



# Knowledge Organisers

## Year 8 – Term 1

### Homework Retrieval Practice and Using your Knowledge Organiser

- Homework will be set on Microsoft Teams as an assignment.
- Homework tasks will be knowledge-based retrieval activities. They will consist of 10-20 questions which assess key knowledge that has been taught within that subject that week; e.g. When was the battle of Hastings? What is an integer? Identify the noun in this sentence.
- Feedback for these pieces of homework will then take place in lessons. The start of some of your lessons will be based on these homework tasks- so you must ensure you keep up with them all.
- You will have homework in every subject, except for PE and ASPIRE, and you will have a week to complete it. A1's will be given to everyone who completes their homework. If you don't complete it you will get a C1 and the teacher will tell you when they will be checking it again.

**Assignments**

[Assigned](#)   Returned   Drafts

What is History? Quiz  
Due September 7, 2022 9:00 AM

### What is History? Quiz

Due September 7, 2022 9:00 AM

#### Instructions

Complete the retrieval practice quiz.

#### Student work

What is History? Quiz (10BHi)   ...

NAME: \_\_\_\_\_

FORM: \_\_\_\_\_



# Knowledge Organisers

## Year 8 – Term 1

- Knowledge Organisers contain the most important information you need to know for each of your subjects
- Learning these facts will help you to succeed in lessons
- If you struggle with your homework retrieval practice you can use these knowledge organisers to support you.
- You can also use these knowledge organisers as part of your revision for upcoming tests.
- You should also read your book each night
- You may be given optional homework to complete but this is not compulsory (but worth lots of achievement points!)





# Need some ideas?

If you have watched the Woodrush Online YouTube videos and you are still not sure what to do you can use these ideas on these pages for activities to complete and tick them off. You can use as many or as few of these ideas as you want! Keep repeating the tasks until you get them right first time.

## Science

|  |  |
|--|--|
| Read all of the keywords, close you knowledge organiser and see how many you can remember. Check and correct   |  |
| Write definitions for produces, consumer, herbivore, carnivore, omnivore, predator, prey and top predator. Give at least one example for each for your own knowledge |  |
| Define what the word adaptation means, think of three different plants or animals and describe how they are adapted to their environment                             |  |
| List the 5 stages of natural selection and then try and use those stages to explain why giraffes have evolved to have long necks                                     |  |
| Draw the wave diagram from memory, include labels and definitions. Check and correct   |  |
| Explain the difference between reflection and reactions making sure you include all key words. Check and correct   |  |
| Create a spelling list for all the key words on the page. Look, cover, write, correct and repeat until you get them all right.                                       |  |
| Create your own drawing of the cross-section of the eye. Close your knowledge organiser, label the parts and say what each one does. Check and correct               |  |

## History

|  |  |
|--|--|
| Describe what appeasement means and the reasons for an against it. Check you knowledge organiser to see if there was any more detail you can add   |  |
| Make a glossary of all the key historical terms mentioned on the War at Home page and explain what they mean (including those in the information around the map)                         |  |
| Create a mind map about the key events of the second world war without looking at your knowledge organiser. Check, correct and add detail. Keep doing this until you don't miss any off! |  |
| Create a timeline key events of the second world war, add in facts about the key dates. Check and correct  |  |

## Geography

|   |  |
|---|--|
| Make a mind map on why people are migrating within China. Check, correct and add detail. Keep doing this until you don't miss anything off! |  |
| Make an argument for whether China has a pollution problem.   |  |
| Cover and write out all of the key terms. Keep doing this until you have all of them written down.  |  |
| Create a clustered bar chart. What can you create one on, can you find any online?  |  |

## Art

|  |  |
|--|--|
| Write the rules for the proportion of the face                           |  |
| Complete independent study task one and draw a portrait from art history |  |
| Complete independent task two and draw a self portrait                   |  |

## Faith and Ethics

|  |  |
|--|--|
| List all of the keywrods to do with the Easter story without looking at you knowledge organiser. Check and correct   |  |
| List al the ways that humans are similar and different from animals  |  |
| Write the subheadings about the Hunger Games from your knowledge organiser in your book. Close your knowledge organiser and see if you can give examples form the film to prove each point |  |



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If you have watched the Woodrush Online YouTube videos and you are still not sure what to do you can use these ideas on these pages for activities to complete and tick them off. You can use as many or as few of these ideas as you want! Keep repeating the tasks until you get them right first time.

## Spanish

Write 4 different sentences about your taste in music in Spanish from memory, Check and correct

Draw mind map of different types of film, write these both in Spanish and English. Check and correct

Make flashcards for as many different adjectives as you can, keep testing yourself until you know them off by heart

Make lists of food and drink that you like, love or dislike in Spanish, check and correct

Write a script for a short sketch in Spanish where you order a meal from a restaurant, check and correct

From memory write as many words as you can related to parties in English and Spanish. Check and Correct

## DT

Draw 3 different size boxes using 2 point perspective. Describe in words how you have done it.

From memory list the 8 healthy eating guidelines Check and correct

Write as many keywords from the textiles pages as you can remember and, from memory, describe what they mean. Check and correct

Make a spelling list from the keywords on the Product Design page. Look, cover, write, check and correct until you get them right.

Write the names of the key designers mentioned on the DT pages. From memory try and list their achievements. Check and correct

## Music

Draw out the 12 Bar Blues Chords in C from memory. Check and correct

Create a table to compare Blues and Jazz. Check, correct and add detail from your knowledge organiser

Draw out a section of the keyboard in your book. Practice playing the Blues scale in C on it

## Computing

Make flashcards of the keywords and definitions about computing. Keep testing yourself until you know them.

Crte a spelling list from the keywords. Look, cover, write, check and correct until your know them.

Explain in your own words what virtual reality, artificial intelligence and robotic process automation are. Check, correct and add detail.

## Drama

Make a mind map of the physical and vocal skills you can use in a performance

From memory list the dramatic devices you can use in a scene and describe what they mean. Check and correct

Think of a character from a film, use the keywords from the dram pages to describe how this character has been successful created.

## PE

Draw a mind map for Tennis, Football and Athletics, add in the core skills and tactics.

Choose one of the 4 sports, write a checklist of what you need to do to succeed.

Name from memory as many key words from the PE page. The link each one with the sport it belongs to.



# English

## Gothic Genre

### Literary methods in the Gothic genre

- **Pathetic Fallacy** - dark stormy weather is used to create an eerie atmosphere
- **Foreboding** - language is used to make the reader feel tense and nervous about what may happen next
- **Foreshadowing** - the writer will often give hints about eerie events that will happen later on
- Poetic Voice
- **Similes**
- **Metaphors** - describing something by saying it is something else.

A metaphor consists of three parts. It is a bit like an equation in maths.

**Tenor + vehicle = ground.**

Tenor means the thing we are describing using the metaphor.

Vehicle means the comparison the thing we are comparing the tenor to.

Ground is the idea or concept that connects the two together (the thing the metaphor is getting at).

e.g. The teacher is a dragon.

Tenor = the teacher, vehicle = the dragon, ground = ferocity (what the teacher and the dragon have in common.).

We would then write something like 'By comparing the teacher to a dragon the author suggests her ferocity.'

- **Settings** - eerie settings such as old castles, stormy seas, or haunted buildings will be described in vivid detail to create horror

## Y8 Autumn Term

**Allusion:** where someone refers to an event or a story they expect their readers to know.

**Allusions in the poem:**  
**Pallas Athene**  
**Christianity**

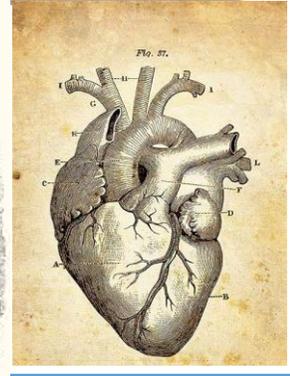
**In Medias Res**- Latin for 'in the middle of the action'.  
**Semantic field** – group of words to do with a particular idea

**Key Quotations:**

**The Raven – Edgar Allan Poe**

'Once upon a midnight dreary'  
 'Thrilled me—filled me with fantastic terrors never felt before.'  
 'Quoth the Raven, 'Nevermore.'  
 'Some late visitor entreating entrance at my chamber door; /This it is, and nothing more.'  
 'Deep into that darkness peering,  
 long I stood there, wondering, fearing,  
 doubting, dreaming dreams/  
 no mortal ever dared to dream before.'  
 'In there stepped a stately raven of the saintly days of yore;Not the least obeisance made he; not a minute stopped or stayed he;/But, with mien of lord or lady, perched above my chamber door'  
 Then this ebony bird beguiling my sad fancy into smiling,  
 By the grave and stern decorum of the countenance it wore.'  
 Ghastly grim and ancient raven wandering from the Nightly shore —  
 Tell me what thy lordly name is on the Night's Plutonian shore!"  
 Quoth the Raven, "Nevermore."

# Gothic



## Atmosphere Gothic Setting

This is when we talk about the mood or feelings in a piece of writing or scene of a film. For example, stormy weather might create a tense and frightening atmosphere. Descriptions of a beautiful landscape can create a more relaxing atmosphere.

Motif



## Imagery and Symbolism

This is when a writer uses language to create a vivid description for the reader. Methods used to create imagery include similes, metaphors, personification, and pathetic fallacy.

**Features of Gothic:**

- Dark, smoky and grimy – you can't see well.
- Filled with death and disease.
- Full of innocent gullible victims (often innocent country girls)
- Haunted by evil supernatural beings.
- The rich preying upon the poor.
- Full of towers, churches, castles, and abandoned places
- Questions whether life after death is possible.



# English

## Tier 2 and 3 vocabulary:

- Dreary** - dull and grey.
- Ballad** - a long poem which tells a story.
- Unreliable** - not to be trusted.
- Redemption** - when a sinner is forgiven for their sins by God.
- Haunting** - when spirits come back from beyond the grave.
- Psychology** - study of the brain.
- Mesmerism** - hypnosis.
- Mysticism** - believing in the supernatural.
- Logic** - believing in facts and reasoning.
- Sin** - acts against the laws of God.
- Shade** - a ghost.
- Spectre** - a ghost.

## How to punctuate dialogue

The part that describes what a character says is the **dialogue**. This should be in **speech marks**:

“ ”

The sentence ending (. ! ?) should be before the closing speech mark:

“Should we go now?”

“I’m so shocked!”

“I’ll meet you both later.”

The part that explains *how* the character says their dialogue is called a **reporting clause**.

If the reporting clause is *before* the dialogue, then a comma goes before the opening speech mark:

“I’ll meet you later,” **she said**.

If the reporting clause is *after* the dialogue, then a comma is placed before the closing speech mark

**She said**, “I’ll meet you later.”

If the dialogue is between 2 reporting clauses, then both rules apply:

**She said**, “I’ll see you later,” **as she slowly turned and left**.

- Apparition** - a ghost.
- Manipulated** - made to do something (like a puppet).
- Genre** - writing that shares similar features.
- Prophecy** - telling the future.
- Grief** - deep sadness at a death.
- Decline** - getting worse.
- Wisdom** - being wise.
- Mourning** - period of sadness after a death, people in mourning often wear black.
- Protagonist** - main character, hero.
- Antagonist** - villain.

### Key Sentence Types 6. Three Verb Sentence

*The monstrous fungi billowed, swelled, rose up and up, surrounding the base of every tree.*

**Not, Nor, Nor Sentence**

*Not a single animal, not the rabbits I had seen on the meadow, nor the mice whispering in the grass, nor even the spiders and beetles came so deeply into the forest’s reach.*

**Prepositional Push Off**

*Beneath the thirty or forty feet of the trees’ rise, the world seemed to have come to an end.*

**Never Did Than**

*Never did a place so disturb me, than this alien, lifeless place.*

**The Writer’s Aside**

*The familiar world - as you can imagine - was a million miles away.*



## Colons: there are two ways that a colon can be used

A colon is used to separate two main clauses when one clause explains the other

For example:

She put ice cubes in the lemonade: it was roasting hot that day.

Mila drank the water: she was thirsty.

# Gothic

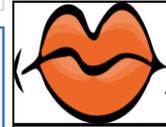
## Writing Persuasively



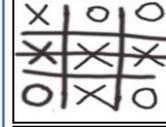
**HOOK:** grab your reader’s attention. Explain who you are, and why you care about this issue. **ETHOS**



**FACTS:** **LOGOS** use facts, quotes and statistics from things you have read to prove that you are right. Make a logical argument.



