



WOOTTON PARK

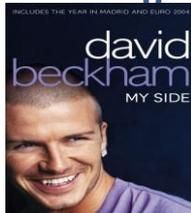
'Ipsam quod faciendum est diutius'

Knowledge Maps

Year 7	Term 1
Your Name	
Your Email Address	

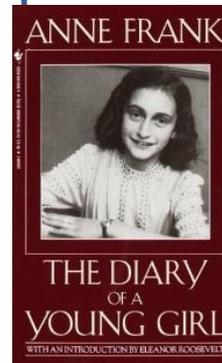
What are autobiographies?

Autobiographies can take many different forms; oral or written records of a person's life story often turn into books, audio recording and movies. Intimate writings produced during a person's lifetime, including letters, diaries, and journals can be used for inspiration in the memoir; these elements often play a large part in the writing of a formal biography that is sent to publication. Because of language and writing barriers, there are very few biographical works that were written before the 15th century.



Autobiography: Key Terms

Genre:	The type of Text
Audience:	Who the text is written for
Purpose:	Why the text has been written
Narrative Perspective:	The point of view the writing is from
Tone:	The mood/feeling expressed by the writer
Emotive Language:	Language with makes us feel
Context:	The background to the writing (Cultural/Religious/Social)
Inference:	Reading between the lines. Also know as 'implied' meaning
Empathy:	Feeling what others are feeling
Imagery:	Language which paints pictures



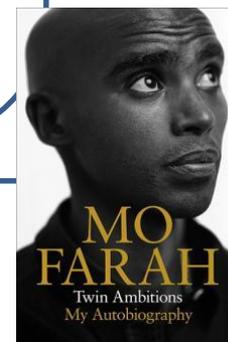
Features of Autobiography

- They are personal pieces of writing recording thoughts and feelings about life experiences
- The reader gains an understanding of the writer's personality
- The reader gains an insight into the writer's life
- People and places are described in detail
- Language is descriptive and imaginative
- They are written in the 1st person

Useful Websites

<https://www.thoughtco.com/how-to-write-your-autobiography-1857256>

http://www.bbc.co.uk/bitesize/standard/english/close_reading_texts/autobiographies_travel_writing/revision/1/



Can I write in paragraphs?

Literacy mat

Can I use different sentence types?

The TIPTOP rule

You move onto a new paragraph when you change time, place, topic or person.

1. I always start an essay with an **introduction** which addresses the question.
2. I finish an essay with a **conclusion** to summarise the main points of my argument and to address the question again.
3. I use **connectives** in each paragraph to link my ideas and to put them in a logical order.

I am proud of my work because...

- I have written clearly so that my reader can understand my writing easily.
- I have checked my **spelling** and corrected any errors.
- I have used full sentences with a subject and a verb.
- I have used correct **punctuation and grammar**.
- I have paragraphed my work using TIPTOP.
- My writing is suitable for the person I am writing for.

Simple sentences: contains a subject and a verb and can contain an object

- Sarah likes to read in the library.
- Tom enjoys reading at home.

Compound sentences: joins two simple sentences using the connectives: *for, and, nor, but, or, yet, so.*

- Sarah likes to read in the library but Tom prefers to read at home.

Complex sentences: A complex sentence contains a conjunction such as *because, since, after, although, or when*.

- Because Robert felt tired, he only studied for an hour.
- Although the rain had stopped, the pitch was still water-logged.
- Paul enjoys Music, however, he is more proficient in Art.

Can I spell familiar words accurately?

Common contractions

We must use an apostrophe to replace any letter(s) we have left out.

Homophones

I have checked that I have not mixed up my homophones.

- | | | |
|-----------------|-------------|---------------|
| • Furthermore | • But | ▪ Meanwhile |
| • Whereas | • Since | ▪ Nonetheless |
| • Nevertheless | • Yet | ▪ However |
| • Alternatively | • Therefore | ▪ Although |
| • Consequently | • Besides | ▪ Moreover |

Have I used the correct grammar?

I am aware that I must use language that is appropriate to my reader.

- ❖ No slang *that lesson was bangin'*
- ❖ No informal language *I'm gonna do my homework now*

❖ Other things to consider:

- ✓ I am clear about the purpose of this piece of writing
- ✓ I know who my audience is
- ✓ I will use a suitable layout and text type

11 o'clock	How's	They'd	Where'll
Aren't	I'd	They'll	Where's
Can't	I'll	They're	Who'd
Couldn't	I'm	Wasn't	Who'll
Didn't	Isn't	We'd	Who's
Doesn't	It'd	We'll	Why'd
Don't	It'll	We're	Why'll
Hadn't	It's	Weren't	Why's
Hasn't	Mightn't	What'd	Won't
Haven't	Mustn't	What'll	Wouldn't
He'd	Shan't	What's	You'd
He'll	She'd	When'd	You'll
He's	She'll	When'll	You're
How'd	She's	When's	
How'll	Shouldn't	Where'd	

Affect/effect	Meat/meet
Bare/bear	One/won
Brake/break	Passed/past
Buy/by	Peace/piece
For/four	Practice
Flour/flower	(n)/practise (v)
Grate/great	Read/red
Hair/hare	Sea/see
Hole/whole	Sight/site
Hour/our	Son/sun
Knight/night	To/too/two
Know/no	Wait/weight
	Weak/week
	Wear/where

Basics:

- ❑ Every sentence must start with a capital letter.
- ❑ Every sentence must finish with some form of punctuation: .?!)
- ❑ Proper nouns need capital letters. These are **unique** people, places or things *e.g. there are many cities so 'city' doesn't take a capital letter. However there is only one London, therefore it takes a capital letter.*
- ❑ When writing titles of works such as books, films or plays:
 - Capitalise the first word
 - Capitalise any main/important words
 - Don't capitalise minor words such as 'and', 'of' or 'the' *e.g. The Sound of Music, The Wizard of Oz, Harry Potter and the Goblet of Fire*
- ❑ When writing speech:
 - ✓ Go to a new line when a different person speaks *e.g. "Good morning" said the Headteacher.*
 - "It's the afternoon!" replied the student.*
 - ✓ Each person's speech is marked with speech marks *e.g. "Walk on the left" said Mr Mathews.*

Literacy mat

Can I use punctuation?

The Apostrophe

I always aim to use apostrophes correctly.

There are two main reasons why we use apostrophes: for **possession** and to **replace a letter or letters**

Note: Apostrophes are NEVER used to denote plurals

Full stop	.	indicates that a sentence has finished
Comma	,	indicates a slight pause in a sentence, separates clauses in a complex sentence and items in a list
Question mark	?	goes at the end of a question
Exclamation mark	!	goes at the end of a dramatic sentence to show surprise or shock
Apostrophe	'	shows that letter(s) have been left out or indicates possession
Speech marks	" "	indicate direct speech, the exact words spoken or being quoted
Colon	:	introduces a list, a statement or a quote in a sentence
Semicolon	;	separates two sentences that are related and of equal importance
Dash / hyphen	-	separates extra information from the main clause by holding words apart
Brackets	()	can be used like dashes, they separate off extra information from the main clause
Ellipsis	...	to show a passage of time, to hook the reader in and create suspense

Apostrophe for Possession

(To show that something belongs to another)

If a single thing/person owns anything, add an apostrophe + 's'.

- The dog's bone
- The boy's homework
- Jones's bakery
- Yesterday's lesson

However, if it is plural (more than one), an apostrophe comes after the 's'.

- The dogs' bones
- The boys' homework
- Joneses' bakeries (lots of Jones families)
- Many websites' content is educational

There/ their/ they're

Note: special care must be taken over the use of **there**, **their** and **they're** as they sound the same but are used quite differently:

- ❖ **There** shows position *Your seat is over there*
- ❖ **Their** shows that 'they' own something *Their blazers are navy blue*
- ❖ **They're** is short for **they are** as in *They're revising every day*

ITS

Note: **its**, which shows that something owns something (like our, his etc), does not take an apostrophe: *the dog ate its bone and we ate our dinner*

Your/ you're

Note: special care must be taken over the use of **your** and **you're** as they sound the same but are used quite differently:

- ❖ **Your** is possessive as in *this is your pen*
- ❖ **You're** is short for you are as in *you're coming over to my house*

Can I spell accurately?

