



WOOTTON PARK

*'Ipsam quod faciendum est diutius'*

# Knowledge Maps

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## Week 1 – Plot summary

*Of Mice and Men* is centred around two itinerant workers, George and Lennie, in California in the 1930s as they start work on a ranch in a place called Soledad (a Spanish word meaning 'solitude'). The whole story takes place over a period of four days, starting on Thursday evening and ending on Sunday. While at the ranch, George and Lennie meet other characters, who emphasise the loneliness and difficulty of life for the people living and working in these places.

George is a small, intelligent man who looks after his friend Lennie, a large, strong man who has a learning disability. Lennie's strength becomes increasingly problematic throughout the story as it becomes clear that he does not understand how much damage he can cause.

At several points during the novel, the two men discuss their dream of owning their own ranch and working for themselves, but this is shown to be impossible as by the end of the book Lennie has accidentally killed a woman and George's only option is to shoot him before he is caught.

## Week 2 – Context

John Steinbeck was born in Salinas, California in 1902. Although his family was wealthy, he was interested in the lives of the farm labourers and spent time working with them. He used his experiences as material for his writing. ☐ On October 29 1929, millions of dollars were wiped out in the Wall Street Crash. It led to the People losing their life savings and a third of America's population became unemployed. ☐ A series of droughts in southern mid-western states like Kansas, Oklahoma and Texas led to failed harvests and dried-up land. Farmers were forced to move off their land: they could not repay the bankloans which had helped buy the farms and had to sell what they owned to pay their debts. ☐ Racism/sexism were common, especially in Southern states due to economic climate, & history of slavery.



### Week 3 – Form and structure

*Of Mice and Men* is written in the form of a novella, which is fictional and shorter than a novel but longer than a short story. Steinbeck said that he decided to write the story in a similar way to a play, with a focus on using dialogue, and less description than is usual for **prose** fiction.

The play style is also evident in the structure as the book has three sections, like acts - each a pair of chapters; like scenes. Each chapter starts with an overview of the setting of that 'scene', similar to stage directions in a play. The book has a **third person narrator**, but there is less narration than in traditional prose fiction and the action often moves on through the characters' dialogue.

Although the narrator is **omniscient**, they do not give a lot of insight into the characters' thoughts and feelings, as some omniscient third person narrators do. Instead, this is suggested to the reader through the characters' actions and what they say. This makes the style of writing quite direct and unemotional, which reflects the way that the characters live and relate to each other.

### Week 4 - Context

#### Key Characters

George	frustrated, devoted, a dreamer
Lennie	childlike, unassuming, physically powerful
Candy	unloved, an outcast, aging
Curley	insecure, unmerciful, jealous
Curley's wife	a seductive temptress, objectified, lonely, nameless
Crooks	cynical, proud, isolated
Slim	compassionate, wise, respected
Carlson	heartless, insensitive

## Week 5 – Key themes

There are different themes running through *Of Mice and Men*, all linked primarily to George and Lennie as the central characters of the novel. Their plan to own their own farm highlights the theme of dreams, which also involves Candy and Crooks, as well as Curley's wife. George and Lennie's unusual friendship introduces the idea of companionship, while also contrasting with the loneliness experienced by characters such as Curley's wife, Crooks and Candy.



## Week 6 – key quotes

- pg21 **“Lennie, who had been watching, imitated George exactly”** Narrator
- pg32 **“Guys like us, that work on ranches, are the loneliest guys in the world”** George
- pg32 **“Because I got you to look after me and you got me to look after you”** Lennie
- pg45 **“A guy on a ranch don’t never listen nor he don’t ask no questions”** Candy
- pg106 **“Nobody never gets to heaven, and nobody never gets no land”** Crooks
- pg122 **“I never get to talk to nobody. I get awful lonely”** Curley’s Wife

## Week 7 –Language

Steinbeck includes a lot of dialogue in the book, and this is all written in **colloquial** language. This reflects the way that people would really have spoken, which shows Steinbeck's focus on trying to show the hardship of life for itinerant workers during the Great Depression. There is a lot of animal imagery used throughout the novella. Lennie in particular is linked to animals through similes and metaphors. This demonstrates his inability to understand the behaviour of others and the consequences of his own actions. The way that animals are treated, such as Candy's dog, also reveals a lot about how society treats people.

Steinbeck writes in a direct and straightforward way, particularly when referring to things that happen on the ranch. This reflects the way in which the men on the ranch speak: they are honest and **forthright**. However, in the parts of the book (mainly at the beginning and end) which are set in unspoiled nature, Steinbeck is more descriptive, perhaps suggesting that beauty exists in this world primarily where man has not interfered.



## Week 1 – Plot summary

*Of Mice and Men* is centred around two [ ] workers, [ ] in California in the [ ] as they start work on a **ranch** in a place called Soledad (a Spanish word meaning 'solitude'). The whole story takes place over a period of four days, starting on Thursday evening and ending on Sunday. While at the ranch, George and Lennie meet other characters, who emphasise the [ ] and [ ] for the people living and working in these places.

George is a [ ] man who looks after his friend [ ] Lennie, a large, strong man who has a learning disability. Lennie's strength becomes increasingly problematic throughout the story as it becomes clear that he does not understand how much damage he can cause.

At several points during the novel, the two men discuss their dream of owning their own ranch and working for themselves, but this is shown to be impossible. At the end of the book Lennie has accidentally killed a woman and George's only option is to shoot him before he is caught.

## Week 2 – Context

Create a 5 minute fact file for John Steinbeck and the context of the novel.

**Week 3 – Form and structure**

**Explain three different form/structural devices used with the plot**

**Week 4 - Context**

<b>Key Characters</b>	
<b>George</b>	<b>childlike, unassuming, physically powerful</b>
<b>Candy</b>	<b>insecure, unmerciful, jealous</b>
<b>Curley's wife</b>	<b>cynical, proud, isolated</b>
<b>Slim</b>	<b>heartless, insensitive</b>



## Week 5 – Key themes

Explain the three key themes present in the novel

## Week 6 – key quotes

Recall one key quote for Lennie

Recall one key quote for George

Recall one key quote for Curley's wife



## Week 7 –Language

What type of imagery is used to present Lennie and why?

Why does Steinbeck write in a straightforward direct way?

What is colloquial language and why is it used in the novel?



## Week 1: Product rule for counting

A **factorial** is the result of multiplying a sequence of descending integers. We write it using an exclamation mark.

For example: '4 factorial' =  $4! = 4 \times 3 \times 2 \times 1$ .

Make sure you can use the factorial button on your calculator



If there are  $m$  ways of performing the first task and  $n$  ways of performing the second task, the total number of ways of doing the first task and the second task is  $m \times n$

### Worked Example:

In a restaurant there are three starters  
And four main courses.

The total number of different  
Combinations is therefore  $3 \times 4 = 12$ .

If the restaurant offered 4 desserts as well as the starters and the mains,  
then there would be:

$3 \times 4 \times 4 = 48$  different meal combinations.



## Week 2: Place Value and Estimation

When we **estimate** we need to round numbers to 1 **significant figure**. This means that each value should contain one non-zero digit, and it will always be the first non-zero digit that is either rounded up or kept the same.

**Remember:** When we round, we locate the "**key digit**" and then look at the number to the right. If the number to the right is 5 or more we round the "**key digit**" up; but if the number to the right is 4 or less then the "**key digit**" stays the same.

We can also use the **place value system** to help us to evaluate answers to slightly altered calculations.

### For example:

If we know that  $3.7 \times 9.86 = 36.482$

Then we also know that...

$$37 \times 98.6 = 3648.2$$

$$0.37 \times 0.986 = 0.36482$$

$$3.7 \times 98.6 = 364.82$$

$$3648.2 \div 98.6 = 37$$

Notice that depending on how the values in the question have changed in the place value system, the answer is equally affected by the change.



## Week 3: HCF and LCM

Using **prime factor trees**, we can break numbers down into a **product** of their **prime factors**. When we know the product of primes of 2 or more numbers, we can use this to help us to find the **highest common factor** and **lowest common multiple**.

Remember...

A **factor** is a number that goes in to another number

A **multiple** is a number that appears in the times table of another number

A **prime number** is a number that has only two factors, 1 and itself.

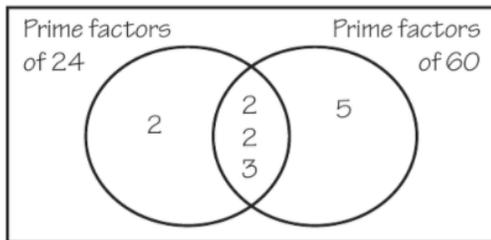
You can use a **Venn diagram** to help you find the **HCF** and **LCM** using the product of primes.

Find the highest common factor and lowest common multiple of 24 and 60.

$$24 = 2 \times 2 \times 2 \times 3$$

$$60 = 2 \times 2 \times 3 \times 5$$

Write each number as a product of prime factors.



Draw a Venn diagram.

The highest common factor (HCF) of 24 and 60  
 $= 2 \times 2 \times 3 = 12$

Multiply the common prime factors.

The lowest common multiple (LCM) of 24 and 60  
 $= 2 \times 2 \times 2 \times 3 \times 5 = 120$

Multiply all the prime factors.

## Week 4: Indices

**Indices** are a way to express when a number is multiplied by itself a number of times.

For example:

$$3 \times 3 \times 3 \times 3 \times 3 = 3^5$$

We can simplify calculations that involve indices when the base number is the same.

**If multiplying, we add the powers**

**If dividing, we subtract the powers**

$$x^m \times x^n = x^{m+n}$$

$$x^m \div x^n = x^{m-n}$$

Any number to the **power of 0** will always be **equal to 1**, when  $x \neq 0$

If the **power is negative**, we should first apply the integer power to the base number. The negative sign means the opposite, and therefore the answer becomes its **reciprocal**.

For example:

$$5^{-2} = \frac{1}{5^2} = \frac{1}{25}$$

$$x^{-n} = \frac{1}{x^n} \text{ for any number } n, x \neq 0$$

Sometimes, the **power may be a fraction**. In this instance the base number is rooted by the **denominator** of the **fractional index**.

For example:

$$16^{\frac{1}{2}} = \sqrt[2]{16} = 4$$

$$125^{\frac{1}{3}} = \sqrt[3]{125} = 5$$

$$x^{\frac{1}{n}} = \sqrt[n]{x}$$

$$x^{\frac{n}{m}} = (\sqrt[m]{x})^n$$



## Week 5: Standard Form

Scientists use numbers written in **standard form** because it allows them to work out using calculations using really large or really small numbers.

A number is in standard form when it is in the form  $A \times 10^n$ , where  $1 \leq A < 10$  and  $n$  is an integer.  $63 \times 10^4$  is not written in standard form, because the first number is not between 1 and 10

**14624 (ordinary number)  $\rightarrow 1.4624 \times 10^4$  (standard form)**

**0.568 (ordinary number)  $\rightarrow 5.68 \times 10^{-1}$  (standard form)**

A negative power means that the original number is a small number (a decimal number).

A positive power means that the original number is a large number.

We can calculate with numbers in standard form, by using our knowledge on indices.

For example:

$$7.8 \times 10^2 \times 6.3 \times 10^3$$

$$7.8 \times 6.3 \times 10^2 \times 10^3 = 49.14 \times 10^5$$

However, this answer is not written in standard form. We must adapt our answer so that it is in standard form.

$$7.8 \times 6.3 \times 10^2 \times 10^3 = 49.14 \times 10^5 = \mathbf{4.914 \times 10^6}$$

## Week 6: Surds

A **surd** is a number written exactly using **square or cube roots**.

$\sqrt{3}$  and  $\sqrt[3]{5}$  are examples of surds. This is because we cannot simplify the expressions any further.

