

# Year 7 – HT6



**Newsome  
Academy**  
Everyone Exceptional Everyday

# Knowledge Organisers

Name:

Team:



# Mathematics

Our students will:

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

# 7.22 Angles and properties of triangles or quadrilaterals

## The learning outcomes for this topic are:

- Know the names and properties of the basic quadrilaterals
- Find missing angles on a line or around a point
- Find missing angles in a triangle

- Find missing angles in a combination of triangle and straight line/point
- Find missing angles in a quadrilateral
- Find missing angles in isosceles triangles

Key Word	Definition
Quadrilateral	A four sided shape
Kite	Two sets of isosceles triangles. Two pairs of equal sides. One pair of equal angles.
Trapezium	One set of parallel lines, one of which is longer than the other.
Rhombus	Pushed over square
Parallelogram	Pushed over rectangle
Arrowhead	Similar to the "top" of a kite with an inverted bottom.
Equilateral	All sides and angles are equal
Isosceles	Often triangle, two equal sides two equal lengths
Point	The only 1D thing.

### Additional Resources

MathsWatch: 9, 45, 121, 122

Corbett Maths: Videos [2](#), [30](#), [33](#), [34](#), [35](#), [37](#), [39](#); Worksheets [2](#), [30](#), [33](#), [34](#), [35](#), [37](#), [39](#);

### Careers Focus – Where could this take you?

Navigation is one of the oldest mathematical practices. Used by sailors and, relatively speaking, more recently by aircraft navigators. The practice relies heavily on geometry and angles.

### Curriculum Links - Coherence

#### Required Knowledge:

- 7.20 Measuring and Drawing Angles

#### Applied to:

- 9H.24 Volume and Surface area of prisms
- 10H.03 Pythagoras Theorem

#### Links across school:

- Cubism (Art)
- Building tables, Chairs, furniture (DT)

### Key Concepts

Angle Rule	Description	Diagram
Angles on a straight line	The sum of angles on a straight line is $180^\circ$ . $x + y + z = 180$	
Angles at a point	The sum of angles at a point is $360^\circ$ . $w + x + y + z = 360$	
Vertically opposite angles	Vertically opposite angles are equal in size.	

### Angles in a Triangle

Angles in a triangle refers to the sum (total) of the angles at each vertex in a triangle. The sum of the interior angles of a triangle is  $180^\circ$ .

E.g.

<b>Right angled triangle</b> One right angle $90 + 55 + 35 = 180^\circ$	<b>Isosceles triangle</b> Two equal sides & angles $72 + 72 + 36 = 180^\circ$	<b>Equilateral triangle</b> Three equal sides & angles $60 + 60 + 60 = 180^\circ$	<b>Scalene triangle</b> All sides & angles different $83 + 68 + 29 = 180^\circ$

### Angles in a Quadrilateral

Angles in a quadrilateral are the four angles that occur at each vertex within a four-sided shape; these angles are called interior angles of a quadrilateral.

The sum of the interior angles of any quadrilateral is  $360^\circ$

We can prove this using the angle sum of a triangle.



This is the same for all types of quadrilaterals.

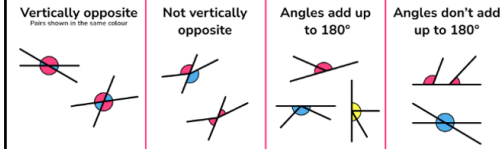


### Concept – what it is

$180 - 121 = 59$

$90 + 145 = 235$   
 $360 - 235 = 125$

### Non-Concept – what it isn't

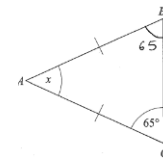


With the straight line rule it is only the angles on either side of a line bisecting the straight line.  
For vertically opposite angles the lines must be straight.

### Standard Examples

$64 + 32 = 96$   
 $180 - 96 = 84$

$65 + 65 = 130$   
 $180 - 130 = 50$



### Non-Standard Examples

$180 - 70 = 110$

$\frac{110}{2} = 55$

$180 - 55 = 125$

$125 + 29 = 154$

$180 - 154 = 26$

# 7.22 Angles and properties of triangles or quadrilaterals

- The learning outcomes for this topic are:**
- Know the names and properties of the basic quadrilaterals
  - Find missing angles on a line or around a point
  - Find missing angles in a triangle

- Find missing angles in a combination of triangle and straight line/point
- Find missing angles in a quadrilateral
- Find missing angles in isosceles triangles



**Useful Formulae and Hints**

When the question says "diagram not drawn accurately". It is not drawn accurately. You can not simply measure the angle and put that as your answer. You need to use angle rules to work it out.

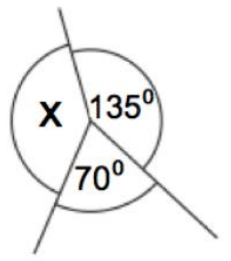
Angles on a straight line =  $180^\circ$

Vertically opposite angles are equal. Note only if the lines are straight.

Angles round a point =  $360^\circ$   
The lines do not all have to cross in a straight line here, but they do all have to make a circle.

Angles in a triangle =  $180^\circ$   
Note in an isosceles triangle two lines are equal and two angles are equal.

**GCSE Questions**



- (a) Work out the size of the angle marked x.  
(b) Give a reason for your answer. **(2)**

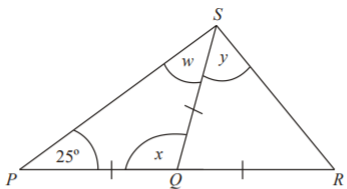


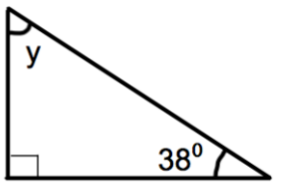
Diagram NOT accurately drawn

$PQR$  is a straight line.  
 $PQ = QS = QR$ .  
Angle  $SPQ = 25^\circ$ .

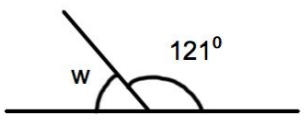
- (a) (i) Write down the size of angle  $w$ .  
..... $^\circ$   
(ii) Work out the size of angle  $x$ .  
..... $^\circ$
- (b) Work out the size of angle  $y$ .  
..... $^\circ$

**(4 marks)**

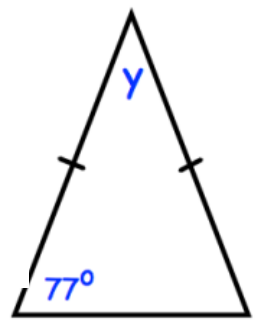
Shown is a right angled triangle.



Work out the size of angle  $y$ .

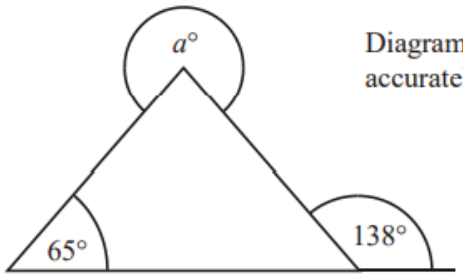


- (i) Work out the size of the angle marked  $w$ .



Work out the size of the angle marked  $y$ .

..... $^\circ$   
**(2)**



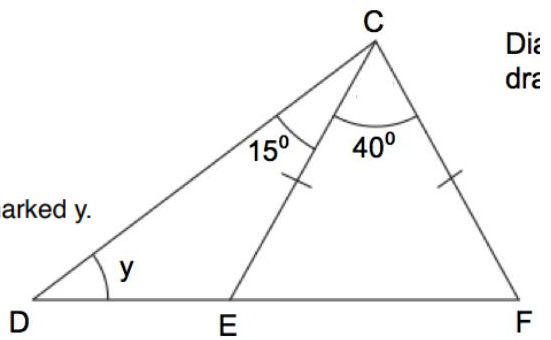
**Work out the value of  $a$ .**

Diagram accurately

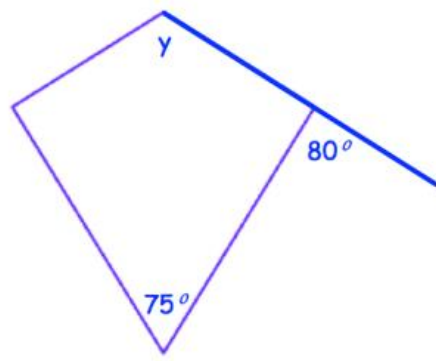
$DEF$  is a straight line.  
 $CE = CF$ .  
Angle  $ECF$  is  $40^\circ$ .  
Angle  $DCE$  is  $15^\circ$ .

Find the size of the angle marked  $y$ .

..... $^\circ$   
**(4)**



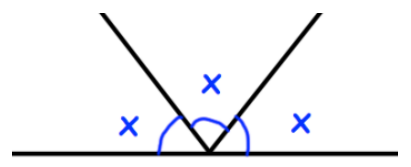
19. Below is a kite.



Calculate the size of angle  $y$ .

Work out the size of  $x$ .

..... $^\circ$   
**(2)**



# 7.23 Angles on parallel lines

The learning outcomes for this topic are:

- Correctly identify pairs of alternate angles
- Correctly identify pairs of corresponding angles
- Find missing values using one-step alternate or corresponding angles
- Draw a graph from a data table
- Compare two time series graphs
- Create a conversion graph from a conversion rate

Key Word	Definition
<b>Parallel</b>	Two or more lines, always maintaining exactly the same distance apart, therefore never meeting.
<b>Corresponding</b>	F rule. The angle above the two bars of the F is the same. Think Football Club. FC
<b>Alternate</b>	Z rule. The angles lying on either side of the middle crossing line. Think A-Z.
<b>Allied (/Co-interior/Supplementary)</b>	[ or ] the two angles in between the bracket of the parallel lines add up to 180°

**Additional Resources**

MathsWatch: 120

Corbett Maths: Videos [25](#); Worksheets [25](#)

**Careers Focus – Where could this take you?**

Carpenter. A carpenter needs parallel lines to create furniture rooms, doors, shelves, theatre sets and any number of jobs that are created in squares, rectangles, parallelograms etc.



**Curriculum Links - Coherence**

**Required Knowledge:**

- 7.22 Angle rules

**Applied to:**

- 10H.04 Trigonometry
- 11H.01 Circle Theorems

**Links across school:**

- Painting playing surfaces (PE)
- Distance of stars (Physics)

**Key Concepts**

## Angles in parallel lines

Angles in parallel lines are angles that are created when two parallel lines are intersected by another line called a **transversal**.



Corresponding angles	Corresponding angles are equal in size.	
Alternate angles	Alternate angles are equal in size.	
Co-interior angles	The sum of co-interior angles is 180°. $x + y = 180$	

## Angles in parallel lines

In order to find a missing angle in parallel lines:

- 1 Highlight the angle(s) that you already know
- 2 State the **alternate angle**, **co-interior angle** or **corresponding angle** fact to find a missing angle in the diagram.
- 3 Use basic angle facts to calculate the missing angle.

Steps 2 and 3 may be done in either order and may need to be repeated. Step 3 may not always be required.

**Concept – what it is**

**Standard Examples**

$\theta = 180^\circ - 50^\circ$

$\theta = 130^\circ$

**Non-Concept – what it isn't**

**Non-Standard Examples**

$x = 47$

$133$

$133^\circ$

$w = 127$

$53^\circ$

$x = 53$

$y = 53$

$z = 127$

## 7.23 Angles on parallel lines

The learning outcomes for this topic are:

- Correctly identify pairs of alternate angles
- Correctly identify pairs of corresponding angles
- Find missing values using one-step alternate or corresponding angles

- Draw a graph from a data table
- Compare two time series graphs
- Create a conversion graph from a conversion rate



### Useful Formulae and Hints

**Parallel**  
Two or more lines, always maintaining exactly the same distance apart, therefore never meeting.

**Corresponding**  
F rule. The angle above the two bars of the F is the same. Think Football Club. FC

**Alternate**  
Z rule. The angles lying on either side of the middle crossing line. Think A-Z.

**Allied (/Co-interior/Supplementary)**  
[ or ] the two angles in between the bracket of the parallel lines add up to 180°

Turn the page so the parallel lines are horizontal.