- ❑ Sound out the word
- ❑ Think about how it looks
- ❑ Think about a similar word
- ❑ Is there a memory sentence for this word? (e.g. **big e**lephants **c**annot **a**lways **u**se **s**mall **e**xits)
- ❑ Find the word in a list -
 - Key words list
 - Frequently used words list
 - Your own word bank
- ❑ Look it up in a dictionary/spellchecker
- ❑ Ask a friend or teacher
- ❑ To learn it: look, cover, write, check
- ❑ Once you've solved it, add the correct spelling to your own word bank.

Unit 1 - Key skills: Key point

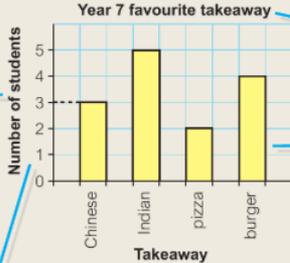
Key point

A **bar chart** uses bars of equal width to show data.

A **bar-line chart** uses lines instead of bars.

Worked example

The **bar chart** shows some students' favourite takeaway shops.



Look across to find the number of students who chose Chinese.

The title says what the chart is about.

The bars are the same width. They have equal width gaps between them.

The vertical axis shows the number of students. The numbers go up in steps of 1.

- a How many students chose each takeaway?
3 Chinese, 5 Indian, 2 pizza, 4 burger
- b How many more students chose a burger than a pizza?
 $4 - 2 = 2$ students
- c How many students are there altogether?
 $3 + 5 + 2 + 4 = 14$ students

Discussion What does the tallest bar show?

Add up the numbers for each takeaway.

Key point

The **mode** is the most common item in a set of data. It has the highest frequency.

Key point

The **range** shows how spread out a set of data is.

$$\text{range} = \text{largest value} - \text{smallest value}$$

Key point

The **median** is the middle value when the data is written in order.

Key Terms – Can you add the definitions (meanings)?

Mode: _____

Median: _____

Range: _____

Frequency: _____

Unit 1 - Test Your Understanding

STEM / Real The table shows the number of faults on cars that were tested for their MOT.

Number of faults	Number of cars
0	8
1	12
2	10
3	8
4	6

- a How many cars had 2 faults?
- b How many cars had more than 2 faults?
- c How many cars were tested altogether?
- d What was the most common number of faults?
- e How many cars passed the MOT?

Yuri counted the food items in students' lunch boxes.

6, 7, 5, 6, 5, 8, 6, 4, 5, 5, 7, 6, 5, 6, 4, 7, 6, 5, 6, 4

- a Copy the **frequency table**. Tally the numbers in the table. Fill in the **frequency** column.

Food items	Tally	Frequency
4		
5		
6		
7		
8		
Total		

The number of children in the families of some Year 7 students are 3, 1, 2, 1, 1, 2, 1, 2, 6, 1, 1, 2, 2, 1
Find the median.

Work out the mean for each set of values.
a 1, 2, 5, 6
b 4, 6, 8, 10

Websites and further reading

- Pearson Active Learn: <http://pearsonactivelearn.com>
- Maths Watch: <http://mathswatch.co.uk/>
- BBC Bitesize: <http://www.bbc.co.uk/education/subjects/zghs34j>
- Numeracy and Foundation level practice questions and answers: <https://corbettmaths.com/5-a-day/gcse1/>

Unit 2 - Key Skills:

Key point

To find the square of a number you multiply the number by itself.
For example, 3 squared = $3 \times 3 = 9$.
You write 3 squared as 3^2 .

Key point

A **multiple** is a number that is in a times table.
 $5 \times 2 = 10$
10 is a multiple of 5 and a multiple of 2

Key point

To **round** to the nearest 10, find the multiple of 10 that the number is closest to.
Look at the digit in the Units column.
If the digit is less than 5, round down.
If the digit is 5 or more, round up.

Key point

A number **sequence** is a set of numbers that follow a rule.

Key point

Doubling is the same as $\times 2$ (multiplying by 2).

Worked example

Use the column method to work out $392 - 165$.

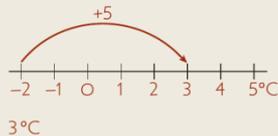
392	Write the larger number on top.
-165	
392	Start with the units column. You can't subtract 5 from 2 because this gives a negative answer.
-165	
392	Take a ten from the 9 tens to make 8 tens and 12 units. $12 - 5 = 7$
-165	
227	
392	Now look at the tens column and the hundreds column.
-165	
227	

Check: $400 - 170 = 230$, which is close to 227

Round each number to the nearest ten and subtract.

Worked example

The temperature is -2°C . It gets 5°C warmer.
What is the new temperature?



Use a number line. Start at -2°C . Count up 5°C .

Unit 2 - Test Your Understanding

Work out these additions using the column method.

- a $53 + 28$
- b $78 + 84$
- c $123 + 258$
- d $571 + 346$
- e $361 + 27$
- f $162 + 89$

Work out

- a 3×4
- b 5×4
- c 3×8
- d 5×7

Round each number to the nearest 10.

- | | | | |
|-------|-------|-------|-------|
| a 37 | b 84 | c 98 | d 65 |
| e 124 | f 263 | g 297 | h 135 |

Work out

- | | |
|---------------|---------------|
| a $15 \div 5$ | b $18 \div 6$ |
| c $24 \div 3$ | d $28 \div 4$ |
| e $18 \div 3$ | f $28 \div 7$ |

Find the new temperatures.

- a The temperature is 3°C . It increases by 4°C .
- b The temperature is -3°C . It goes up by 4°C .
- c The temperature is -5°C . It rises by 9°C .

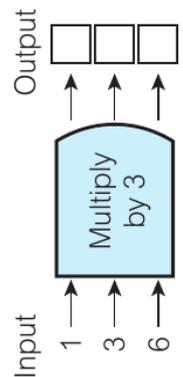
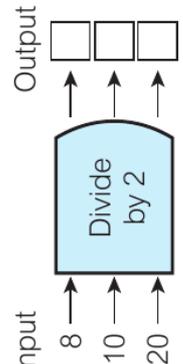
Divide each number by 1000.

- | | |
|----------|----------|
| a 5000 | b 45 000 |
| c 91 000 | d 6000 |

Unit 3:

Match each yellow card with a blue card that gives the same answer.

- | | |
|--------------|--------------|
| $8 \div 2$ | 3×4 |
| 2×5 | $8 - 4$ |
| $10 - 5$ | 2×3 |
| $4 + 4 + 4$ | $5 + 5$ |
| $3 + 3$ | $10 \div 2$ |



Overview

In this term, learners will be studying up to three units which will include number content, data handling content and algebra. The Units are as follows:

Analysing and displaying data, number skills and expressions, functions and formulae

Key Terms: Unit 1:

Data
Range
Mode/modal
Median
Frequency table
Mean

Unit 2:

BIDMAS
Partitioning
Estimation
Approximation
Rounding

Unit 3:

Function
Simplifying
Expand
Distributive Law
Substituting

Key skills

Unit 1 Analysing and displaying data

- 1.1 Mode, median and range
- 1.2 Displaying data
- 1.3 Grouping data
- 1.4 Averages and comparing data
- 1.5 Line graphs and more bar charts
- 1.6 Using spreadsheets

Unit 2 Number skills

- 2.1 Mental maths
- 2.2 Addition and subtraction
- 2.3 Multiplication
- 2.4 Division
- 2.5 FINANCE: Time and money
- 2.6 Negative numbers
- 2.7 Factors, multiples and primes
- 2.8 Square and triangle numbers

Unit 3 Expressions, functions

- 3.1 Functions
- 3.2 Simplifying expressions 1
- 3.3 Simplifying expressions 2
- 3.4 Writing expressions
- 3.5 STEM: Substituting into formulae
- 3.6 Writing formulae

Unit 1:

Worked example

Find the median of 4, 2, 6, 7, 2, 1, 3, 6, 6, 9



There are two middle values. The median is halfway between 4 and 6.