$\sqrt{4}$  and  $\sqrt[3]{27}$  are not examples of surds. This is because we can simplify the expressions fully.

We can generalise some of the rules to do with simplifying surds, as shown below:

$$\sqrt{mn} = \sqrt{m} \times \sqrt{n} \qquad \sqrt{\frac{m}{n}} = \sqrt{m} \div \sqrt{n}$$

**Rational numbers** can be written as a fraction in the form  $\frac{a}{b}$ , where  $a$  and  $b$  are integers and  $b \neq 0$

2 is a rational number because it can be written as  $\frac{2}{1}$

$\sqrt{2}$  is an **irrational number**

To rationalise a **denominator** we can multiply  $\frac{\sqrt{a}}{\sqrt{b}} \times \frac{\sqrt{b}}{\sqrt{b}}$

Further examples

$$\sqrt{75} = \sqrt{25 \times 3} = 5\sqrt{3} \quad \text{First simplify } \sqrt{75}$$

$$\frac{5}{\sqrt{75}} = \frac{5}{5\sqrt{3}} = \frac{1}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{3}}{\sqrt{9}} = \frac{\sqrt{3}}{3} \quad \text{Simplify the fraction before rationalising.}$$



## Week 7: Expanding and Factorising and proof

### Key words:

**Identity** – when two sides of a relation such as  $2(x + 5) = 2x + 10$  are equal for all values of  $x$  we call it an identity. We can use the symbol  $\equiv$  to show an identity.

**Equation** – An equation is when two sides of a relationship are only true for certain values of  $x$ . For example  $2x = 6$ , therefore  $x = 3$  is the only value that makes this true.

When we expand a bracket, we must multiply every term inside the bracket by the term on the outside of the bracket. For example:

$$4(x + 8) = 4x + 32$$


To factorise an expression means to find the HCF of each term which allows us to re-write the expression in to brackets. The HCF goes on the outside of the bracket.

$$25yx + 100y - 15xy^2$$

$$\text{HCF} = 5y$$

$$5y(5x + 20 - 3xy)$$

**Consecutive numbers** – numbers that follow on from one another. For example: 2, 3, 4, 5, 6, 7, ....

Worked example: Show algebraically that the product of any two consecutive integers is divisible by 2.

One of these two numbers must be even, so it can be written as  $2m$  for some whole number,  $m$ .

If the other number is  $n$  then their product is  $2m \times n = 2mn$ .  $2mn$  has a factor of 2 so it is divisible by 2.

Numbers 1, 2, 3, 4, 5, ... are odd, even, odd, even, odd, etc. so a pair of consecutive numbers must contain one odd and one even. If a number is even it is in the 2 times table.

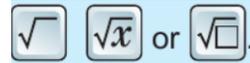


## Week 1: Integers

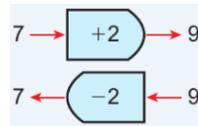
**Squares**- The answer when a number is multiplied by itself.  
For example, 16 is a square number as  $4 \times 4 = 16$ .

**Cubes**- The answer when a number is multiplied by itself three times. For example, 27 is a cube number as  $3 \times 3 \times 3 = 27$ .

**Square root**- This is the inverse of squaring a number. On your calculator, it may look like this:



A **function** is a rule. The **inverse function** reverses the rule



## B

 Brackets

## I

 ndices

## D

 ivision

## M

 ultiplication

## A

 ddition

## S

 ubtraction

+	-	x	÷
Add Plus Sum Total	Subtract Minus Take away Difference	Multiply Times Product	Divide Half Split

**BIDMAS**- This is the order of operations which tells you what step to do first.

## Week 2: Decimals and place value

**Rounding to decimal places**- To round a number to 1 decimal place (1dp), look at the digit in the 2<sup>nd</sup> decimal place. If it is **5 or more**, round up.

For example, 35.23 is 35.2 (1 d.p.) and 35.27 is 35.3 (1 d.p.).

Work out  $35.1 \div 1.5$

$$35.1 \div 1.5 = \frac{35.1}{1.5}$$

$$\frac{35.1}{1.5} = \frac{351}{15}$$

(Arrows indicate multiplying numerator and denominator by 10)

1.5 has 1 decimal place, so multiply both numbers by 10.

$$15 \overline{) 351.0}$$

Divide.

$$\text{Check: } 15 \times 23.4 \approx 20 \times 20 = 400$$

Check using an inverse operation and estimation.

**Communication hint**  $\approx$  means 'approximately equal to'.

To **estimate** an answer to a calculation, round each number to one **significant figure**

**Significant figures**- There is a lazy way of writing this, which is **sf** or **sig fig**.

Crucial: The first significant figure is always the **first non-zero number** you come across. The second significant figure is the number to the right of that, and so on...

Remember: the size of your rounded number should be a similar size to the number in the question, and you must use zeros to help you with this.



## Week 3: Factors, multiples and squares

**HFC-** This stands for **highest common factor**. The HCF of two (or more) numbers is the largest number that is a factor of both numbers.

Find the highest common factor of 6 and 8

Factors of 6: 1, ②, 3, 6

Factors of 8: 1, ②, 4, 8

**HCF = 2**

**LCM-** This stands for **lowest common multiple**. The LCM of two (or more) numbers is the smallest number that is a multiple of both (or all) numbers.

Q. Find the LCM of 4 and 6

4 → 4, 8, ⑫, 16, 20, 24, ...

6 → 6, ⑫, 18, 24, 30, 36, ...

**Prime-** A number that only has two factors; 1 and itself. E.g. 13

**Factors-** A number which goes into another number without leaving a remainder. E.g. 3 is a factor of 18.

**Multiples-** A number in its timetables. E.g. 10 is a multiple of 2.

### Examples

Squares	Primes	Cubes
1	2	1
4	3	8
9	5	27
25	7	64
36	11	125
49	13	1000
64	17	
81	19	
100	23	
	29	

## Week 4: Index notation and prime factors

In **index notation**, the number that is being multiplied by itself is called the **base**. The number written above the base is called the **index** or **power**. The index tells you the number of times the base has been multiplied by itself.

Base →  $10^{11}$  = 10 × 10 × 10 × 10 × 10 × 10 × 10 × 10 × 10 × 10 × 10

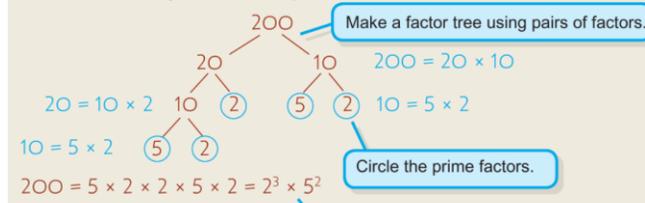
Index or power

$$a^b \times a^c = a^{b+c}$$

$$a^b \div a^c = a^{b-c}$$

**Prime Factor Decomposition-** This could also be written as '**product of its prime**'. It means finding all of the prime factors of that number. A **factor tree** is a quick and easy way to do this. An example is below.

Write 200 as the **product** of its prime factors.



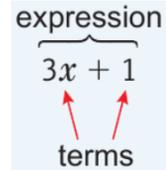
Collect the prime factors from the diagram. Then write them in size order with the smallest first, using index notation.



## Week 5: Expressions

A **term** is a number, a letter or a number and letter multiplied together.

**Like terms** contain the same letter to the same power (or do not contain a letter). You can simplify an **expression** by collecting like terms.



Simplify these expressions by collecting like terms.

a  $2a + 3 + a + 4$

b  $2x^2 - 2x + 7x^2 + 4x$

a  $2a + 3 + a + 4 = 3a + 7$

Add the letter terms:  $2a + a$ . Add the numbers:  $3 + 4$

b  $2x^2 - 2x + 7x^2 + 4x = 9x^2 + 2x$

$x^2$  and  $x$  are not like terms.

You can write an **algebraic expression** by using letters to stand for numbers. The letter is called a **variable** because its value can change or **vary**.

Simplify

a  $6 \times y$

b  $5 \times 2p$

c  $c \times b$

d  $t \div 5$

a  $6y$

6 lots of  $y$

b  $10p$

Multiply the numbers first:  $(5 \times 2) \times (p)$

c  $bc$

Write letters in alphabetical order.

d  $\frac{t}{5}$

Simplify  $2a \times 3b$

$$2a \times 3b = 2 \times 3 \times a \times b$$

Multiply the numbers first:  $2 \times 3$ .  
Then multiply the letters:  $a \times b$

$$= 6ab$$

Put the number first, then the letters in alphabetical order.

## Week 6: Expressions continued and substitution

Terms can be simplified when multiplying or dividing, even when they are not like terms.

$$a \times b = ab$$

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

When multiplying:

Write letters in **alphabetical order**

Write **numbers before letters**

To divide algebraic terms, divide the numbers first and then the letters.

$$\frac{10x}{2} = \frac{10}{2} \times x = 5x$$

$$\frac{1}{2}x = \frac{x}{2}$$

These fractions both mean 'half of  $x$ '.

When  $x = 2$  and  $y = 5$  work out the value of

a  $x + y$

b  $xy$

c  $\frac{5x}{y}$

d  $4x + 3y$

a  $2 + 5 = 7$

Replace  $x$  and  $y$  with the values given.

b  $2 \times 5 = 10$

c  $5 \times 2 \div 5 = 10 \div 5 = 2$

Use the priority of operations.

d  $4 \times 2 + 3 \times 5 = 8 + 15 = 23$

**Substitution** refers to changing a letter for a number.



## Week 7: Revision

**HFC**- This stands for **highest common factor**. The HCF of two (or more) numbers is the largest number that is a factor of both numbers.

Find the highest common factor of 6 and 8

Factors of 6: 1, ②, 3, 6

Factors of 8: 1, ②, 4, 8

**HCF = 2**

**LCM**- This stands for **lowest common multiple**. The LCM of two (or more) numbers is the smallest number that is a multiple of both (or all) numbers.

Q. Find the LCM of 4 and 6

4 → 4, 8, ⑫, 16, 20, 24, ...

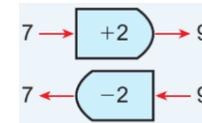
6 → 6, ⑫, 18, 24, 30, 36, ...

**Substitution** refers to changing a letter for a number.

When multiplying in algebra:

- Write letters in **alphabetical order**
- Write **numbers before letters**

A **function** is a rule. The **inverse function** reverses the rule



In **index notation**, the number that is being multiplied by itself is called the **base**. The number written above the base is called the **index** or **power**. The index tells you the number of times the base has been multiplied by itself.

Base →  $10^{11}$  =  $10 \times 10 \times 10$

Index or power

**B**rackets

**I**ndices

**D**ivision

**M**ultiplication

**A**ddition

**S**ubtraction

$$a^b \times a^c = a^{b+c}$$

$$a^b \div a^c = a^{b-c}$$

A **term** is a number, a letter or a number and letter multiplied together.

**Like terms** contain the same letter to the same power (or do not contain a letter). You can simplify an **expression** by collecting like terms.

expression  
 $3x + 1$   
 terms

**Rounding to decimal places**- To round a number to 1 decimal place (1dp), look at the digit in the 2<sup>nd</sup> decimal place. If it is **5 or more**, round up.

For example, 35.23 is 35.2 (1 d.p.) and 35.27 is 35.3 (1 d.p.).

## Week 1-2

## Atoms

All substances are made of tiny particles called **atoms**.

A relatively small number of substances are made up of only one type of atom. These substances are called **elements**.

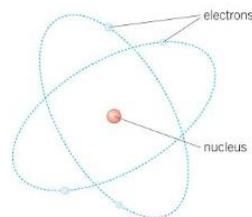
The **periodic table** shows us all the elements and symbols there are in our world.

The columns on the periodic table are called **groups**.

The rows on the periodic table are called **periods**.