Are there more than One pair of parallel lines?

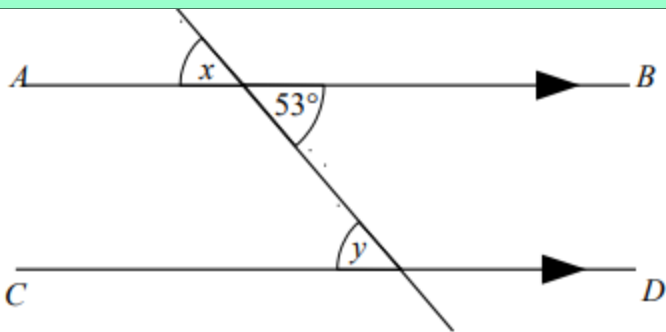
Is there something easy you can do first? E.g. angles on a straight line or opposite angles?

If in doubt find all the angles you can!

Is there an isosceles triangle? Don't forget the angles beneath the identical lines are equal.

### GCSE Questions

1

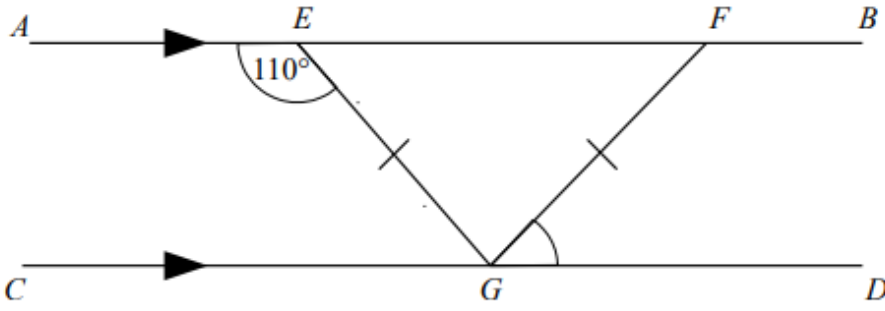


*AB and CD are parallel lines.*

- Write down the size of angle  $x$  (1)
- Give a reason for your answer. (1)
- Write down the size of angle  $y$ . (1)
- Give a reason for your answer. (1)

(Total for question 1 is 4 marks)

5



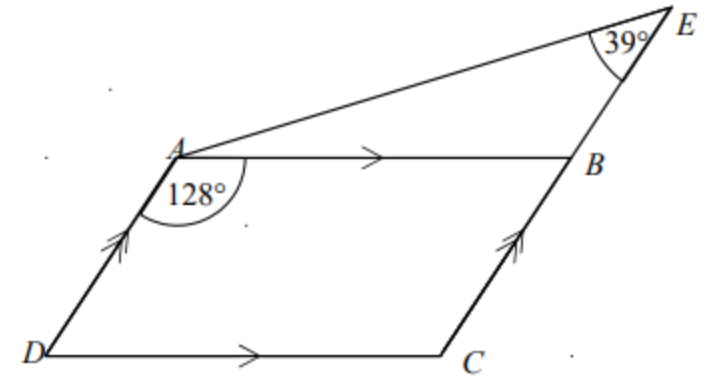
*AB and CD are parallel lines.  
EFG is an isosceles triangle*

Angle  $AEG = 110^\circ$

- Find the size of angle  $FGD$ .  
Give a reason for each stage of your working.

(Total for question 5 is 3 marks)

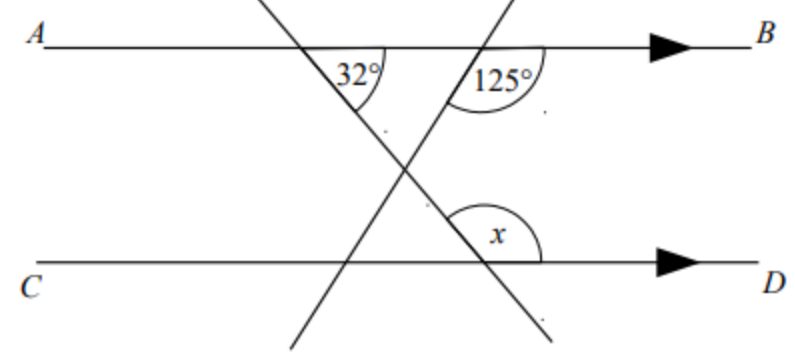
4



*ABCD is a parallelogram.  
CBE is a straight line.  
Angle  $BAD = 128^\circ$   
Angle  $AEB = 39^\circ$*

- Find the size of angle  $BAE$ .  
Give a reason for each stage of your working.

(Total for question 4 is 3 marks)



*AB and CD are parallel lines.*

- Find the size of angle  $x$  (1)
- Give a reason for your answer. (2)

(Total for question 3 is 3 marks)

# 7.24 Probability scales and mixed events

The learning outcomes for this topic are:

- Draw a probability scale from 0 to 1 with words to describe probabilities
- Draw an arrow to a probability scale to represent an event
- Find probabilities of simple events as a fraction, decimal or percentage

- Find simple 'and' & 'or' probabilities
- Describe an event for a given worded probability
- Find probabilities by drawing a sample space diagram

Key Word	Definition
Impossible	Never going to happen
Certain	Always going to happen
Unlikely	Improbable
Likely	Having good possibilities of success
Even Chance	50/50 Equally like to happen as not
Mutually exclusive	Completely different. Not relying on each other.
Independent	Not reliant on anything else
Exhaustive	What I am, writing these Knowledge Organisers
Event	Something which happens
Outcome	What happened
Trial	an experiment, a test.
Possibility	Options that may happen
Probability	The chance of an event happening

### Additional Resources

MathsWatch: 14, 59, 60, 126

Corbett Maths: Videos [245/6/9, 250/1](#); Worksheets [245/6/9, 250/1](#);

### Careers Focus – Where could this take you?

A Bookmaker. Someone who takes bets. The advert for bookmakers are everywhere on TV and at sporting events. A bookmaker calculates the probabilities, or odds, and works out which events are likely to happen and which are not. They will then offer probabilities for customers to make a bet. However, the bookmaker will have worked it out so they always (almost) make money.

### Curriculum Links - Coherence

**Required Knowledge:**

- 7.09 Graphs of linear equations

**Applied to:**

- 8.20 sample space diagrams
- 10F.05 Choices and Outcomes

**Links across school:**

- Forecasting future Growth (Business)

### Key Concepts

#### How to calculate probability

**Probability** is the likelihood of an event occurring.  
To find the probability of an event happening we use the formula

$$\text{Probability} = \frac{\text{Number of desired outcomes}}{\text{Total number of outcomes}}$$

Probabilities range from **0 to 1**.  
If something has a **probability of 0** then it is **impossible** and if something has a **probability of 1** then it is **certain**.

We use the notation **P(event)** to represent the probability of an event happening.

#### Probability Distribution

**Probability distributions** are a summary of the probabilities of all possible outcomes of an experiment or situation, known as a random variable.

For example, this table shows the probability distribution for a 4-sided spinner obtained after an experiment.

Colour	Red	Blue	Green	Yellow
Probability	0.3	0.35	0.15	0.2

These probabilities are not all the same but **sum to 1**.  
 $0.3 + 0.35 + 0.15 + 0.2 = 1$ .

#### Sample Space

A **sample space** is a list or diagram used to display all possible outcomes. This could be as a list or a table of values. Making a list of all possible outcomes is known as enumeration.

To create a **sample space** diagram we need to think about the possible outcomes of a situation.

For example,  
Let's say we were to flip a fair coin and at the same time roll a fair six-sided die.  
The sample space for this situation could be written as a list of the possible combinations.  
(H, 1), (H, 2), (H, 3), (H, 4), (H, 5), (H, 6), (T, 1), (T, 2), (T, 3), (T, 4), (T, 5), (T, 6)

#### Concept – what it is

There are 8 marbles in a bag.  
4 marbles are red.  
3 marbles are blue.  
1 marble is green.  
On marble is selected at random from the bag.

On marble is selected at random from the bag.

(a) On the probability scale mark with a cross (X) the probability that the marble is red.

(b) On the probability scale mark with a cross (X) the probability that the marble is yellow.

(c) Write down the probability that marble is blue.

$\frac{3}{8}$

#### Non-Concept – what it isn't

It is NOT a ratio.

#### Standard Examples

There are some counters in a bag.  
The table shows the number of counters of each colour.

Colour	Red	Blue	Yellow	Green
Number of Counters	7	2	5	3

A counter is taken at random from the bag.

(a) Write down the probability that the counter is green.

$$\frac{3}{7+2+5+3} = \frac{3}{17}$$

(b) Write down the probability that the counter is not blue.

$$\frac{15}{17}$$

#### A2 An ordinary dice is thrown.

What is the probability that the dice lands on a prime number?

(The Prime scores are 2, 3 and 5)

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

#### Non-Standard Examples

Two fair six-sided dice are rolled.  
The score is **difference** between the numbers on each dice.

(a) Complete the table to show all possible scores.

		Dice 1					
		1	2	3	4	5	6
Dice 2	1	0	1	2	3	4	5
	2	1	0	1	2	3	4
	3	2	1	0	1	2	3
	4	3	2	1	0	1	2
	5	4	3	2	1	0	1
	6	5	4	3	2	1	0

Find the probability of scoring a 2

$$\frac{8}{36} = \frac{4}{18} = \frac{2}{9}$$

## 7.24 Probability scales and mixed events

The learning outcomes for this topic are:

- Draw a probability scale from 0 to 1 with words to describe probabilities
- Draw an arrow to a probability scale to represent an event
- Find probabilities of simple events as a fraction, decimal or percentage

- Find simple 'and' & 'or' probabilities
- Describe an event for a given worded probability
- Find probabilities by drawing a sample space diagram



### Useful Formulae and Hints

Remember:  
Probabilities add to 1

0 = no chance at all of the event happening.  
P (winning the lottery when I don't do it) = 0

1 = absolutely certain it will happen.  
P(sun will rise tomorrow) = 1

Add up the total number of counters/sweets/children etc. This is the denominator – the bottom number.

Add up the chances of the event happening. This is the Numerator – the top number.

Write a probability as a fraction, a decimal or a percentage.

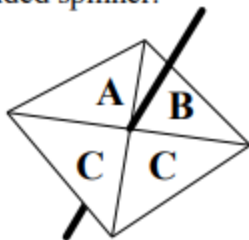
The probability of a AND b – you add the probabilities.

The probability of something NOT happening is 1 minus the probability it does. i.e. all the other possibilities.

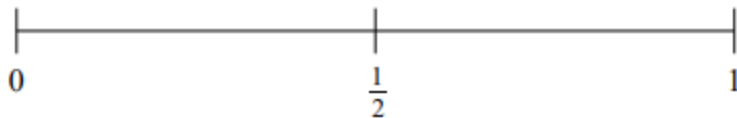
On a sample space diagram, do NOT include the titles!

### GCSE Questions

1 Stevie spins a fair 4-sided spinner.



(a) On the probability scale mark with a cross (X) the probability that the spinner lands on A.



(b) Write down the probability that the spinner lands on C.

(2 marks)

4 Here is a list of 8 numbers.

1 2 3 4 5 6 8 9

One of the numbers is chosen at random.

Write down the probability that this number is 9.

(1 mark)

8. A fair dice is numbered from 1 to 6.  
The dice is rolled twice.

(a) Draw a sample space diagram to show the possible outcomes.

(b) Work out the probability that the number obtained on the first roll is more than double the score on the second roll.

5 There are 11 pens in a box.

5 pens are red.  
4 pens are blue.  
2 pens are green.

One pen is selected at random from the box.

(a) Write down the probability that pen is green.

(b) Write down the probability that pen is black.

(2 marks)

10 Raphael buys one raffle ticket.

A total of 250 raffle tickets are sold.

One of these tickets will win the raffle.

Each ticket has an equal chance of winning the raffle.

(a) Write down the probability that Raphael's ticket will win the raffle.

(b) Write down the probability that Raphael's ticket will not win the raffle.

(2 marks)

The probability of Barry winning a Badminton match is  $\frac{3}{8}$

Work out the probability that Barry does not win a Badminton match.