Key point

The **median** is the middle value when the data is written in order.

Key point

The **range** is the difference between the smallest and largest values. The larger the range, the more spread out the values.

Worked example

Daniel's last five long jumps were 3.7 m, 3.4 m, 4.1 m, 3.8 m, 4.1 m
Paul's last five long jumps were 3.9 m, 4.3 m, 3.2 m, 4.2 m, 3.1 m
Compare their performances.

Daniel $\text{range} = 4.1 - 3.4 = 0.7 \text{ m}$
 $\text{total} = 3.7 + 3.4 + 4.1 + 3.8 + 4.1 = 19.1 \text{ m}$
 $\text{mean} = 19.1 \div 5 = 3.82 \text{ m}$

Paul $\text{range} = 4.3 - 3.1 = 1.2 \text{ m}$
 $\text{total} = 3.9 + 4.3 + 3.2 + 4.2 + 3.1 = 18.7 \text{ m}$
 $\text{mean} = 18.7 \div 5 = 3.74 \text{ m}$

Paul is less consistent than Daniel because his jumps have a greater range.
 Daniel performed better on average because his jumps have a greater mean.

Key point

A **frequency table** shows how many of each value there are in a set of data.

Key point

The **mode** is the most common value. It is also called the **modal** value.

Compare the ranges.

Compare the means.

Unit 2:

Worked example

Work out

a 27×6

$$\begin{aligned} 27 \times 6 &= 20 \times 6 + 7 \times 6 \\ &= 120 + 42 = 162 \end{aligned}$$

Split 27 into 20 + 7.

Split 20 into 10 x 2.
It is easier to do $10 \times 6 = 60$ first and then 60×2 .

b 4×99

$$\begin{aligned} 4 \times 99 &= 4 \times 100 - 4 \times 1 \\ &= 400 - 4 = 396 \end{aligned}$$

For numbers ending in 9, it is easier to work with the next whole number: $99 = 100 - 1$.

Worked example

Work out 34×29

Estimate: 34×29 is roughly $30 \times 30 = 900$

$$\begin{array}{r} 34 \\ \times 29 \\ \hline 306 \\ + 680 \\ \hline 986 \end{array}$$

First work out 34×9 .

Now work out 34×20 .

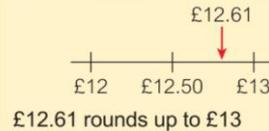
Add the two partial answers to give the final answer.

Check: 986 is close to 900

Check the answer against the estimate.

Key point

To round a decimal to the nearest whole number, look at the digit in the first decimal place.
If the digit is less than 5, round down.
If the digit is 5 or more, round up.



Key point

You must use the **priority of operations** to do calculations. Use **BIDMAS**:

- B**rackets
- **I**ndices (powers)
- **D**ivision and **M**ultiplication
- **A**ddition and **S**ubtraction

Key point

To **round** to the nearest 10, look at the digit in the units column.
To round to the nearest 100, look at the digit in the tens column.
To round to the nearest 1000, look at the digit in the hundreds column.
If the digit is less than 5, round down.
If the digit is 5 or more, round up.

Websites and further reading

- Pearson Active Learn: <http://pearsonactivelearn.com>
- Maths Watch: <http://mathswatch.co.uk/>
- BBC Bitesize: <http://www.bbc.co.uk/education/subjects/zqhs34j>
- Numeracy and Foundation level practice questions and answers: <https://corbettmaths.com/5-a-day/gcse/>
- Maths quiz: <http://www.educationquizzes.com/ks3/maths/>
- KS3 online tests: <http://www.romsey.hants.sch.uk/maths/ks3onlinetests.htm>

Unit 3:

Worked example

Simplify

a $4 \times y$

$4y$

$4 \times y$ and $y \times 4$ can both be simplified to $4y$. Always write the number before the letter when multiplying.

b $4y \times 3$

$12y$

$4y \times 3$ simplifies to $12y$ because $3 \times 4y = 4y + 4y + 4y = 12y$

c $y \times x$

xy

$y \times x$ simplifies to xy because $y \times x = x \times y = xy$. Always write the letters in alphabetical order.

d $20p \div 10$

$2p$

If a calculation has just multiplication and division, it doesn't matter which order you work it out. $20 \times p \div 10 = 20 \div 10 \times p = 2 \times p$

Worked example

Alice is x years old. Ben is 5 years older and Carl is 3 years younger than Alice.

Write expressions for Ben's and Carl's ages.



Key point

A **formula** shows the relationship between different variables, written as words or letters.
You can use a formula to work out an **unknown** value by **substituting** the values that you do know into the formula.

Overview

In this term, learners will be studying up to three units which will include analysing and displaying data, number skills and equations, functions and formulae.

Key point

The **frequency** of a value is the number of times it occurs.
A **frequency diagram** is a bar chart that shows the frequencies.

Key Terms:

Unit 1: Frequency
Data Average
Discrete Mean
Continuous Median
Two-Way Table Mode
Line of Best Fit Range

Unit 2: LCM
BIDMAS Prime Factor
Indices Roots
Index Notation
Prime Number
HCF

Key point

The **average** gives a typical value for a set of data. The mode, median and mean are different ways of describing the average.

Unit 3:

Expression
Like Terms
Variable
Formula
Expand
Indices
Factorise

Key skills:

Unit 1 Analysing and displaying data

- 1.1 Two-way tables and bar charts
- 1.2 Averages and range
- 1.3 Grouped data
- 1.4 More graphs
- 1.5 Pie charts
- 1.6 STEM: Scatter graphs and correlation

Unit 2 Number skills

- 2.1 Factors, primes and multiples
- 2.2 Using negative numbers
- 2.3 Multiplying and dividing
- 2.4 Squares and square roots
- 2.5 More powers and roots
- 2.6 Calculations

Unit 3 Equations, functions and formulae

- 3.1 Simplifying algebraic expressions
- 3.2 Writing algebraic expressions
- 3.3 STEM: Using formulae
- 3.4 Writing formulae
- 3.5 Brackets and powers
- 3.6 Factorising expressions

Unit 1:

Key point

A **two-way table** splits data into groups in rows across the table and in columns down the table. You can calculate the totals across and down.

Key point

A **line of best fit** shows the relationship between two sets of data. There should be the same number of crosses on each side of the line. There may also be crosses on the line.

Key point

Discrete data can only take particular values. For example, dress sizes can only be even numbers. For discrete data you can use groups like 1–10, 11–20 ...

Continuous data is measured and can take any value. For example, length, mass and capacity. For continuous data there are no gaps between the groups.

Worked example

The table shows the number of players injured in rugby matches. Work out the mean.

Injuries	Frequency	Total number of injuries
0	8	$8 \times 0 = 0$
1	4	$4 \times 1 = 4$
2	6	$6 \times 2 = 12$
3	2	$2 \times 3 = 6$
Total	20	22

Mean = $22 \div 20 = 1.1$

Mean = total number of injuries ÷ number of players.

Add a column to work out the total number of injuries.

6 players had 2 injuries. $6 \times 2 = 12$ injuries altogether.

Work out the total frequency number of rugby players and the total number of injuries.

Worked example

Draw a pie chart to show this data about the tracks on a classical CD.