**ANECDOTE:** Tell a story from your life, or give a real example to explain the impact of this issue on real people.



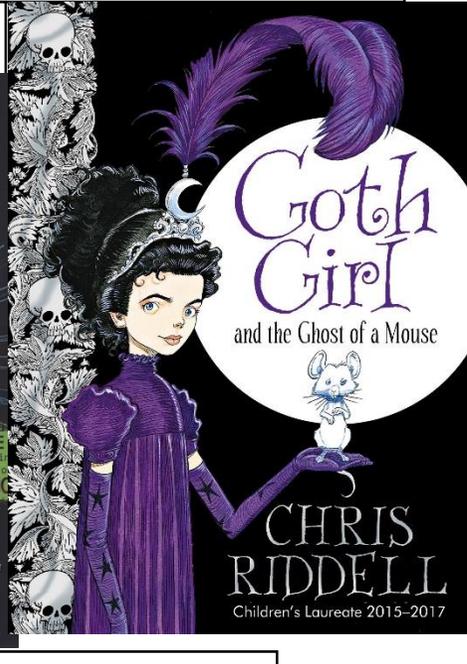
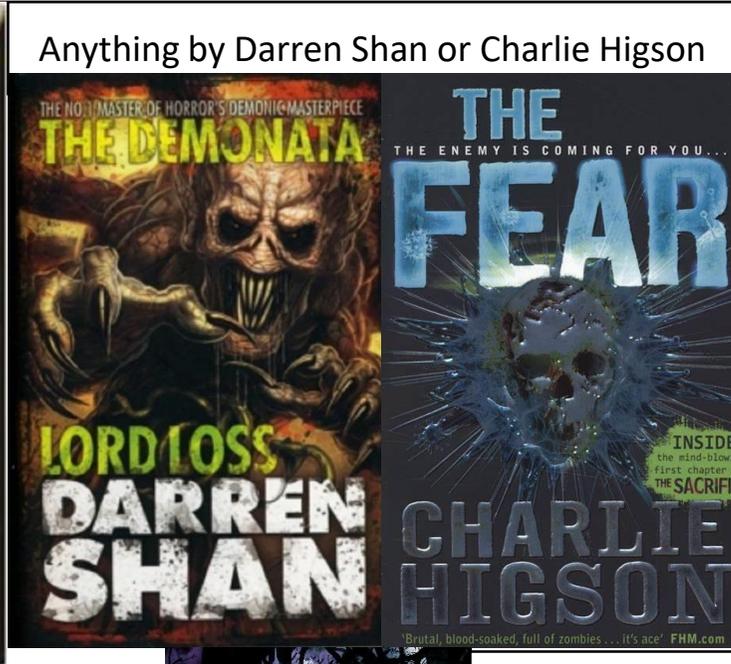
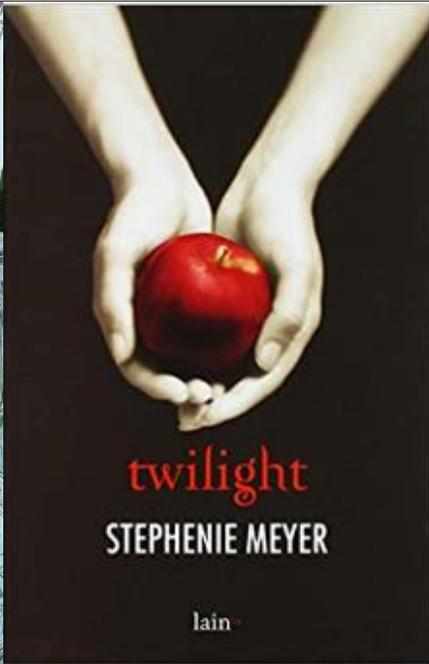
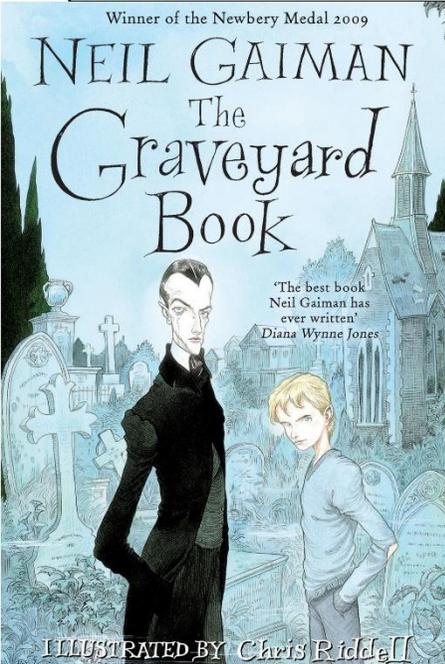
**COUNTER-ARGUMENT:** What might people who disagree with you say, and how would you argue against them?



**EMOTIVE APPEAL:** How could you use emotive language and anger, sympathy, sadness or joy to change your reader’s mind? **PATHOS**

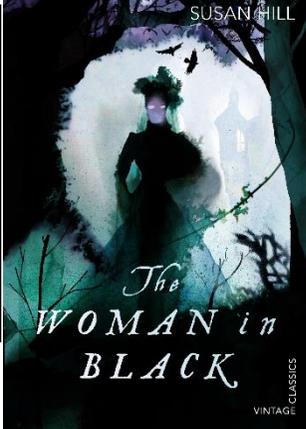


Some suggestions for Gothic themed books to read and test on for AR .



Anything by Darren Shan or Charlie Higson

You could also look for graphic novel, simplified, or original versions of the following classics:  
**Frankenstein by Mary Shelley**  
**Dracula by Bram Stoker**  
**The Yellow Wallpaper by Charlotte Perkins Gilman**  
**Poe stories: The Black Cat, the Fall of the House of Usher**  
**The Turn of the Screw by Henry James**



We will be using extracts from The Woman in Black by Susan Hill to inspire characters in our own writing, so it might be nice to read it.



# MATHS

## Order of Operations

The **lower bound** is the smallest value that would round up to the estimated value.

The **upper bound** is the smallest value that would round up to the **next** estimated value.

For example, a mass of 70 kg, rounded to the nearest 10 kg, has a lower bound of 65 kg, because 65 kg is the smallest mass that rounds to 70 kg. The upper bound is 75 kg, because 75 kg is the smallest mass that would round up to 80kg.

### Discrete values (Whole values)

The number of people on a train is 400 to the nearest 100

350 ← **400** → 449

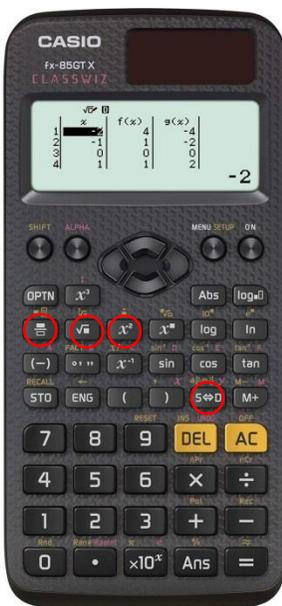
32 cm, measured to the nearest cm:

The degree of accuracy is to the nearest 1 cm.

$$1 \text{ cm} \div 2 = 0.5 \text{ cm}$$

$$\text{Upper bound} = 32 + 0.5 = 32.5 \text{ cm}$$

$$\text{Lower bound} = 32 - 0.5 = 31.5 \text{ cm}$$



## Key buttons on your calculator

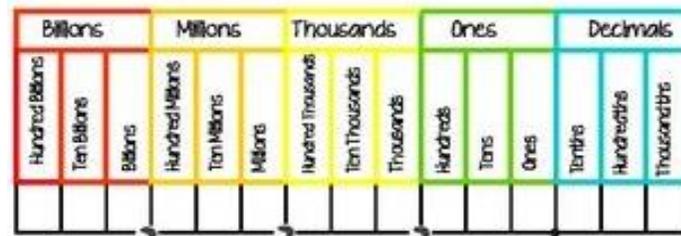
$\frac{\square}{\square}$  : Fraction button

$x^2$  : to square a number

$\sqrt{\square}$  : Square root

$S \leftrightarrow D$  : Changes an answer to a decimal

# Whole numbers and Decimals



### Multiplying

X 10    digits move LEFT 1 space  
 X 100    digits move LEFT 2 spaces  
 X 1000    digits move LEFT 3 spaces



### Dividing

$\div 10$     digits move RIGHT 1 space  
 $\div 100$     digits move RIGHT 2 spaces  
 $\div 1000$     digits move RIGHT 3 spaces



## Rounding whole numbers

### Place Value

Thousands  
 Hundreds  
 Tens  
 Units

14672

To the nearest ten

14670

To the nearest hundred

14700

To the nearest thousand

15000

## Rounding decimal points

### Decimal Places

Count Right from the Decimal Point

1 2 3 4

12.5298

To 1 decimal place

12.5

To 2 decimal places

12.53

To 3 decimal places

12.530

## Rounding significant figures

### Significant Figures

Count Right from first non-zero Digit

1 2 3 4 5 6

325484

To 1 significant figure

300000

To 2 significant figures

330000

To 3 significant figures

325000



# MATHS

## Units of measure

There are two systems used for measuring quantities - **metric** and **imperial**.

The **metric system** uses three main units for measuring:

length in metres (m)

mass in kilograms (kg)

volume in cubic metres (m<sup>3</sup>)

The **imperial system** uses the following units:

length in inches, feet and yards

mass in pounds (lb), ounces (oz) and stons

volume in gallons

## Converting between metric units.

You will need to know how to convert between metric units. It is important to learn how many grams are in a kilo gram or how many centimetres are in a metre to help you scale up or down depending on the appropriate size of an object. You might want to know if you have enough ingredients to make a cake and the recipe is in kg and you only know the g.

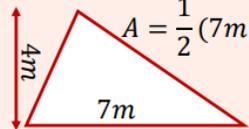
| Length         | Weight         | Volume         |
|----------------|----------------|----------------|
| 1 km = 1,000 m | 1 kg = 1,000 g | 1 kL = 1,000 L |
| 1 m = .001 km  | 1 g = .001 kg  | 1 L = .001 kL  |
| 1 m = 100 cm   | 1 g = 100 cg   | 1 L = 100 cL   |
| 1 cm = .01 m   | 1 cg = .01 g   | 1 cL = .01 L   |
| 1 m = 1,000 mm | 1 g = 1,000 mg | 1 L = 1,000 mL |
| 1 mm = .001 m  | 1 mg = .001 g  | 1 mL = .001 L  |

# Perimeter, area and volume

## Area of triangle

The area of a triangle takes up **half** the space of the rectangle that is formed around it

$$\text{Area of triangle} = \frac{1}{2}(b \times h)$$



$$A = \frac{1}{2}(7m \times 4m) = \frac{1}{2}(28m^2)$$

$$14m^2$$

## Area of parallelogram

Imagine a tilted rectangle



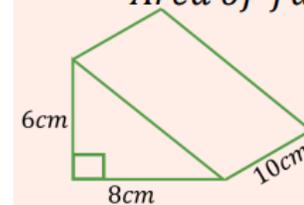
Be sure to use **perpendicular heights**

## Volume of prism

The same cross sectional area throughout

$$\text{Volume} = \text{Area of face} \times \text{depth}$$

$$\text{Area of face} = \frac{1}{2}(8 \times 6)$$



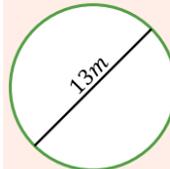
$$\downarrow$$

$$24cm^2$$

$$24cm^2 \times 10cm = 240cm^3$$

## Area of circle

$$A = \pi r^2 \rightarrow \text{Pi times the radius squared}$$



Diameter is double the radius

$$A = \pi \times 6.5^2$$

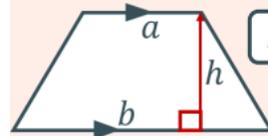
$$A = \pi \times 42.25$$

$$A = 132.73m^2$$

## Area of a trapezium

A more complex formula to know

$$\text{Area of trapezium} = \frac{1}{2}(a + b) \times h$$



Add the parallel sides

Halve it

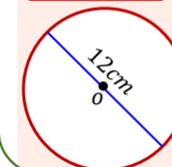
Multiply by height

## Circumference of a circle

$$C = \pi d$$

$$C = 2\pi r$$

The circumference is always about three times the length of the diameter



$$C = \pi \times 12cm$$

$$C = 37.7cm$$



# MATHS

## Expanding brackets

To expand brackets you need to multiply everything inside the bracket by the number or letter outside.

Multiply terms outside by all terms inside

$$10(x + y + 4) = 10x + 10y + 40$$

$$3x(6x - 2) = 18x^2 - 6x$$

Expanding brackets often the first step in simplifying algebra

$$2(x + 3y) - 7(2x - y) = 2x + 6y - 14x + 7y$$

Include sign in multiplication  $= -12x + 13y$

## Factorising

Factorising is the opposite of expanding. You are putting the brackets back in!

Look at whole expression, identify HCF and divide out

$$12x - 6y + 3z \quad \text{HCF} = 3$$

$$3(4x - 2y + z)$$

$$ax + aby + 4az \quad \text{HCF} = a$$

$$a(x + by + 4z)$$

# Expressions and Formulae

## Collecting like terms

Collecting like terms enables us to simplify expressions making them easier to use. Terms that contain the exact same variable can be classed as 'like' terms and be simplified. Be careful of the signs in front of the variable!

$$5x + 6y - 2x - 5y = 3x + y$$

$$5xy + 3x - 2xy + 4y = 3xy + 3x + 4y$$

$$2x^2 + 3x + 5x^2 - 5x = 7x^2 - 2x$$

## Laws of indices

There are rules that you need to learn when working with indices.

### Special indices to consider

$$x^1 = x \quad \text{Anything to the power 1 = itself}$$

$$x^0 = 1 \quad \text{Anything to the power 0 = 1}$$

$$1^x = 1 \quad \text{1 to the power of anything = 1}$$

These laws can be applied if the bases are the same

$$x^a \times x^b = x^{a+b}$$
$$z^3 \times z^7 = z^{10}$$

When multiplying powers with the same base - Add the powers

$$x^a \div x^b = x^{a-b}$$
$$s^2 \div s^5 = s^{-3}$$

When dividing powers with the same base - Subtract the powers

$$(x^a)^b = x^{a \times b}$$
$$(e^4)^3 = e^{12}$$

When raising the power (brackets) - Multiply the powers

## Re-arranging formulae

You may need to re-arrange a formula in order to be able to calculate what you need. This is often the case in physics and chemistry.