(1 mark)



# 7.25 Experimental probabilities

## The learning outcomes for this topic are:

- Design a suitable questionnaire
- Complete a frequency table for a set of trials
- Find probabilities from a given frequency table
- Find missing values given probabilities
- Use experimental probabilities to find expected number of outcomes for an event
- Use experimental probability to decide on bias

Key Word	Definition
<b>Trial</b>	An experiment, a test.
<b>Questionnaire</b>	A set of questions on a form in order to gain data
<b>Possibilities</b>	Options that may happen
<b>Probabilities</b>	The chances of an event happening
<b>Relative Frequency</b>	The probability based on results of an experiment
<b>Theoretical</b>	What we know in our heads should happen
<b>Experimental</b>	What actually happened
<b>Bias</b>	Not fair. Weighted in some way or another

**Additional Resources**

MathsWatch: 58, 125

Corbett Maths: Videos [248](#), [253](#), [268](#); Worksheets [248](#), [253](#), [268](#);

**Careers Focus – Where could this take you?**

Engineers must calculate the probability of such things as a heavy gust of wind or a car's front suspension hitting a pothole on an average day.

Questionnaires and Online surveys are used by many different companies to see if their products are what the customer wants or how they can improve the products.

**Curriculum Links - Coherence**

**Required Knowledge:**

- 7.24 Probability

**Applied to:**

- 8.22 Two-way
- 10H.07 Venn Diagrams

**Links across school:**

- Just-in time methods of ordering stock (Business)
- Expected outcome of experiments (Science)

### Key Concepts

- Questionnaires and online surveys

A **questionnaire** or **online survey** consists of a list of standardised questions about a specific topic. They can be distributed to a large sample of the population and returned to the data processor quickly using data collection tools such as the internet.

Questionnaires are one of the **most common** types of data collection as they can be **cost-effective** and, when the questionnaire is well structured, can provide enough detail to satisfy the requirements of the researcher.

**Marketing campaigns** regularly use the internet, specifically **social media** to broadcast new ideas and products to the market, often followed up by a questionnaire to provide **feedback** about the product or service that has been sold.

A questionnaire can contain a mixture of closed and open questions. **Closed questions** have a **fixed response** that can be answered by ticking a box or selecting a value on a scale. Closed questions are used to collect **quantitative data** as you can quickly determine the number of participants that select each option.

### Relative Frequency

**Relative frequency** is the number of times an event happens divided by the total number of outcomes that took place in an experiment, known as the number of trials.

To calculate the relative frequency we can use the formula

$$\text{Relative frequency} = \frac{\text{frequency of the event occurring}}{\text{total number of trials of the experiment}}$$

**Relative frequency** is used for experimental probability. Experimental probability is different to theoretical probability as it is based on actual occurrences rather than theory.

### Experimental Probability

**Experimental probability** is the probability of an event happening based on an actual experiment or observation.

To calculate the **experimental probability** of an event, we find the relative frequency of the event.

Relative frequency =  $\frac{\text{frequency of event occurring}}{\text{total number of trials of the experiment}}$

We can also express this as  $R = \frac{f}{n}$  where  $R$  is the relative frequency,  $f$  is the frequency of the event occurring, and  $n$  is the number of trials of the experiment.

If we find the relative frequency for all possible outcomes from the experiment we can write the probability distribution for that experiment.

### Concept – what it is

Number	Frequency	Relative Frequency
1	6	$\frac{6}{50} = 0.12$
2	13	$\frac{13}{50} = 0.26$
3	15	$\frac{15}{50} = 0.3$
4	16	$\frac{16}{50} = 0.32$

Charlie wants to find out how many hours students revise for their chemistry test.

(c) Design a suitable question.

How many hours did you spend revising for your chemistry test?  
Give your answer to the nearest hour.

0 to 2 hours  
 3 to 5 hours  
 6 to 8 hours  
 9 or more hours

### Standard Examples

92 people were asked how they got to work:

- 35 used a car
- 42 took public transport
- 8 rode a bicycle
- 7 walked

The Relative Frequencies (to 2 decimal places) are:

- Car:  $35/92 = 0.38$
- Public Transport:  $42/92 = 0.46$
- Bicycle:  $8/92 = 0.09$
- Walking:  $7/92 = 0.08$

$$0.38 + 0.46 + 0.09 + 0.08 = 1.01$$

(It would be exactly 1 if we had used perfect accuracy)

### Non-Concept – what it isn't

It is common to forget to use the relative frequencies from experiments for probability questions and use the theoretical probabilities instead.


For example, they may be asked to find the probability of a die landing on an even number based on an experiment and the student will incorrectly answer it as 0.5.0.5.

The relative frequency is the same as the experimental probability. This value is written as a fraction, decimal or percentage, not an integer.

When collecting data it might be easy just to ask the five closest people. However this sample might be biased and not give a broad range of responses.

### Non-Standard Examples

Here is a 4-sided spinner.



The sides of the spinner are labelled 1, 2, 3 and 4. The spinner is biased. The probability that the spinner will land on each of the numbers 2 and 3 is given in the table. The probability that the spinner will land on 1 is equal to the probability that it will land on 4.

Number	1	2	3	4
Probability	$\times 0.13$	0.46	0.28	$\times 0.13$

$\frac{0.46}{0.28} = 0.74$

Sarah is going to spin the spinner 500 times.  $1 - 0.74 = 0.26$

Work out an estimate for the number of times it will land on 4.  $0.13 \times 500 = 65$       $\frac{0.26}{2} = 0.13$

How much money do you spend buying CDs?

£10 – £30     £30 – £50     £50 – £70     more than £70

# 7.25 Experimental probabilities

The learning outcomes for this topic are:

- Design a suitable questionnaire
- Complete a frequency table for a set of trials
- Find probabilities from a given frequency table

- Find missing values given probabilities
- Use experimental probabilities to find expected number of outcomes for an event
- Use experimental probability to decide on bias



**Useful Formulae and Hints**

**Questionnaires**  
[Survey Questions](#)  
[mathsisfun.com](http://mathsisfun.com)

What do I hope to learn from asking the questions?

A survey question can be:  
**Open-ended** (the person can answer in any way they want), or  
**Closed-ended** (the person chooses from one of several options)

Your questions should also be **neutral** ... allowing the person to think their own thoughts about the question.

The question "**Do you love nature?**" (in the example above) is a **bad question** as it almost forces the person to say "Yes, of course."

Try changing the words to be more **neutral**, for example: "How important is the natural environment to you?"

**GCSE Questions**

**1** The probability that a biased dice will land on a 6 is 0.3  
The dice is going to be rolled 200 times.  
Work out an estimate for the number of times the dice will land on 6.  
**(2 marks)**

Aidan wants to find out people's opinion on a new road being built.

*A new road will cause a lot of traffic for the village, don't you agree?*

- Yes
- Maybe
- Unsure

(a) Write down two things wrong with this question.

1 .....

.....

2 .....

.....

(b) Design a better question for Aidan's questionnaire to find out if people wanted a new road to be built.

Include response boxes.

**14** The table shows the probabilities that a biased dice will land on 1, on 2, on 3, on 5 and on 6.

<b>Number</b>	1	2	3	4	5	6
<b>Probability</b>	0.14	0.2	0.08		0.13	0.21

The dice is rolled 200 times.

Work out an estimate for the number of times the dice will land on 2 or on 4.

**(3 marks)**

1. Josie wants to test if a coin is biased. She flips the coin 30 times. Here are here results.

H T H T H H H T H H  
H T H H H T H H H T  
H H H H T H H H T H

(a) Complete the relative frequency table.

	Heads	Tails
<b>Relative frequency</b>		

(2)

(b) Do you think the coin is biased? Explain your answer.



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.

Keyword	Definition
Cultural Capital	Values, knowledge and ideas that help us to understand more about the world around us and different societies from around the globe.
Ludicrous	So foolish, out of place or ridiculous that it seems amusing.
Chivalry	The qualities of courage, honour, courtesy, justice and a willingness to help those in need. Usually associated with knights.
Mythology	A collection of myths belonging to a particular culture or religion.
Nobility	The quality of being brave and honest in character or belonging to the aristocracy
Etymology	The study of the origin of words and how they have changed through time.
Narcissism	A personality style that involves being overly preoccupied by oneself, often at the expense of others.
Summary	A brief overview of the main points of something.
Aristocracy	The highest class in society. People who were born into great wealth (Royals and other members of high society).

## Key Concepts

### What is a Myth?

Myths are stories based on traditions. They explain the world and man's experience and man used myths to explain natural phenomena before our understanding of science. The stories usually feature supernatural beings or events and deal with universal concerns: death, birth, the afterlife and good and evil.

**Can you name 5 Greek myths?**

### What is a fable?

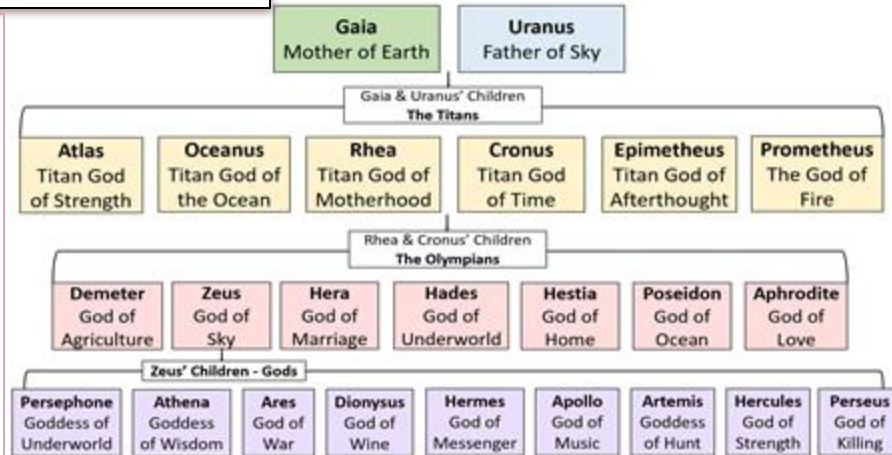
A fable is a short, simple story, featuring animals as characters that speak or behave like humans. These stories can be humorous and are designed to teach a moral lesson about life.

### What is a legend?

A legend is a story that has been passed down through history orally by storytellers and person to person. Legends are usually based around real people or historical events and feature a heroic person or fantastic place.

**Do you know the legend of King Arthur?**

### Greek Gods family tree



## Retrieval Practice- Match up the correct definition to the term (Tier 3 vocabulary)



Challenge: Write two examples for each term

Questions	Answers
Verb	Using a word, phrase or idea more than once to draw attention to it. E.g. The room fell quiet. Deathly quiet.
Simile	Creating a mental picture for the reader through appealing to the senses.
Adjective	Comparing one thing to another using like or as.
Noun	Describes an object or action in a way that isn't literally true, but helps explain an idea or make a comparison
Adverb	A word for an object, person, place or thing.
Repetition	A word that modifies a noun. E.g. Blue, crooked, full.
Imagery	A word that denotes an action or a state of being. E.g. Run, writing, spoke.
Metaphor	A word that modifies a verb. E.g. Quietly, strangely, suddenly.

## Career Focus - Museum Curator



**A Museum Curator** is a person who finds, organises, researches and displays items for display in museums. As a curator, you will be in charge of not only the exhibits but also training and instructing museum staff and also engaging and educating members of the public who visit your galleries.

Career links:

<https://nationalcareers.service.gov.uk/job-profiles/museum-curator>  
[Museum/gallerycurator job profile | Prospects.ac.uk](https://www.prospects.ac.uk/museum/gallerycurator-job-profile)

## Challenge Activities



**Task 1** - Use your imagination to write an origin myth about how Castle Hill came to be. You can include mythical creatures like giants and dragons or make it about Viking invaders- be creative!



**Task 2**:- Research Aesop. Who was he? Why is he important? Can you name some of his fables? Which is your favourite and why?

## Topic Links



This topic links to:  
**Art** - Cave paintings.  
**Geography**- Creation of civilisations and societies and their cultures.  
**History**- Ancient civilisations and oral histories.  
**RE**- Mythology and symbolism.