Track	Frequency
Opera	6
Orchestra	4
Piano	2

Total number of tracks = $6 + 4 + 2 = 12$

$\div 12$ (12 tracks is 360°)
 $\div 12$ (1 track is 30°)

Opera $\times 6$ (1 track is 30°)
 $\times 6$ (6 tracks are 180°)

Orchestra $4 \times 30^\circ = 120^\circ$

Piano $2 \times 30^\circ = 60^\circ$

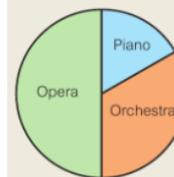
Check: $180^\circ + 120^\circ + 60^\circ = 360^\circ$

The total number of tracks is the total frequency.

Work out the angle for one track.

Work out the angle for each type of music.

Check that the angles add up to 360° .



Tracks on CD

Draw the pie chart. Label each sector or make a key (you do not have to label the angles). Give your pie chart a title.

Unit 2:**Key point**

A **prime number** has exactly two factors, 1 and itself.

Key point

The **highest common factor (HCF)** of two numbers is the largest number that is a factor of both numbers.

Key point

The **lowest common multiple (LCM)** of two numbers is the smallest number that is a multiple of both numbers.

Key point

You can use **index notation** to write a number to a **power** or **index**.

The power tells you how many times the number is multiplied by itself.

$$2^3 = 2 \times 2 \times 2$$

2^3 is '2 to the power 3'.

3 is the power.

Key point

The priority of operations is

- Brackets
- Indices or Powers
- Multiplication and Division
- Addition and Subtraction

Worked example

Work out an estimate of $\sqrt{55}$.

$$\sqrt{49} = 7 \text{ and } \sqrt{64} = 8$$

$\sqrt{55}$ lies between 7 and 8

Estimate is 7.4

55 is between 49 and 64

55 is closer to 49 than 64, so estimate just less than 7.5

Key point

The inverse of cube is **cube root**.

$$2^3 = 8, \text{ so the cube root of 8 is } \sqrt[3]{8} = 2.$$

Websites and further reading

- Pearson Active Learn: <http://pearsonactivelearn.com>
- Maths Watch: <http://mathswatch.co.uk/>
- BBC Bitesize: <http://www.bbc.co.uk/education/subjects/zqhs34j>
- Numeracy and Foundation level practice questions and answers: <https://corbettmaths.com/5-a-day/gcse1/>
- Maths quiz: <http://www.educationquizzes.com/ks3/maths/>
- KS3 online tests: <http://www.romsey.hants.sch.uk/maths/ks3onlinetests.htm>

Unit 3:**Worked example**

Expand

a $2(x + 3)$

$$\begin{aligned} 2(x + 3) &= 2 \times x + 2 \times 3 \\ &= 2x + 6 \end{aligned}$$

Worked example

Factorise $3x + 9$.

$$\begin{aligned} 3x + 9 \\ = 3(x + 3) \end{aligned}$$

3 is a common factor of both $3x$ and 9.

Write 3 in front of the bracket.

Divide both terms by 3 to find the values in the bracket.

Key point

A **formula** is a general rule for a relationship between quantities.

You use a formula to work out an unknown quantity by substituting.

Worked example

The **formula** used to calculate speed is: $\text{speed} = \frac{\text{distance}}{\text{time}}$

Work out the speed of a cyclist who travels 1000 metres in 20 seconds.

$$\begin{aligned} \text{Speed} &= \frac{1000}{20} \\ &= 50 \text{ m/s} \end{aligned}$$

Substitute the values into the formula.
Write the units.
m/s means metres per second.

Worked example

Simplify

a $3b \times 2b$

$$\begin{aligned} 3b \times 2b &= 3 \times b \times 2 \times b \\ &= 3 \times 2 \times b \times b \\ &= 6b^2 \end{aligned}$$

The order of multiplication does not matter.

b $\frac{8b}{4}$

$$\frac{8b}{4} = 2b$$

$\frac{8b}{4}$ means $8b \div 4$. Work out $8 \div 4$

Overview

In this term, you will learn about Enquiry Processes, how a scientist approaches and analyses scientific questions. You will also begin the Physics topics beginning with forces where you will learn about speed and gravity, you will then learn about electromagnets and finally energy and energy costs.

To revise log into

<https://www.kerboodle.com/users/login>

and look through the Activate 1 book.

BBC Bitesize:

<http://www.bbc.co.uk/education/subjects/zn4d2p>

Enquiry Processes

- 1 Asking Scientific Questions
- 2 Planning investigations
- 3 Recording Data
- 4 Analysing Patterns
- 5 Evaluating Data

1.1 and 1.2 Speed and Gravity

2.1 Electromagnets

3.1 and 3.2 Energy and energy costs

Planning Investigations



Any plan should include:

- A hypothesis and the data required to answer it
- The independent and dependent variables
- A list of control variables and how to control them
- A hypothesis: what they think will happen and why
- Equipment list
- A risk assessment
- A method showing how equipment is used to collect accurate and precise data

Collecting, recording and presenting data

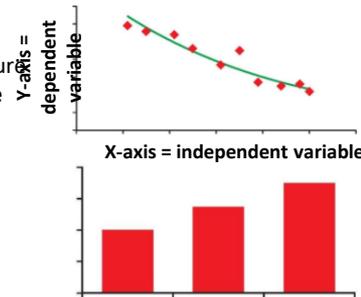
Continuous data – has any value, e.g. length or temperature

Discontinuous data – only whole number values (**discrete** data) or values that are words (**categoric** data)

A **line graph** is drawn when the dependent and independent variables are both numbers.

A **scatter graph** is drawn to find a **correlation**.

A **bar chart** is drawn when the independent variable is categoric.



Evaluating data and methods

There are two types of **error** in an experiment, they can be **random** or **systematic**.

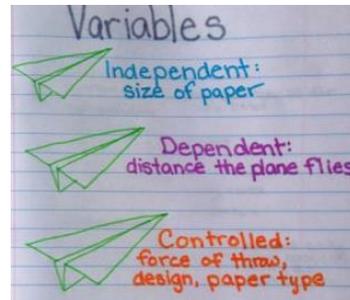
Random errors – are hard to control or predict, i.e. a sudden change in temperature in the classroom

Systematic errors – more controllable, i.e. using the right size measuring cylinder to measure 9ml of water

Enquiry Processes: Working Scientifically

To be a great scientist we need to be able to explore the steps required to carry out experimental processes and therefore determine scientific theory.

Asking questions is vital in this process; making **observations** about the world around us and forming **scientific enquiry questions**.

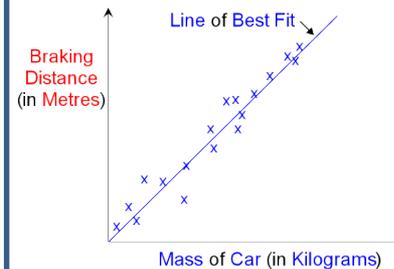


Variables -

DEPENDENT VARIABLE - the thing in the experiment that is being measured

INDEPENDENT VARIABLE - the thing in the experiment that is changing

CONTROL VARIABLE - the things in the practical that stays the same



1.1 Speed

1.1.1 Introduction to forces

1.1.2 Balanced and unbalanced

1.1.3 Speed

1.1.4 Distance-time graphs

1.2 Gravity

1.2.1 Gravity

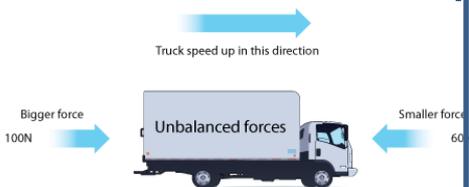
Summary and Question Session

1.1.1 Introduction to forces

A force is a **push** or a **pull**.



When drawing force diagrams we use '**Force arrows**.' These arrows show the size and direction of the force:



There are 2 types of force:

- **Non-contact forces** like gravity
- **Contact forces** like friction or air resistance

Forces are measured with a **newton meter in newtons (N)**.

1.1.2 Balanced and unbalanced

When two opposite forces are acting on an object there will be an overall **resultant force**.

