With You' by Elvis Presley and compare it to the reggae cover version by UB40. What reggae features does the UB40 version include?

Year 8 - Band Skills: Hooks and Riffs

The aims of the sequence of learning are to ensure that all students:
- are able to compose a pop riffs and hooks through understanding of common writing techniques
- Increase confidence by performing to others

Keyword	Definition
Riff	A short, repeated, 'catchy' phrase in popular music, typically used as an introduction or refrain in a song. Often played on a guitar
Hook	A short riff, passage, or phrase, that is used in popular music to make a song appealing, memorable and "catchy".
Key	The main group of notes/pitches that are used throughout a piece of music.
Composition	a song or piece of music
Ensemble	A group of musicians
Band	A group of musicians. (Most often used in pop music)
Rehearsal	A set time a band get together to practise and learn their songs.
Performance	When a musician or group of musicians play music, usually to an audience.

Career Focus - Where could this take you?

Being in a band will really strengthen your time management. Getting to rehearsals, gigs and studio sessions on time is vital in our band. While we don't always get along, we have to overcome these difficulties and learn to work well with others.
Through the years we have developed our creative thinking skills by coming up with ideas and writing over 150 songs! In the early days we had to organise gigs, rehearsal spaces and recording studio time as well as spreading the word about our gigs and albums. Now we employ people who do this for us. There are many music careers aside from being in a band, such as: Promotion, marketing, roadies, live/studio engineers, tour bus drivers, band management, song writers, stylists and many more.

Challenge Activities

1. Create your own guitar or piano riff using a scale (eg. Pentatonic, Minor).
2. Here is a compilation of riffs played using the pentatonic scale. See how many you can play on an instrument:
   https://www.youtube.com/watch?v=9teYiPih-X8&ab_channel=MartyMusic

Further listening:
Famous Guitar Riffs: The White Stripes - 'Seven Nation Army',
Deep Purple – 'Smoke on the water'
Famous Bass Riffs: Queen – 'Another One Bites The Dust'
Pink Floyd – 'Money'
Famous Keyboard Riffs: Van Halen – 'Jump' Prince – '1999'

Topic Links

This topic links to other topics such as:
- Drama – General skills (voice projection, stage presence, costumes)
- Music – Voice 21 Oracy skills (through performance)

Additional Resources

BBC Bitesize:
https://www.bbc.co.uk/bitesize/guides/z6ch8xs/revision/4

Billboard list of the 25 catchiest hooks ever:
https://www.billboard.com/music/music-news/greatest-catchiest-pop-hooks-ever-6731053/

Newsome Academy — Everyone Exceptional Everyday
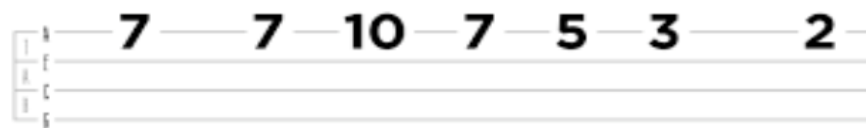
Year 8 - Band Skills: Hooks and Riffs

The aims of the sequence of learning are to ensure that all students:
- are able to compose a pop riffs and hooks through understanding of common writing techniques
- Increase confidence by performing to others