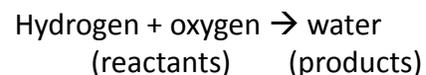
The vast majority of substances you come across are not elements. They are made up of different types of atoms bonded together and are called **compounds**.

All atoms are made up of a tiny central **nucleus** with **electrons** orbiting around it.

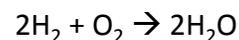


## Chemical equations

Chemical equations show the **reactants** and the **products** in a reaction. Chemical reactions can be represented as **word equations**:

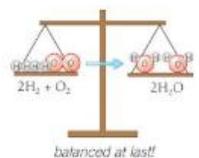
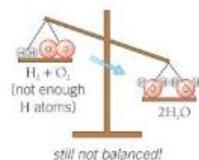
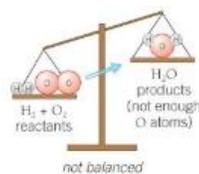


We can also represent this as a **symbol equation**:



This equation is **balanced** because the same number of each element were reacted and produced. This is the **Law of conservation of mass**.

**State symbols** tell us if something is a solid (s), liquid (l), gas (g) or aqueous solution (aq).



## Separating mixtures

*A mixture is made up of two or more substances (elements or compounds) that are not chemically combined together.*

Mixtures can be separated through a few different techniques:

- **Filtration** – insoluble solid/salt and a solvent using a filter paper
- **Crystallisation** – soluble salt and a solvent by heating with water
- **Distillation** – to collect the solvent from a soluble salt and solvent using boiling points.
- **Chromatography**

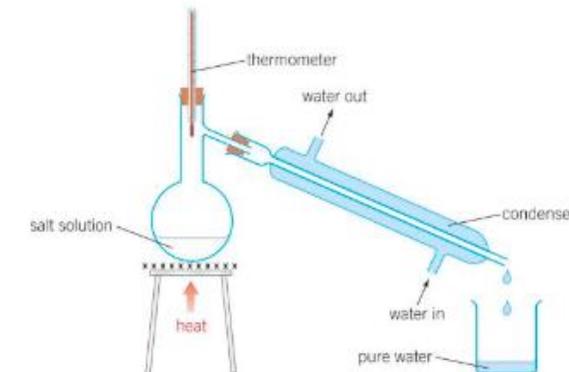


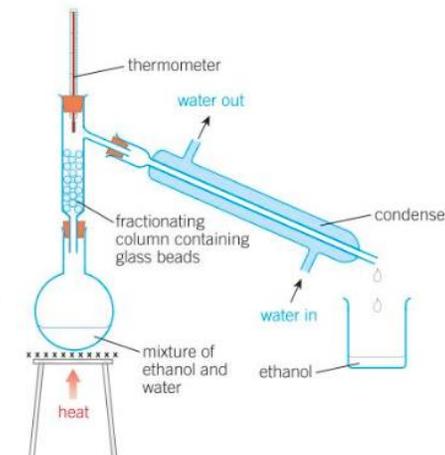
Figure 4 Distilling pure water from salt solution

## Fractional distillation and paper chromatography

**Fractional distillation** is used to separate several different solutions from each other using increasing boiling points. The similar method and equipment would be used as if this were a standard distillation.

**Chromatography** is used to separate substances from mixtures in solutions, like ink.

We use a capillary tube is used to dab a spot of the solution on a pencil line. The water travels up the paper and the ink spreads up the paper and separates out.



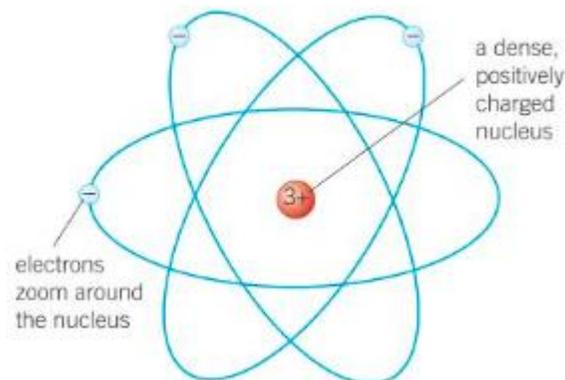
## Week 3

## History of the atom

John **Dalton** in the 1800's suggested that substances were made up of atoms that were small hard spheres. He thought each chemical elements had its own atoms that differed from others. He didn't think they could be divided or split. He also suggested that atoms in chemical reactions re-arranged themselves to combine in new ways.

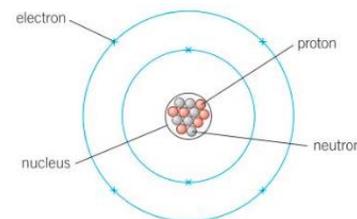
At the end of 1800's J.J. **Thomson** discovered the **electron**. This is a small negatively charged particle which is very light.

Geiger and Marsden did an experiment with radioactive particles and suggested the atom had a **nucleus** containing **protons** (small positively charged particle).



## Structure of the atom

Type of sub-atomic particle	Relative charge	Relative mass
Proton	+1	1
Neutron	0	1
Electron	-1	Very small



**Atomic number** – tells us the number of protons in each atom of an element

**Mass number** – tells us the number of protons + neutrons in the nucleus of an atom

$$\text{Number of neutrons} = \text{mass number} - \text{atomic number}$$

## Ions, atoms and isotopes

An **ion** is an atom that has gained or lost electrons to make is positively charged. For example, if Hydrogen loses it's a electron it becomes a positive ion,  $H^+$ .

mass number	12	C (carbon)	23	Na (sodium)
atomic number	6		11	

**Isotopes** are atoms of the same element that have the same atomic number but a different mass number. For example Carbon-12 ( $^{12}_6C$ ) and Carbon-13 ( $^{13}_6C$ ). Sometimes by having extra neutrons a nucleus becomes unstable and therefore radioactive.

## Electronic structures

Electrons are arranged around the nucleus in **shells**, rather like the layers of an onion.

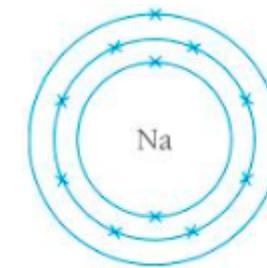
**Electron shell diagrams** have to be filled up in a certain way:

- The first shell can hold up to two electrons
- The second shell can hold up to eight electrons
- Once there are eight electrons in the this energy level, the fourth begins to fill up

Sometimes drawing it can take too long so you can write down the electron structure.

Example: **Sodium: 2, 8, 1**

When you write electronic structures for elements, any atoms that have the same number of electrons on the outside shell then they are in the same group. Sodium: 2, 8, 1 means that sodium is in Group 1.





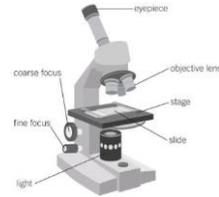
## Week 4

## The world of the microscope

We can use a microscope and an image to calculate the real-life size of an object. To do this:

$$\text{Magnification} = \frac{\text{size of image}}{\text{size of real object}}$$

**Resolution** is the ability to distinguish between two separate points and it is the **resolving power** of a microscope that affects how much detail it can show.



## Using units

1 kilometre (km) = 1000 metres (m)

1 m = 100 centimetres (cm)

1 cm = 10 millimetres (mm)

1 mm = 1000 micrometres ( $\mu\text{m}$ )

1  $\mu\text{m}$  = 1000 nanometres (nm) – so a nanometre is 0.000 000 001 metres (or written in standard form as  $1 \times 10^{-9}$  m).



## Animal and plant cells

**Nucleus** – contains the DNA and controls the cell

**Cytoplasm** – liquid gel where chemical reactions take place

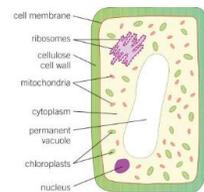
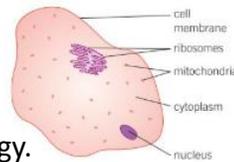
**Cell membrane** – controls what comes in and out of the cell

**Mitochondria** – where aerobic respiration takes place to release energy.

**Ribosomes** – where protein synthesis takes place, making all the proteins

**Chloroplasts** – contain chlorophyll which absorbs light so the plant can make food by photosynthesis

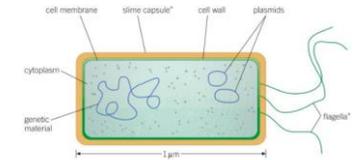
**Permanent vacuole** – filled with cell sap to keep the cell rigid.



## Eukaryotic and prokaryotic cells

**Eukaryotic cells** are cells like animal and plant cells. They have a cell membrane, cytoplasm and genetic material (DNA) in the nucleus.

**Prokaryotic cells** are much, much smaller than eukaryotic cells. Bacteria are single celled living organisms and are prokaryotic cells. In prokaryotic cells the DNA is *not enclosed* in a nucleus. The bacterial chromosome is a single DNA loop found free in the cytoplasm. Prokaryotes may also contain extra small rings of DNA called plasmids. Plasmids code for very specific features such as **antibiotic resistance**.



\*not always present  
Figure 1 Bacteria come in a variety of shapes, but they all have the same basic structure.

## Specialised cells

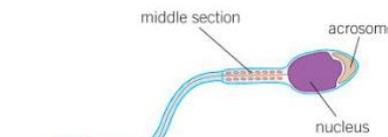
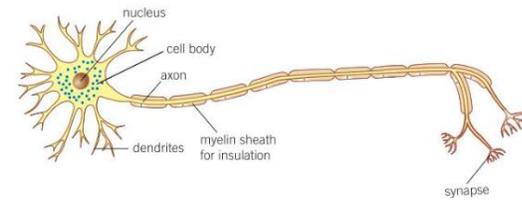


Figure 3 A sperm cell

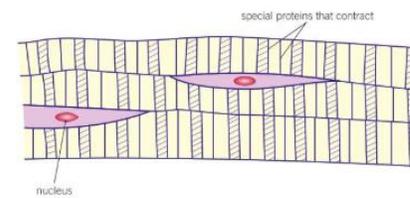


Figure 2 A striated muscle cell is specialised to contract and relax

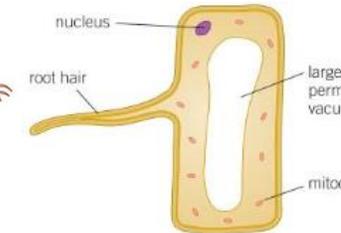


Figure 1 A root hair cell

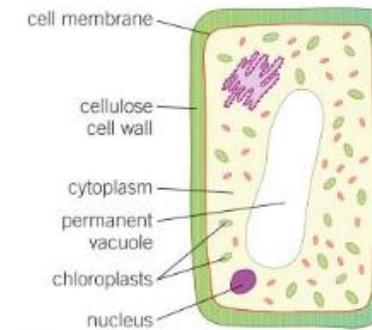


Figure 2 A photosynthetic plant cell

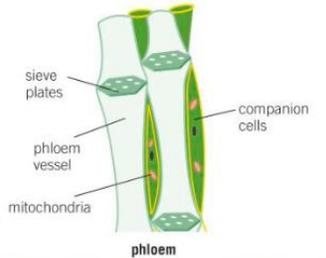


Figure 4 The adaptations of phloem cells

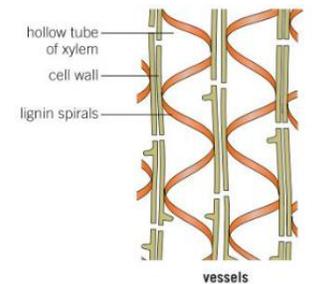


Figure 3 The adaptations of xylem cells

## Week 5

## Diffusion

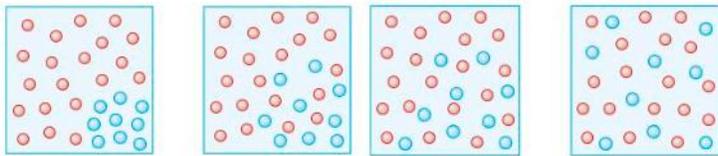
*Diffusion is the movement of particles from a region of high concentration to low concentration.*

If there is a big difference in concentration then diffusion happens faster, if the difference is small then the rate of diffusion is slower.