Often it is useful to re-arrange a formula to make a different variable the subject

Make  $l$  the subject of the formula

$$P = 4l \quad \rightarrow \quad \frac{P}{4} = l$$

Use inverse operations

$$y = \frac{18t - 3}{p} \quad \text{Make } t \text{ the subject}$$
$$\times p \quad +3 \quad \div 18$$

$$t = \frac{py + 3}{18}$$



## Remember what you do to the top you must do to the bottom!

### Converting between mixed numbers and improper fractions

Improper fraction to mixed number:

$$\frac{13}{5} \text{ Divide numerator by denominator to get whole number}$$

$$2^r3 \text{ Remainder forms new numerator}$$

$$2\frac{3}{5} \text{ Denominator remains the same}$$

Mixed number to improper fraction:

$$7\frac{3}{8} \text{ Multiply whole number by denominator}$$

$$56 + 3 \text{ Add on the numerator}$$

$$\frac{59}{8} \text{ Denominator remains the same}$$

### Adding and subtracting mixed numbers

In order to add and subtract mixed numbers you need to convert them into improper fractions. Then you make the denominator the same and complete the operation. Don't forget to turn the answer back into a mixed number.

$$6\frac{1}{5} - 4\frac{3}{4} \Rightarrow \frac{31}{5} - \frac{19}{4} \Rightarrow \frac{124}{20} - \frac{95}{20} \Rightarrow \frac{29}{20} = 1\frac{9}{20}$$

$$3\frac{1}{5} + 5\frac{9}{10} \Rightarrow \frac{16}{5} + \frac{59}{10} \Rightarrow \frac{32}{10} + \frac{59}{10} \Rightarrow \frac{91}{10} = 9\frac{1}{10}$$

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### Converting recurring decimals to fractions

A recurring decimal is a decimal that repeats and never ends. It is written with a dot above the first and last number that recurs.

$$0.\dot{6} \longrightarrow 0.66666666666666 \dots$$

$$0.21\dot{3} \longrightarrow 0.21333333333333 \dots$$

$$0.\dot{8}4\dot{1} \longrightarrow 0.841841841841 \dots$$

You need to learn what simple decimals that recur as written as a fraction. If all the numbers recur you put the number over a multiple of 9.

$$0.\dot{x} \longrightarrow \text{A single recurring digit will be a fraction over 9} \quad \frac{x}{9}$$

$$0.\dot{x}\dot{y} \longrightarrow \text{A double recurring digit will be a fraction over 99} \quad \frac{xy}{99}$$

$$0.\dot{x}y\dot{z} \longrightarrow \text{A triple recurring digit will be a fraction over 999} \quad \frac{xyz}{999}$$

### Fraction to decimal

Divide the numerator by the denominator.  
Using Bus shelter division

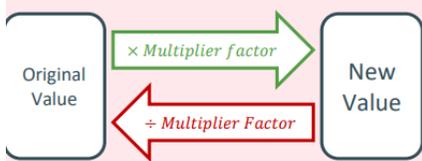
$$\frac{1}{7} \longrightarrow 7 \overline{) 1.0000} \begin{array}{l} 0.1428 \\ \underline{7} \phantom{0000} \\ 30 \phantom{000} \\ \underline{28} \phantom{000} \\ 20 \phantom{00} \\ \underline{14} \phantom{00} \\ 60 \\ \underline{56} \\ 40 \\ \underline{35} \\ 50 \\ \underline{49} \\ 10 \end{array} \longrightarrow 0.143$$



# MATHS

## Percentage increase and decrease

To calculate percentage increase or decrease you can convert the percentage to a decimal to find a multiplier and then use that to calculate the new amount.



To find the multiplier you use 100%.  
If it is an increase you add to 100.  
If it is a decrease you take away from 100.  
You then divide your number by 100.

### Increase of 23%

$100 + 23 = 123$   
 $123 \div 100 = 1.23$   
Multiply your amount by 1.23

### Decrease of 42%

$100 - 42 = 58$   
 $58 \div 100 = 0.58$   
Multiply your amount by 0.58

## Percentage of amounts

### Find 35% of 40

#### Method 1- Unitary method

Find 1%, 10%, 5% etc.

$$\begin{array}{r}
 10\% = 4 \quad (\div 10) \\
 30\% = 12 \\
 + 5\% = 2 \\
 \hline
 14
 \end{array}$$

2017

## Simple interest

Interest calculated as a percent of the original loan.

Example: a 3-year loan of \$1,000 at 10% costs 3 lots of 10%  
So the interest is  $3 \times \$1,000 \times 10\% = \$300$

Simple interest is almost never used in the real world, with compound interest being preferred.

# Decimals and percentages

## Reverse percentages

If you are going to find the original amount you need to get to a multiple of 100 and then times up to 100%.

John pays £60 for a bag after getting 20% discount. How much did it originally cost?



Remember: Original price is always equal to 100%

$$\text{Sale price} = 100\% - 20\% = 80\%$$



## Compound interest

Where interest is calculated on both the amount borrowed plus previous interest. Usually calculated one or more times per year.

To calculate: work out the interest for the first period, add it to the total, and then calculate the interest for the next period, and so on, like this:





# MATHS

## Ratio and Proportion

### Introduction to ratio

A ratio shows the relative sizes of two or more values.

Ratios can be shown in different ways:

- using the ":" to separate example values
- using the "/" to separate one value from the total
- as a decimal, after dividing one value by the total
- as a percentage, after dividing one value by the total

Example: if there is 1 boy and 3 girls you could write the ratio as:

1:3 (for every one boy there are 3 girls)

1/4 are boys and 3/4 are girls

0.25 are boys (by dividing 1 by 4)

25% are boys (0.25 as a percentage)

### Sharing into a ratio



Share \$40 in the ratio 3 : 5

Find total number of parts

Add the ratio parts together

$$3 + 5 = 8$$

Find value of one part

Divide amount by number of parts

$$\$40 \div 8 = \$5$$

Each part of the ratio is worth \$5

### Calculating a ratio with given a difference

Charlene and Danielle share some money in ratio 2 : 3 Danielle gets £25 more than Charlene. How much does each girl receive?

This question is different from the one above as we know that Danielle got £25 more.

Danielle gets 1 more part than Charlene as 3-2=1

1 part = £25

2 parts = £50

3 parts = £75

Charlene gets £50 and Danielle gets £75.

### Calculating ratio given one amount

The ratio of boys to girls in a school is 4 : 5 There are 220 boys in the school. How many students attend the school?

This time we know that 4 parts =220

$$1 \text{ part} = 220 \div 4$$

$$= 55$$

Total in school is  $9 \times 55 = 495$  pupils

### Proportion

#### Direct Proportion

As one value increases, the other increases at the same rate

Three Coffees cost £7.50,  
How much would five Coffees cost?

Find the value of one coffee then multiply by quantity needed

$$£7.50 \div 3 = £2.50 \text{ per coffee}$$

$$£2.50 \times 5 = \underline{£12.50}$$

#### Inverse Proportion

As one value increases, the other decreases at the same rate

It takes 3 men 4 days to build a wall.  
How long would it take 2 men?

Find the time taken by one man then divide by quantity stated

$$3 \text{ men} \times 4 \text{ days} = 12 \text{ days}$$

$$12 \text{ days} \div 2 \text{ men} = \underline{6 \text{ days}}$$



# Science

**Gamete:** The male gamete (sex cell) in animals is a sperm, the female an egg.

**Fertilisation** The process where the nucleus of a sperm cell joins with the nucleus of an egg cell.

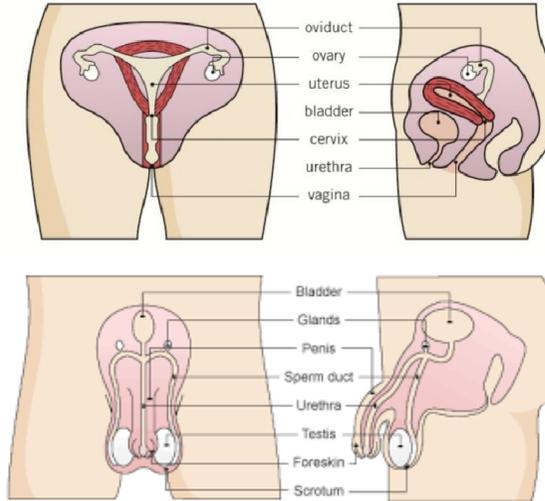
**Ovary:** Organ which contains eggs.

**Testes:** Organs where sperm are produced.

**Menstruation:** Loss of the lining of the uterus during the menstrual cycle

**Foetus:** The developing baby during pregnancy.

**Ovulation:** The release of an egg from an ovary

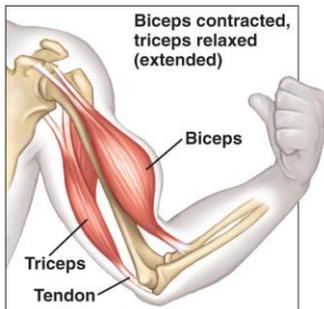


Cell = the basic building block that makes up living organisms

Tissue = a group of similar cells working together

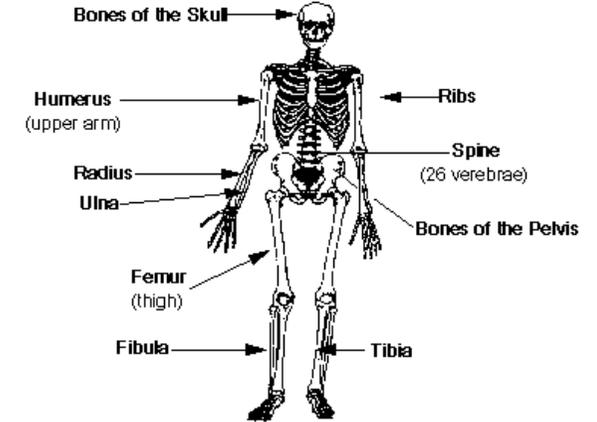
Organ = a group of different tissues working together

Organ system = a group of organs working together



# B2 Health

## Selected Bones



| Type of drug | Effect on the body                             |
|--------------|--|
| Stimulant    | Increase alertness and speed up nervous system |
| Depressant   | Slow down nervous system                       |
| Hallucinogen | Alter how you see and feel                     |
| Painkiller   | Reduce pain                                    |

| Nutrient               | Use in the body   | Good sources                                       |
|------------------------|---|--|
| Carbohydrate           | To provide energy   | Cereals, bread, pasta, rice and potatoes           |
| Protein                | For growth and repair   | Fish, meat, eggs, beans, pulses and dairy products |
| Lipids (fats and oils) | To provide energy. Also to store energy in the body and insulate it against the cold. | Butter, oil and nuts                               |
| Minerals               | Needed in small amounts to maintain health  | Salt, milk (for calcium) and liver (for iron)      |
| Vitamins               | Needed in small amounts to maintain health  | Fruit, vegetables, dairy foods                     |
| Dietary fibre          | To provide roughage to help to keep the food moving through the gut                   | Vegetables, bran                                   |
| Water                  | Needed for cells and body fluids  | Water, fruit juice, milk                           |



**Physical changes** do not make a new substance.

State changes e.g. melting are physical changes.

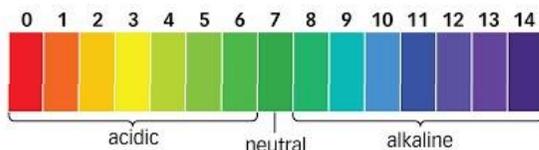
Physical changes are reversible.



**Chemical changes** (reactions) do make a new substance.

Chemical changes are often irreversible.

## pH scale



**Indicators** change colour to show **pH** (acidity) of a solution

Acid + alkali → salt + water  
This is called neutralization.

Acid + metal → salt + hydrogen

Metal oxides e.g.  $\text{Na}_2\text{O}$  are **bases**. Non-metal oxides e.g.  $\text{CO}_2$  are **acids**.

## Reaction Equations

**Reactant + Reactant → Product + Product**

Things you start with on the left      arrow      Things you finish with on the right

## Formulae

**Formulae** use element symbols to show the amount of each type of atom in a compound  
 $\text{CO}_2$  contains 1 carbon and 2 oxygen atoms

## Energy of Reactions



**Exothermic reactions** release heat energy.

They cause the temperature to increase.

**Endothermic reactions** take in heat energy.

They cause the temperature to decrease.

**Catalysts** speed up the **rate of reaction** (how quickly the reaction happens), but they do not affect the overall **energy** change.

They do not get used up in the reaction, so they are very useful in industry.

**Oxidation** is a reaction with oxygen (usually from the air)

**Combustion** is burning:

Fuel + oxygen → carbon dioxide + water

It has a fast rate of reaction and is exothermic.

**Rusting** is oxidation of iron metal to form iron oxide. It requires oxygen and water vapour. The rate of reaction is slow, but salt speeds it up.



**Thermal decomposition** is an endothermic reaction where compounds break down when heated

Calcium carbonate → Calcium oxide + carbon dioxide

**Displacement reactions** involve a more reactive element replacing a less reactive element in a compound.

Iron oxide + aluminium → aluminium oxide + iron



# Science

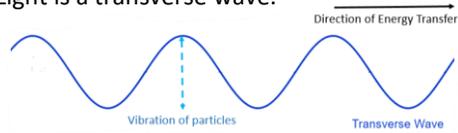
*Context: How do we see and hear things?*

# P3 Waves

## Waves

Waves are created by **vibrations**.  
All waves transfer **energy**.

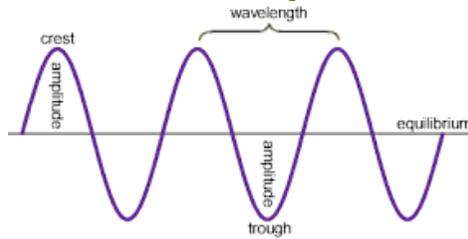
**Transverse waves** vibrate up and down, but the energy of the wave moves left and right. Light is a transverse wave.



**Longitudinal waves** vibrate left and right, and the energy travels in the same direction. Sound is a longitudinal wave



## Wave diagram



### Wavelength:

Length, measured from crest to crest

### Amplitude:

Height, measured from middle to crest

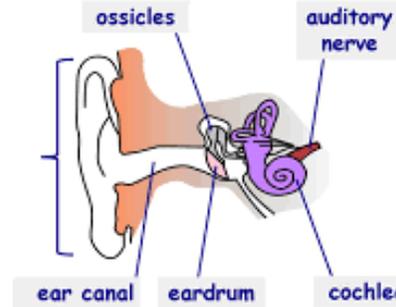
### Crest:

The peak of a wave

### Trough:

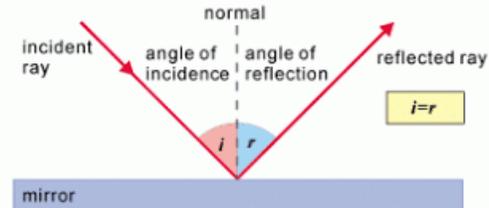
The bottom of a wave

## The ear



Sound waves travel down the **ear canal**. The **eardrum** receives the vibrations and passes them to small bones, called the **ossicles**. The **cochlea** turns the vibrations into an electrical signal, which the **auditory nerve** sends to the brain.

## Reflection



**Reflection:** When a wave bounces off an object

### Law of reflection:

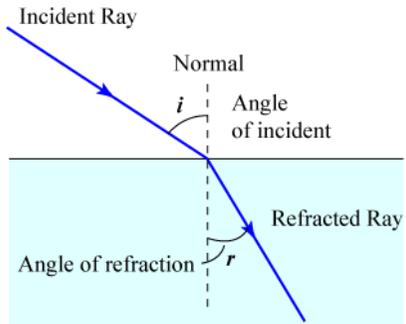
Angle of incidence = angle of reflection

The **normal** is a line drawn at a right angle (perpendicular) to the mirror.