Key Concepts
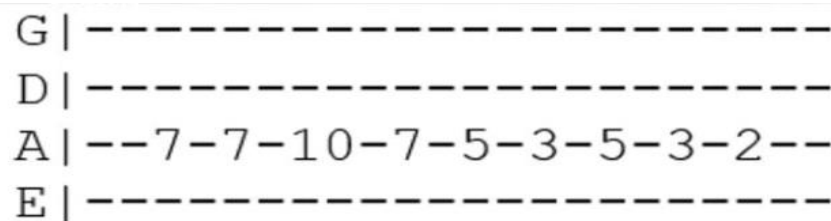
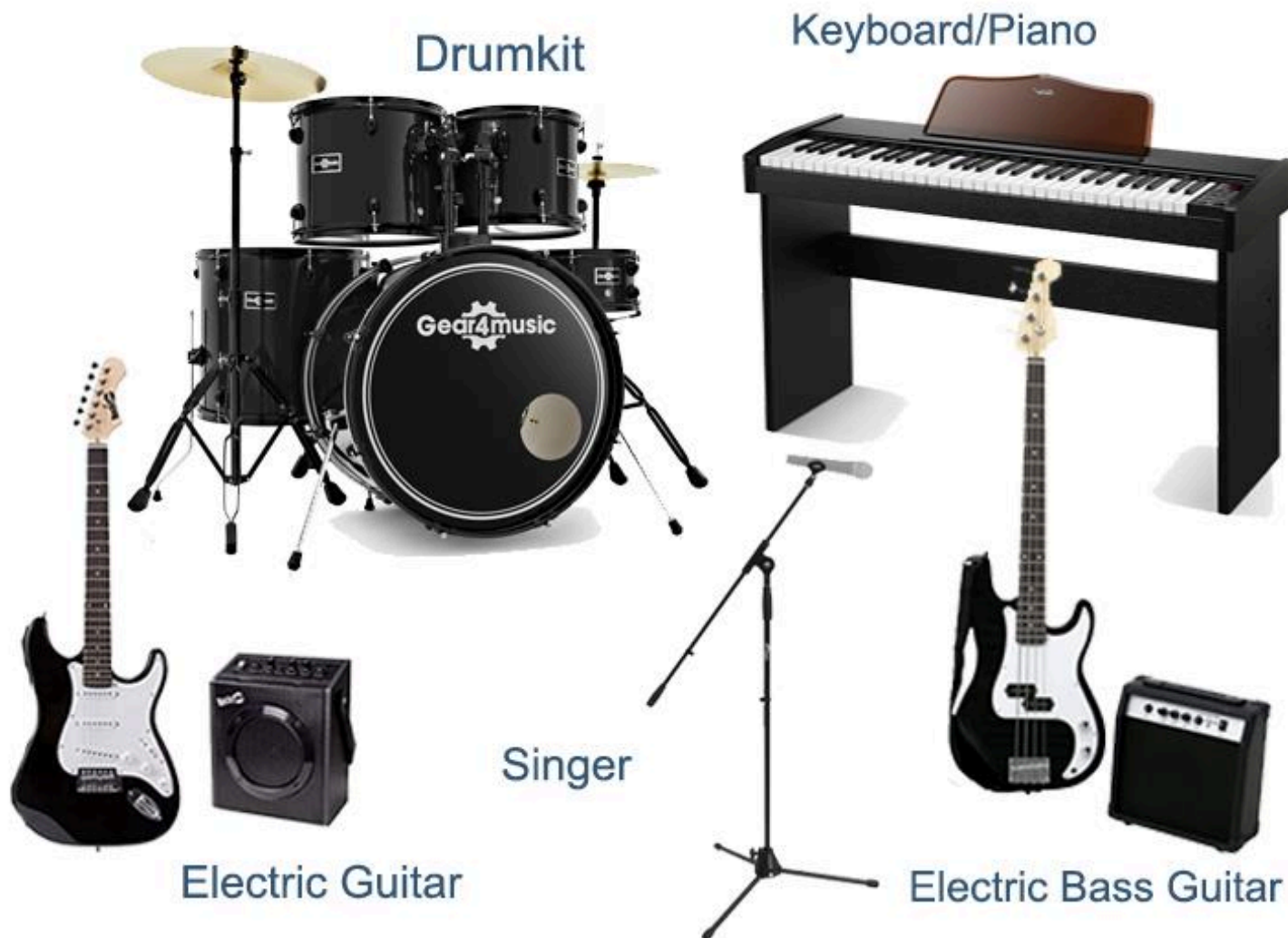### 'Seven Nation Army' by The White Stripes - Tabs

Ukulele

7   7   10   7   5   3   2

Guitar

7   7 10   7 5 3   2

Bass

```
G|-----------------------------------
D|-----------------------------------
A|--7-7-10-7-5-3-5-3-2--
E|-----------------------------------
```