Net movement = particles moving in – particles moving out

Temperature can also affect the rate of diffusion. The hotter it is the faster the rate of diffusion.

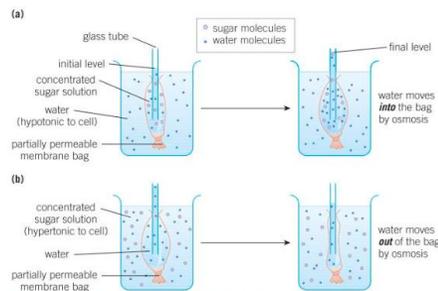
Diffusion is required in living things for several reasons. Diffusion occurs in cells across the cell membrane, substances that need to diffuse are substances such as; glucose, oxygen, carbon dioxide and waste products like urea.



## Osmosis

*Osmosis is the diffusion of water through a partially permeable membrane from a dilute solution to a concentrated solution down a concentration gradient.*

- **Dilute** – contains more water particles than sugar, for example.
- **Concentrated** – contains a larger number of sugar particles and a lower number of water particles, for example.



**Figure 1** A model of osmosis in a cell. In (a) the model cell is in a hypotonic solution. In (b) the model cell is in a hypertonic solution

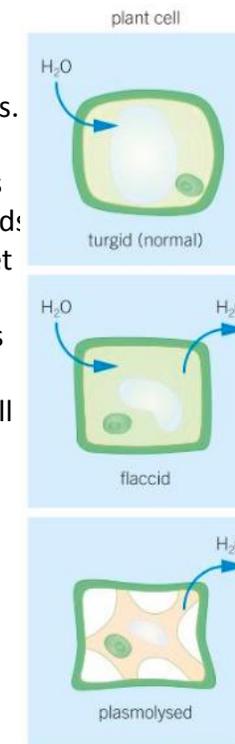
**Isotonic** – concentration of solutes in the solution outside the cell is the same as inside the cell

**Hypertonic** - concentration of solutes in the solution outside the cell is the higher than inside the cell

**Hypotonic** - concentration of solutes in the solution outside the cell is the lower than inside the cell

## Osmosis in plants

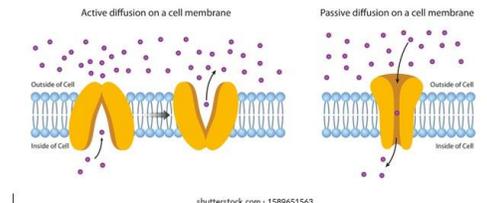
Plants rely on osmosis to support their stems and leaves. Water gets into the cells via osmosis and into the vacuoles of each cell. The pressure builds up until no more water can get in. This pressure is known as **turgor**. Turgor pressure makes the cells hard and rigid. If as much water is entering the cell as there is leaving the cell it will become **flaccid** and the plant isn't as supported. If more water is lost through osmosis than there is coming in the cell becomes **plasmolysed**.



## Active transport

*Active transport is the movement of substances from a dilute solution to a more concentrated solution against a concentration gradient, requiring energy from respiration.*

Active transport is needed in cells when ions from soil, for example, are needed in plants.



## Exchanging materials

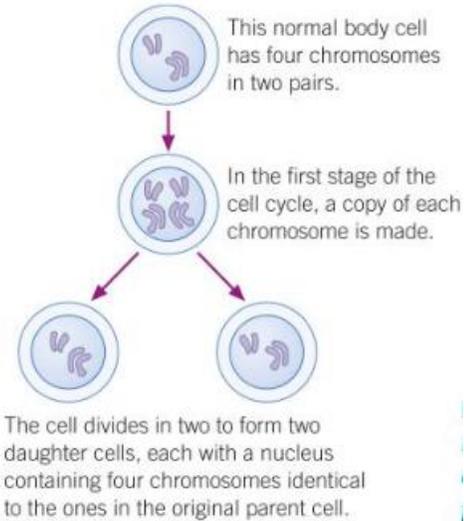
When exchanging materials the surface area to volume ratio is very important. As organisms get bigger and more complex their surface area to volume ratio gets smaller. This makes it difficult to exchange materials.

However, organisms can adapt to aid in exchanging materials. They can increase the effectiveness of an exchange surface by having a thin membrane, efficient blood supply and by being well ventilated.

## Week 6

## Cell division

Each cell has a nucleus and that contains chromosomes. These make up you!  
A gene is a small packet of information that contains sections of DNA. There are 46 chromosomes in every nucleus, and therefore 23 pairs.  
Cell division, needed to make new cells, called **mitosis** can produce identical cells.

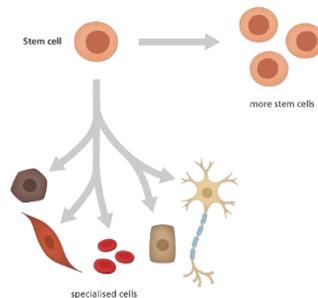


## Growth and differentiation

When a foetus is developing cells divide and **differentiate**. This means they change and specialise for their job. The original cells, before the differentiation, are called the **stem cells**.

## Stem cells

An egg and a sperm cell fuse to form a **zygote**. That divides and becomes an **embryo**.  
Stem cells are being used in many scientific and medical regions to develop cures or remedies for illness. Research is being completed to try to solve paralysis and diabetes.  
Stem cells in plants can be used to make clones making plant growth much faster and economical.



## Stem cell dilemma

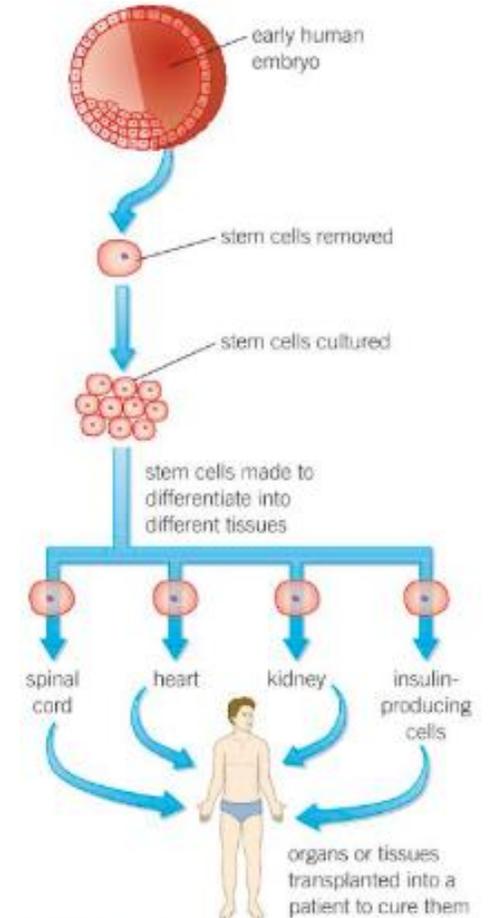
There are many benefits to using stem cells for medicinal purposes but there are also disadvantages.

## - Problems with embryonic stem cells

Many embryonic stem cells come from aborted embryos. Some people are concerned with the use of a potential human being used as a source of cells. Some people feel, an embryo cannot give permission, therefore violating human rights. Other issues include that therapy from using embryonic is slow, difficult and expensive.

## - The future of stem cell research

Scientists have found the blood from an umbilical cord from a new born baby contains stem cells. The cells could help overcome ethical issues.  
Scientists have also found ways of growing adult stem cells which can treat heart disease and grow new organs.



**Figure 2** This shows one way in which scientists hope embryonic stem cells might be formed into adult cells and used as human treatments in the future

## Week 7

## Changes in energy stores

Energy can be **stored** in different ways and is **transferred** by heating. Some examples are:

- Chemical energy
- Kinetic energy
- Gravitational Potential energy (GPE)
- Elastic Potential energy
- Thermal energy

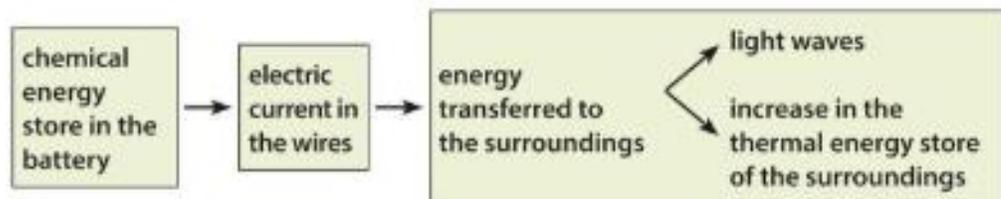
Energy stores	Examples
Chemical	In food, fuel and electric batteries
Kinetic	In moving objects
Gravitational potential	In objects raised above a planets surface
Elastic potential	In a stretched, compressed or twisted object
Internal (thermal)	In any heated object
Magnetic	In any object with a magnetic field
Electrostatic	In electrostatic forces between charges
Nuclear	The forces acting between atomic nuclei

Force pathways include:

- Mechanically** – when a force acts and an object moves
- Electrically** – when an electric current flows
- Heating** – a temperature difference between objects
- Radiation** – electromagnetic waves or sound

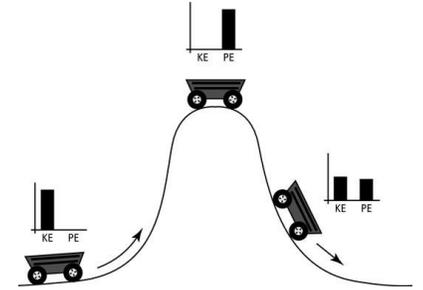
Energy can be transferred from one store to another. E.g. in a torch chemical energy from the battery is transferred to light and thermal energy.

These transfers can be shown in flow diagrams:



## Conservation of energy

The **conservation of energy** tells us that energy can be transferred usefully stored or dissipated, but can never be **created** or **destroyed**.



## Energy and work

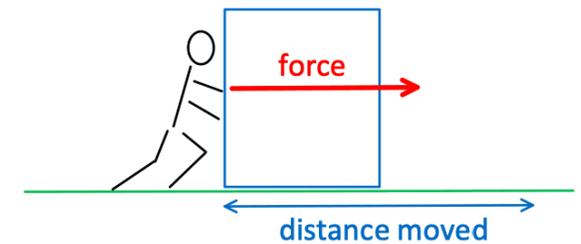
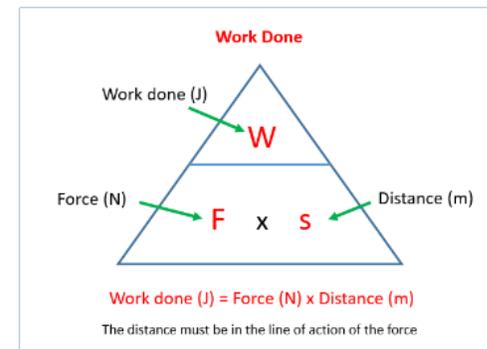
When an object is moved by a force, **work** is done on the object by the force. So the force is transferring energy to the object.

**Energy transferred = work done**

We can calculate work done, and therefore energy transferred using the following equation:

**Work done,  $W = \text{Force applied, } F \times \text{distance moved along the line of action of the force, } s$**

(Joules, J) = (Newtons, N) x (meters, m)



## Week 8

## Kinetic energy and elastic energy stores

The energy an object has because of its **motion** (movement) depends on its mass and speed. This is called **Kinetic energy**.