When the forces acting on an object are the same size but act in opposite directions we say:

- The resultant force is **zero**
- The forces are **balanced**
- The object is in **equilibrium**



Resultant force = 0

Resultant force = 2N →

If a force is unbalanced then the object is moving in the direction of the stronger force.

1.1.3 Speed

Speed is a measure of how far something travels in a particular time.

In science we measure speed in **metres per second (m/s)**.

We calculate it using:

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$



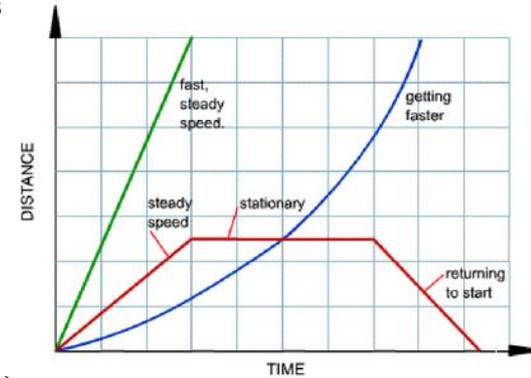
1.1.4 Distance-time graphs

These graphs show how something moves.

Acceleration tells you how quickly your speed is changing.

Working out speed from a distance time graph:

$$\text{speed} = \frac{\text{total distance (m)}}{\text{total time (s)}}$$



1.2 Gravity

1.2.1 Gravity

When a diver jumps off a diving board he moves towards the Earth because there is a force acting on him. This is **gravitational force** or gravity.

The force on the diver would depend on:

- **The mass of the object**
- **How far apart they are**



Don't forget there is a difference between **weight** and **mass**. **Weight** is a force so it is measured in Newtons (N). **Mass** is the amount of 'stuff' something is made up of.

$$\text{weight (N)} = \text{mass (kg)} \times \text{gravitational field strength, } g \text{ (N/Kg)}$$

2.1 Electromagnets, potential difference

- 2.1.1 Potential Difference
- 2.1.2 Resistance
- 2.1.3 Series and Parallel Circuits

Electromagnets: 2.1.1 Potential Difference

Potential difference (p.d.) is a push in a **cell** or **battery** that makes a charge move. It can tell us about:

- The size of force on the charges
- The energy transferred by the cell to the charges
- The energy transferred by the charges to the components in the circuit

To measure p.d. you use a **voltmeter**, and it is measured in **volts**.

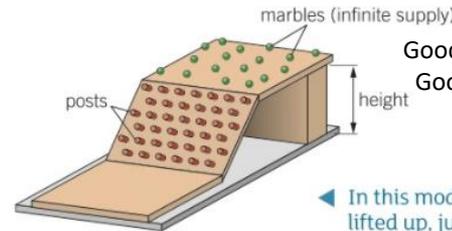
Electromagnets: 2.1.2 Resistance

Resistance tell you how easy or difficult it is for charge to pass through a component, it is measured in **ohms** (Ω).

We can calculate it using;

$$\text{Current (A)} = \frac{\text{potential difference (V)}}{\text{resistance } (\Omega)}$$

Good **electrical conductors** have a low resistance.
Good **electrical insulators** have a high resistance.

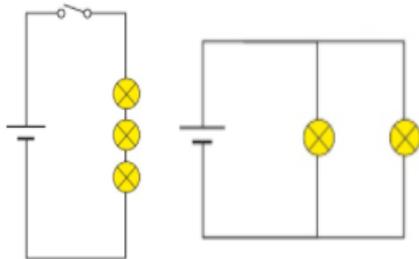


◀ In this model the marbles are lifted up, just like a battery provides a potential difference.

Electromagnets: 2.1.3 Series and parallel circuits

Christmas lights were connected in **series**, they are in one loop with the switch and battery.

Parallel circuits are when there is more than one loop.



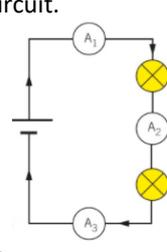
P.d. in a series circuit will be split across each component in the circuit.

P.d. in a parallel circuit will be the same across each component in the circuit.

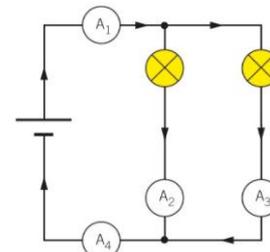
Electromagnets: 2.2.1 Current

Current is the amount of charge flowing per second. **Charge** means charged particles, in the case of electricity they are negative charges called **electrons**. Current is measured in amperes (A) or amps, with an **ammeter**.

In a series circuit the current is the same everywhere in the circuit.

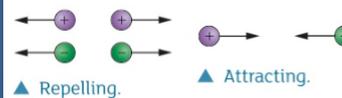


In a parallel circuit the current would be split between the loops.



Electromagnets: 2.2.2 Charging Up

There are two types of **electric charge**, positive (+) and negative (-) charge. Charged particles can **attract** or **repel**, this is called an **electrostatic force**.



Atoms are made of three types of even smaller particles:

- Protons = positive charge
- Electrons = negative charge
- Neutrons = no charge

When you rub a balloon on your jumper, some electrons are transferred from the jumper to the balloon. Thee balloon is **charged up**. It now has more electrons than protons, so it is **negatively charged**. Your jumper is **positively charged**.



3.1 Energy Costs

3.1.1 Food and fuels

3.1.2 Energy resources

3.1.3 Energy and Power

3.2 Energy Transfer

3.2.1 Energy adds up

3.2.2 Energy dissipation

Energy Costs: 3.1.1 Food and fuels

Different foods have different amounts of **energy**. Energy is measured in **joules (J)**. One joule is a very small amount of energy so we often use **kilojoules (KJ)**. 1 KJ = 1000J. The more active you are, the more energy you need.

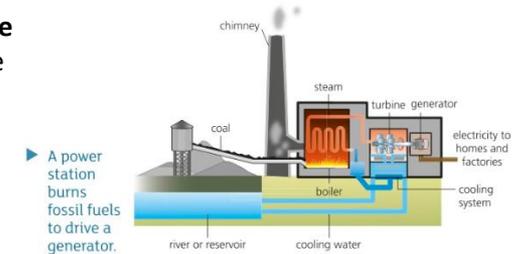
Food	Energy (kJ) per 100 g
apple	200
banana	340
peas	250
chips	1000
cooked beef	1000
chocolate	1500

Energy Costs: 3.1.2 Energy resources

Coal, gas and oil are **energy resources**, these three are known as **fossil fuels**.

These fuels are also known as **non-renewable** fuels and release carbon dioxide into the atmosphere.

We need to find **renewable** resources to make sure we can continue generating electricity without the resources running out or without damaging the environment.



Energy Costs: 3.1.3 Energy and power

Electrical appliances have a power rating in **watts (W)**. It tells us how much energy is transferred per second. To calculate power we can use this formula:

$$\text{Power (W)} = \frac{\text{Energy (J)}}{\text{Time (s)}}$$



Understanding this can also help us to calculate our electricity bills.

$$\text{Cost (p)} = \text{Power (kW)} \times \text{Time (hours)} \times \text{Price (per kWh)}$$

Energy Transfer: 3.2.1 Energy adds up

Energy **cannot** be created or destroyed only transferred. This is the **law of conservation of energy**.

- **M**ost - Magnetic
- **K**ids - Kinetic
- **H**ate - Heat
- **L**ice - Light
- **G** - Gravitational
- **C** - Chemical
- **S** - Sound
- **E** - Elastic
- **E**nergy - Electrical
- **N**ames - Nuclear

Energy Transfer: 3.2.2 Energy dissipation

When you drive a car, you use various forms of different energy. Electrical to power the radio, chemical to fuel the car, sound to hear the radio and light to see where we are going. Not all of the fuel is used usefully, some is 'wasted.' This means the energy goes into the atmosphere, we say it has **dissipated**.