## Refraction

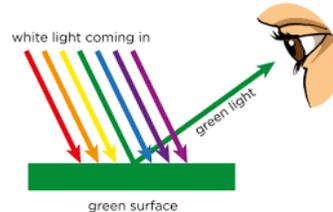
**Refraction:** When light enters a new medium (material) it changes speed and direction.

In a **more dense medium**, it slows down and changes direction towards the normal.

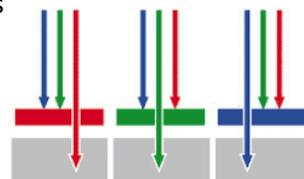


## Colour

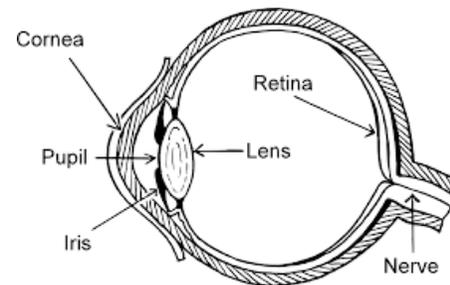
White light is made of all of the different colours. Objects only reflect certain colours, which is why they look that colour to us.



A **filter** blocks all colours of light, except those in the filter.



## The eye



**Cornea:** Protects the eye

**Pupil:** Lets light in to the eye

**Iris:** Controls the size of the pupil

**Lens:** Directs light towards the retina

**Retina:** Turns light into an electrical signal

**Optic nerve:** Sends the signal to the brain

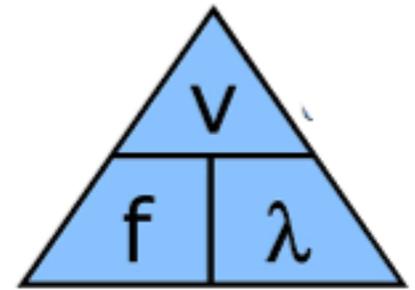
## Wave speed

$$V = f \times \lambda$$

**V :** wavespeed in m/s

**f :** frequency in Hz

**$\lambda$  :** wavelength in m



# History

# Empire and the Slave Trade

## Key dates and events

| 1441  | 1502  | 1619  | 1641  | 1655   | 1783   | 1804   | 1833  | 1867   |
|---|---|---|---|--|--|--|---|--|
| First enslaved African people are taken from Africa by the Portuguese | First enslaved African people arrive in the New World in the forced service of the Spanish conquistadors. | British ship The White Lion brought 20 enslaved African people ashore in the British colony of Jamestown, Virginia. The crew had seized the Africans from the Portuguese slave ship Sao Jao Bautista. | Colonial plantations in the Caribbean begin exporting sugar. British traders also begin capturing and shipping enslaved people regularly. | Britain takes Jamaica from Spain. Sugar exports from Jamaica will enrich British owners in the coming years. | British Society for Effecting the Abolition of the Slave Trade is founded. They will become a major force for abolition. | After a slave revolt led by Toussaint L'Overture, Saint-Domingue) achieves independence from France and is renamed Haiti. It was now ruled by a majority black population. | Britain passes a law banning slavery in its colonies. Enslaved people are to be released over a period of years, with the final release scheduled for 1840. | Last trans-Atlantic voyage of captive enslaved people. |

## Key Terms:

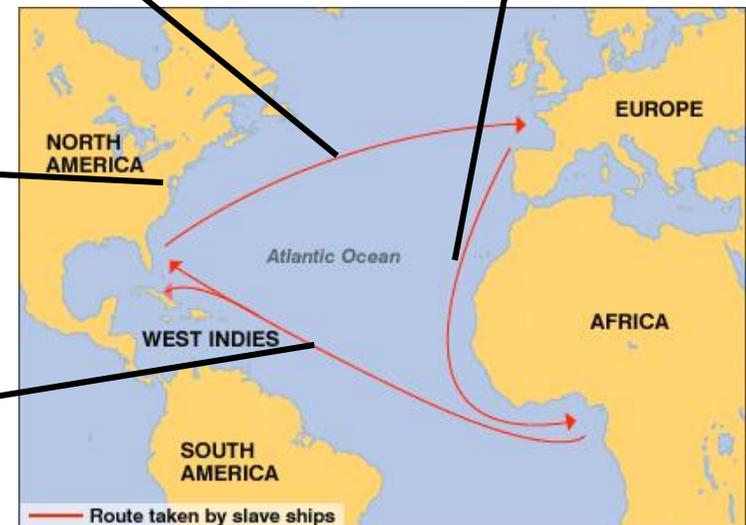
|                 |  |
|-----------------|--|
| Slavery         | Belonging to another person and having no personal freedoms.                         |
| Enslaved people | People who have been forced into slavery   |
| Trans-Atlantic  | Across the Atlantic ocean.   |
| Colony          | A country or territory that is owned by another country. Colonies make up an Empire. |
| Empire          | The collection of colonies owned by a state or country. Example: The British Empire. |
| Revolt          | Take violent action against an established government or ruler; rebel.               |
| Abolition       | Trying to get rid of or ban a certain practice. For example slavery.                 |
| Plantation      | A large farm where crops are grown such as sugar, cotton, tobacco.                   |
| The New World   | What the continent of America was called when it was first discovered by Europeans.  |

**3.** Crops such as sugar, tobacco and cotton which were grown and picked by enslaved people were then transported to Europe for sale.

Virginia, the first British colony in America, founded in 1604. The capital was Jamestown. Enslaved people were first brought here in 1619

**2.** Kidnapped black Africans (called slaves by their captors) were taken from Africa across the Middle Passage to America to be sold to work on plantations.

**1.** Manufactured goods such as guns, cloth and iron were taken to Africa to be traded for enslaved people.



# History

## Key people and groups

### King Charles I

- King of England from 1625 until his execution in 1649

### Parliament

- Elected by the people. Controlled taxes.
- Fought against Charles during the Civil War

### Oliver Cromwell

- General in parliament's army during the war
- Becomes the 'Lord Protector' of England, Scotland and Ireland from December 1653 – September 1658

### King Charles II

- Son of Charles I
- Takes the throne when the monarchy is restored in 1660

## Key Terms:

|                       |   |
|-----------------------|---|
| Divine right of kings | Belief that the monarch is chosen by God and should have absolute power |
| Democracy             | A system of government where everyone can vote                          |
| Tyrant                | A cruel and unfair ruler  |
| Treason               | Betraying your country  |
| Roundhead             | Nickname for parliamentary soldiers                                     |
| Cavalier              | Nickname for Royalist soldiers  |
| Puritan               | A very strict Protestant  |
| Civil War             | War between two or more sides in the same country                       |

# Power and Monarchy

## Causes

- The King did not allow parliament to have their say on the issue of taxes
- The King believed he could rule without having to consult anyone else.
- Many people in parliament, particularly puritans, believed that the king was trying to turn the country Catholic

## Causes, Events, Consequences

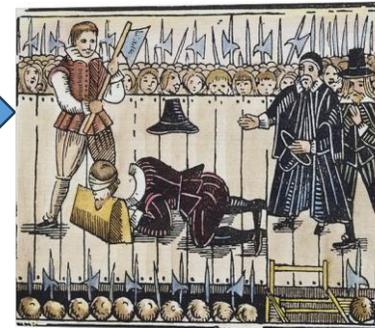


## Consequences

- Charles is put on trial and found guilty of treason and sentenced to death
- Charles I is executed on the 30th January 1649
- Parliament gains more powers
- Oliver Cromwell becomes leader of England
- More religious freedom once the King is executed

## Events

- King Charles declared war on parliament in August 1642
- The war begins well for the Royalists who take Oxford and Bristol in 1643
- After successive defeats, parliament's army is crushed at Naseby in 1645
- The King surrenders to Scotland in 1645 but is handed over to parliament and imprisoned.





# Geography

## Our developing world: Part 1

### Key terms

**Life Expectancy-** The average age a countries population is expected to live for

**GDP- Gross domestic product-** The value of goods made by a country each year.

**GDP per capita -** Gross domestic product- The value of goods made by a country each year divided by the population of that country

**Infant Mortality-** The number of babies who die before their first birthday/ per 1000

**HDI index-** A way of measuring development that includes literacy rate, life expectancy and wealth.

**Literacy rate-** The % of people in a country who can read and write.

**Fair Trade-**Trade between richer and poorer countries where a fair price is given for goods.

**Debt Relief-** When a rich country reduces the debt owed by a poorer country

**Primary economy-** Goods sold by a country that involve taking raw materials out of the ground eg Farming, mining or fishing.

**Secondary economy-** Goods that are manufactured (produced in a factory) and then sold.



### The Geography of Malawi

- Malawi is located in South East Africa, between the Equator and the Tropic of Capricorn.
- It is a landlocked country that has no access to the sea.
- Malawi is approximately half the size of the UK
- Malawi's capital city is Lilongwe.
- Lake Malawi is a large lake the runs to the East of the country



### Why is Malawi under-developed?

**COLONIALISM:** Malawi was controlled by the British until 1965 so was exploited by the British government.

**LANDLOCKED COUNTRY:** With no access to the sea, Malawi struggles to trade with countries outside of Africa.

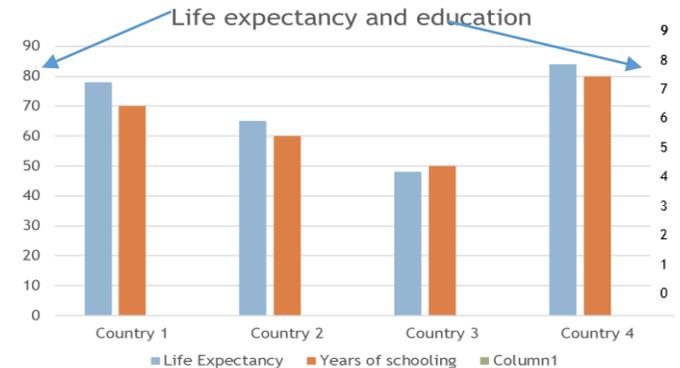
**DISEASE:** Malawi has over 1 million orphaned children due to AID's which means few get opportunities to make money. There is only one doctor for every 50000 people.

**EDUCATION:** 30% of children in Malawi do not start primary school which means they gain few qualifications.

**NATURAL DISASTERS:** Times of little rainfall lead to drought and times of too much rainfall lead to flooding. This affects farming which affects peoples food supply.

### Creating a clustered bar chart

- 1) Choose the correct numbers for each axis by checking the highest life expectancy and highest years of education
- 2) Blue bars take the left axis, orange bars take the right axis
- 3) Include a key and leave a space between each set of data





# Geography

## Our developing world: Part 2

### How can we help Malawi develop?

**TOURISM**-Lake Malawi has opportunities for beach holidays and the national parks could be used for safaris. This will provide jobs in construction and as tour guides, lifting people out of poverty.



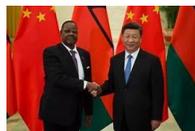
**AID**- Charities and governments can provide tools for work, medicine for disease and loans to start small businesses. This would enable more people to work more effectively.

**IMPROVED TECHNOLOGY**- Ploughs for farmers and small dams for irrigation would enable higher yields when farming for crops. This means more profit.



**FAIR TRADE**- If the UK offers a fair price for Malawi's sugar. The extra money could be used to help farmers grow their business and pay workers a fair wage.

**INVESTMENT FROM CHINA**- China has been allowed to move some of its business into Malawi. In exchange, Chinese companies can provide employment for young Malawians.



### Does China have a pollution problem?

Yes

- In 2017 it was estimated China was building a non renewable power station every week
- 1.4 Billion people need electricity and energy
- China emits more overall CO2 than any other country.
- More Chinese own cars than ever before
- Rivers are highly polluted by waste and fossil fuels

No

- Huge turbines on dams produce clean energy for 11% of China.
- China now produces more wind power than both the USA and UK combined.
- Per person China produces less CO2 than the USA.
- In 2015 China invested \$100 billion into clean energy, in 2005 it was just \$3 billion

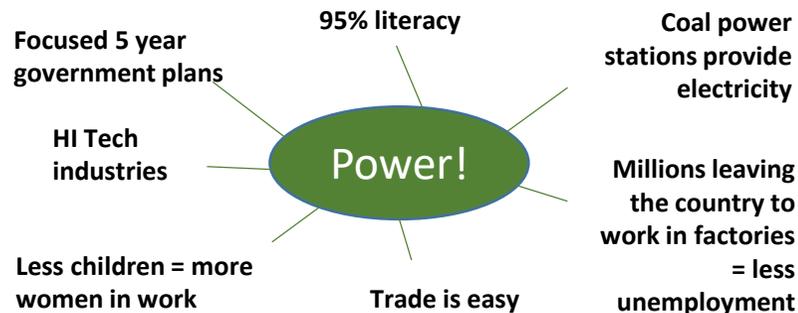
### Why people migrating within China?



The **West** is **cold** and **mountainous**  
The **North** is **dry desert**  
People are **moving** to the **South and East** because:

- The climate is warm
- There are plenty of jobs
- There is a coastline
- Better schools and hospitals

### Why is China's economy growing so quickly?



### Is China really developed?

This is for you to decide but remember, development isn't just about wealth!

It also includes  
Education  
Health  
Overall quality of life  
Treating members of society equally!



# Faith & Ethics

## What are human rights?

We are all born with human rights, but several important documents explain what they are and how they should be protected.

### Universal Declaration of Human Rights

The Universal Declaration of Human Rights is the most important document outlining human rights. It was agreed upon by the United Nations in 1948, as a response to the terrible events of the Second World War.

The Universal Declaration of Human Rights outlines the rights enjoyed by every human being regardless of gender, race, language, religion, politics, or wealth.

It recognises and protects the right to:  
life, freedom and security;  
justice;  
own property;  
have your own opinion about religion and politics;  
say what you want;  
associate with who you want;  
marry who you want;  
work where you want;  
rest and relaxation;  
education.