We can calculate kinetic energy ( $E_k$ ) using the following equation:

$$\text{Kinetic energy, } E_k = \frac{1}{2} \times \text{mass, } m \times \text{speed}^2, v^2$$

(joules, J) (kilograms, kg) (metres per second, m/s)<sup>2</sup>

When stretching a rubber band or a spring, the work you do is stored in it as **elastic potential energy**.

We can calculate elastic potential energy ( $E_e$ ) using the following equation:

$$\text{Elastic potential energy, } E_e = \frac{1}{2} \times \text{spring constant, } k \times \text{extension}^2, e^2$$

(joules, J) (Newtons per metre, N/m) (meters, m)

## Kinetic energy and elastic energy stores

The **efficiency** of an appliance is how well an object turns input energy into useful energy, wasting as little energy as possible.

It can be calculated using:

$$\text{Efficiency} = \frac{\text{Energy output energy transferred by the device (J)}}{\text{Total input energy supplied to the device (J)}}$$

How can we increase efficiency?

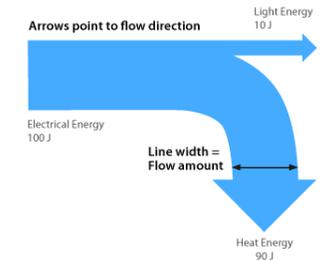
	Why devices waste energy	How to reduce the problem
1	Friction between the moving parts causes heating.	Lubricate the moving parts to reduce friction.
2	The resistance of a wire causes the wire to get hot when a current passes through it.	In circuits, use wires with as little electrical resistance as possible.

## Energy and dissipation

When energy is transferred or dissipated. It can be done in one of two ways:

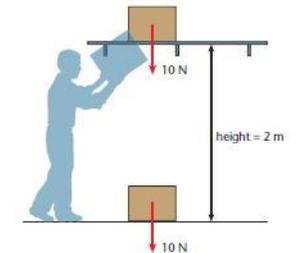
- **Useful energy** – energy is transferred way we want
- **Wasted energy** – energy is not transferred in the way we want

We can represent these changes in energy is a Sankey diagram:



## Gravitational potential energy

Every time you lift an object up, you do some work. Your muscles transferred energy from the chemical energy store in the muscle to the gravitational energy store of the object. In a calculation we refer to this store as gravitational potential energy,  $E_p$ .

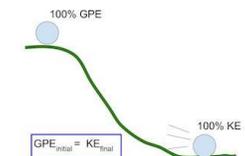


$$\text{Changes in object's gravitational potential energy store (Joules, J)} = \text{weight (Newton, N)} \times \text{change of height (metres, m)}$$

Being on the moon means that we can lift some objects more easily due to the change in gravity. This means the changes of gravitational potential energy would also change depending of the gravitational field strength.

$$\text{Change of gravitational potential energy store, } \Delta E_p = \text{mass, } m \times \text{gravitational field strength, } g \times \text{change of height, } \Delta h$$

$$\text{(joules, J)} = \text{(kilograms, kg)} \times \text{(newtons per kilogram, N/kg)} \times \text{meters (m)}$$



## Topic 1: -The Living World

### The Living World

**Ecosystems** exist at a range of scales and involve the interaction between **biotic** (living) and **abiotic** (non-living) components.

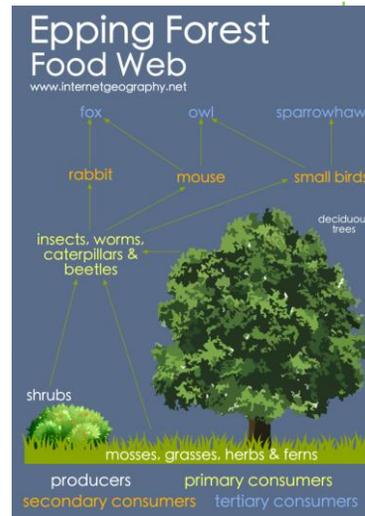
### Epping Forest Case Study

Epping forest is an ancient, **deciduous** woodland to the north-east of London. It is all that remains of a more extensive forest that covered England at the end of the last **ice age**. The forest is approximately 19 kilometres (12 miles) long from north to south, but no more than 4 kilometres (2.5 mi) from east to west at its widest point.

Epping Forest has a complex **food web**, composed of thousands of species, due to its careful management.

The forest has:

- a wide variety of native tree species that include beech, elm, oak and ash;
- a **shrub layer** consisting of hazel and holly, along with grasses, brambles, fern, bracken and flowering plants;
- 177 species of lichen and moss
- many primary consumers including insects and small mammals and deer, along with 38 species of birds
- **secondary consumers** such as owls, adders and foxes;
- 700 species of fungi, important decomposers, which are common due to a large amount of deadwood;
- over 100 lakes and ponds provide important habitats for numerous fauna species (animals) and flora (plants).



## Topic 2: What is an ecosystem?.

An ecosystem is an area that includes all the biotic (living organisms) parts such as plants and animals and the abiotic (non-living) such as soil, rocks and climate sharing an environment.

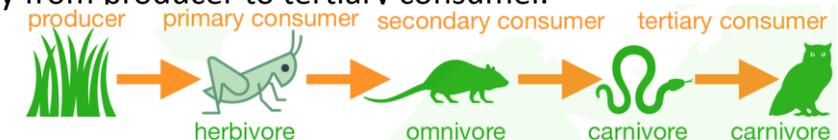
### How does energy flow through an ecosystem?

Organisms within an ecosystem can be classed as producers, consumers or decomposers. Energy flows through these organisms within the ecosystem. Producers, such as trees, produce their own food and begin this cycle. Using energy from the sun they produce food. They do this by photosynthesis. Most producers are plants, but there are some small organisms that produce food through photosynthesis as well.

The producers are eaten by primary consumers that cannot produce their own food, such as a giraffe. Primary consumers are herbivores which means they only eat plants. Secondary consumers are carnivores such as lions. In a simple food chain, secondary consumers eat primary consumers.

Decomposers break down dead plants and animals. They also break down the waste of other organisms. Examples of decomposers include bacteria and fungi. Decomposers get their energy from breaking down dead material e.g. dead producers, dead consumers or fallen leaves. When dead material is decomposed nutrients are released into the soil. These nutrients are then taken up from the soil by plants. Decomposers are very important for any ecosystem. If they weren't in the ecosystem the plants would not get essential nutrients and dead matter and waste would gather.

A food chain shows the relationships between these feeding groups. They show the flow of energy from producer to tertiary consumer.



### Topic 3: How do changes affect the balance of an ecosystem?

Natural events, such as extreme weather, flooding and natural hazards can disturb the balance of **ecosystems**. For example, in 1987, a great storm resulted in the felling of 15 million trees in England. This led to a considerable decline in **primary and secondary consumers** in the **food chain**. **Consumer** species have since returned following **secondary forest growth**. This is an example of ecosystem resilience.

Human actions can also significantly upset the natural balance in an ecosystem. A range of human activities in the Amazon rainforest has had a **detrimental** effect on the ecosystem. The removal of forest exposes the topsoil, which is then eroded, making it impossible for the rainforest to recover.

#### How does the loss or gain of a species affect a food web?

The diagram below shows the food web for Epping Forest. A decline in insects due to disease could lead to a reduction in the number of rabbits, mice and small birds. Also, more **primary consumers**, such as caterpillars are consumed as there are fewer insects, reducing butterfly numbers. However, **deciduous** trees may thrive due to the lower number of insects feeding on them. As well as these direct impacts, there will also be indirect impacts caused by the reduction of insects. There could be fewer **secondary consumers** such as foxes, owls and sparrow hawks as there are few **secondary consumers**.

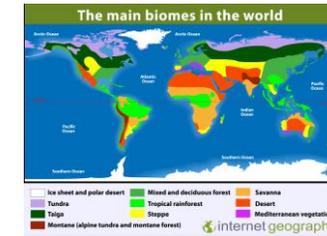
#### Rewilding

'Rewilding' or 'ecosystem restoration' has been used to restore balance in ecosystems. In 1995 grey wolves were re-introduced to Yellowstone National Park in the USA as a way of returning balance to the **ecosystem**. Since the removal of wolves from the ecosystem in the 1920s, the elk population boomed along with other large prey animals. The number of elk and other large prey animals increased to the point that they gathered in large herds along valley bottoms and meadows **overgrazing** new-growth vegetation. This caused a significant change in the **ecosystem**

### Topic 4: What is a biome?

#### What is a biome?

Biomes are very large ecological areas e.g. tropical rainforest. The map below shows 10 of the world's main biomes.



#### The distribution of ecosystems is affected by local factors including:

- climate
- altitude
- soil type

**Climate** (rainfall, temperature and sunshine hours) is the main factor that influences the **distribution** of ecosystems. On a smaller scale, **altitude** and soil type become more important.

**Altitude**, height above sea level, affects the growth of vegetation. **Higher altitudes** are colder so fewer plants grow. This also limits the number of animal species that can thrive. Cold environments also have thin soils due to the lack of **organic matter** available to decompose and form soil.

**Soil types** also affect the **diversity** of plants and animals. **Nutrient-rich** soils can support more vegetation. The acidity, **drainage** and thickness of soils also affect whether plants can grow.

**Biomes** contain **fauna and flora** (animals and plants) that have **adapted** to the environment. Biomes are often defined by abiotic (non-living) factors such as **climate, relief, geology, soils and vegetation**.



## Topic 5: What is the structure of the tropical rainforest?

### WHAT ARE THE MAIN LAYERS IN THE RAINFOREST?

There are clear layers in the rainforest. Each layer has animals and plants which have **adapted** to the conditions found there.



**Emergents** are the tallest trees and are usually over 50 metres tall. The **Kapok** tree is an example of an **emergent**.

The sea of leaves blocking out the sun from the lower layers is called **the canopy**. The canopy contains over 50% of the rainforest wildlife. This includes birds, snakes and monkeys. **Lianas** (vines) climb to the canopy to reach sunlight. Epiphytes, or air plants, are also found in this layer. An **epiphyte** is an organism that grows on the surface of a plant and gets its moisture and **nutrients** from the air, rain, water or from debris gathering around it.

**The under canopy** mainly contains bare tree trunks and **lianas**. **Lianas** are vines that climb the vegetation in a bid to reach sunlight.

**The shrub layer** has the **densest** plant growth. It contains shrubs and ferns and other plants needing less light. **Saplings** of **emergents** and **canopy trees** can also be found here.

**The forest floor** is usually dark and damp. It contains a layer of rotting leaves and dead animals called litter. This **decomposes** rapidly (within 6 weeks) to form a thin **humus**, rich in nutrients. Below the rich top soil the soil lacks nutrients. This is because nutrients are rapidly **absorbed** by vegetation.



## Topic 6-How has rainforest vegetation adapted to the climate?

Vegetation in the tropical rainforest has adapted to thrive in its hot, wet climate in a range of ways.

The rainforest has four distinct layers of plants with different **adaptations**. For example, plants in the highest layer (**emergent**) only have branches at their **crown** (where the most light reaches them), and plants in the **under-canopy** have large leaves to absorb as much light as possible to support **photosynthesis**.

In the tropical rainforest, most trees in the rainforest have wide buttress roots to support them as they grow incredibly tall (over 20-40m in some cases) as there is considerable competition for sunlight. In addition to this roots grow wide rather than deep because nutrients exist in the top layer of soil.

**Epiphytes** are plants that grow on the surface of another plant. They get their moisture and nutrients from the air, rain, water or debris **accumulating** around it.

### Tree adaptations

Tree bark in the tropical rainforest is typically thin. This is because the temperature throughout the year is typically between 26-28°C. Therefore they do not need protection from the cold.

Plants drop their leaves gradually throughout the year, meaning they can go on growing all year round.