Instruments in a Typical Popular Music Band

Drumkit

Keyboard/Piano

Electric Guitar

Singer

Electric Bass Guitar

Newsome Academy
Everyone Exceptional Everyday

Year 8 Invasion Games

The aims of the sequence of learning are to ensure that all students:
- Can identify at least five core skills required for invasion games
- Demonstrate basic core skills such as a shoulder pass in isolation
- Demonstrate core skills in a game situation
- Lead a group of peers in a basic drill (practicing one skill)

| Keyword	Definition
Pass	keep possession of the ball by maneuvering it between different players with the objective of advancing it up the playing field
Catch	to receive the ball from another player and keep possession
Defend	to resist the attack of the opposing team
Attack	the action of attacking or engaging an opposing team with the objective of scoring points or goals
Tackle	trying to take the ball from an opponent
Intercept	Obstruct someone/something from getting to their desired position/destination
Tactics	A strategy planned and implemented to achieve a set goal

Key Concepts

Defending

Pressure

Closest defender moves towards the attacker with the ball - aim to **slow the attacker down** or guide them into a certain direction

Cover

When a defender puts pressure on the attacker — the other defenders cover the **space the defender left**.
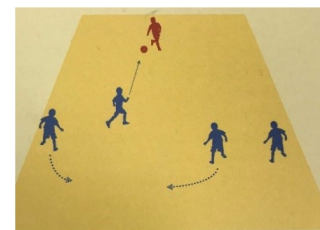
Attacking

Width

To **create space** in front of the goal send the ball wide to move the defenders out of position—giving an easy **chance to shoot at goal**.

Penetration (forward move)

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

You should already know:
- The aim of invasion games
- The name of at least 3 invasion games
- The basic principles of invasion games
- The core skills required to be successful in invasion games

You will be assessed on:
- Understanding
- Technique in isolation
- Technique in game
- Leadership
- Attitude to learning

Athletes to research further:
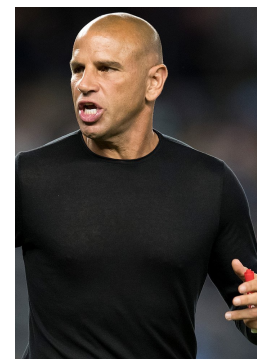
Raheem Sterling

Eleanor Cardwell

Courtney Lawes

Newsome Academy — Everyone Exceptional Everyday

Year 8 Invasion Games

The aims of the sequence of learning are to ensure that all students:
- Can identify at least five core skills required for invasion games
- Demonstrate basic core skills such as a shoulder pass in isolation
- Demonstrate core skills in a game situation
- Lead a group of peers in a basic drill (practicing one skill)

Retrieval Practice

Questions	Answers
What are the core Netball skills?	Chest pass, Bounce pass, Shoulder pass, Overhead pass, Two-footed landing, **One-footed landing**, Shooting, Pivot, **Man Marking** and **Dodging**
What are the Netball positions?	Goal keeper, Goal defence, Wind defence, Centre, Wing attack, Goal attack and Goal shooter
What are the core football skills?	Dribbling close to feet, Dribbling changing direction **with speed**, Passing side foot (**close distance**), Passing **on laces** (**long distance**), Defending (**man to man**) and Attacking (**two versus one**)
What are the core Rugby skills?	Target with hands out, Push pass, **Pop pass**, Catch and **pass and move**, Protecting, **Holding**, **Contact**, Side-stepping, Attacking (**line speed**), Attacking (**creating an overlap**), Defending (**line and movement**)

Career Focus - Where could this take you?

I am a **team psychologist.** As part of my job, I develop and employ strategies to help athletes to overcome pre-match nerves and anxiety.

Challenge Activities

1. Answer the following question: Why is it important that we understand the playing area for an invasion game?

2. Create a mind map of the differences between netball, football and rugby.

Topic Links

This topic links to:
- Science – movement of the body and muscles; the physics of sports
- English – understanding and defining key terminology
- Mathematics – problem solving, recording figures and analysing performance
- Voice 21 – coaching peers

Additional Resources

To further practise and develop you knowledge see:
- https://seeliger.carsoncityschools.com/common/pages/DisplayFile.aspx?itemId=8364188
- https://www.youtube.com/watch?v=ABC5iPye7JY
- https://www.youtube.com/watch?v=yW7JH6xkV7w