## Additional Resources



To further practise and develop your knowledge see:  
[Classic Tales | Free mythology resources for listening and learning](#)  
<https://www.youtube.com/watch?v=G99aSA0Nk3s>  
<https://www.youtube.com/watch?v=rNk-zV2T7b>  
[Who were the ancient Greek gods and heroes? - BBC Bitesize](#)



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.



- Describe how chicks develop and hatch
- Explain ways to make Newsome a greener place

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

## Key Concepts

### Growing Plants

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

**Plant Growth Stages**

- 1 Sprout**: Seeds contain all the nutrients they need to germinate and grow their first pair of leaves.
- 2 Seedling**: As roots begin to develop and spread, plants need a boost of quickly absorbed, well-balanced nutrients.
- 3 Vegetative**: Nitrogen is most important for plants when their energy is directed into growing stems and foliage.
- 4 Budding**: Full-grown plants need extra phosphorus during the transition to the flowering stage.
- 5 Flowering**: Potassium is essential for the development of healthy flowers and fruit.
- 6 Ripening**: As flowers or fruit reach full maturity, the plants no longer need nutrients just water.

## Making Newsome Greener

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

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

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

## Chick development

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

At 5 DAYS: The embryo is visible, surrounded by the yolk sac and albumen. The allantois and amnion are also present.

At 10 DAYS: The embryo has grown larger and is more clearly defined. The yolk sac is still visible.

At 20 DAYS: The chick is fully formed and is beginning to break through the shell. The yolk sac is almost completely absorbed.

## Hatching eggs

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

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



- Describe how chicks develop and hatch
- Explain ways to make Newsome a greener place



Retrieval Practice	
Questions	Answers
What is biodiversity?	The variety of living species living in an ecosystem.
Why is biodiversity important?	Stops species from becoming endangered or extinct.
What is sustainability?	Fulfilling the needs of current generations without compromising the needs of future generations
What can we do to make Newsome a greener more sustainable school?	<ol style="list-style-type: none"> <li>1. Reduce the use of resources</li> <li>2. Reuse every possible resource</li> <li>3. Recycle everything you can</li> <li>4. Install a school garden</li> <li>5. Create an in-school compost bin</li> <li>6. Get parents and the neighbourhood involved</li> </ol>
Why is being greener and sustainability important?	Helps us understand the importance of natural resources and helps us to protect the environment.
What are the stages of plant growth?	1. Sprouting 2. Seedling 3. Vegetative 4. Budding 5. Flowering 6. Ripening
What process involves plants taking in carbon dioxide from the air?	Photosynthesis.
Why is this process important to reduce global warming?	Photosynthesis takes in carbon dioxide and releases oxygen. Carbon dioxide is a greenhouse gas and contributes to global warming.
How many days does it take for chicks to fully develop?	21 days
What do chicks use to break the shell and hatch?	They have a bump at the end of their beaks called the egg tooth.
Why don't chicks need to get or drink for the first 24-48 hours?	They have ingested (eaten) the yolk that was in the egg so their stomachs are full.

## Career Focus - Where could this take you?



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

## Challenge Activities



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

## Topic Links



- This topic links to:
- Photosynthesis
  - Life diversity
  - Reproduction
- We will also be practising how to
- Grow plants
  - Treat living organisms with respect

## Additional Resources



To further practise and develop your knowledge see:

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





# Humanities

Our students will:

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

- Describe China's location in the World and what it is like to live there
- Explain how China has undergone change over the past 120 years
- Describe China's physical Geography

- Explain population distribution across China
- Describe the changes which made Shenzhen a megacity

Keyword	Definition
Ageing population	Increase in the % of elderly in a country
Capitalism	People own business with the idea of making profits
Colony	A country under the control of another country
Communist	The state own everything and controls what to make
Economic	Money and business
Emperor	The supreme male monarch of an empire
Megacity	A city with more than 10 million people
Migrant	A person who moves to another country
Monsoon	Heavy rains that fall in summer months
Nationalists	Strongly supports their own country
Plateau	Area of high, flat land
Policy	A law or regulation
Population distribution	How people in a country are spread around
Urbanising	The increase in the % of people in a city or town

## Key Concepts



### PHYSICAL FEATURES OF CHINA

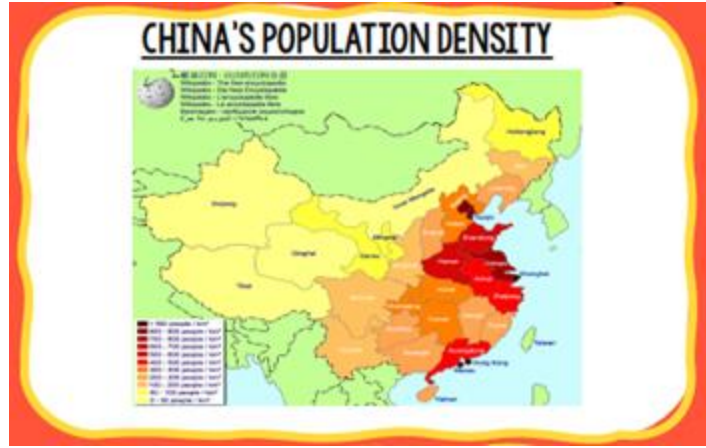
- There are three main rivers in China – the Yangtze, Huang He and Pearl Rivers
- The Himalayan Mountains are found in the south-west of China and run along China's border with Nepal and India
- China is a large country containing many different climates. The north is cold and dry, and the south is warmer and wetter
- The Gobi Desert is situated in the northern part of China
- The east coast of China borders the Pacific Ocean




### HUMAN FEATURES OF CHINA

- Beijing is the capital of China
- One of the most famous landmarks is the Great Wall of China, the longest man-made structure in the world, stretching nearly 7000km long
- Main cities in China include Beijing and Shanghai
- China has a population of 1.3 billion (2007) – the largest population of any country in the world





### COMMUNISM IN CHINA

- **COMMUNISM** - a theory or system of social organization in which all property is owned by the community and each person contributes and receives according to their ability and needs
- **DEMOCRACY** - a system of government by the whole population or of the eligible members of a state, typically through elected representatives
- **CAPITALISM** - an economic and political system in which a country's trade and industry are controlled by private owners for profit, rather than by the state





### PROBLEMS WITH COMMUNISM

Communism may sound like a good idea on paper however there are many problems associated with communist countries

- Widespread poverty
- Poor human rights records
- Lack of freedom of information (internet), movement and speech

### IS CHINA STILL COMMUNIST?

China is governed by the Communist Party of China (CPC), but the government can vote in a democratic way. However the CPC:

- Restrict internet access and protests
- Control what is published in the papers
- Have no real opposition party



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

- Describe China's location in the World and what it is like to live there
- Explain how China has undergone change over the past 120 years
- Describe China's physical Geography

- Explain population distribution across China
- Describe the changes which made Shenzhen a megacity



## Key Concepts

### WORKING IN SHENZHEN

Foxconn is the world's largest electronics factory. Foxconn is owned by a Taiwanese company, it makes iPads, iPhones and iPods for Apple.

#### WHAT HAPPENED IN SHENZHEN?

- In 6 months 10 people under the age of 25 jumped from the roofs to their death
- Workers have to repeat their tasks at high speed, under military style supervision every day
- Some complaints of the factory include not being able to sit, take toilet breaks, not being paid for overtime and poor living conditions



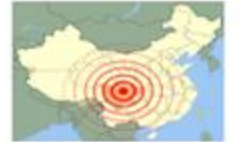
#### THE FUTURE OF SHENZHEN

- Apple promised to check whether the factory was safe and whether it should continue to make products for them
- The factory has tried to stop the suicides by hiring 2000 singers, dancers and gym trainers
- Also it is putting up nets to 'catch' the jumpers
- It promised to rise wages and move workers closer to their homes



### THE 2008 SICHUAN EARTHQUAKE

Sichuan is one of the major industrial centres of China. In addition to heavy industries such as coal, energy, iron and steel, the province has also established a light industrial sector comprising building materials, wood processing, food and silk processing



#### FACTS AND FIGURES

- Time: 14:28 Monday 12<sup>th</sup> May
- Length of main quake: approx 2 mins
- The earthquake measured 8.0 on the Richter Scale
- 69,195 confirmed dead
- 18,392 missing presumed dead
- 374,643 injured
- 4.8 million people left homeless according to official figures but the real number could be 11 million

#### EFFECTS

- Many key transport links were damaged
- Many thousands of children died in schools which collapsed
- The ground shaking caused many landslides which covered roads, railways, housing and industry



#### RESPONSES

- International Red Cross who came into the area with tents, clean water and food parcels
- The Government allowed families in Sichuan to have another child without fear of fines and even paid for men reverse their vasectomies



### POLLUTION IN CHINA

#### CAUSES

- Huge numbers of people work in heavy industry in China
- China builds a coal fired power station every week to meet the demand for cheap electricity



- Car ownership is growing faster in China than anywhere else
- China makes most of its money from manufacturing which causes most of the air pollution
- Coal is cheap to mine and China has a lot of it



#### EFFECTS

- 1.2 million people died early in 2010 in China due to outdoor air pollution
- 26% of all deaths in urban China are due to respiratory illnesses
- 16 of the worst 20 cities for air pollution are in China



Only high blood pressure and smoking cause more deaths in China than air pollution.

Most people in cities wear face masks when they go outside for long periods of time

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

- Describe China's location in the World and what it is like to live there
- Explain how China has undergone change over the past 120 years
- Describe China's physical Geography

- Explain population distribution across China
- Describe the changes which made Shenzhen a megacity

## Retrieval Practice



Questions	Answers
What is the capital city of China?	Beijing
Name the 3 main rivers in China	Yangtze, Huang and Pearl.
What is Communism?	A system where all property is owned by the community and each person contributes to this.
What is one problem with Communism?	It led to a lack of a freedom of information (the internet) and speech.
Where is the largest electronics factory, what is it called and what do they make?	The factory is Foxconn and is in Shenzhen. They make products for Apple like iPads and iPhones
What are problems in Shenzhen?	Workers have to repeat tasks at high speed and complain about not being able to sit.
What is the future like for Shenzhen?	In factories they have promised to improve wages .
What is a cause of pollution in China?	Car ownership is growing faster in China than anywhere else in the world.
What is an effect of the pollution in China?	26% of all deaths in Urban areas in China are due to respiratory illness.

## Career Focus - Corporate responsibility and sustainability practitioner



It is my job to design the company strategy for corporate responsibility and sustainability. We make sure the business works in a way that does not cause harm to communities or the environment. We need to keep up to date with policy and legislation and work with internal and external partners

## Challenge Activities



- Cook a meal, which takes inspiration from China photograph the process and give details on its origin and the ingredients
- Create a collage using images, words and photographs to show features and details on the China
- Create an English to Chinese phrase booklet/poster. With translations of key words and terms.

## Topic Links



This topic links to:

- Geography - Map work, population and physical features
- History
- Maths

## Additional Resources



To further practise and develop your know ledge see:

[Introduction to China](#) [How is China Changing](#)



- The aims of the sequence of learning are to ensure that all students:
- Explore the roles of women in Medieval England.
  - Explain how women were viewed in Medieval England, in particular 'Wise Women'.
  - Analyse the various reasons people believed some women were witches in Medieval England.
  - Evaluate how women and witches were treated in Medieval England including trials and punishments.

Keyword	Definition
Rural	A place in the countryside.
Peasant	A person of low social status who usually works as a farmer.
Domestic	Relating to the home or family relations.
Harvest	The time of year, usually in the summer months, when crops are gathered in from the fields.
Wise women	Healers who used knowledge passed down through generations to care for sick people. They often used herbs and spells.
Stone age	A period of prehistory in which humans used primitive stone tools. Lasting roughly 2.5 million years, the Stone Age ended around 5,000 years ago
Supernatural	A force beyond scientific understanding or the laws of nature.
Superstition	A widely held but irrational belief in supernatural influences, especially leading to good or bad luck.
Plague	A contagious bacterial disease typically with the formation of buboes ( <i>bubonic plague</i> ) and sometimes infection of the lungs ( <i>pneumonic plague</i> ).
Scapegoated	Unfairly blaming a person or group of people for something.
Satan	A devil working against god and considered the personification of evil.
Feud	An ongoing argument.
Familiar	A demon supposedly attending and obeying a witch, often said to assume the form of an animal.
Bamberg	A town in Northern Bavaria, in Germany.
Burnt at the stake	A medieval execution method whereby a person, or group of people is tied to a pole around a pile of wood, the wood is then set alight and they are burnt to death.