The Universal Declaration of Human Rights is not a law itself. It is a statement of the world's commitment to human rights. Many of its articles have been included in the laws of countries around the world.

## Are humans unique and should other species be protected by rights?

The philosopher Rene Descartes is famous for the quotes "I think, therefore I am!" and "animals are mere machines but man stands alone". These quotes give some insight into how humans are different to animals, such as the following criteria:

### Complex language

Humans have a lowered larynx (which allows for a wider variety of sounds than all other animals) and more intricate brain structures that allow for an enormous variety of words to be used and understood.



### Higher consciousness

Humans can contemplate things far beyond their own existence. Humans frequently consider the meaning of non-tangible ideas and try to create theories to explain these concepts that we cannot see or touch.

## Discrimination and Equal opportunities.

Unfortunately some people in society are discriminated against based on their characteristics. Laws and human rights are there to protect people and prevent discrimination.

It is against the law to discriminate against anyone because of:

- age
- gender reassignment
- being married or in a civil partnership
- [being pregnant](#) or on maternity leave
- [disability](#)
- race including colour, nationality, ethnic or national origin
- religion or belief
- sex
- sexual orientation

These are called 'protected characteristics'.

# Human Rights

## Task

You are to imagine that you are the leader of a new world and you have been given the task of creating your own set of 10 Universal Human rights that all people would be entitled to.

What would they be and explain why you chose them?

### Discrimination and equal opportunities.

As we can see that you are not allowed to discriminate against someone based on their protected characteristics.

Do you think there should be more things added to the list and why?

How do you think someone should be dealt with, if they are caught discriminating another person and why?





# Spanish



## Unit 1: Where I Live

### MODEL TEXT

|   |  |   |
|---|--|---|
| 1 | En Madrid hay una piscina y muchos restaurantes pero no hay playa. | In Madrid there is a swimming pool and lots of restaurants but there isn't a beach. |
| 2 | Me gusta mucho mi pueblo porque es bastante animado.               | I really like my town because it is quite lively.                                   |
| 3 | Normalmente a las nueve y media voy al parque.                     | Normally at 9:30 I go to the park.  |
| 4 | Este fin de semana voy a salir con mis amigos.                     | This weekend I am going to go out with my friends.                                  |

Line 1: What is there in your town?



| In my village/town                           | Verb                                  | Places in the town   |
|--|---------------------------------------|--|
| <b>En mi barrio</b><br>(In my neighbourhood) | <b>hay</b><br>(there is/are)          | <b>un castillo</b> (a castle)<br><b>un centro comercial</b> ( a shopping centre)<br><b>un cine</b> (a cinema)<br><b>un estadio</b> (a stadium)<br><b>un mercado</b> (a market)<br><b>un polideportivo</b> (a leisure centre)<br><b>un parque</b> (a park)<br><b>un museo</b> (a museum)<br><b>un restaurante</b> (a restaurant)<br><b>una playa</b> (a beach)<br><b>una plaza</b> (a square)<br><b>una iglesia</b> (a church)<br><b>una piscina</b> (a swimming pool)<br><b>una tienda</b> (a shop)<br><b>una universidad</b> (a university)             |
| <b>En mi pueblo</b><br>(In my village)       |                                       | <b>unos restaurantes</b> (some restaurants)<br><b>unas tiendas</b> (some shops)<br><b>muchos restaurantes</b> (lots of restaurants)<br><b>muchas tiendas</b> (lots of shops)   |
| <b>En mi ciudad</b><br>(In my town)          |                                       | <b>castillo</b> (a castle)<br><b>centro comercial</b> ( a shopping centre)<br><b>cine</b> (a cinema)<br><b>estadio</b> (a stadium)<br><b>mercado</b> (a market)<br><b>polideportivo</b> (a leisure centre)<br><b>parque</b> (a park)<br><b>museo</b> (a museum)<br><b>restaurante</b> (a restaurant)<br><b>playa</b> (a beach)<br><b>plaza</b> (a square)<br><b>iglesia</b> (a church)<br><b>piscina</b> (a swimming pool)<br><b>tienda</b> (a shop)<br><b>universidad</b> (a university)<br><b>restaurantes</b> (restaurants)<br><b>tiendas</b> (shops) |
|  | <b>no hay</b><br>(there isn't/aren't) |  |
|  | <b>no hay nada</b> (there is nothing) |  |



# Spanish



## Unit 1: Where I Live

Line 2: Do you like living in your town?

| Opinion  | Living here                        | Because                    | Opinion phrase                             | Intensifier                | Adjective  |
|--|------------------------------------|----------------------------|--|----------------------------|--|
| <b>Me gusta</b><br>(I like)                      | <b>vivir aquí</b><br>(living here) | <b>porque</b><br>(because) | <b>diría que es</b><br>(I would say it is) | <b>un poco</b><br>(a bit)  | <b>tranquilo</b> (calm)<br><b>bonito</b> (pretty)<br><b>histórico</b> (historic) |
| <b>Me gusta mucho</b><br>(I really like)         |                                    |                            | <b>pienso que es</b><br>(I think it is)    | <b>bastante</b><br>(quite) | <b>animado</b> (lively)<br><b>moderno</b> (modern)<br><b>ruidoso</b> (noisy)     |
| <b>Me encanta</b><br>(I love)                    |                                    |                            | <b>creo que es</b><br>(I believe it is)    | <b>muy</b><br>(very)       | <b>feo</b> (ugly)<br><b>sucio</b> (dirty)  |
| <b>No me gusta</b><br>(I don't like)             |                                    |                            |  | <b>demasiado</b><br>(too)  |  |
| <b>No me gusta nada</b><br>(I don't like at all) |                                    |                            |  |                            |  |
| <b>Odio</b><br>(I hate)                          |                                    |                            |  |                            |  |



Line 3: Telling the time



| It is       | Hour  | Minutes   |
|-------------|---|---|
| Es (It is)  | la una (1 o'clock)  | y cinco (5 past)<br>y diez (10 past)  |
| Son (It is) | las dos (2 o'clock)<br>las tres (3 o'clock)<br>las cuatro (4 o'clock)<br>las cinco (5 o'clock)<br>las seis (6 o'clock)<br>las siete (7 o'clock)<br>las ocho (8 o'clock)<br>las nueve (9 o'clock)<br>las diez (10 o'clock)<br>las once (11 o'clock)<br>las doce (12 o'clock) | y cuarto (quarter past)<br>y veinte (20 past)<br>y veinticinco (25 past)<br>y media (half past)<br><br>menos veinticinco (25 to)<br>menos veinte (20 to)<br>menos cuarto (quarter to)<br>menos diez (10 to)<br>menos cinco (5 to) |



### Line 3: What do you do in town and when?

| Sequencer   | At     | Time                      | Verb                        | Activity  |
|---|--------|---------------------------|-----------------------------|---|
| Primero (First)<br>Luego (Then)<br>Finalmente (Finally) | a (at) | las cinco y media (5:30)  | salgo (I go out)            | con mis amigos (with my friends)  |
|   |        | las seis y cuarto (6:15)  | voy (I go)                  | al cine (to the cinema)<br>al parque (to the park)<br>a la cafetería (to the café)<br>a la bolera (to the bowling alley)<br>a la playa (to the beach)<br>de compras (shopping)<br>de paseo (for a walk) |
|   |        | las dos menos diez (1:50) | no hago nada (I do nothing) |   |



### Line 4: What are you going to do?

| Time marker                                | Verb                           | Activity   |
|--|--------------------------------|--|
| Este fin de semana<br>(This weekend)       | voy a<br>(I'm going)           | salir con mis amigos (to go out with my friends)<br>ver la televisión (to watch TV)<br>hacer mis deberes (to do my homework) |
| El sábado<br>(On Saturday)                 | vas a<br>(you are going) (s)   | jugar al voleibol (to play volleyball)<br>chatear (to chat online)<br>ir al cine (to go to the cinema)                       |
| El domingo<br>(On Sunday)                  | va a<br>(he/she is going)      | ir al parque (to go to the park)<br>ir a la cafetería (to go to the café)<br>ir a la bolera (to go to the bowling alley)     |
| Por la mañana<br>(In the morning)          | vamos a<br>(we are going)      | ir a la playa (to go to the beach)<br>ir de compras (to go shopping)<br>ir de paseo (to go for a walk)                       |
| Por la tarde<br>(In the afternoon/evening) | vais a<br>(you are going) (pl) | hacer nada (to do nothing)<br>hacer muchas cosas (to do lots of things)  |
|  | van a<br>(they are going)      |  |





### Model Text - Mis vacaciones - Holidays

|    |  |  |
|----|--|--|
| 1. | El verano pasado fui a Italia con mis padres.  | Last summer I went to Italy with my parents.   |
| 2. | Fuimos en avión y en coche. El viaje duró cuatro horas, ¡Qué guay!                                 | We went by plane and by car. The journey took four hours, how cool!                        |
| 3. | El primer día visité monumentos y luego descansé en la playa.                                      | On the first day I visited monuments and then I relaxed on the beach.                      |
| 4. | Otro día, por la mañana saqué fotos y después mandé mensajes a mis amigos.                         | On another day, in the morning I took photos and afterwards I sent messages to my friends. |
| 5. | Fue flipante porque hizo buen tiempo, sin embargo, perdí mi pasaporte. ¡Qué lástima!               | It was awesome because the weather was good, however, I lost my passport. What a shame!    |
| 6. | Si ganara la lotería, iría a Tailandia con mis amigos. Me quedaría en un hotel de cinco estrellas. | If I won the lottery, I'd go to Thailand with my friends. I'd stay in a 5 star hotel.      |

### Line 1 - ¿Adónde fuiste de vacaciones? (Where did you go on holiday?)

|  |                          |  |  |
|--|--------------------------|--|--|
| El verano pasado<br>(Last summer)  | fui a<br>(I went to)     | Escocia (Scotland)<br>Gales (Wales)<br>Irlanda (Ireland)   | con mi familia<br>(with my family)   |
| El año pasado<br>(Last year)   | fuimos a<br>(We went to) | Italia (Italy)<br>España (Spain)<br>Francia (France)<br>Grecia (Greece)<br>Alemania (Germany)<br>Turquía (Turkey)<br>Los Estados Unidos (USA)<br>México (México) | con mis padres<br>(with my parents)<br><br>con mi clase<br>(with my class)<br><br>con mis amigos<br>(with my friends)<br><br>con mi equipo<br>(with my team) |
| no fui de vacaciones (I didn't go on holiday)<br>me quedé en casa (I stayed at home) |                          |  |  |

### Line 2 - ¿Cómo fuiste? (How did you get there?)

|                           |                    |                                     |                                 |                                  |
|---------------------------|--------------------|-------------------------------------|---------------------------------|----------------------------------|
| Fui en<br>(I went by)     | avión<br>(plane)   | El viaje duró<br>(the journey took) | una hora<br>(one hour)          | ¡Qué guay!<br>(How cool!)        |
| Fuimos en<br>(we went by) | barco<br>(boat)    |                                     | ocho horas<br>(eight hours)     | ¡Qué bien!<br>(How great!)       |
|                           | coche<br>(car)     |                                     | medio día<br>(half a day)       | ¡Qué rollo!<br>(How annoying!)   |
|                           | tren<br>(train)    |                                     | un día completo<br>(a full day) | ¡Qué aburrido!<br>(How boring)   |
|                           | autocar<br>(coach) |                                     |                                 | ¡Qué suerte!<br>(How lucky!)     |
|                           | autobús<br>(bus)   |                                     |                                 | ¡Qué lástima!<br>(What a shame!) |



# Spanish



## Unit 2: Holidays

### The preterite tense – AR verbs

The preterite tense is used to talk about actions in the past. E.g. Yesterday I visited a museum.

**Step 1** – Take the AR verb – e.g. *Visitar* (To visit)

**Step 2** – Remove the AR ending – *Visit*

**Step 3** – Add the following endings, depending on who did the action:

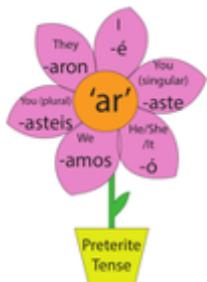
|              | AR      |
|--------------|---------|
| I            | _é      |
| You singular | _aste   |
| He/She       | _o      |
| We           | _amos   |
| You plural   | _asteis |
| They         | _aron   |

E.g.

|                  | VISITAR            |
|------------------|--------------------|
| To visit         | <b>VISITAR</b>     |
| I visited        | <b>visité</b>      |
| You (s) visited  | <b>visitaste</b>   |
| He/she visited   | <b>visitó</b>      |
| We visited       | <b>visitamos</b>   |
| You (pl) visited | <b>visitasteis</b> |
| They visited     | <b>visitaron</b>   |

### Useful AR verbs

|                          |                             |
|--------------------------|-----------------------------|
| <b>Vistar</b> (to visit) | <b>Montar</b> (to ride)     |
| <b>Hablar</b> (to speak) | <b>Descansar</b> (to relax) |
| <b>Comprar</b> (to buy)  | <b>Mandar</b> (to send)     |
| <b>Bailar</b> (to dance) | <b>Nadar</b> (to swim)      |



### Irregular verb – Sacar (to take)

Sacar → Saqué (I took)



Most Spaniards prefer to spend their summer holidays in Spain, rather than going abroad. Many leave the hot, humid weather of the cities inland to go to the coastal regions of Valencia, Andalusia or the Balearic Islands.