Many trees have smooth, thin bark as there is no need to protect the trunk from cold temperatures. The smooth surface also allows water to run off efficiently to the soil so the tree can absorb the water.

Additionally, smooth trunks reduce the risk of **epiphytes** growing on a tree as they have nothing to attach themselves. This helps protect the tree from the risk of collapse under the weight of epiphytes.

Plants have thick, waxy leaves with pointed tips. The pointed tips (called **drip-tips**) channel the water to a point, so it runs off – that way the weight of the water doesn't damage the plant, and there's no standing water for **fungi and bacteria** to grow in. The waxy coating of the leaves also helps repel the rain.



## Week 1 - 3 – World War 1

### Key concept 1: The aftermath.

1. **Shell Shock** – Many men found the horrors of war did not match up to the propaganda they had been shown and came home with shell shock. The army have recently been criticised for how they treated men with Shell Shock during the war (**Case Study: Harry Farr**).
2. **A true 'World War'**: Soldiers from all over the world came to help their **allies**, the impact of imperialism was strong during this time period.
3. (**Case Study**) **Were the 'Lions' led by 'Donkeys'?** The death toll for WWI was unlike anything ever seen before, nearly 9 million people were lost. In Britain some people blame the army and its generals for the high loss of life. Is this fair?
4. **Remembrance**: Discussion ensued over how to be remember the men, who fell in the war - poppies

### Key concept 2: Peace making

**World War 1** ended at 11am on the eleventh day of the eleventh month, in 1918. Germany signed an **armistice (an agreement for peace and no more fighting)** that had been prepared by Britain and France.

The allies met at **Versailles**, France, in 1919 to negotiate a peace, which would avoid all future wars.

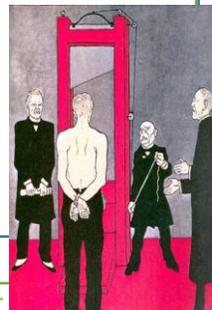
Who attended?

**David Lloyd George – Britain**

**Woodrow Wilson – USA**

**George Clemenceau – France**

The main questions were how to deal with Germany and how to ensure world peace.



## Week 4- 7 – World War 2

### Key concept 3: The rise of Hitler

The **Treaty of Versailles**, signed in 1919, was a weak peace. Many countries, including Germany, were left weak and swore revenge. In 1923, Germany could not pay the **reparations** anymore, which it had been told to pay in the Treaty of Versailles. Germany also had **mass unemployment and hyperinflation** in the 1920s. Many extreme parties started to speak about revenge, among them the German Workers Party, of which **Adolf Hitler** became a member.

Hitler's main aims were:

**Lebensraum – more living space for Germany**

**Rearmament – building up a new German army**

**Volksdeutsche – bringing all people of German blood together in one country**

**Anschluss – annexation of Austria**

**Destroy Communism – eliminating all political opponents**



### Websites and further reading:

- <https://www.bbc.com/education/topics/z4crd2p>
- <https://www.youtube.com/watch?v=QPdFo8nwkZI>
- <https://historykids.net/history/world-war-1-facts-and-information/>
- <https://www.natgeokids.com/uk/discover/history/general-history/first-world-war/>
- <https://www.bbc.co.uk/bitesize/guides/z3bp82p/revision/1>
- <https://www.bbc.co.uk/bitesize/guides/zwq6qty/revision/1>



## Week 1 - 4

### Key concept 1: Personal Identity

Your **identity** is the sum of characteristics, which make you into the person you are. The following ideas can make up someone's identity:

- Family circumstances
- Looks and style
- Likes and dislikes
- Sexuality/gender
- Personality
- Hobbies
- Careers
- Family and friends



Some of these elements can change, however others are not, and it is important that you over time define what makes you, you.

**Consider: Do you think some characteristics are more important than others?**

### Key concept 2: Values and Decision

**Values** are principles and standards of behaviour. You will have to decide for yourself:

- What are my personal values?
- Who are my role models?
- What do I want to become?
- How do I want to be remembered?
- Am I influenced by others' values?
- Which value is most important to me?

**Consider: Do your actions define you? What do they say about you?**



## Week 5-7

### Key concept 3: Rites of Passage

A rite of passage is a ceremony, which marks the passing of a person from one stage of their lives to another.

- Birth (Christening or Naming ceremony)
- Coming of Age (Initiation ceremony)
- Marriage (Marriage ceremony)
- Death (Funeral)

Different religions celebrate these stages in life in different ways. You looked at a Christian wedding and a Jewish Bar/ Bat Mitzvah as your case studies. Next term we will study funeral rites and views on life after death.

**Consider: Can you think of any other rites of passages? Have you ever experienced a rite of passage (your own or someone else's)?**



### Websites and further reading:

- <https://www.bbc.co.uk/bitesize/topics/z9kdm3>
- <https://www.bbc.co.uk/bitesize/guides/zd9whyc/revision/1>
- <https://www.bbc.co.uk/bitesize/guides/zk4dtfr/revision/1>
- <https://www.truetube.co.uk/film/bat-and-bar-mitzvah>



# Term 1 Week 1 & 2 -

- Discussing what you do in your summer holidays
- Using common activity verbs- *hacer, jugar, montar, ver etc.*

This is CORE vocabulary for this topic.

<b>¿Qué haces en verano?</b>	<b>What do you do in summer?</b>		
Compro un montón de revistas.	I buy loads of magazines.	Nado en el mar.	I swim in the sea.
Escucho música / la radio.	I listen to music / the radio.	Salgo con mis amigos / mi hermano/a.	I go out with my friends / my brother / sister.
Hago deporte / kárate / los deberes / submarinismo.	I do sport / karate / homework / diving.	Toco la guitarra / el piano.	I play the guitar / the piano.
Juego a los videojuegos / al baloncesto / al voleibol.	I play computer games / basketball / volleyball.	Veo la tele / un partido de fútbol.	I watch TV / a football match.
Monto a caballo / en bici.	I go horseriding / cycling.	Voy al parque / a la playa / al centro comercial.	I go to the park / the beach / the shopping centre.

- Linking in time frames and frequencies
- Developing ideas with opinions and linking with verbs (Opinion + verb)
- Varying reasons/adjectives to explain why
- Using *cuando* and weather structure

<b>¿Con qué frecuencia?</b>	<b>How often?</b>
siempre	always
a menudo	often
todos los días	every day
a veces	sometimes
una vez a la semana	once a week
dos o tres veces a la semana	two or three times a week
casi nunca	almost never

and next because  
moreover also  
so then however  
as well as but  
furthermore later

- Me gusta(n)
- Me chifla(n)
- Me flipa(n)
- Me mola(n)
- Me encanta(n)
- No me gusta(n)
- Odio

Cuando hace calor, juego al tenis. Juego una vez a la semana.  
When it's hot I play tennis. I play once a week.

This is CORE vocabulary for this topic.

nunca	never
Cuando...	When...
hace buen tiempo	it's good weather
hace mal tiempo	it's bad weather
hace calor / frío	it's hot / cold
hace sol / viento	it's sunny / windy
llueve / nieva	it's raining / snowing

<https://quizlet.com/gb/365270192/gcse-spanish-module-1-flash-cards/>

# Term 1 Week 3 & 4 -

- Practising the Present Tense structures
- Talking about holiday preferences
- Developing opinions and ideas along with reasons
- Pushing to talk about other peoples likes/preferences

This is CORE vocabulary for this topic.

**PRESENT TENSE**  
It is used to talk about things happening now, in the current. **It translates as 'I do' 'I eat' 'I play' or 'I am playing'**

<u>AR</u>	<u>ER</u>	<u>IR</u>
o	o	o
as	es	es
a	e	e
amos	emos	imos
áis	éis	ís
an	en	en

Make sure you practise to be able to use and recognise the vocab. Practise using 'look, cover, write, check'. Add other things you may wish to say to your list.

Cuando	hace buen tiempo...	
	hace mal tiempo...	
	hace calor...	
	hace frío...	
	hace sol...	
	hace viento...	
	llueve...	
	nieva...	

[www.conjugemos.com](http://www.conjugemos.com) is a really useful website to practise verbs and endings 😊

<b>¿Cómo prefieres pasar las vacaciones?</b>	<b>How do you prefer to spend the holidays?</b>	Me gusta...	I like...
¿Dónde vives?	Where do you live?	Me encanta / Me mola / Me chifla...	I love...
Vivo en el...	I live in the...	No me gusta (nada)...	I don't like... (at all)
norte / sur...	north / south...	Odio...	I hate...
este / oeste...	east / west...	A (mi padre) le gusta...	(My dad) likes...
de España / México	of Spain / Mexico	estar al aire libre	being outdoors
de Inglaterra / Escocia	of England / Scotland	hacer artes marciales / deportes acuáticos	doing martial arts / water sports
de Gales / Irlanda (del Norte)	of Wales / (Northern) Ireland	ir de compras / de excursión	going shopping / on an excursion
Tengo... semanas de vacaciones.	I have... weeks holiday.	leer	reading
Soy adicto/a a...	I'm addicted to...	no hacer nada	doing nothing
Soy un(a) fanático/a de...	I'm a... fan / fanatic	tomar el sol	sunbathing
ya que / dado que	given that / since	usar el ordenador	using the computer
Prefiero...	I prefer...	ver películas	watching films

## Week 5 & 6 -

- Talking about Past holidays
- Using the Preterite tense to talk about previous holidays
- Using the *hace* structure
- Explaining who you went on holiday with

**This is CORE vocabulary for this topic.**

### ¿Adónde fuiste de vacaciones? *Where did you go on holiday?*

Hace una semana / un mes	<i>A week / month ago</i>
Hace dos semanas / meses / años	<i>Two weeks / months / years ago</i>
El año / verano pasado	<i>Last year / summer</i>
Fui de vacaciones a...	<i>I went on holiday to...</i>
Francia / Italia / Turquía	<i>France / Italy / Turkey</i>
¿Con quién fuiste?	<i>Who did you go with?</i>
Fui...	<i>I went...</i>

**PRETERITE**  
 It is used to talk about single completed actions in the past. **It translates as '-ed.'**

<u>AR</u>	<u>IR/ER</u>
é	í
aste	iste
ó	ió
amos	imos
asteis	isteis
aron	ieron

con mi familia / insti	<i>with my family / school</i>
con mi mejor amigo/a	<i>with my best friend</i>
solo/a	<i>alone</i>
¿Cómo viajaste?	<i>How did you travel?</i>
Viajé...	<i>I travelled...</i>
en autocar / avión	<i>by coach / plane</i>
en barco / coche / tren	<i>by boat / car / train</i>



**This is CORE vocabulary for this topic.**

primero	<i>first</i>
luego	<i>then</i>
después	<i>after</i>
más tarde	<i>later</i>
finalmente	<i>finally</i>



- Changing connectives to link your ideas and sentences
- Expanding sentences to say *first, then, later*
- Using these aspects in written work to develop

## Week 7 & 8 -

- Explaining what you did during your holidays.
- Linking two different past tenses together
- Giving opinions in the past tense
- Pushing to change the person from 'I' to another person 'We' 'He' 'She' etc.

**This is CORE vocabulary for this topic.**

**IMPERFECT**  
 It is used to talk about repeated actions in the past, past actions with no specific start/end point, interrupted/unfinished past actions or general description in the past. **It translates as 'was/were -ing' or 'used to ...'.**

<u>AR</u>	<u>IR/ER</u>	perdí mi móvil	<i>I lost my mobile phone</i>
aba	ía	saqué fotos	<i>I took photos</i>
abas	ías	tomé el sol	<i>I sunbathed</i>
aba	ía	tuve un accidente en la playa	<i>I had an accident on the beach</i>
ábamos	íamos	vi un partido en el estadio	<i>I saw / watched a match at the stadium</i>
abais	íais	visité el Park Güell	<i>I visited Park Güell</i>
aban	ían	visité... a pie / en bici / en Segway	<i>I visited... on foot / by bike / by Segway</i>
		vomitó en una montaña rusa	<i>I was sick on a roller coaster</i>
		fuiamos al Barrio Gótico	<i>we went to the gothic quarter</i>
		vimos los barcos en el puerto	<i>we saw the boats in the port</i>

- Using *lo mejor fue cuando* structure
- Pushing to talk with positive structures and negative to compare.