## Key Concepts

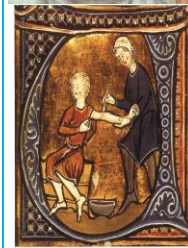
### Medieval Women:

Most people in medieval times lived in small rural communities, making their living from the land. Peasant women had many domestic responsibilities, including caring for children, preparing food, and tending livestock. During the busiest times of the year, such as the harvest, women often joined their husbands in the field to bring in the crops, this involved working 16 hour days.



### Wise Women:

In a village, the wise-woman (or man) often had knowledge which had been passed on from the generations before, and many years of experience working with herbs. Often, the 'wise-woman' delivered babies too, and her skills were highly valued. They were very important in medieval society as they delivered most of the care for those who were sick. When more universities began to be established women were not allowed to train to be doctors. This meant that qualified doctors were trying to get rid of the practices of wise women. Due to this conflict, wise women were often accused of witchcraft as their healing methods had included spells and potions since the stone age.



A tradition going back to ancient times existed in European society of people practising various forms of magic, and during the Middle Ages, accusations of witchcraft would be made against men and women from all sectors of society.

### Why did people believe in witches?

In medieval times people had simple beliefs, they believed in good luck, bad luck and the power of the supernatural. People were highly religious and superstitious, and therefore would naturally turn to these beliefs when scared. Due to a lack of scientific understanding, when bad things happened, such as crop failures or an outbreak of plague, people looked for someone to blame. Women / witches were often scapegoated in these situations.



### What were witches accused of doing?

During this period, witches were believed to have been in a pact with Satan and capable of inflicting harm upon their enemies. However, people were happy to use their religious beliefs as an excuse to take revenge on those people that they mistrusted, or disliked, by accusing them of witchcraft. This led to petty feuds within villages resulting in false accusations of witchcraft.



### How do you spot a witch?

Most people accused of witchcraft were poor, lonely, isolated and rather defenceless old ladies, they were blamed for anything that went wrong in the community. They often fit the following criteria: Old woman, usually poor • Lives alone • Has a 'familiar' (an animal) usually a cat or a toad • Has a 'Devils mark' this can be a mole or a third nipple. Wise women and people who did not openly show their religion were also accused.


### The Bamberg Witch trials 1627-32

This was one of the biggest mass trials and executions in history, it's also one of the most famous witch trials. Over an extended period of time in Germany, around 1000 people were executed for witchcraft. Many of these people were women, however all sexes and classes were executed. The punishment for witchcraft was being burnt at the stake, this is a slow and painful death, some were beheaded first.




- Explore the roles of women in Medieval England.
- Explain how women were viewed in Medieval England, in particular 'Wise Women'.

- Analyse the various reasons people believed some women were witches in Medieval England.
- Evaluate how women and witches were treated in Medieval England including trials and punishments.

Retrieval Practice 	
Questions	Answers
What job did most peasants, including women, do in medieval England?	Most peasants were farmers, they grew their own food and farmed the Lords land.
What was the key role of women in medieval society?	The key roles of women were in the domestic sphere. For example, cooking, cleaning and looking after the children.
Why were 'Wise Women' so important in medieval society?	Wise Women were the main care givers in medieval villages when people were unwell, this was important as doctors were only available to the rich. They also acted as midwives.
How did Wise Women treat illnesses?	They used knowledge passed down through generations, this included herbal remedies, potions and spells.
How were women pushed out of the medical profession?	When universities began to be established, women were not allowed to study to become doctors, this meant they could not 'officially' train in the profession.
Why were Wise Women accused of witchcraft?	Wise women were targeted because of the methods they used to treat. For example, potions and spells. They were also targeted by the church who believed their methods were sinful.
Why did people believe in witches?	Due to a lack of scientific knowledge, medieval people were very superstitious. When bad things happened, e.g. an outbreak of plague, they looked for someone to blame.
What are familiars?	Familiars are a demon, often disguised as an animal, who are companions to witches. The most stereotypical familiar is a black cat.
Why were some accusations of witchcraft false?	Feuds between neighbours or individuals in a village could sometimes result in an accusation of witchcraft as a form of revenge.
What was the punishment for witchcraft?	Witchcraft was punished by being burnt at the stake, this was a very slow and painful way to die.



### Career Focus - Where could this take you?



**I am a Nurse** – My job is to deliver vital care to people who are unwell. An important part of my job is the ability to empathise with my patients to understand their point of view and deliver the care that they need. My skills in empathy also enable me to work with doctors to find out the causes of the injuries or conditions my patients are suffering from. In order to do my job well I need to understand how people interact with each other, and the world around them.

### Challenge Activities

1. Write a diary entry describing the life of a medieval peasant woman. Include the types of jobs she would be doing throughout the day. Focus on what would be difficult about the life of a medieval peasant.
2. Create a spell and potions booklet detailing the different methods that Wise Women used to heal the sick. Ensure you add illustrations to match the ingredients in the potions!
3. Carry out your own research and create a case study on a witch trial that we have not studied in class. Complete the case study in the form of an information leaflet. Make sure you include:
  - Where the witch trial took place.
  - Why it took place.
  - How many people died.
  - Individual stories about the victims of the trial.

Topic Links 	Additional Resources 
This topic links to: <ul style="list-style-type: none"> <li>• Medieval England</li> <li>• Medicine through time</li> <li>• The Tudors (Reformation)</li> <li>• Christianity</li> </ul>	To further practise and develop your knowledge see: <ul style="list-style-type: none"> <li>• <a href="https://www.bl.uk/the-middle-ages/articles/women-in-medieval-society">https://www.bl.uk/the-middle-ages/articles/women-in-medieval-society</a></li> <li>• <a href="https://www.mothershippton.co.uk/wp-content/uploads/2018/12/ks3_history_witchcraft_2.pdf">https://www.mothershippton.co.uk/wp-content/uploads/2018/12/ks3_history_witchcraft_2.pdf</a></li> </ul>



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

- Identify the three poisons in Buddhism
- Understand the middle way
- Explain the differences between a Monk & a Lay Buddhist

- Understand the concept of the Sangha and the community of Buddhists
- Examine the Karuna Trust and the importance of this

Keyword	Definition
Principles	Guiding someone to the right path. The rules and requirements to follow a good life.
Enlightenment	This is when a Buddhist finds the truth about life and stops being reborn because they have reached Nirvana.
Nirvana	The highest state that someone can attain, a state of enlightenment, meaning a person's individual desires and suffering go away.
Samsara	Samsara is the continual repetitive cycle of birth and death that arises from ordinary beings.
Compassion	Compassion is a feeling of concern for others who are suffering and therefore makes a person want to do something to help.
Pali	Language of the Buddha. The language of Buddhists.
Laity	Buddhists who are not religious officials like priests or monks.
Sangha	In Buddhism, sangha refers to the monastic communities of bhikkhu (monks) and bhikkhuni (nuns).

## Key Concepts

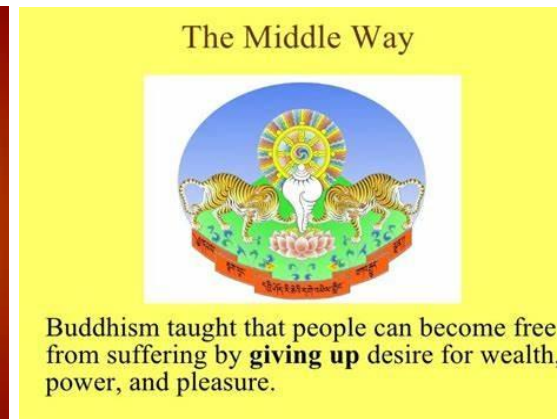
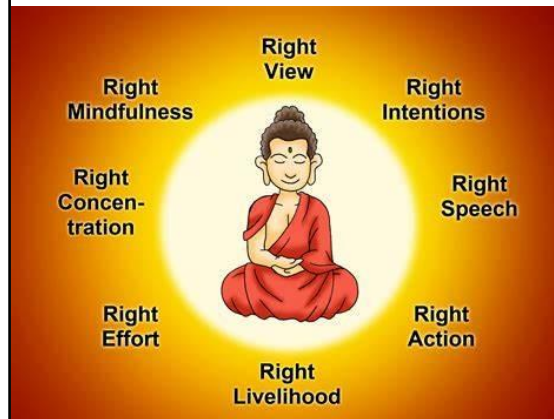
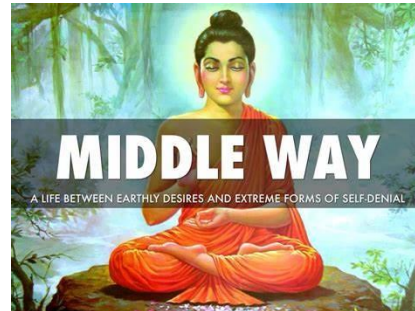
### The Three Poisons

The basic causes of suffering are known as the Three Poisons: greed, ignorance and hatred. These are often represented as a rooster (greed), a pig (ignorance) and a snake (hatred). In the Pali language, which is the language of the Buddha, these three creatures are known as lobha (greed), moha (ignorance) and dosa (hatred).



### The Middle Way

The **Noble Eightfold Path** (also called the Middle Way, or the Threefold Way). It gives Buddhists a path they can follow to end suffering. However, these are not steps but rather eight guiding principles that suggest the way to end suffering and ultimately achieve **enlightenment**.



### Main beliefs of Buddhism

- Gautama the Buddha taught that the way to achieve enlightenment, and escape samsara, the circle of suffering which we all exist in, was to avoid the three poisons; greed, hatred and delusion.
- This can be achieved by following the middle way, or eightfold path.



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

- Identify the three poisons in Buddhism
- Understand the middle way
- Explain the differences between a Monk & a Lay Buddhist

- Understand the concept of the Sangha and the community of Buddhists
- Examine the Karuna Trust and the importance of this

**Key Concepts**  

## Monk and Lay Buddhists

In many Asian Buddhist cultures the sangha is divided between monks and nuns, who can be seen as the 'real' full-time Buddhists, and lay people, who can be regarded as part-timer supporters. In some countries the role of the laity is simply to serve the monastics.



### The Sangha

Sangha, meaning 'company' or 'community', refers to the monastic communities of monks and nuns across the Buddhist world. The Sangha has kept Buddhist texts safe over the centuries and has interpreted and taught Buddhist philosophy. The Sangha has also provided inspiration and guidance on how to live a good Buddhist life.

### Monks and nuns

The Sangha generally refers to orders of monks and nuns who have chosen a life that focuses entirely on the Dhamma. They live according to the rules of the order of monks or nuns they join. These rules are called the **vinaya**, meaning 'discipline'.

Monks and nuns can be referred to as **bhikku**. The word literally means 'beggar', as the Buddha and his followers owned nothing and asked for food, having renounced the world completely. Buddhist communities are happy to give to food, clothing and other necessities to the monks and nuns because they have renounced material wealth and family life to devote themselves to the **dhamma**. This means that Buddhist monks and nuns provide important spiritual help and guidance for the **lay community**. Today, Buddhist monks and nuns may generate income by holding meditation classes and offering services or selling things that may benefit the community.

Karuna Trust (UK) is a charity based in London. It was established in 1980 under the name 'Aid for India', and linked to the Triratna Buddhist Community. It is administered by Western Buddhists, but the projects are open to anyone regardless of background.

“I believe that at every level of society, the key to a happier world is the growth of compassion.”