### Line 3 - ¿Qué hiciste? (What did you do?)

|  |   |                                     |   |
|--|---|-------------------------------------|---|
| <b>El primer día</b><br>(On the first day) | <b>visité monumentos</b><br>(I visited monuments)                     | <b>Luego</b><br>(then)              | <b>visité monumentos</b><br>(I visited monuments)                     |
| <b>Un día</b><br>(One day)                 | <b>compré una camiseta</b><br>(I bought a t-shirt)                    | <b>Más tarde</b><br>(later)         | <b>compré una camiseta</b><br>(I bought a t-shirt)                    |
| <b>Por la mañana</b><br>(In the morning)   | <b>saqué fotos</b><br>(I took photos)                                 | <b>Después</b><br>(afterwards)      | <b>Saqué fotos</b><br>(I took photos)                                 |
| <b>Por la tarde</b><br>(In the afternoon)  | <b>descansé en la playa</b><br>(I relaxed on the beach)               | <b>Otro día</b><br>(on another day) | <b>descansé en la playa</b><br>(I relaxed on the beach)               |
| <b>Por la noche</b><br>(In the evening)    | <b>mandé mensajes a mis amigos</b><br>(I sent messages to my friends) |                                     | <b>mandé mensajes a mis amigos</b><br>(I sent messages to my friends) |
|  | <b>nadé en el mar</b><br>(I swam in the sea)                          |                                     | <b>nadé en el mar</b><br>(I swam in the sea)                          |
|  | <b>tomé el sol</b><br>(I sunbathed)                                   |                                     | <b>tomé el sol</b><br>(I sunbathed)                                   |
|  | <b>comí paella</b><br>(I ate paella)                                  |                                     | <b>comí paella</b><br>(I ate paella)                                  |
|  | <b>bebí una limonada</b><br>(I drank a lemonade)                      |                                     | <b>bebí una limonada</b><br>(I drank a lemonade)                      |



# Spanish



## Unit 2: Holidays

### The preterite tense – ER and IR verbs

The preterite tense is used to talk about actions in the past. E.g. Last night we ate paella.

**Step 1** – Take the ER or IR verb – e.g. *Comer* (To eat)

**Step 2** – Remove the ending – *Com*

**Step 3** – Add the following endings, depending on who did the action:

|              | ER/IR   |
|--------------|---------|
| I            | _i      |
| You singular | _iste   |
| He/She       | _ió     |
| We           | _imos   |
| You plural   | _isteis |
| They         | _ieron  |

E.g.

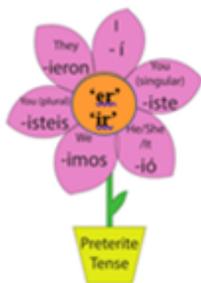
| To eat       | COMER     |
|--------------|-----------|
| I ate        | Comí      |
| You (s) ate  | Comiste   |
| He/she ate   | Comió     |
| We ate       | Comimos   |
| You (pl) ate | Comisteis |
| They ate     | Comieron  |

| To go out         | SALIR     |
|-------------------|-----------|
| I went out        | Salí      |
| You (s) went out  | Saliste   |
| He/she went out   | Salió     |
| We went out       | Salimos   |
| You (pl) went out | Salisteis |
| They went out     | Salieron  |



### Useful AR verbs

|                   |                     |
|-------------------|---------------------|
| Comer (to eat)    | Salir (to go out)   |
| Ver (to see)      | Escribir (to write) |
| Beber (to drink)  | Dormir (to sleep)   |
| Conocer (to meet) |                     |



### Irregular verb – Ver (to see)

Ver → Vi (I saw) – no accent!

### Line 4 – What did you do on the last day?

| Time marker                               | Past tense activity   | Sequencer                      | Past tense activity   |
|---|---|--------------------------------|---|
| <b>El último día</b><br>(On the last day) | Comí paella<br>(I ate paella)                               | <b>Luego</b><br>(then)         | Comí paella<br>(I ate paella)                               |
| <b>Por la mañana</b><br>(In the morning)  | Comí un helado<br>(I ate an ice cream)                      | <b>Más tarde</b><br>(later)    | Comí un helado<br>(I ate an ice cream)                      |
| <b>Por la tarde</b><br>(In the afternoon) | Salí en barco<br>(I went out on a boat)                     | <b>Después</b><br>(afterwards) | Salí en barco<br>(I went out on a boat)                     |
| <b>Por la noche</b><br>(In the evening)   | Escribí SMS<br>(I wrote text messages)                      |                                | Escribí SMS<br>(I wrote text messages)                      |
|   | Dormí mucho<br>(I slept a lot)                              |                                | Dormí mucho<br>(I slept a lot)                              |
|   | Vi un castillo interesante<br>(I saw an interesting castle) |                                | Vi un castillo interesante<br>(I saw an interesting castle) |
|   | Bebí una limonada<br>(I drank a lemonade)                   |                                | Bebí una limonada<br>(I drank a lemonade)                   |
|   | Conocí a un chico guapo<br>(I met a good looking boy)       |                                | Conocí a un chico guapo<br>(I met a good looking boy)       |
|   | Conocí a una chica guapa<br>(I met a good looking girl)     |                                | Conocí a una chica guapa<br>(I met a good looking girl)     |



# Spanish



## Unit 2: Holidays

Line 5 - ¿Cómo te fue? (How was it?)

|   |                            |  |
|---|----------------------------|--|
| <b>Fue divertido</b><br>(It was fun)          | <b>porque</b><br>(because) | <b>hizo buen tiempo</b><br>(The weather was good)                            |
| <b>Fue estupendo</b><br>(It was brilliant)    |                            | <b>conocía un chico/chica guapo/guapa</b><br>(I met a good-looking boy/girl) |
| <b>Fue fenomenal</b><br>(It was fantastic)    |                            | <b>me relajé</b><br>(I relaxed)  |
| <b>Fue flipante</b><br>(it was awesome)       |                            | <b>la comida era rica</b><br>(the food was delicious)                        |
| <b>Fue guay</b><br>(It was cool)              |                            | <b>el hotel era lujoso</b><br>(the hotel was luxurious)                      |
| <b>Fue regular</b><br>(it was OK)             |                            |  |
| <b>Fue un desastre</b><br>(It was a disaster) | <b>porque</b><br>(because) | <b>llovió</b><br>(It rained)   |
| <b>Fue horrible</b><br>(It was horrible)      |                            | <b>comí algo malo y vomité</b><br>(I ate something bad and I was sick)       |
| <b>Fue horroroso</b><br>(it was terrible)     |                            | <b>perdí mi pasaporte</b><br>(I lost my passport)                            |
| <b>Fue raro</b><br>(it was weird)             |                            | <b>perdí mi móvil</b><br>(I lost my mobile)                                  |



Have a look at this map of Spain...  
Have you been on holiday to any of these cities?

The Balearic Islands include Mallorca, Menorca, Ibiza and Formentera.  
The Canary Islands are in the Atlantic Ocean, off the coast of northwest Africa. The main islands are Tenerife, Lanzarote, Gran Canaria and Fuerteventura.



# Art

## Developing Skills

tear duct

thick thin thick

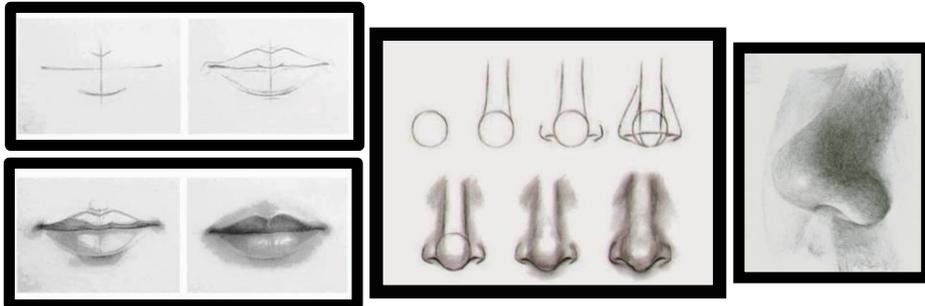
The eyeball is a sphere. We never see all of it because of our eyelids.

The eyelids follow the curve of the eyeball. The lid is sometimes squished at the top, thanks to the skull.

The iris (colored part) is a circle. It is usually overlapped by the upper lid.

The pupil (black part) is right in the center of the iris.

The lines in the iris radiate out from the center.



one eye length in between eyes

**Proportions of the Face**

crown of head to eyes equals half of head's length

nose is about halfway between eyes and chin

mouth is halfway between nose and chin

ears extend from brow to nose

<https://www.youtube.com/watch?v=WROSZ6803cE>

# Portraiture

## Keywords

**Self Portrait** - a portrait of yourself created by yourself

**Contour drawing**- a drawing that is essentially an outline; the French word **contour** meaning, "outline."

**Tonal Value** - is the light or dark of a subject independent of its colour.

**Proportion** - refers to the relationship in size and placement between one object and another.

## Artist in Focus

**Luke Dixon** is a graphic artist, illustrator and print maker from the north of England. he is the founder of The Bear Hug Company.



## Independent Study Task One: Time Line Portrait

Using the Art History Time Line below, choose a portrait from any period of Art you wish.

On A4 paper, copy the portrait in any media you wish.



## Independent Study Task Two: Practicing Skills – Self Portrait

Take a photograph of your own face front on.

Using the You Tube clip to guide you, draw out the proportions of your face

Sketch out lightly and then spend at least 20 minutes on each feature

Add a wide range of tones so that your portrait becomes less flat (2D) and looks more realistic (3D)



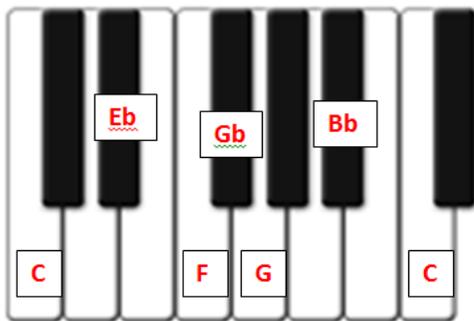
# Music

## 12 Bar Blues Chords in C

|   |   |   |   |
|---|---|---|---|
| C | C | C | C |
| F | F | C | C |
| G | F | C | C |

C = CEG  
F = FAC  
G = GBD

## Blues Scale in C



## Key Features

### Blues:

- Slow tempo
- Sad Lyrics
- Repetitive melodies and words.
- Instruments such as brass , piano and vocals were popular in traditional blues music.

### Jazz:

- Swing rhythm patterns used.
- Improvised melody line.
- Melody played by instruments such as vocals, trumpet, clarinet, flute.
- Drum kit, piano and double bass keep the ensemble in time and are part of the rhythm section.

## Keywords

|                   |   |
|-------------------|---|
| Improvisation     | Spontaneous performance without specific or scripted preparation.                                       |
| Swing rhythm      | Alternately lengthening and shortening the pulse-divisions in a rhythm.                                 |
| Chords            | A group of (typically three or more) notes sounded together, as a basis of harmony.                     |
| Walking Bass Line | A <b>walking bass line</b> simply walks through the appropriate scale of each chord, one note per beat. |

# Blues and Jazz

## History and Background

- In the 18<sup>th</sup> and 19<sup>th</sup> Centuries Africans were taken from Africa and brought to North America to work as slaves for white landlords.
- Blues Music usually has sad words about the way people have been treated.
- Blues music started in America by African slaves working under harsh conditions.
- Blues music originated from the slaves working in the cotton fields.

## Key Musicians

**Bessie Smith** (1894 - 1937) was an American blues singer. Nicknamed the **Empress of the Blues**, she was the most popular female blues singer of the 1920s and 1930s.



**BB King** (1925 - 2015) was an American blues singer, electric guitarist, songwriter, and record producer. King introduced a sophisticated style of soloing based on fluid string bending and shimmering vibrato that influenced many later electric blues guitarists



**Muddy Waters** (1913 - 1983) was an American blues singer-songwriter and musician who is often cited as the "father of modern Chicago blues", and an important figure on the post-war blues scene.





# Drama



## Creating a Character

### Vocal Skills

|        |  |
|--------|--|
| Accent | How you pronounce words to sound like you are from a particular country. |
| Pace   | How fast or slow you talk.   |
| Pause  | A beat in between a word for dramatic effect.                            |
| Pitch  | How high or low you talk.  |
| Stress | Putting emphasis on certain words.                                       |
| Tone   | How you say a word to show a particular emotion.                         |
| Volume | How loud or quiet you talk.  |

### Physical Skills

|                    |  |
|--------------------|--|
| Body Language      | How you use your body to show a particular emotion.                            |
| Eye Contact        | Where you look to involve your audience or other characters.                   |
| Facial Expressions | How you use your face to show a particular emotion.                            |
| Gait               | How you walk as a specific character.  |
| Hand Gestures      | How you use your hands to show a particular emotion.                           |
| Posture            | How you position your back and shoulders to show a specific character/emotion. |
| Stance             | How you stand as a specific character.   |



### Performance Tips

|  |  |
|--|--|
|  | Face the audience all the time. No one wants to see the back of your head! |
|  | Stay in role! Try not to laugh or come out of character.                   |
|  | Project!   |
|  | Know what you're doing! Practice means confidence.                         |

### Characterisation Skills

Frowning and mouth upturned.

Loud volume.

High pitch.

Angry tone.

Intense eye contact.

Straight posture.

Arms crossed.

Wide stance.

Lots of stress.



How might we know this character is angry?

### Why is Important to Create Successful Characters?

In Drama, we have to make our audiences believe us. Therefore, we must work hard at creating a character completely different from ourselves.



For example, Alan Rickman who played Severus Snape in Harry Potter was a lovely person. However, he used his skills to show us how horrible his character was.



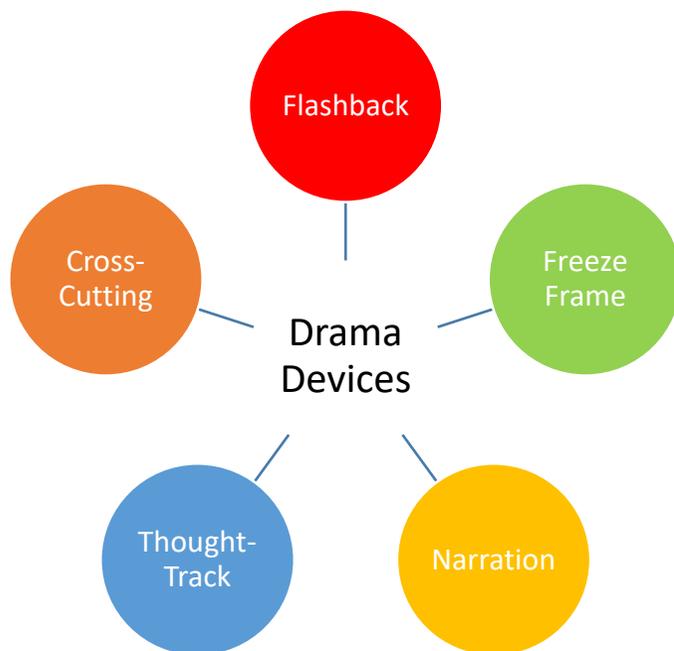


# Drama



## Creating a Scene

How can we make a scene look interesting?