Lo mejor / peor fue cuando...	<i>The best / worst thing was when...</i>
aprendí a hacer vela	<i>I learned to sail</i>
comí muchos helados	<i>I ate lots of ice creams</i>
compré recuerdos	<i>I bought souvenirs</i>
descansé	<i>I rested</i>
hice esquí / turismo /	<i>I went skiing / sightseeing /</i>

## Term 2 Week 1 & 2 -

- Using opinions and reasons in different tenses
- Talking about ideal holidays

This is CORE vocabulary for this topic.

<b>Mis vacaciones ideales</b>	<b>My ideal holidays</b>
Prefiero ir de vacaciones en... primavera / verano / otoño / invierno	I prefer going on holiday in... spring / summer / autumn / winter
Me gusta ir a la costa / al campo / a la montaña / a la ciudad	I like going to the coast / countryside / mountains / city

This is CORE vocabulary for this topic.

Prefiero ir a un hotel / un camping / un apartamento / una casa rural	I prefer going to a hotel / campsite / apartment / house in the country
Es divertido / barato / interesante / relajante	It's fun / cheap / interesting / relaxing



- Using *lo pasé* structure
- ¡Qué ...! Structure

<b>¿Qué tal lo pasaste?</b>	<b>How was it?</b>
Lo pasé fenomenal / fatal	I had a great / awful time
Lo pasé bien / mal	I had a good / bad time
En mi opinión / Creo que...	In my opinion / I think that...
Fue inolvidable / interesante / flipante / horroroso	It was unforgettable / interesting / awesome / awful
¡Qué aburrido / miedo / guay!	How boring / scary / cool!

## Term 2 Week 3 & 4 -

- Talking about different accommodation
- Using verbs with *usted*

This is CORE vocabulary for this topic.

<b>¿Dónde te alojaste?</b>	<b>Where did you stay?</b>		
Me alojé / Me quedé... en un albergue juvenil / un hotel en un parador en un camping / una pensión	I stayed... in a youth hostel / a hotel in a state-run luxury hotel on a campsite / in a guest house		
Estaba... cerca de la playa en el centro de la ciudad en el campo	It was... near the beach in the city centre in the country	un poco / bastante... muy / demasiado... antiguo/a animado/a barato/a caro/a cómodo/a	a little bit / quite... very / too... old lively cheap expensive comfortable
¿Cómo era el hotel?	What was the hotel like?		

Tenía...	It had...
Había...	There was/were...
No tenía ni... ni...	It had neither... nor...
Además, no tenía...	Furthermore, it didn't have...
(un) bar	a bar
(un) gimnasio	a gym
(un) restaurante	a restaurant
(una) cafetería	a café
(una) discoteca	a disco
(una) piscina climatizada	a heated pool
(una) sauna	a sauna
mucho espacio	lots of space

This is CORE vocabulary for this topic.

- Talking about different complaints and problems

<b>Quiero quejarme</b>	<b>I want to complain</b>
Quiero... hablar con el director. cambiar de habitación. un descuento.	I want... to speak to the manager. to change room. a discount.
El aire acondicionado...	The air conditioning...
El ascensor...	The lift...
La ducha...	The shower...
La habitación...	The room...
La luz...	The light...
no funciona. está sucio/a.	doesn't work. is dirty.

Hay ratas en la cama. No hay... Necesito... papel higiénico jabón / champú toallas / (un) secador	There are rats in the bed. There is no... I need... toilet paper soap / shampoo towels / a hairdryer
¿Cuál es el problema? ¿Qué habitación es? ¿Cómo se llama usted? ¿Cómo se escribe? ¿Puede repetir, por favor?	What's the problem? Which room is it? What are you called? (polite) How do you spell that? Can you repeat, please?

## Term 2 Week 5 & 6 -

- Booking different accommodations
- Discussing disastrous holidays
- Practising different role plays to develop speaking
- Developing thinking spontaneously
- Identifying positive and negative structures together
- Giving different accounts and points of view

**This is CORE  
vocabulary for this  
topic.**

<b>Quisiera reservar...</b> ¿Hay... aire acondicionado? aparcamiento? wifi gratis? (una) tienda de recuerdos? ¿Cuánto cuesta una habitación...? Son... euros por noche. ¿A qué hora se sirve el desayuno? ¿Cuándo está abierto/a el/la...? ¿Hasta qué hora está abierto/a el/la...? ¿Se admiten mascotas?	<b>I would like to book...</b> Is/Are there... air conditioning? parking? free wifi? a gift shop? How much does a... room cost? It's... euros per night. What time is breakfast served? When is the... open? What time is the... open until? Are pets allowed?	Hay un suplemento para perros. Quisiera reservar... una habitación individual / doble con / sin balcón con baño / ducha con vistas al mar con cama de matrimonio con desayuno con media pensión con pensión completa ¿Para cuántas noches? Para... noches del... al... de...	<i>There's a supplement for dogs. I would like to book... a single / double room with / without balcony with a bath / shower with sea view with double bed with breakfast with half board with full board For how many nights? For... nights from the... to the... of...</i>
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**This is CORE  
vocabulary for this  
topic.**



<b>Mis vacaciones desastrosas</b> Por lo general Por un lado... por otro lado... Sin embargo Por eso El primer / último día... Al día siguiente... alquilé una bicicleta conocí a mucha gente fui a una fiesta perdí mis gafas de sol visité el pueblo	<b>My disastrous holiday</b> In general On one hand... on the other hand... However Therefore / So (On) the first / last day... On the following day... I hired a bicycle I met lots of people I went to a festival / party I lost my sunglasses I visited the town / village	cogimos el teleférico decidimos acampar fuimos de excursión Tuve / Tuvimos... un retraso / una avería. Tuve / Tuvimos que... ir a la comisaría. llamar a un mecánico. Perdí / Perdimos... el equipaje / la cartera / las llaves. El paisaje era precioso.	<i>we took the cable car we decided to camp we went on an excursion I had / We had... a delay / a breakdown. I had to / We had to... go to the police station. call a mechanic. I lost / We lost... the luggage / the wallet / the keys. The landscape was beautiful.</i>
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Subject: Art

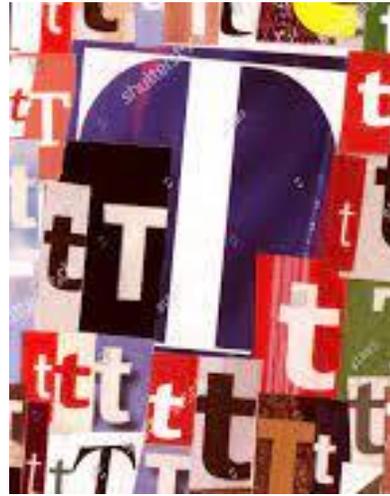
Term: 1&2

Topic: Typography - Word & Image (Support for this topic can all be found in your personal Typography Booklet.



### **Key Skill 1: Collage**

In response to Sir Peter Blakes alphabet collages you will use found typography in magazines and newspapers to create a collage of different lettering and font styles.



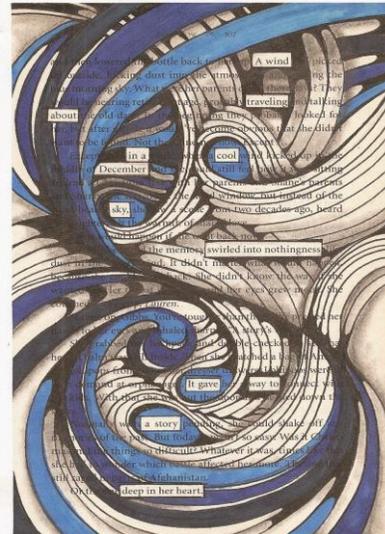
### **Key Skill 2: Illuminated**

An illuminated letter was usually the first letter of a page. These were large and colourful, with areas in gold, while the rest of the text was black. The images used to illustrate the letters included animals, plants and mythical creatures. You will learn about the history of illuminated manuscripts before creating your own illuminated letter.



### **Key Skill 3: Blackout Poetry**

Home learning - You will create a piece of Blackout poetry. Blackout poetry is when you take a written piece of text from a book, newspaper, or magazine and edit words, in order to come up with your very own poetry whilst also creatively presenting work.



### **Key Skill 3: Graffiti**

Studying different graffiti font styles is how a lot of graffiti writers choose their own individual style. Flat cap, Calligraffiti, Puzzle, Shadow Wiggles are just a few of the different styles that exist in the street art scene. Using the guidance available to create your own graffiti typography piece.





### Key Skill 5: Paper Cut (Notan)

Henri Matisse was the first artist in the Western World to make the paper cut technique recognisable. You will be using a technique called to create a typography piece. This task will challenge you to be aware of the positive and negative space as you work with asymmetrical or symmetrical designs.



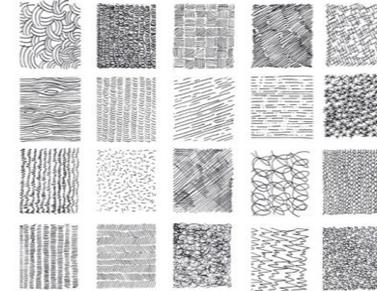
### Key Skill 7: Zentangle

Drawing structured patterns. Patterns are called, tangles. Tangles are created with combinations of dots, lines, simple curves, S-curves and orbs. Using the technique which is similar to mandala you will develop a typography piece which combines symmetrical and asymmetrical patterns.



### Key Skill 6: Clay Slab / Tile

Slabbing clay is a hand building ceramics technique that has been around for centuries. Slabbing clay is a technique the includes rolling out slabs of clay and then cutting out pieces and attaching them together to create pots, cups, and urns.



### **MARK MAKING IDEAS**

You will create a design idea for a clay typography slab before learning the important techniques needed to construct a clay slab along with relevant Health and Safety requirements.

Mark making patterns will allow you to creatively decorate your clay slab before your piece is fired in the kiln and later glazed.



Subject: Art

Term: 1&2

Topic: Typography - Word & Image (Support for this topic can all be found in your personal Typography Booklet.



### Key Skill 8: Watercolour

Stephen Raw (born 1952) is a British artist. Raw started 'Letterforms' some twenty years ago and has since provided 'bespoke' lettering for numerous clients. One art director said that "where the computer stops Stephen starts, and that's exactly what I need". Stephen is also an internationally recognised artist whose medium is 'visible language'.



You will develop your clay slab / tile design further by apply colour using wax resist and watercolour wash techniques.

Watercolour wax resist refers to the process of creating a masked surface before inking with watercolours, or any liquid pigment.



### Key Skill 9: Photography

Home learning - You will look for typography within your own environment and take photographs. It will be essential that you consider your composition and think creatively about where you find your typography. Jennifer Blakeley and Max Mattei are both photographers who take pictures of typography in different environments.



### Key Skill 10: Image made from text

Home learning – This typography piece requires you to develop an image of your personal choice and turn it into text.

You can either draw the basic outline of object and fill with text or use relevant websites to download an image and turn into text.



Subject: Art

Term: 1&2

Topic: Typography - Word & Image (Support for this topic can all be found in your personal Typography Booklet.



### Key Skill 11: Research

This term you will learn about Typography and its purpose. Typography can be dated back to the 11th century, during the innovation of movable type. Before the digital age, typography was a specialised craft associated with books and magazines, and eventually public works. The first example of typography can be seen in the Gutenberg Bible, which kick-started a typography revolution in the west.