**His Holiness The 14th Dalai Lama of Tibet, 'What Is The Purpose Of Life?'**








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

- Identify the three poisons in Buddhism
- Understand the middle way
- Explain the differences between a Monk & a Lay Buddhist

- Understand the concept of the Sangha and the community of Buddhists
- Examine the Karuna Trust and the importance of this

Retrieval Practice 	
Questions	Answers
What are the three poisons in Buddhism called?	The three poisons in Buddhism are called greed, ignorance and hatred.
What does Laity mean?	Laity are lay Buddhists who support the practicing Buddhists. These are simple and normal people who devote themselves to Buddhist practices but they live a normal secular life alongside it.
What is the eightfold path also known as?	The eightfold path is also known as the middle way or the three fold way.
Name the eight paths within Buddhism?	Within the eightfold path, it includes; the right view, the right intentions, the right speech, the right action, the right livelihood, the right effort, the right concentration and the right mindfulness.
What are monks and nuns referred to as?	Monks and nuns are referred to as bhikku's.
Where is the Karuna Trust based?	The karuna trust is based in London in the United Kingdom.
What does Vinaya mean?	Vinaya are rules from the order of the monks, in order of the group of monks and the nuns Buddhists join. These are disciplines that a Buddhist should follow.

## Career Focus - Where could this take you?





**Job role:** Spiritual Consultant.  
 “My name is Kothmale Kumara Kassapa Thero, I am the royal pandit reverend for International Centre for Theravada Buddhism UK, working as a Spiritual Consultant (advisor). We offer necessary instruction and assistant from experienced teachers who are advanced practitioners of meditation. By studying religious education you understand more about the Buddhist belief as well as enhance your own knowledge further. Within RE the skills which have helped me understand my role are; research skills, debating, essay writing, speaking, communication skills etc...”

## Challenge Activities

- Describe in full sentences what a monk would do in his everyday life.
- Explain in detail the three poisons in Buddhism and how it affects a Buddhist in today's society.
- Create an information leaflet for someone who does not know anything about Buddhism.
- Design a wheel of life linking to the eightfold path, include around the eight ways the things that will make you lead a good life.
- Research different Buddhists in the world today. Can you find out the different Buddhist traditions and their way of life.

Topic Links	Additional Resources
-------------	----------------------

<p>This topic links to other RE topics &amp; cross curricular subjects such as;</p> <ul style="list-style-type: none"> <li>• Sikhism</li> <li>• Buddhism</li> </ul> <p>We will also be practising how to</p> <ul style="list-style-type: none"> <li>• Argue a point and practise our Voice 21</li> <li>• Participate in debates</li> <li>• Write PEE sentences/how to answer exam questions</li> </ul>	<p>To further practise and develop your knowledge see:</p> <p><a href="https://www.bbc.co.uk/bitesize/topics/znkxpv4">https://www.bbc.co.uk/bitesize/topics/znkxpv4</a></p> <p><a href="https://kids.britannica.com/kids/article/Buddhism/352887">https://kids.britannica.com/kids/article/Buddhism/352887</a></p>  
--	--

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.

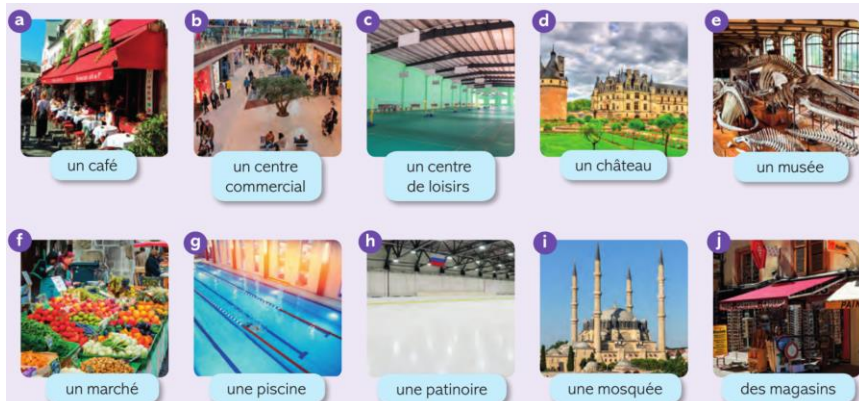
- The aims of the sequence of learning are to ensure that all students can:
- say what there is in your town.
  - say what activities you do in your town.

- Accept and decline invitations to go out.
- Order food and drink in a café
- Say what you are going to do next weekend..

## Key concepts



### Talking about what there is in your town.



### Talking about where you go in town.

Le week-end, <i>At the weekend,</i>	je vais <i>I go</i>	au <i>to the</i>	bowling <i>bowling alley</i>	avec mes copains <i>with my friends</i>
Le samedi matin, <i>On Saturday mornings,</i>			cinéma <i>cinema</i>	avec mes copines <i>with my friends</i>
Le samedi soir, <i>On Saturday evenings,</i>		à la <i>to the</i>	parc <i>park</i>	
Le dimanche après-midi, <i>On Sunday afternoons,</i>			stade <i>stadium</i>	avec mes parents <i>with my parents</i>
			piscine <i>swimming pool</i>	avec mon demi-frère <i>with my half-brother/step-brother</i>
			plage <i>beach</i>	
	à l' <i>to the</i>	église <i>church</i>	avec mes grand-parents <i>with my grandparents</i>	
	aux <i>to the</i>	magasins <i>shops</i>		

### Tu veux sortir? Invitations to go out.

Tu veux <i>Do you want</i>	aller <b>au</b> café <i>to go to the café</i>	aujourd'hui? <i>today?</i>
	jouer <b>au</b> golf <i>to play golf</i>	ce matin? <i>this morning?</i>
	regarder <b>un</b> film <i>to watch a film</i>	cet après-midi? <i>this afternoon?</i>
		ce soir? <i>this evening?</i>
		ce week-end? <i>this weekend?</i>

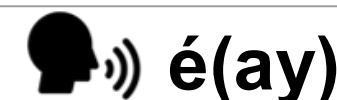
### Accepting or declining invitations..

Merci, bonne idée. <i>Thank you, good idea.</i>
Oui, je veux bien. <i>Yes, I want to.</i>
D'accord. <i>OK.</i>
Pourquoi pas? <i>Why not?</i>
Non, merci. <i>No, thanks.</i>
Désolé(e)! <i>Sorry!</i>
Je ne veux pas. <i>I don't want to.</i>
Tu rigoles! <i>You're joking!</i>

### Vous desirez? Ordering food and drink.

Je voudrais <i>I would like</i>	un <i>a/an</i>	café crème <i>milky coffee</i> café express <i>espresso coffee</i> chocolat chaud <i>hot chocolate</i> coca (light) <i>(Diet) Coke</i> croquemonsieur <i>grilled cheese and ham sandwich</i> diabolo menthe <i>mint cordial</i> jus d'orange <i>orange juice</i> Orangina <i>fizzy orange</i> sandwich au fromage <i>cheese sandwich</i> sandwich au jambon <i>ham sandwich</i> thé au citron <i>tea with lemon</i> thé au lait <i>tea with milk</i>
	une <i>a</i>	crêpe au sucre <i>pancake with sugar</i> eau minérale <i>mineral water</i> glace au chocolat <i>chocolate ice cream</i> glace à la vanille <i>vanilla ice cream</i> glace à la fraise <i>strawberry ice cream</i> grenadine à l'eau <i>pomegranate cordial</i>
Pour moi, <i>For me,</i>	des	frites <i>chips</i>

### Key sounds



quatre

musique

cinéma

thé

4




- say what there is in your town.
- say what activities you do in your town.

- Accept and decline invitations to go out.
- Order food and drink in a café
- Say what you are going to do next weekend..

## Retrieval Practice



Questions	Answers
Où habites-tu?	J'habite à <b><u>Huddersfield.</u></b>
Qu'est-ce qu'il y a dans ta ville?.	Dans ma ville il y a <b><u>un cinéma</u></b> et <b><u>des restaurants.</u></b>
Qu'est-ce qu'il n'y a pas?	Il n'y a pas de <b><u>marché</u></b> et de <b><u>patinoire.</u></b>
Où vas-tu le weekend?	Le <b><u>samedi</u></b> je vais <b><u>au centre commercial</u></b> et le <b><u>dimanche</u></b> je vais <b><u>à la piscine.</u></b>
Tu veux sortir <b><u>ce soir</u></b> ?	Oui <b><u>je veux bien!</u></b> ✓ Non <b><u>tu rigoles</u></b> ✗
Rendez-vous à quelle heure?	Rendez-vous à <b><u>sept heures.</u></b> 
Vous desirez?	Je voudrais <b><u>un sandwich au fromage</u></b> et <b><u>un coca</u></b> s'il vous plait.
C'est combien?	C'est onze euros. €
Qu'est-ce que tu vas faire le weekend prochain?	Je vais <b><u>visiter les monuments.</u></b>

## Career Focus - Where could this take you?



I am a tour guide. I am lucky because I can work all over the world. I can travel to different countries and meet people from interesting cities. I know lots about the towns and cities. I am also very sociable.

## Challenge Activities



1. Create a poster to advertise your town. Include what there is and what you do there.
2. Research a town in France. Is it different to Huddersfield? Why or why not?
3. Complete the Languagenut activities.
4. Design a menu for a café in France. What would you sell? Don't forget to include the prices.

## Topic Links



- This topic links to:
- All about me.
  - My hobbies.
  - My home and family.
  - Food and drink.

## Additional Resources



To further practise and develop your knowledge see:

- Language nut
- Oak academy

Your teacher can remind you of your login.



# Computing

Our students will:

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

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

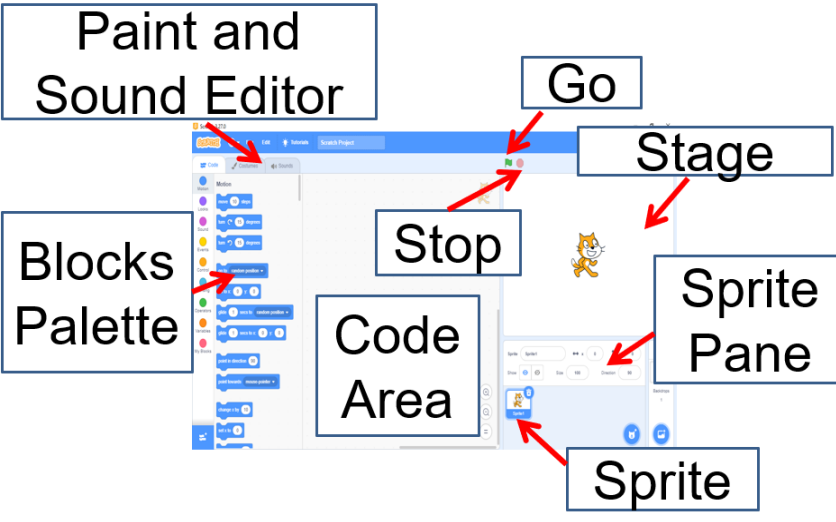
- Describe the Scratch layout
- Describe the appropriate use of a range of blocks and scripts in Scratch

- Evaluate the use of blocks and scripts used to create a range of programs in Scratch
- Describe the definitions of some keywords in Scratch

Keyword	Definition
<b>Sprite</b>	The programmable images on a Scratch program screen.
<b>Script</b>	The set of instructions that is used to program in Scratch, usually presented as a collection of blocks that connect with one another.
<b>Costume</b>	The different "frames" or alternate appearances of a sprite. Sprites can change their look to any of its costumes.
<b>Comment</b>	Adjustable yellow coloured textboxes that can be attached to blocks, or left floating, used to add detail to a program.
<b>Sequencing</b>	The specific order in which instructions are performed in a program. If the sequence is incorrect, it may cause errors in a program.
<b>Variable</b>	A variable represents a location in memory. It is used to hold a value which you assign to it e.g. 'Lives' = 3
<b>Broadcasting</b>	Used to communicate between sprites or linked scripts to control when specific scripts are run in a program
<b>Iteration (Loop)</b>	The repetition of a sequence of instructions
<b>Conditional Statement</b>	Evaluates the state of a program to determine whether something is either true or false. If true, the conditional script will be used