We can calculate how efficient an appliance is through a calculation. The higher the efficiency the better an object is at using energy and not 'wasting' it.

$$\text{Efficiency (\%)} = \frac{\text{useful energy output} \times 100}{\text{energy input}}$$

Subject: Geography	Term: 1	Topic: What is Geography?
--------------------	---------	---------------------------

Key question 1: What is Geography?

Human Geography: The study of the interaction between **human** beings and their **built environment** such as population, settlement and globalization.

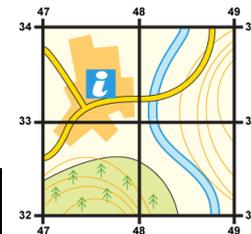


Physical Geography:

The branch of geography dealing with **natural features** such as oceans, rivers, landscape, natural disasters and ecosystems.

Key question 2: What are the key Geographical skills?

- Locations
- Knowledge and understanding about the world
- Questioning and critical thinking
- Researching information
- Presenting data
- Comparing data



Key question 3: What are the key map skills?

Compass directions: North, South, East and West. Never Eat Soggy Worms

Plans : A plan is a small scale map, we often have plans for rooms or shopping centres. It locates places using a key.

Maps: there are a variety of different maps based on the different scales we have. It may be a map of a country or a map of the world.

Scale: This is how we show something in real life on our map. We scale down the size of items. For example we might have a scale of 1cm on the map equals 1 KM in real life.

Key: A way to show all of the map symbols on the map. There is a description of what each symbols means.

Websites and further reading:

- <http://www.bbc.co.uk/education/subjects/zrw76sg>
- <http://www.bbc.co.uk/education/topics/zm38q6f>
- <https://www.ordnancesurvey.co.uk/mapzone/>
- http://www.bbc.co.uk/bitesize/ks3/geography/geographical_enquiry/geographical_skills/revision/5/



Key vocabulary to define and learn:

Cartography	Direction	Equator	Country	Continent
	Global	Local	National	Key
	grid	Atlas	Scale	Map
	location	aerial	latitude	Route
				longitude

Key concept 1: What is Philosophy?

What is Philosophy?

Philosophy is the study of people's thoughts, beliefs and ideas. For example different religions.



Key philosophical questions:

- Is their life after death?
- Is god real?
- Can people resurrect?
- Do we reincarnate?



Key concept 2: What is Ethics?

What is Ethics?

Ethics is concerned with distinguishing between good and evil in the world, between right and wrong human action. It focuses on morals

Key ethical questions:

- Is it every ok to start a war?
- Is it ok to steal food if your family is starving?
- Should murdered be killed as punishment for murdering some one?



Key concept 3: Balancing ideas, opinions, beliefs and facts

What is a fact?

Something that is known or proven true.

Can you give your opinions?

What is an opinion?

A view or judgement formed about something, not necessarily based on fact or knowledge

Can you see things from other peoples' perspective?

What is a belief?

an acceptance that something exists or is true, especially one without proof

Can you back up your ideas with evidence and examples?



Websites and further reading:

<http://www.bbc.co.uk/education/subjects/zh3rkqt>

<http://www.bbc.co.uk/ethics/introduction/>

<http://www.bbc.co.uk/schools/gcsebitesize/rs/god/knowledge/rev1.shtml>



Key vocabulary to define and learn:

Ethics	Philosophy	beliefs	facts	opinions	balance
	bias	morals	equality	Equal Opportunities	
Campaigns	debates	Fair		Future	
	Critical thinking				

Key concept 1: What was the Roman Empire?

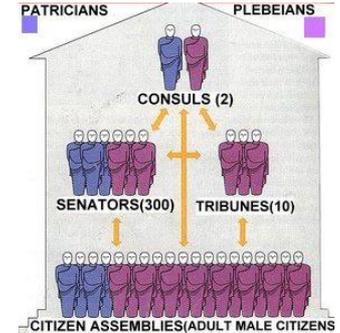
Two thousand years ago, the world was ruled by Rome. From England to Africa and from Syria to Spain, one in every four people on earth lived and died under Roman law. The Roman Empire began with the crowning of Gaius Octavian Thurinus in 31 B.C. and fell to the German Goths in A.D. 476, for a total of **507 years**.



Key concept 2: Why was the Roman Empire so powerful and successful?

During its height the **Roman Empire** was one of the biggest ever seen. They created it with

- A massive army using people from each country.
- **Strong government** with input from the people.
- **Integration** into the different countries – giving them new technologies and **modern inventions** (like central heating).
- Seized all the assets (money and buildings) so they remained very rich.



Key concept 3: Key features of the Roman Empire

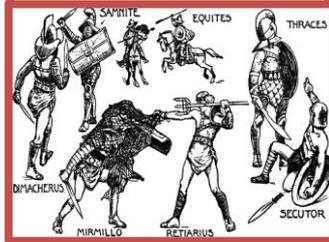
Celtic Warrior V S Roman Centurion



Boudicca rose a **Celtic rebellion** against the Romans in 60AD. She killed herself instead of being captured.



Different types of Roman Gladiator



Websites and further reading:

<http://www.primaryhomeworkhelp.co.uk/Romans.html>

<http://www.bbc.co.uk/education/topics/zwrpfg8>

<http://www.bbc.co.uk/education/topics/zhxmn39>

http://www.bbc.co.uk/schools/primaryhistory/romans/the_roman_army/teachers_resources.shtml



Key vocabulary to define and learn:

- | | | | | |
|--------|----------------|-------------|-------------------|-----------------|
| Empire | Government | Integration | Modern inventions | Roman Centurion |
| Christ | Boudicca | Gladiator | Anno Domini | Before |
| | Celtic Warrior | | | |
| | Slaves | Rebellion | | |

Key Content 1 – ¿Cómo te llamas? (*What is your name?*)

Introduce yourself and ask key personal questions

Answer these questions

Take part in spoken dialogue

Looking at the rules for Spanish pronunciation.

Key Content 2 – ¿Qué tipo de persona eres? (*What sort of person are you?*)

Describing your personality

Knowing the 'parts of speech' – and linking this knowledge to knowledge of English & other languages

Knowing about gender and being able to agree adjectives – masculine & feminine



Key Content 3 – ¿Tienes hermanos? (*Do you have brothers/sisters?*)

Understanding how verbs work (especially the verb TENER – 'to have').

Talking about your brothers and sisters 

Understanding gender (masculine, feminine) and number (singular/plural) with nouns

Key Content 4 – ¿Cuándo es tu cumpleaños? (*When is your birthday?*)

Feliz cumpleaños

Revisiting pronunciation and accents

Knowing and using numbers 1-31

Knowing the alphabet, days and months

Key Content 4 – ¿Tienes mascotas? (*Do you have pets?*)

Knowing common animals

Describing your pets and making adjectives agree with nouns

Activities

- Taking part in a dialogue
- Matching and adapting questions and answers
- Creating and illustrating a personal profile about you and your life

Websites and further reading:

Search on www.quizlet.com for 'Viva 1, M1'
Use the first module in your textbook and on www.pearsonactivelearn.com
Use www.linguascope.com and the password your teacher gives you to practise and play language games



Key Vocabulary (See Textbook pages 25 & 25) *For revision you need to be able to understand all the texts*

Practise vocabulary at home and/or with a friend at school

Tick off the modules above as you complete them, and make sure you can still do these topics for the End of Unit test. Look over your learning and complete anything missing at home each week: **Look, cover, write, check...**

You need: **Key questions** **Greetings** **Descriptions of personality** **Numbers 1-31** **Months of the year** **The verb to have 'TENER'** **Colours** **Pets**

High Frequency Words: *soy (I am), es (it is), tengo (I have), también (also), pero (but), y (and), muy (very), bastante (quite), un poco (a little), no (no/not), mi(s) (my), tu(s) (your)*