### Performance Tips

|   |  |
|---|--|
|    | Face the audience all the time. No one wants to see the back of your head! |
|    | Stay in role! Try not to laugh or come out of character.                   |
|   | Project!   |
|  | Know what you're doing! Practice means confidence.                         |

### Dramatic Devices

|               |   |
|---------------|---|
| Cross-Cutting | Where you have two scenes happening at the same time that link.                             |
| Flashback     | Creating a scene that goes back in time to get a better understanding of what is happening. |
| Freeze Frame  | A frozen image showing a key moment.  |
| Narration     | Telling the audience a story.   |
| Thought-Track | Telling the audience exactly what your character is thinking and feeling.                   |

### Why should we add devices to our scenes?

Adding devices to our scenes makes them more interesting. They can also give our audiences more information on what is happening.



# Food & Nutrition

## The nutrients & healthy eating



### Context Food in the news

**Poor diet quality was directly responsible for 11 million deaths world wide in 2017**

A new survey commissioned by the British Nutrition Foundation reveals that **62% of Britons have made a change to their diet to get healthier over the past year.**

**Health consciousness is expected to rise** following heightened awareness of health conditions after the pandemic

### Measurements

G = grams

kg = kilograms - 1kg = 1000g

ml = millilitre

L= litre – 1 litre = 1000ml

Tsp = teaspoon = 1 tsp = 5g

Tbsp = tablespoon = 1 tbsp = 15g

### The eight healthy eating guidelines

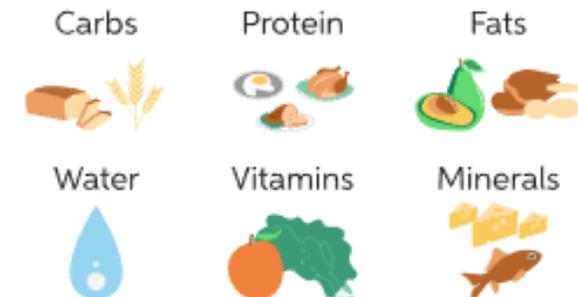
1. Base your meals on starch carbohydrates
2. Eat lots of fruit and vegetables
3. Eat more fish
4. Cut down on saturated fats
5. Eat less salt
6. Drink plenty of water
7. Do not skip breakfast
8. Get active and try to maintain a healthy weight

### Key Words

|                       |   |
|-----------------------|---|
| <b>Macronutrient</b>  | Nutrients required by the body in larger amounts. Carbohydrates, protein & fats   |
| <b>Micronutrient</b>  | Nutrients required by the body in smaller amounts. Vitamins & minerals  |
| <b>Gelatinisation</b> | The thickening of a liquid due to the swelling of starch grains when heat is applied  |
| <b>Sustainability</b> | The fulfilling the needs of current generations without compromising the needs of future generations, while ensuring a balance between economic growth, environmental care and social well-being. |

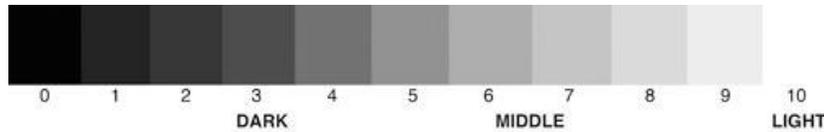


### Six essential nutrients





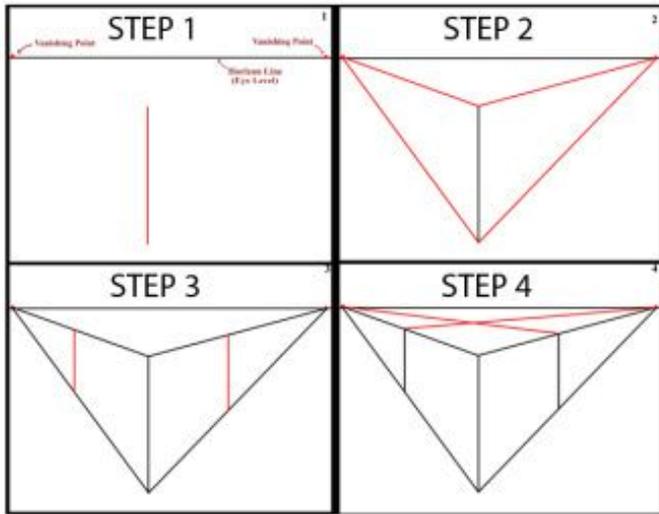
# Graphics



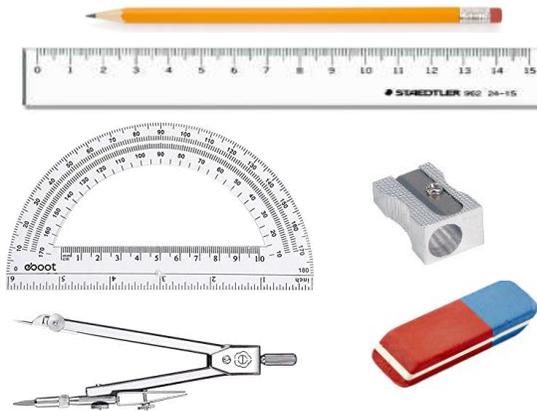
## Year 8

### Graphics Techniques

#### 2 Point Perspective



### Key Equipment



### Keywords

|                           |   |
|---------------------------|---|
| <b>Perspective</b>        | <b>Perspective</b> is what gives a three-dimensional feeling to a flat image such as a <b>drawing</b> or a painting |
| <b>Illustration</b>       | An <b>illustration</b> is a decoration, interpretation or visual explanation of a text, concept or process.         |
| <b>Tone</b>               | Tone refers to how light or dark a colour or shade is.  |
| <b>Construction Lines</b> | Lines which are lightly added to a drawing to help guide you to create the correct angles.                          |
| <b>Typography</b>         | The style and appearance of writing.  |



### Careers: Architecture

Architects create designs for new construction projects, alterations and redevelopments. They use their specialist construction knowledge and high-level drawing skills to design buildings that are functional, safe, sustainable and aesthetically pleasing.

The average **salary** for **Architect** jobs is £77,500.

### Useful tools for Inkscape

- ← **Selector**
- ← **Bezier Tool**
- ← **Rectangle Tool**
- ← **Type Tool**
- ← **Spray Tool**
- ← **Eraser Tool**
- ← **Paint Bucket Tool**
- ← **Gradient Tool**



### Frank Miller

As a Graphic Designer, Miller began his career creating illustrations for comics. Marvel has worked for Marvel and DC. He has a distinct style creating powerful images using silhouettes. His art stands out against other graphic designers.

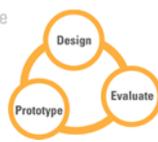
Miller's distinct style, world-building, and elevation of the anti-hero have awarded him every major comic book industry award and a global following.





# Product Design

Iterative Design



Innovative  
Sustainable  
Functional

## Year 7

### What is Product Design and why is it important?

The role of **design** is to create a marketable **product** from an innovation. Design is often the deciding factor in the success of a product.

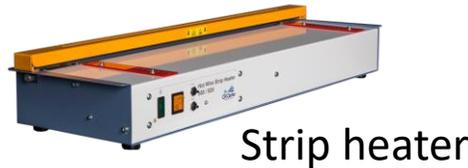
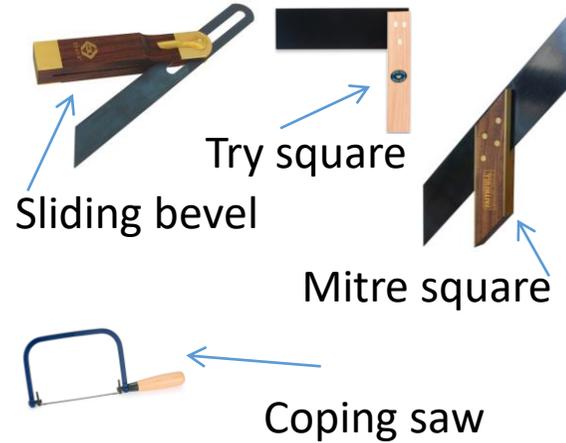
Many customers make purchasing decisions based primarily on product design, because good product design ensures **quality, appearance, performance, ease of use, and reliability.**



- Scribe
- Acrylic
- Accuracy
- Quality
- Forming
- Shaping

Keywords

### Identifying the equipment



### Health and Safety Rules

- Wear safety equipment in the workshop
- Listen to instructions
- Do not run in the workshop
- Do not eat and drink in the workshop
- Ask teacher if unsure of instructions
- Do not wear loose items and tie back hair when entering workshop

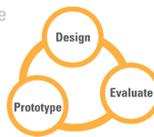
### This is James Dyson.

He is an influential designer because ....

- He constantly **innovates**, his designs are creative and unique
- His products are designed around the needs of the **stakeholders**
- The "cyclone technology" design, including the 15 years and **5,127 prototypes** it took before the first model, DC01, would ultimately prove successful in 1993. Fifteen years!
- **Design and manufacturing** occurs on a **global** scale. Dyson employs over 7,000 people.

Famous Designers





### Identifying the equipment



Mitre saw



Digital Vernier callipers



Sliding bevel



Tenon Saw



Coping saw



Engineer square



Metal Centre Punch



Scribe

Hacksaw



### Keywords

|                     |   |
|---------------------|---|
| <b>Precision</b>    | Being exact and accurate when marking and cutting out.  |
| <b>Tolerance</b>    | An allowable amount of variation of a specified quantity, especially in the dimensions of a machine or part e.g. +/- 0.25mm.                    |
| <b>Aesthetics</b>   | The look and/or feel of a product and how this is incorporated into the design.   |
| <b>Ergonomics</b>   | Human factors and ergonomics is the application of psychological and physiological principles to the design of products, processes, and systems |
| <b>Stakeholders</b> | A person with an interest or concern in something, especially a business.   |

### Categories of Materials

**Metal** – Ferrous and non ferrous mild steel, aluminium and brass

**Alloy**

**Composite** – Carbon fibre,,Kevlar

**Smart materials** – electrochromic materials, photochromic, memory shape alloys, self-healing materials, thermochromic

**Modern materials** – High performance alloys and graphene, super alloys

**Plastics** – **Thermosetting and thermo softening polymers, HIPD, ABS, Polyster resin, epoxy resin**



*Marc Newson.*



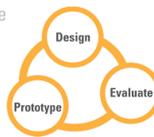
**Famous Designers**

-Marc Andrew Newson CBE is an **industrial designer**.

-His style uses smooth **geometric lines, translucency**, strength, transparency, and tends to have an absence of sharp edges.

-Marc Newson has been described as the most **influential** designer of his generation.

- Mark Newson's current stakeholders include Nike (trainers), Jaegar (clocks), Mont Blanc (pens), Louis Vuitton (kitchen ware) and Ferrari (automotive), Pentax (camera).



### Identifying the equipment



Sliding bevel



Laser Cutter



Mitre saw



Tenon saw



Coping saw



Pyrography pen

### Inclusive and exclusive designs

**Inclusive** design is about Ensuring that products and Systems can be used by Everyone, or as many People as possible.

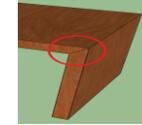
**Exclusive** design is when Products are designed for a particular group of people.

Keywords

### Keywords

|              |   |
|--------------|---|
| Precision    | Being exact and accurate when marking and cutting out.  |
| Tolerance    | An allowable amount of variation of a specified quantity, especially in the dimensions of a machine or part e.g. +/- 0.25mm.                    |
| Aesthetics   | The look and/or feel of a product and how this is incorporated into the design.   |
| Ergonomics   | Human factors and ergonomics is the application of psychological and physiological principles to the design of products, processes, and systems |
| Stakeholders | A person with an interest or concern in something, especially a business.   |

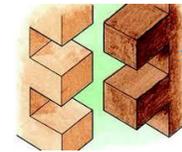
### Shaping and joining



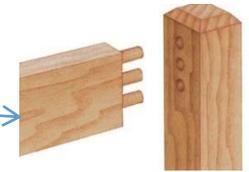
Mitre joint



Dovetail joint



Box joint/comb joint



Dowel joint

## MATTHEW WILLIAMSON DESIGN



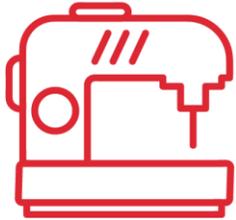
Matthew Williamson is an award-winning, British interior designer known predominantly for his unique and unrivalled use of pattern and colour. Matthew has drawn on his decades of experience and pivoted seamlessly into the world of interior design. He now develops several homeware collections to sit alongside his growing residential and commercial interior design portfolio.

Famous Designers



# Textiles

# Textiles Woven Monster Cushion



## Context

Textile arts are arts and crafts that use plant, animal, or synthetic fibres to construct practical or decorative objects. Textiles have been a fundamental part of human life since the beginning of civilization.

## Designer Focus

Sarah Cooke



Sarah Cooke is an recycled weave artist who's Key design features are:

- Working with waste fabrics and materials to create her designs
- Often uses bright colours
- Makes fabrics, bags and clothing



## Examples of Monster Cushions



## Textiles Techniques

### Tie-dye



The process of tie-dye typically consists of folding, twisting, pleating, or crumpling fabric or a garment, before binding with string or rubber bands, followed by the application of dye or dyes.

### Applique



Appliqué is ornamental needlework in which pieces or patches of fabric in different shapes and patterns are sewn or stuck onto a larger piece to form a picture or pattern.

### Weaving



Weaving is a method of textile production in which two distinct sets of yarns or threads are interlaced at right angles to form a fabric or cloth .

## Key Words

### Fabrics

Fabrics are made by either weaving, knitting or bonding fibres together. These fibres could be made out of natural or synthetic fibres.

### Fibres

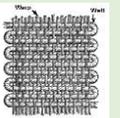
Fibres are hair like structures that are either natural (made from plant or animal sources) or synthetic (made from chemicals).  
Examples of natural fibres are Wool, Cotton and Silk  
Examples of synthetic fibres are Polyester, Nylon and Rayon

### Loom

A loom is a device used to weave cloth and tapestry. The basic purpose of any loom is to hold the warp threads under tension so that warp threads can be interlaced.