## Key Concepts

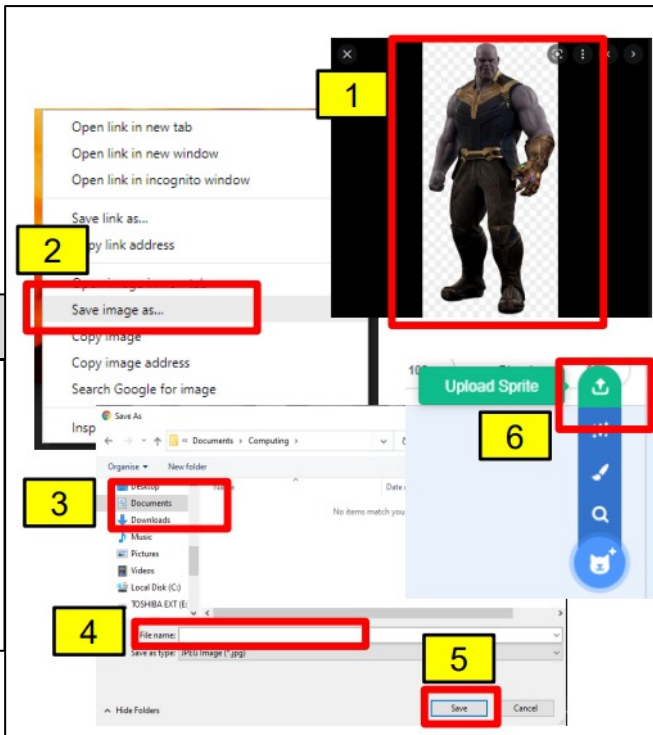
### The Scratch layout



### How to add custom Sprites

1. Find a high-resolution transparent image
2. Right click > Save image as...
3. This PC > Documents > Computing
4. Rename the file to something appropriate
5. Press Save

### How to code an interactive sprite





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

- Describe the Scratch layout
- Describe the appropriate use of a range of blocks and scripts in Scratch


Evaluate the use of blocks and scripts used to create a range of programs in Scratch

- Describe the definitions of some keywords in Scratch



## Retrieval Practice

### Questions Answers

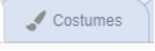
How do you add a new sprite in Scratch?

 Go to the bottom right hand side of the scratch screen and click on the button called "Choose New Sprite". The button looks like a cat.

What happens when you click on the 'Green Flag' and 'Red Button' on Scratch?

  Green Flag: Starts the running of scripts  
Red Button: Stops the scripts from running

How do you change the costume of a sprite used in the program?

 Go to the top right hand side of the scratch screen and click on the tab called "Costumes"

When using the 'point in direction' block, what will the numbers 0, 180, -90 and 90 do to the sprite?

This block changes the direction of the sprite:

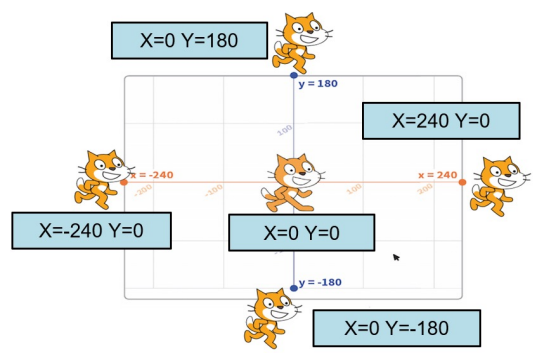
Number	Sprite Direction
0	Sprite faces upwards
180	Sprite faces downwards
-90	Sprite faces towards the left
90	Sprite faces towards the right



How can you correctly use the 'go to...' block to place sprites in set positions on the stage area.

Use the correct X and Y co-ordinates in the 'go to' block.

For example:



## Career Focus - Where could this take you?



I am a **3D modelling artist** and create the models for all 3D art assets within the game – characters, weapons, vehicles, furniture, trees, rocks and so on. Often I start with a brief or 2D drawing from a concept artist

## Challenge Activities

1. Create a two player game in Scratch that uses all of the blocks, scripts and techniques you have covered in this unit. Also, research the internet and include the use of new blocks and scripts that have not been covered in this unit.
2. Create a poster on MS PowerPoint that includes one or all of the following details: variables, broadcasting and conditional statements.
3. Create a short vlog about the types of careers you could get into within the gaming industry. Explain what each type of job would involve and which opportunities would be of interest to you.

## Topic Links Additional Resources

This topic links to:

- Computing Curriculum: Understand how instructions are stored and executed within a computer system and create, re-use, revise and re-purpose digital artefacts for a given audience
- Mathematics: use of logical inference, problem-solving skills and simple algebra

To further practise and develop your knowledge see:

- <https://scratch.mit.edu/>
- <https://www.youtube.com/c/ScratchTeam>



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.



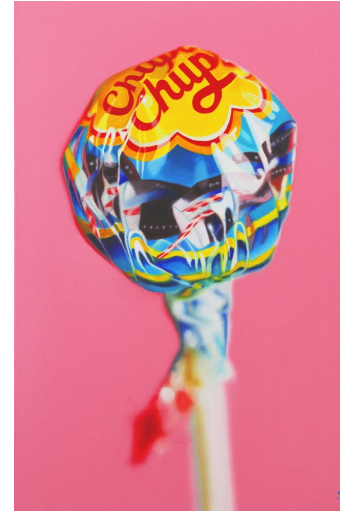
Keyword	Definition
Composition	The arrangement of elements within a work of art.
Realism	Representing a person, location or thing in a way that is accurate and true to life.
Focal Point	The main or principal point of focus.
Contemporary	The term contemporary art is loosely used to refer to art of the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

## Key Concepts



During this project you will:

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



**SCAN ME**

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



**SCAN ME**





## Retrieval Practice

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

## Career Focus - Where could this take you?



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

## Challenge Activities



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



## Topic Links



- English - Understanding terminology
- Science – accurate observation skills

## Additional Resources



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



- Learn the basics of health & safety in the kitchen
- Learn how to recognise and categorise fruit and vegetables
- Be able to select and prepare (including chop safely) vegetables

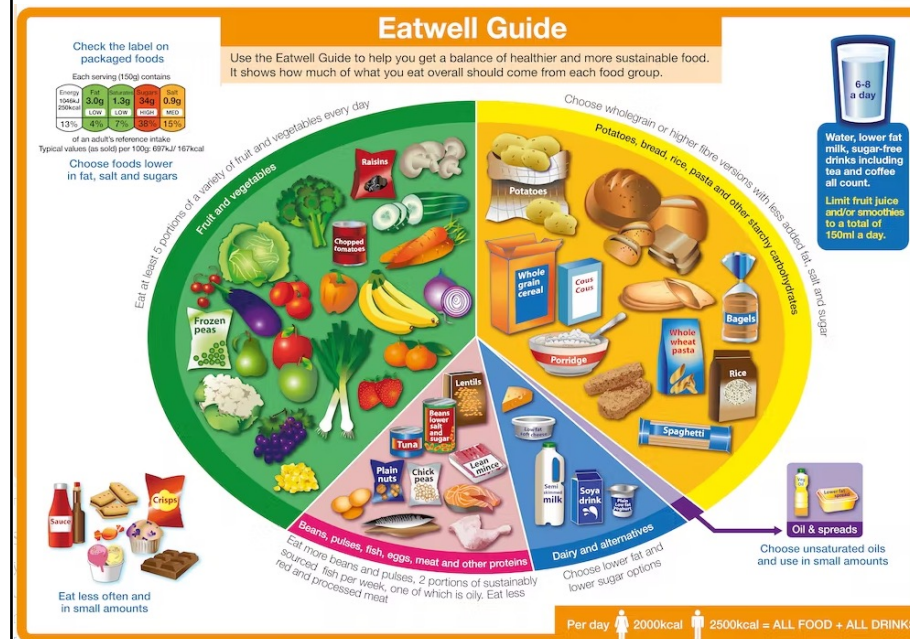
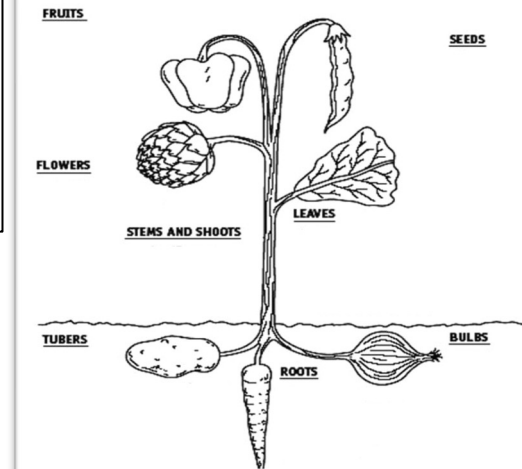
- Learn how to cook pasta, rice and noodles
- Learn the difference between healthy and unhealthy food and the importance of nutrients
- To be able to prepare, cook and present a healthy hot meal

Keyword	Definition
<b>Weighing scales</b>	A tool used to accurately measure the weight/mass of ingredients
<b>Knife</b>	A sharp tool used for cutting food. Different types of knives have different uses, e.g. bread knife, fish knife
<b>Chopping board</b>	Board used for cutting food on to protect work surfaces. Generally made from glass, plastic or wood
<b>Saucepan</b>	A larger pan used for boiling water or making sauces
<b>Frying pan</b>	A frying pan is a flat-bottomed pan used for frying or sautéing food
<b>Grater</b>	A metal tool used for grating food into much smaller pieces
<b>Baking tray</b>	A metal or Pyrex tray used in the oven to cook food on
<b>Cooling rack</b>	A wire rack used to cool food, often baked products
<b>Carbohydrate</b>	Carbohydrates provide energy for the body. The body breaks carbohydrates down into glucose, which is the primary energy source for the brain and muscles.
<b>Protein</b>	Protein is one of the three nutrients found in food that the body needs in large amounts. It is essential for the maintenance and building of body tissues and muscle.
<b>Fibre</b>	Fibre is a type of carbohydrate that the body cannot break down and so it passes through our gut into our large intestine (or colon). It is found naturally in plant foods like wholegrains, beans, nuts, fruit and vegetables and is sometimes added to foods or drinks. Fibre helps to keep our digestive system healthy and helps to prevent constipation.
<b>Fat</b>	The body uses fat as a fuel source. It is the major storage form of energy in the body. Fat also has many other important functions in the body, and a moderate amount is needed in the diet for good health. Too much fat or too much of the wrong type of fat can be unhealthy.
<b>Cross-contamination</b>	Cross-contamination is the physical movement or transfer of harmful bacteria from one person, object or place to another.
<b>Nutrient</b>	A substance that provides nourishment essential for the maintenance of life and for growth, e.g. calcium, iron etc
<b>Healthy</b>	In a good physical or mental condition; in good health.

## Key Concepts


### The 4Cs Concept

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




- Learn the basics of health & safety in the kitchen
- Learn how to recognise and categorise fruit and vegetables
- Be able to select and prepare (including chop safely) vegetables

- Learn the difference between healthy and unhealthy food and the importance of nutrients
- To be able to prepare, cook and present a healthy hot meal

Retrieval Practice 	
Questions	Answers
What are 8 tips for healthy eating?	<ul style="list-style-type: none"> <li>• Base your meals on higher fibre starchy carbohydrates.</li> <li>• Eat lots of fruit and veg.</li> <li>• Eat more fish, including a portion of oily fish.</li> <li>• Cut down on saturated fat and sugar.</li> <li>• Eat less salt: no more than 6g a day for adults.</li> <li>• Get active and be a healthy weight.</li> <li>• Do not get thirsty.</li> <li>• Do not skip breakfast</li> </ul>
Why is weighing and measuring important?	<p>Weighing and Measuring for good results in most recipes, accurate weighing and measuring is essential.</p> <p>When you are baking with flour, sugar and liquids, you must measure accurately or your cooking will be spoiled. If you weigh out too much sugar or too little raising agent, your cakes will not rise or you could spoil the taste and/or texture.</p> <p>Food can be weighed in Grams (g). 1000g = 1 Kilogram (kg). Liquid is measured in Millilitres (ml) or litres (l). 1000ml = 1 Litre(l)</p>
What are the most important health and safety and personal hygiene rules?	<ul style="list-style-type: none"> <li>• Be aware of sharp equipment such as knives, peelers and graters- store them carefully and use the bridge hold and claw grip when chopping.</li> <li>• Take care with hot equipment and food/ liquids- turn pan handles in, always use oven gloves and avoid splashes when stirring or draining foods.</li> <li>• Wipe up spills quickly so you do not slip over</li> <li>• Be aware of others in the kitchen</li> <li>• Report any accidents to the teacher</li> <li>• Tie hair back</li> <li>• Wash your hands</li> </ul>

### Career Focus - Where could this take you?



My job is a **food technologist** and I study foods and their nutritional content. I use laboratory skills and techniques to identify nutrients and calorie content of foods.