Los números 1–31
Numbers 1–31

Cero	0
uno	1
dos	2
tres	3
cuatro	4
cinco	5
seis	6
siete	7
ocho	8
nueve	9
diez	10
once	11
doce	12
trece	13
catorce	14
quince	15
dieciséis	16
diecisiete	17
dieciocho	18
diecinueve	19
veinte	20
veintiuno	21
veintidós	22
veintitrés	23
veinticuatro	24
veinticinco	25
veintiséis	26
veintisiete	27
veintiocho	28
veintinueve	29
treinta	30
treinta y uno	31

Saludos	Greetings
¡Hola!	<i>Hello!</i>
¿Qué tal?	<i>How are you?</i>
Bien, gracias.	<i>Fine, thanks.</i>
fenomenal	<i>great</i>
regular	<i>not bad</i>
fatal	<i>awful</i>
¿Cómo te llamas?	<i>What are you called?</i>
Me llamo...	<i>I am called...</i>
¿Dónde vives?	<i>Where do you live?</i>
Vivo en...	<i>I live in...</i>
¡Hasta luego!	<i>See you later!</i>
¡Adiós!	<i>Goodbye!</i>

¿Tienes mascotas?	
Do you have pets?	
Tengo...	<i>I have...</i>
un caballo	<i>a horse</i>
una cobaya	<i>a guinea pig</i>
un conejo	<i>a rabbit</i>
un gato	<i>a cat</i>
un perro	<i>a dog</i>
un pez	<i>a fish</i>
un ratón	<i>a mouse</i>
una serpiente	<i>a snake</i>
No tengo mascotas.	<i>I don't have pets.</i>
¿Cómo es?	<i>What is it like?</i>
¿Cómo son?	<i>What are they like?</i>

¿Cuántos años tienes?		How old are you?
Tengo... años.		<i>I am... years old.</i>
¿Cuándo es tu cumpleaños?		<i>When is your birthday?</i>
Mi cumpleaños es el... de...		<i>My birthday is the... of...</i>
enero		<i>January</i>
febrero		<i>February</i>
marzo		<i>March</i>
abril		<i>April</i>
mayo		<i>May</i>
junio		<i>June</i>
julio		<i>July</i>
agosto		<i>August</i>
septiembre		<i>September</i>
octubre		<i>October</i>
noviembre		<i>November</i>
diciembre		<i>December</i>

Mi pasión	My passion
Mi pasión es...	<i>My passion is...</i>
Mi héroe es...	<i>My hero is...</i>
el deporte	<i>sport</i>
el fútbol	<i>football</i>
la música	<i>music</i>
el tenis	<i>tennis</i>

Palabras muy frecuentes

High-frequency words	
bastante	<i>quite</i>
no	<i>no/not</i>
mi, mis	<i>my</i>
muy	<i>very</i>
pero	<i>but</i>
también	<i>also, too</i>
tu/tus	<i>your</i>
un poco	<i>a bit</i>
y	<i>and</i>

¿Qué tipo de persona eres?
What sort of person are you?

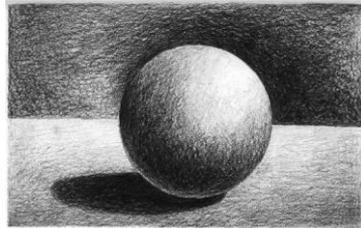
Soy...	<i>I am...</i>
divertido/a	<i>amusing</i>
estupendo/a	<i>brilliant</i>
fenomenal	<i>fantastic</i>
generoso/a	<i>generous</i>
genial	<i>great</i>
guay	<i>cool</i>
listo/a	<i>clever</i>
serio/a	<i>serious</i>
simpático/a	<i>nice, kind</i>
sincero/a	<i>sincere</i>
tímido/a	<i>shy</i>
tonto/a	<i>silly</i>
tranquilo/a	<i>quiet, calm</i>

Los colores	Colours
blanco/a	<i>white</i>
amarillo/a	<i>yellow</i>
negro/a	<i>black</i>
rojo/a	<i>red</i>
verde	<i>green</i>
gris	<i>grey</i>
marrón	<i>brown</i>
azul	<i>blue</i>
rosa	<i>pink</i>
naranja	<i>orange</i>

¿Tienes hermanos?	
Do you have any brothers or sisters?	
Tengo...	<i>I have...</i>
una hermana	<i>a sister</i>
un hermano	<i>a brother</i>
una hermanastra	<i>a half-sister/step-sister</i>
un hermanastro	<i>a half-brother/stepbrother</i>
No tengo hermanos.	<i>I don't have any siblings</i>
Soy hijo único./Soy hija única.	<i>I am an only child. (m/f)</i>

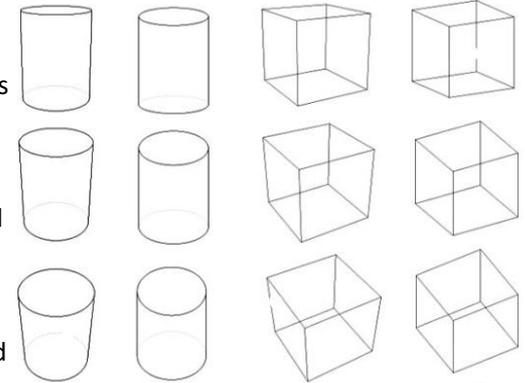
Key question 1: Why do we explore tone in art?

Look at the drawing to the right. We know immediately what it is, we know what shape it is. **Why?** We say "well, it's obvious isn't it? It's a sphere" but **how do we know?** What is there about this 2 dimensional image that tells us that?

**Key question 2: How do we draw 3D shapes?**

Remember, there is a difference between 3 point perspective where there is a **vanishing point**, and no perspective where there is a greater concentration on **parallel lines**.

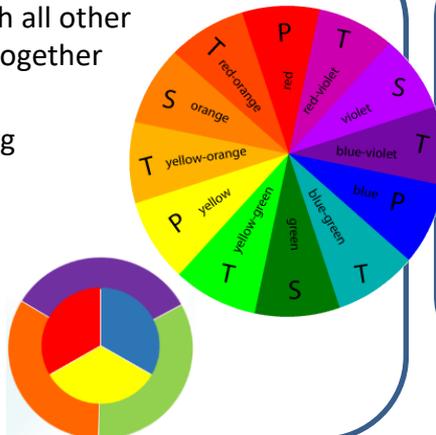
- Cylinders have curved tops and bottoms
- Cubes have 6 sides
- Spheres are circles with tone
- Cones are triangles with curved bottoms

**Key question 3: How to we mix colour?**

Primary colours: colours from which all other colours can be obtained by mixing together (blue, yellow, red)

Secondary colours: colours resulting from the mixing of two primary colours (orange, green, purple)

Tertiary colours: when you mix a secondary colour with a primary colour.

**Websites and further reading:**

BBC Bitesize:

<http://www.bbc.co.uk/schools/gcsebitesize/art/video/drawing/pencilsrev1.shtml>

Pinterest: search 'how to draw 3d shapes' for lots of great ideas

Creating textures with pencils: <https://pencils.com/drawing-lessons-creating-textures/>
and <https://www.craftsy.com/blog/2014/05/drawing-texture-using-graphite/>

Key vocabulary to define and learn:

Tonal values

Light, mid and dark tones

Gradient

Blending

Illusion

Proportions

Complementary colours

Contrasting colours

Texture

3D

Presentation

Key Concept 1: Developing Theatrical Skills

Still Image: is a frozen picture which communicates meaning.

Mime: Actors use gestures, facial expressions and body language in an exaggerated manner to communicate meaning.

Thought Tracking: a character steps out of a scene to address the audience about how they are feeling. This provides a deeper insight into the character for an audience.

Key Concept 3: Communicating A Character

Physical Skills: body language, posture, gesture, co-ordination, stillness, timing, control; facial expression; eye contact, listening, spatial awareness; interaction with other performers

Vocal Skills: pace, pause and projection

Key vocabulary

Still Image

Mime

Thought Tracking

Facial Expressions

Body Language

Projection



Key Concept 2: Using the Stage

Hundreds of years ago stages were raked. This means that the back of the stage was higher than the front. The audience would be seated or standing on a flat level which mean the whole stage could be seen. How does this differ to modern day stages? What other types of staging do we use in modern theatre?