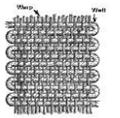
### Warp

Warp threads that are vertical and run from the top to the bottom of a piece of woven fabric or cloth



### Weft

Weft threads that are horizontal and run from the left to the right of a piece of woven fabric or cloth



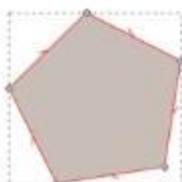


## Editing vector graphics

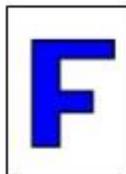
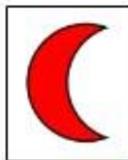
Object



Path



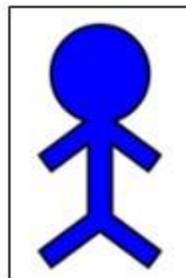
Combine different shapes or paths to create an object



Freehand Lines



Straight Lines



## Common vectors

Icons



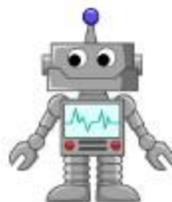
Logos



Illustrations



Try to create a robot using squares and rectangles only.



## Key Words

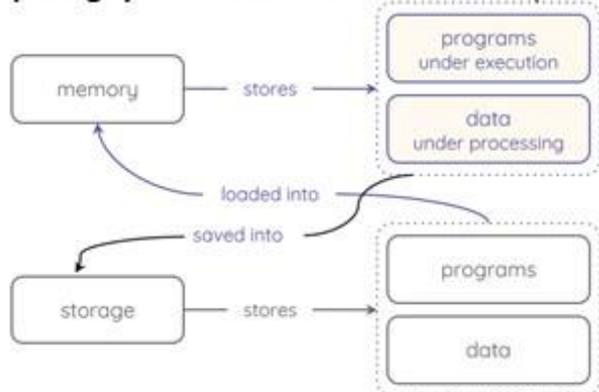
|   |  |
|---|--|
| Paths                                       | The term 'path' is used because lines and shapes have a start and end point with curves and angles along the way, just like a garden path.   |
| <i>Align left</i>                           | Relative to the page: all the shapes will align their left edges to the left side of the page.   |
| Objects                                     | An object is a defined construct such as a rectangle, line or circle   |
| Icon  | Is a symbol that is used to represent an organisation or a product   |
| Vector graphics                             | Are digital images. Each line, curve, shape, and colour is mathematically defined – can be resized without losing quality  |
| Raster graphics                             | Bitmap images (raster graphics) are made up of small individual squares of colour called pixels.   |
| Vector scalability                          | Vector graphics can be scaled up or down without losing any image quality  |
| Raster scalability                          | Raster graphics lose image quality when scaled up or down because they are based on pixels only.   |
| Distribute centres equidistantly vertically | The shape between the one at the top and the one at the bottom will move to a position where the center is an equal distance away from the center of the shape at the top and the center of the shape at the bottom. |



# Computing

# Media - Vector Graphics

All computing systems are similar in structure ('architecture').



## Key Words

|                     |  |
|---------------------|--|
| Input /             | Input: data received by a system   |
| Outputs             | Data transmitted from a system   |
| Specifications      | a table of hardware components and technical characteristics   |
| Data                | Examples are Videos, images, and sounds  |
| Software            | This refers to computer <b>programs</b> .  |
| Programs            | These are required to read that data and play back the videos, or display the images, or reproduce the sounds. |
| PC Purpose          | To execute programs that operate on data.  |
| Secondary storage   | Storage is persistent Non-volatile: it retains its contents when the power is off.                             |
| Primary storage     | Memory is volatile: its contents are lost when the power is off.   |
| Processor           | The CPU executes program instructions one at a time.   |
| Wearable technology | Any kind of electronic device designed to be worn on the user's body   |
| Operating System    | Is a set of programs that controls the operation* of a computing system  |

## Artificial Intelligence - Thinking beyond 'coolness'

### Applications of AI

Self-driving cars

Medical diagnosis

Banking

Detecting fraud  
Approving loan & mortgage applications

Automation

Performing tasks instead of humans

### Moral considerations

Who is responsible in an accident? (Accountability)

How can decisions be explained? (Transparency)

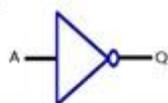
How can we guarantee that machine training does not lead to discrimination? (Bias)  
How can decisions be explained? (Transparency)

How will humans handle lower demand for labour?  
How will the benefits of AI be fairly distributed?

## Logic Gates and Truth Tables

### NOT GATE

A NOT gate takes an input and outputs the opposite.



| Input A | Output Q |
|---------|----------|
| 0       | 1        |
| 1       | 0        |

### AND GATE

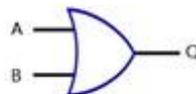
For an AND gate to give an output of 1, both inputs must be 1.



| Input A | Input B | Output Q |
|---------|---------|----------|
| 0       | 0       | 0        |
| 0       | 1       | 0        |
| 1       | 0       | 0        |
| 1       | 1       | 1        |

### OR GATE

For an OR gate to give an output of 1, only one input has to be 1.



| Input A | Input B | Output Q |
|---------|---------|----------|
| 0       | 0       | 0        |
| 0       | 1       | 1        |
| 1       | 0       | 1        |
| 1       | 1       | 1        |



# P.E.

## Badminton

### Core Skills

- Service - high, low & flick (forehand or backhand).
- Overhead - clear & drop (forehand and backhand).
- Underarm - clear, drive & drop (forehand and backhand).
- Net play
- Smash

### Tactics (Tactics, Strategies & Compositional Ideas):

- A: AWAY keep the shuttle away from your opponent.
- B: Play on their weakness usually their BACKHAND.
- C: Keep the shuttle in the COURT but play to the COURT boundaries.
- D: Hit DOWN so your opponent has to hit up

Select shots that are appropriate for defending and attacking.

Select simple shot combinations which move your opponent out of position.

### Rules:

- There are three basic things to remember for scoring singles badminton:
- After each rally a point is scored.
- You keep serving until you lose a rally, the serve will then go over to your opponent.
- You serve from the Left if your score is Odd. You serve from the Right if your score is Even. This is the 'LORE of the SCORE'.



# Badminton and Football

## Football

### Core Skills

- Passing/receiving - either foot.
- Dribbling/moving with the ball - either foot.
- Shooting
- Heading.
- Tackling, jockeying, closing down and marking.

### Tactics (Tactics, Strategies & Compositional Ideas):

Attacking and Defending principles:

#### Attacking:

- Pace
- Depth
- Width.
- Make the pitch as big as possible
- Support: Angle and Distance.

#### Defending:

- Deny the opposition time and space.
- Make the pitch as small as possible.
- Use of the offside .
- Support: Angle and Distance





# P.E.

## Athletics

### Core skills

#### Track:

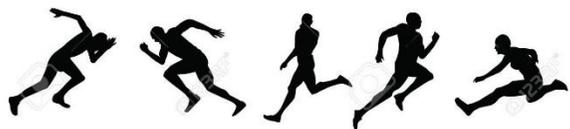
- Starts/finishes.
- Arm action – effectiveness and consistency.
- Leg action to create appropriate pace – consistency and/or change of pace.

### Tactics and strategies:

Use pace judgement to run at a sustained pace for specified periods of time

### Analysis of performance:

Compare performances to previous ones, personal bests and Athletics Awards (ESAA Secondary Awards Scheme).



# Athletics and Dance

## Dance

### Core Skills

#### Action:

Creating a motif

1. Travel, locomotion, stepping and pathways.
2. Balance (static and/or dynamic).
3. Rotation, turning and weight transference.
4. Jumps and elevations.
5. Gestures

#### Dynamics:

Performing an action and/or motif  
fast or slow  
smooth or sharp  
heavy or light

#### Space & relationships:

\_ Direction\_  
\_ Levels\_  
\_ Formation\_  
\_ Canon\_  
\_ Unison\_

### Performance

Perform a full routine in a competition/performance.

This can be in a solo performance, a duet performance or a group performance and should last approximately two minutes.

Perform within the recognised dance style.





## Mental wellbeing

Mental wellbeing describes your mental state - how you are feeling and how well you can cope with day-to-day life. Our mental wellbeing is dynamic. It can change from moment to moment, day to day, month to month or year to year.

## Emotional literacy

The ability to understand and express feelings. Emotional Literacy involves having self-awareness and recognition of one's own feelings and knowing how to manage them.

## Primary emotions

There are 5 primary emotions but over 600 words in the English language for different emotions. The primary emotion groups are:

- Joy
- Anger
- Sadness
- Disgust
- Fear



## Mental illness

Mental illnesses comprise of a broad range of problems, with different symptoms. However, they are generally characterized by some combination of abnormal thoughts, emotions, behaviour and relationships with others. They can only be diagnosed by a Doctor or Mental Health Professional.

## Signs of good mental wellbeing

- Feeling relatively confident in yourself and have positive self-esteem
- Feeling and express a range of emotions
- Building and maintaining good relationships with others
- Feel engaged with the world around you
- Live and work productively
- Cope with the stresses of daily life
- Adapt and manage in times of change and uncertainty

## Signs of poor mental wellbeing

- Erratic changes in mood and behaviour.
- Distancing from friends and family.
- Loss of interest in things that they used to be interested in.
- Excessive sleeping or not sleeping.
- Increased alcohol consumption.
- Poor concentration and being easily distracted.
- Finding it hard to make decisions.
- Feeling overwhelmed by things & tearfulness.
- Finding it difficult to control your emotions.
- Irritability and short temper or aggression.

**ASKING FOR HELP  
IS A COURAGEOUS STEP.**



## Things that can affect our mental wellbeing

Everyone is different and what affects someone's mental wellbeing won't necessarily affect others in the same way. Everyone will have times when they have low mental wellbeing, where they feel stressed, upset or find it difficult to cope. Common life events that can affect your mental wellbeing include:

- loss or bereavement
- loneliness
- relationship problems
- issues at work
- worry about money

However there are times when there is no discernible reason for the way a person feels which can be extremely frustrating.

There are some factors that may make people more vulnerable to experiencing a period of poor mental wellbeing. These may have happened in the past or might still be happening now:

- childhood abuse, trauma, violence or neglect
- social isolation or discrimination
- homelessness or poor housing
- a long-term physical health condition
- social disadvantage, poverty or debt
- unemployment
- caring for a family member or friend
- significant trauma as an adult, such as military combat, being involved in a serious accident or violent crime.

## Importance of self-care

At times people may feel guilty for spending time on themselves. But it's essential for mental wellbeing and can help people to be more resilient. Some self care techniques include:

- Mindfulness
- Doing something you enjoy
- Relaxation techniques
- Get outdoors and fresh air
- Exercise

If someone is living with a mental health problem, taking steps to look after their mental health can help you improve your wellbeing. Strategies can include:

- Talking to someone
- Knowing triggers and warning signs
- Keeping a mood diary
- Building your self esteem

## Where to get more help and support

- Parents and trusted family
- School Staff and Wellbeing Team
- Your Doctor or Practice Nurse
- Young Minds -  
<https://youngminds.org.uk> Text: 85258 or Parents Helpline: 0808 802 5544
- Stem4 - <https://stem4.org.uk>
- NHS Online



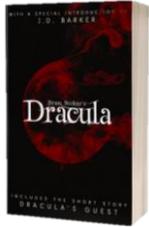


# Yr8 Term 1 Challenges

These are **optional** additional homework tasks you can complete to earn achievement points. Show your form tutor!

## English

Create a front cover and back cover for your own Gothic Novel.



The front cover must have the title and imagine that gives the reader good idea about the book is about. The back cover must have a short introduction to your novel to get the potential reader hooked!

Show your book cover to your English teacher

1hr of CU Credits

## Drama

Create an A4 page character study of a chapter from your favourite film of TV show.



You must include; what their role is in the film/show, what their personality is like and how the actor manages to get this across to the audience

Show it to you drama teacher

1hr of CU Credits

## Music

Go onto YouTube and watch a performance by Bessie Smith, BB King and Muddy Waters.

Write a review of each song explaining what it was about, what instruments were used and what you thought of it. Say which of the three song you liked the most and why



Show your work to your music teacher

1hr of CU Credits

## History

Choose one of the key battles from World War 1. Research this battle and produce an A4 report on what happened and it's impact on the First World War



Show your report to your history teacher

1hr of CU Credits

## Art

Choose your favourite film, tv or sports star. Use the rules you have learnt about portraiture to draw a portrait of this person.



Show it to your art teacher

1hr of CU Credits

## Spanish

With a partner write a short sketch set in a restaurant where one person plays the waiter and the other plays a customer ordering food, all in Spanish.

Film your sketch with props and costumes and show it to your Spanish teacher along with the script written in Spanish.



1hr of CU Credits each

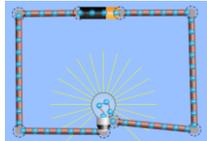
## Science

Use the following website to create your own circuits.

[https://phet.colorado.edu/sims/html/circuit-construction-kit-ac/latest/circuit-construction-kit-ac\\_en.html](https://phet.colorado.edu/sims/html/circuit-construction-kit-ac/latest/circuit-construction-kit-ac_en.html)

(click on AC construction)

Once you have practiced creating one series and one parallel circuit design a circuit which has two lights, each of which can be switched on and off independently of each other.



Take a picture of your circuit and explain how it works. Show your work to your science teacher

1hr of CU Credits

## Food and Nutrition

Go onto the McDonalds website <https://www.mcdonalds.com/gb/en-gb/menu.html>

Draw out this table and find the nutritional information to complete it

| Item                | Energy (Kcal) | Fat (g) | Sugar (g) | Salt (g) |
|---------------------|---------------|---------|-----------|----------|
| Big Mac             |               |         |           |          |
| Large fries         |               |         |           |          |
| Cheesy Garlic bites |               |         |           |          |
| Coca Cola classic   |               |         |           |          |
| Mars McFlurry       |               |         |           |          |
| Total               |               |         |           |          |

When you have finished use the website to suggest healthier alternatives and explain why these are better for you

Show your technology teacher your work

1hr of CU Credits