I need a genuine interest in science and how it is applied to food and cookery, high standards of cleanliness and the ability to adhere to strict hygiene rules.

### Challenge Activities

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

[Energy Bar](#)

[Home made burgers](#)


[Chapatti recipe](#)



[For Further 30 minute recipes](#)

Food skills are acquired, developed and secured over time

**Bridge hold**

**Claw grip**



Topic Links 	Additional Resources 
<p>This topic links to:</p> <ul style="list-style-type: none"> <li>• English - relating explicitly to known vocabulary and understanding it with the help of context</li> <li>• Mathematics - use standard units of mass, length, time, other measures</li> <li>• Science: Nutrition and digestion RSE - What constitutes a healthy diet</li> <li>• Physical health and fitness - The characteristics and mental and physical benefits of an active lifestyle.</li> </ul>	<p>To further practise and develop you knowledge see:</p> <p><a href="#">Eat well guide Quiz</a></p> <p><a href="#">Eat well guide</a></p> <p><a href="#">Eat well video resource</a></p>

- Learn how to use basic functions in Music software.
- Learn how to record into a Digital Audio Workstation using a midi keyboard.

Keyword	Definition
DAW (Digital Audio Workstation)	Software used for recording, editing and producing audio files.
Loops	Pre-recorded audio files (either audio or MIDI regions) that can shift in pitch or tempo and that are designed to play repeatedly.
Audio	Sound that has been recorded or transferred to an electrical signal.
Track	The horizontal rows in the Tracks area that you use to organise your music
Count-In	Several metronome beats that are sounded prior to the start of a recording (or playback), typically for one bar. Using a count-in can help you get ready to record in time with the project tempo
BPM	Abbreviation for <i>beats per minute</i> . Bpm is used to indicate the tempo of a piece of music.
dB (Decibel)	A way to measure the volume or loudness of a sound. On the decibel scale, 1 dB is the smallest change in volume that human ears can detect.
Metronome	A device that marks regular intervals of time, such as musical beats, by making a sound (usually a beep or click).
MIDI (Musical Instrument Digital Interface).	A device (such as a keyboard) that plugs into a computer.
Screen Control	A control you use to change a different aspect of the track's sound. Screen controls are labelled to help you understand which aspect of the sound each one affects.
Texture	How many instruments are playing at the same time. The fewer instruments playing, the thinner the texture, the more instruments are playing, the thicker the texture becomes.

## Key Concepts

### A MIDI Keyboard

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



### Tracks

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



### Screen Control

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




### The rear of the Mac

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

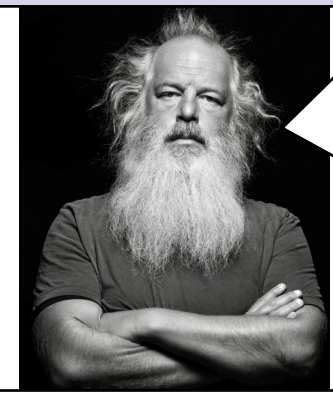


The USB Ports

- Learn how to use basic functions in Music software.
- Learn how to record into a Digital Audio Workstation using a midi keyboard.

Retrieval Practice 	
Questions	Answers
In which ways are DAWs more convenient than traditional, analogue methods of recording?	<ul style="list-style-type: none"> <li>• Portability - People can create music on the move (can be used on laptops, tablets and smart phones).</li> <li>• Cost – many DAWs are available for free. The ones that do cost money are less expensive than all the recording equipment needed to record a song.</li> <li>• Easy to use – For example, loops are a great way for beginners to get started in expressing themselves creatively, without needing to learn how to use complicated technology.</li> <li>• They have lots of features – More advanced users can apply themselves and make some very complicated, creative and interesting music.</li> <li>• You don't have to be able to play a musical instrument to put a song together in a piece of Software!</li> </ul>
Why is it important to develop these skills?	<ul style="list-style-type: none"> <li>• Computer skills are becoming more and more important when it comes to finding a career.</li> <li>• Having transferable skills will also make you much more likely to get a job in the future.</li> <li>• Creating music digitally is another form of creative outlet</li> <li>• Allows you to be musically creative without learning an instrument</li> </ul>
What is automation and why is it useful?	<ul style="list-style-type: none"> <li>• Automation allows you to control effects on an instrument track.</li> <li>• You can control each effect individually (reverb, echo, panning, volume etc.)</li> <li>• You can gradually increase and decrease the effect, remove it completely or make it suddenly increase.</li> </ul>



## Career Focus - Where could this take you?



My name is Rick Rubin and I'm a record producer. My job is to coach musicians and help them record their songs to help them make the best music they can. I have produced albums for Metallica, The Red Hot Chilli Peppers, Linkin Park, Shakira, Jay-Z, Eminem and hundreds more. I also help to set up and use the recording equipment, so it is very important that I know how to use music software like GarageBand.

## Challenge Activities

- **Add a Drummer to your Garageband Project:**  
• <https://support.apple.com/en-gb/HT207837>
- **Add automation to a Garageband Project:**  
• <https://producersociety.com/automation-tutorial-ios-garageband/>

Topic Links 	Additional Resources 
This topic links to: <ul style="list-style-type: none"> <li>• Science – Specifics of sound (such as decibels)</li> <li>• IT – Use of software and digital interfaces</li> <li>• Maths – Dividing bars into beats. Measuring songs and sounds using various units.</li> </ul>	To further practise and develop your knowledge see: <ul style="list-style-type: none"> <li>• <a href="https://support.apple.com/en-gb/guide/garageband/welcome/mac">https://support.apple.com/en-gb/guide/garageband/welcome/mac</a></li> <li>• <a href="https://www.thedomesticmusician.com/how-to-get-your-kids-involved-in-electronic-music-production/">https://www.thedomesticmusician.com/how-to-get-your-kids-involved-in-electronic-music-production/</a></li> </ul>



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

- Students can perform basic skills
- Students can identify strengths and weaknesses in their own performance
- Students can apply skills from practice into competitive games

Keyword (Tier 3 subject specific language)	Definition
Speed	The fastest movement possible over a distance in the shortest time taken.  Speed = distance/time  The faster you can hit a ball, throw a ball in strike and field games, the better your team performance shall be.
Throwing	The ability to hold a ball in your hand and use your arm to generate a force to move it forward. When the ball is released, it then travels forward to the direction you want it to go.
Reaction Time	The time it takes to react and move to an object. This could be a ball coming towards you in rounders or cricket.
Bowling	The ability to throw a ball accurately towards the batter with speed so that they are unable to make contact the ball. The ball must be on target with the batter.
Batting	The ability to hold a bat and to make contact to the ball when it comes towards you from the bowler. The aim is to hit the ball into space away from a fielder so you can then run and score points.
Catching	The ability to co-ordinate your hands and eyes to cup the ball as it comes towards you and hold it so that the ball does not fall to the floor. If you catch the ball from the batter before it lands on the floor, then you have caught them out.
Agility	The ability to change direction quickly using speed. You may have to change your body position when reacting to a ball when trying to hit it with the bat.

**Key Concepts** You should already know:- Some keywords that link to throwing and catching. You can recall basic throwing and catching skills over a short distance in a practice situation. You will be assessed on:- Understanding - Technique - Application - Leadership

## Strike And Field Key Concepts- Basic Skills

### Retrieval Practice:

Memory recall the following skills for your PE lessons.

#### Bowling - Teaching points

When children are practising bowling, make sure there is someone showing they are ready to receive the ball as a backstop would, to give children somewhere to aim. Children should hold up their hands, presenting a clear target and keep their eyes on the ball.

#### Underarm bowl



- Stand with one foot in front of the other.
- Grip the ball in your dominant hand.
- Keeping your arm straight, swing the arm holding the ball back and forth like a pendulum, transferring your weight from the back foot to the front foot as you swing.
- Aim for the backstop's hands - the batter should be able to hit the ball at waist height.
- Release the ball, flicking your wrist upward.

### Fielding: Overarm Throw



#### Technique Points:

1. Stand side-on and point non-throwing arm at partner.
2. Lift your throwing arm up and bend it at the elbow.
3. Rock backward then forward, releasing the ball quickly.
4. Keep your eye fixed on the target.
5. For accuracy, aim to throw the ball into the wicket keeper's hands if attempting to hit the stumps.

#### Fielding Rules:

1. A captain is appointed to each team.
2. The captain talks to his team mates and is responsible for field placements and order of batting.
3. There must always be a wicket keeper ready to catch the ball after the bowler has bowled.

### Batting

- Side on
- Head still
- "V" grip

### Fielding

- Get in line with the ball
- Eye on the ball
- Body behind the ball

**Key words:** wickets, stumps, bowler, batter, fielder, wicket keeper, umpire, pitch, run-out, caught, bowled, LBW.

### Bowling

- Grip the ball
- Run up
- Straight arm
- Release time
- Aim & accuracy
- speed



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

- Students can perform basic skills
- Students can identify strengths and weaknesses in their own performance
- Students can apply skills from practice into competitive games



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

## Rounders Batting Stance



- Sideways on
- Feet shoulder width apart
- Knees bent
- Batting arm back straight
- Bat up at 90 degrees to arm
- Keep head still
- Watch the ball at all times
- Transfer weight from back to front foot
- Follow through in direction you want the ball to go

## Cricket: Batting Basics



### Grip

- Dominant hand at the bottom
- V shape made by thumb and index finger



### Stance

- Stand sideways on to the bowler
- Feet shoulder width apart



### Swing

- Swing the bat back straight
- Eye on the ball

## Catching a Ball

Keep your eyes on the ball. Bend your elbows. Get your hands ready to catch the ball.	Reach your hands towards the ball.
Catch the ball with your hands only.	Bend your elbows slightly to absorb the force of the ball.

### 'Underarm throwing'

Point your non-throwing hand at your target

Step forward and swing your arm forward



**Career Focus - Where could this take you? Sports broadcaster**



My role as a sports broadcaster is to provide coverage and analysis of sporting events for television, radio, or online media. I play a critical role in bringing sports to a wide audience, providing viewers with play-by-play commentary, analysis, and interviews with athletes, coaches, and other sports experts.



**Challenge Activities**

**Design a skill card or a presentation:-**

Can you create a resource that shall help a student in your class develop the correct understanding of a batting, bowling or fielding skill in their PE lesson? This can be presented to your PE teacher and used in lessons.

**Create a wordsearch key terms activate task:-**

This can be used by all students in their PE lessons as memory recall revision task. Use the key words and any other information from the KO pages to develop your answers.

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

**Topic Links**



- This topic links to:
- RSHE – Understanding how physical activity can improve your social health
  - English – understanding and defining key terminology
  - Mathematics – problem solving, recording runs and scores and talking to others about scoring
  - Voice 21 – Discussing key terms for all the basic skills in strike and fielding.

**Additional Resources**



- To further information to develop your knowledge see:
- <https://www.youtube.com/watch?v=MH99kmx9iYI>
  - <https://www.youtube.com/watch?v=8eAx71Mo5Yo&t=12s>
  - <https://www.youtube.com/watch?v=KY8gsVeKn0w>



# Username and Passwords




**Newsome Academy**



**RESPECT | INTEGRITY | TEAMWORK | ASPIRATION**

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

**NON NEGOTIABLE EQUIPMENT**

BLACK PEN

PURPLE PEN

PENCIL



BONUS ITEMS  
HIGHLIGHTER | RUBBER | GLUE STICK | CALCULATOR

**RULER**

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