Key Terminology

- Upstage Right
- Upstage Centre
- Upstage Left
- Centre Stage Right
- Centre Stage
- Centre Stage Left
- Downstage Right
- Downstage Centre
- Downstage Left
- Audience

Websites and further reading:

BBC Bitesize:

<https://www.bbc.co.uk/bitesize/guides/zxpc2hv/revision/1>

Youtube: History of Drama

<https://www.youtube.com/watch?v=Yzxcd8tsJ3Q>

Youtube: The Importance of Drama (Transferable Skills)

<https://www.youtube.com/watch?v=q3DGHtpuV28>

Performance Challenge:

Create a short performance using a range of theatrical skills based on the theme of your choice. You must develop believable characters using physical and vocal skills. You will have an opportunity to perform your work in the last week of term at a Lunchtime Showcase

Subject: Computer Science

Term: 1

Topic: Staying safe online



WOOTTON PARK

'In sum quod faciendum est diutius durat'

Key topic 1.1 - Windows 10

- 1.1.1 Access WPS systems:
- 1.1.2 Internet Explorer
- 1.1.3 Cortana
- 1.1.4 Personalise your desktop
- 1.1.5 Access all programs



Key topic 1.2: Office 365

- 1.2.1 Use WPS email system
- 1.2.2 Login to your emails
- 1.2.3 Navigate Office 365
- 1.2.4 Personalise your view
- 1.2.5 Creating and sending emails
- 1.2.6 Office 365 apps



Key topic 1.3: E-Safety

- 1.3.1 Health and safety in an IT room; exploring hazards and risk management
- 1.3.2 Organising yourself; File Explorer; how to navigate the computer, saving your work.
- 1.3.3 Viruses; different types, how to stay safe
- 1.3.4 Cyberbullying; identifying cyberbullying and how to stay safe
- 1.3.5 Sexting; The law, the dangers and how to stay safe
- 1.3.6 Online safety conclusions; opportunities for formal assessment



STOP
cyberbullying

Websites and further reading:

Windows 10: <https://www.laptopmag.com/articles/how-to-use-windows-10>

Office 365: <https://support.office.com/en-us/article/Learn-your-way-around-Office-365-9b7306d3-8d61-4794-bb6f-6520f65956d9>

E-Safety: <http://www.bbc.co.uk/webwise/0/21259413>

CEOP: <https://www.ceop.police.uk/safety-centre>



A National
Crime Agency
command

Key vocabulary to define and learn:

Navigate	Personalise	Social networking	Internet	Online
Apps	Spam	Pop-ups	Programs	Networking
Desktop		Communication		

Key Skills

- Passing – bounce, chest, shoulder
- Intercepting – anticipating where passes are going.
- Footwork - pivoting
- Movement – without the ball.
- Shooting
- Marking

The Game of Netball

Netball is a ball sport played between two teams of seven players. The sport derived from early versions of basketball, and is similar to it in many respects. Netball developed as a distinct sport in the 1890s in England, from where it spread to other countries. It is popular in many Commonwealth nations and is predominantly played by women.

Games are played on a rectangular court divided into thirds, with a raised goal at each short end. The object of the game is for teams to score goals, by passing a ball and shooting it into their team's goal ring. Players are assigned "positions" that define their role within the team and restrict their movement on court. During general play, a player with the ball can take no more than one step before passing it, and must pass the ball or shoot for goal within three seconds. Goals can only be scored by the assigned shooting players. Top level netball games are 60 minutes long and divided into 15-minute quarters, at the end of which the team with the most goals scored wins.

Websites, further reading and local information.

Netball Rules - <http://www.simplenetball.co.uk/netball-rules/>

Northamptonshire Netball Clubs -
<http://www.northamptonshiresport.org/find-a-club?query=netball&type=&gender=&disability=&sport=&radius=20&location=NN5+5DW&submit=Filter>

England v Jamaica World Cup 2015 –
<https://www.youtube.com/watch?v=FXhuvZ2x9L8>

Famous Netball Players – Ama Agbeze

Ama is an English international netball player. Agbeze plays in the goal defence and goal keeper positions.

She debuted in the England national squad in 2001 and became captain during the 2016 season. During her international career she won bronze playing for the English team during the 2006 Commonwealth Games.

Key Words

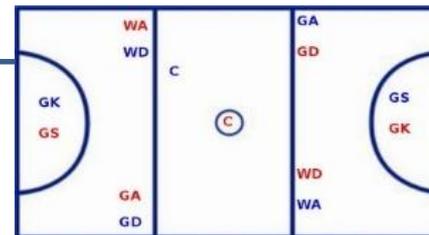
Footwork



Intercepting



Positions in Netball



Pivoting



Key Skills

- Team work - in pairs or small groups.
- Map reading – thumbing and turning.
- Communication – in pairs or small groups.
- Decision making – which checkpoint to go to first.
- Distance marking – understanding distances between checkpoints.
- Symbol understanding – reading the key to help you.



Orienteering

Orienteering is an exciting and challenging outdoor sport that exercises mind and body.

The aim is to navigate between control points marked on an orienteering map.

In competitive orienteering the challenge is to complete the course in the quickest time choosing your own best route.

As a recreational activity, it doesn't matter how young, old or fit you are, as you can run or walk making progress at your own pace on the courses planned to suit you.

Orienteering is a fulfilling sport for runners and walkers of all ages who want to test themselves mentally as well as physically or who want to add variety to their leisure activities.

Websites, further reading and local information.

Newcomer's guide to orienteering -
https://www.britishorienteering.org.uk/newcomers_guide

Orienteering skills and techniques -
http://www.4orienteering.com/orienteering_techniques/

Orienteering Courses near you -
<https://www.britishorienteering.org.uk/pocs>

Key Words

4 figure and 6 figure Grid references
 Attack point

Control points
 Aiming off

Facts about Orienteering;

Orienteering began in Scandinavia in the 19th Century and was primarily a military training event.

It was not until 1919 that the modern version of orienteering was created in Sweden by Ernst Killander as a competitive sport.



Key Skills

- Passing – both off your right and left hands. Long, short, spin and pop passes.
- Tackling – safely and effectively
- Movement – with and without the ball.
- Ball presentation – during tackling and once tackled.
- Rucking – in isolation and competitively.
- Jackling - in isolation and competitively.

The Game of Rugby

Rugby at WPS will be enjoyable and fun sport for all learners, both boys and girls. Throughout the year each learner will be taught Rugby on the curriculum and each learner will have the opportunity to participate in Rugby during extra-curricular activities.

The Rugby World Cup is the third biggest sporting event on the planet, and this success on the global stage is only possible because of the thriving school, university and club competitions in England and around the world. One of the reasons for rugby's rapid growth is that regardless of size, shape, age or gender, there is a type of rugby and a level of competition that is right for almost everyone.

While the conventional 15-a-side version of the sport makes the headlines sevens, and touch are also thriving across England and in schools.

Websites, further reading and local information.

Rugby Rules -

http://news.bbc.co.uk/sport1/hi/rugby_union/rules_and_equipment/4200680.stm

England's World Cup Triumph -

<https://www.youtube.com/watch?v=CqswfjkPm2k>

Northampton Saints –

<https://www.northamptonsaints.co.uk/>

Northampton Casuals -

<http://northamptoncasualsrfc.rfu.club/>

Famous Rugby Players – Maro Itoje

Maro Itoje is a member of the Saracens and England Rugby squads. Maro captained the U20 England team to victory in the 2014 IRB Junior World Championship against a formidable South African team in a fierce contest held at Eden Park, New Zealand. In 2015 he was an integral part of the Saracens squad who lifted the Aviva Premiership Trophy. More recently he has been awarded his first senior caps for England in the 2016 6 Nations.

Key Words

Rucking



Jackling



Ball Presentation



Types of Passing