You will develop work in response to one of the best-known British pop artists, Sir Peter Blake. Peter Blake is considered to be a prominent figure in the pop art movement. Central to his paintings are his interest in images from popular culture which have influenced his collages.

Peter Blake has used the structure of the alphabet as a starting point to create numerous series of work. The collages all relate to enduring themes in Blake's career including nostalgia, childhood along with an exploration of different fonts and typefaces .

During term 1 and Term 2 you will be creating individual typography pieces using a variety of different media, skills and techniques that are 10cm x 15cm. Each piece will be inspired by a variety of different cultures, artists and art movements using the Peter Black grid technique to present as a final outcome.



Gutenberg Bible



Sir Peter Blake Alphabet Series



Final Outcome

### Key Skill 12: Analysis

Each lesson you will be required to complete written tasks about either associated artists, art movements your own work or about techniques you have been developing. Self / Peer assessment will allow you to reflect on your progress throughout the Topic supporting you in making relevant improvements to work.

Subject: Art

Term: 1&2

Topic: Typography - Word & Image (Support for this topic can all be found in your personal Typography Booklet.



### **Websites and further reading:**

#### **Research**

Youtube: The History of Typography- <https://www.youtube.com/watch?v=Oo5LCXPkkhc&t=53s>

Youtube: Peter Blake- <https://www.youtube.com/watch?v=H2YMTtoUSy9I&t=77s>

Youtube: Is graffiti art? Or vandalism? - <https://www.youtube.com/watch?v=4GNoUYZhrT0&t=8s>

Youtube: Graffiti alphabet tutorial - <https://www.youtube.com/watch?v=8irb3kgXs2A>

Youtube: Graffiti art or vandalism? <https://www.youtube.com/watch?v=t5zQVRuGXBM&t=6s>

Peter Blake: Typography Pop Art - <https://www.peterblakegallery.com/>

Stephen Raw: Typography Watercolour - <http://www.stephenraw.com/>

Max Mattei : Photography Typography - <http://maxmatteiphoto.com/index18.html>

Jennifer Blakeley: Photography Typography - <https://www.alphabetphotography.co.uk/index.aspx>

#### **Clay Techniques**

Youtube: The clay process - <https://www.youtube.com/watch?v=x7bIPvnZ24Q&t=2s>

Youtube: How to attach self dry clay - <https://www.youtube.com/watch?v=n4UZvlo6g7E>

#### **Typography Techniques**

Youtube: Medieval Illumination - [https://www.youtube.com/watch?v=Wh4dTR1S\\_l8](https://www.youtube.com/watch?v=Wh4dTR1S_l8)

Youttube: Zentangle Alphabet - [https://www.youtube.com/watch?v=ONqOGw9w6Cg&list=PLmqi5Zsl8aqq94g4Rcu1F9wIH7\\_6hACwN&t=1s](https://www.youtube.com/watch?v=ONqOGw9w6Cg&list=PLmqi5Zsl8aqq94g4Rcu1F9wIH7_6hACwN&t=1s)

#### **Turn Images to Text**

[https://www.picturetopeople.org/image\\_effects/photo\\_text/photo-typography-effect-generator.html](https://www.picturetopeople.org/image_effects/photo_text/photo-typography-effect-generator.html)

<https://www.wordificator.com/>



### **Key Vocabulary and Definitions:**

**Typography** - Typography is the art and technique of arranging type to make written language legible, readable and appealing when displayed. Is derived from the Greek words "to write"

**Font**—is the lettering that graphic designers use to put text on their images and videos. They come in all shapes and sizes, and there is likely one for every imaginable use.

**Collage**—From the French meaning "to glue," collage describes the technique of composing an artwork by gluing a wide range of materials - including pieces of paper, fabric, newspaper clippings, and sometimes readymade objects - to a surface.

**Pop Art**- Art based on modern popular culture and the mass media, especially as a critical or ironic comment on traditional fine art values

**Illuminated Manuscript**- An illuminated manuscript is a manuscript in which the text is supplemented with such decoration as initials, borders, and miniature illustrations

**Response**- A piece of your own work but in the style of the artist you have studied, so using their themes, painting style, media (materials) etc.

**Vellum** - Is prepared animal skin or "membrane", typically used as a material for writing on

**Street Art**—Unofficial and independent visual art created in public locations for public visibility.

**Graffiti**—Is writing or drawings made on a wall or other surface, usually without permission and within public view. Graffiti ranges from simple written words to elaborate wall paintings, and has existed since ancient times. From Italian word *graffio* a scratch.

**Fauvism**- Style of painting that flourished in France around the turn of the 20th century. Fauve artists used pure, brilliant colour aggressively applied straight from the paint tubes to create a sense of an explosion on the canvas from French *fauve*, "wild beast,".

**Notan**—Term that refers to the Japanese idea of balanced light and dark areas in a composition

**Symmetrical** – If something is symmetrical, it has two halves which are exactly the same i.e. mirror image.

**Asymmetrical** – Having two sides or halves that are not the same.

**Zentangle** - Drawing structured patterns. Patterns are called, tangles. Tangles are created with combinations of dots, lines, simple curves, S-curves and orbs.

**Relief** - To create a sculpture in relief is to give the impression that the sculpted material has been raised above the background

**Ceramics** - The art of making three dimensional objects from clay. The choice of clay and the techniques used to shape, decorate, glaze and fire it will all have an impact on the final piece.

**Slab** - A construction technique in which clay is rolled into thin sheets and manipulated into shapes

**Slip** - Mix of clay in water, used as a "glue" or for decorating. The piece of work becomes a relief.

**Bisque** - Is the first clay firing. It is a slower process and occurs at a lower temperature, reaching up to 1000°C (1830°F).

**Glaze** - a mixture of powdered materials that often includes a pre-melted glass made into a slip and applied to a ceramic body by spraying or dipping and capable of fusing to glassy coating when dried and fired.



## Choreography

## Week 1 - 5

### What is the role of a choreographer?

Choreographers create original dances based on a range of different stimuli and they also can develop new interpretations of existing work. During rehearsals, they typically demonstrate dance moves, to instruct dancers in the correct technique and intention of the piece.

### What is a stimulus?

A stimulus OR stimuli can be defined as something that gives you an idea – an inspiration, a starting point. It is the beginning of the choreographic process.

### What does RADS stand for?

#### Relationships – Dance relationships you can use within your work

lead and follow • mirroring • action and reaction • accumulation • complement and contrast • counterpoint • contact • formations.

#### Actions – The movement you use to create your sequences

travel • turn • elevation • gesture • stillness • use of different body parts • floor work • transfer of weight.

#### Dynamics – The energy in how you perform the movement

fast/slow • sudden/sustained • acceleration/deceleration • strong/light • direct/indirect • flowing/abrupt.

#### Space – How you use the space within your dance

pathways • levels • directions • size of movement • patterns • spatial design

### What are choreographic devices?

motif and development – A motif is a series of movements linked to your theme.

Repetition – To perform a movement more than once in the same way

Contrast – To use movements that are opposite in style, size, speed, space

Highlights – to create moments within your dance that stand out.

Climax – To build up to a dramatic moment within the dance

manipulation of number – The number of dancers you use within in your piece

unison and canon – UNISON: Dancers perform movements at the same time CANON:

Dancers perform the movement one after another.

## Performance

## Week 6 - 7

### What are Performance skills in Dance?

#### Physical Skills:

**Balance** - A steady or held position achieved by an even distribution of weight.

**Alignment** - Correct placement of body parts in relation to each other.

**Strength** - Muscular power.

**Isolation** - An independent movement of part of the body.

**Control** - The ability to start and stop movement, change direction and hold a shape efficiently.

**Posture** - The way the body is held.

**Extension** - Lengthening one or more muscles or limbs.

**Co-ordination** - The efficient combination of body parts.

**Stamina** - Ability to maintain physical and mental energy over periods of time.

**Flexibility** - The range of movement in the joints (involving muscles, tendons and ligaments).

**Mobility** - The range of movement in a joint; the ability to move fluently from action to action.

#### Expressive Skills:

**Projection** - The energy the dancer uses to connect with and draw in the audience.

**Phrasing** - The way in which the energy is distributed in the execution of a movement phrase.

**Facial Expression** - Use of the face to show mood, feeling or character.

**Focus (Use of)** - Use of the eyes to enhance performance or interpretative qualities.

**Spatial Awareness** - Consciousness of the surrounding space and its effective use.

**Text In Practice****Week 1 - 3****Who is Willy Russell?**

Willy Russell is an English dramatist best known for *Educating Rita* (1986). He was born in Whiston, near Liverpool in 1947 to a working class family; his father worked in a factory and his mother was a nurse and then in a warehouse. After he left school he became a hairdresser and took other odd jobs, such as a warehouseman. Being a hairdresser was, in his own admittance, "a job I didn't understand and didn't like," and he began to write songs and sketches for the media because writing was the "only thing I felt I understood, felt that I could do." He went on to write a range of plays that were big successes and made into films.

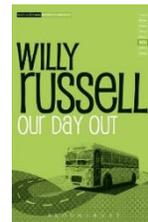
**Our Day Out Plot Summary**

Some students from a Progress Class in Liverpool are going on a trip to Conwy Castle, but they misbehave. Before the trip they leave they buy sweets and the deputy head disciplinarian teacher, Mr Briggs, joins them. On the journey, they make some stops: at a cafe, a zoo, the beach (Conwy Castle) and (afterwards) a fun fair. Whilst the children shoplift and generally make trouble, an older boy, Reilly hits on his young teacher, Susan, who shakes off his attentions by suggesting he turn his attention to the pretty young Linda, who had been trying it on with her own boyfriend, Colin. At the castle, they end up losing one of the children, Carol.

Mr. Briggs finds Carol on the cliffs as she ways up the necessity of returning to her troubled home life. He shouts at her to return but when she threatens to jump off the cliff, he softens and gently talks her down. In an uncharacteristic moment, Mr. Briggs takes the children to the fun fair, where Mrs. Kay gently mocks him for enjoying himself, saying she has the photographs to prove he is not all that bad.

**What themes are explored in the Text?**

The major themes in *Our Day Out* are the lack of education, lack of opportunity and deprivation in inner city Liverpool equaling unemployment and no money for education because of this.

**Performance of an Extract****Week 4 - 6****Creative Process – Getting to know your character**

**Performance of an Extract:** An extract is a section of a play.

**Character Status:** The power difference between the characters

**Role-on-the-wall:** To visually map the relationship between characteristics (emotions) and actions (behaviors) onto a simple outline of a human figure.

**Hot Seating:** A strategy in which a character is interviewed by the rest of the group. This activity invites students to recount a specific event, explore motivation and multiple experiences related to a theme, topic, event, or idea.

**How do you rehearse effectively for a performance?**

To **commit dialogue to memory** for devised performances and/or learn text they are performing for text-based performances

**Self Discipline:** To be able to work independently and stay on task

**Repetition:** To practice your use of skills over and over again to improve.

**Reflection:** To look at your work and understand how to improve it and be able to listen and implement feedback from others.

**Performance or Production****Performance Skills**

**Physical Skills:** body language, posture, gestures, co-ordination, gait, stillness, timing, control; facial expressions; eye contact, spatial awareness, Expression of mood.

**Vocal Skills:** Tone, Volume, Pace, Pitch, Diction, Accent, Pause

**Interaction with other performers:** Relationships between the characters.

**Proxemics:** Use of Space within the stage area.

**Production Skills**

**Set Design:** Flat, Backcloth, Location, Naturalistic, Non-Naturalistic, Props, Scenery, Construction.

**Lighting Design:** Atmospheric, Backlight, Blackout, LED, Spotlight, Lantern, Dimmer/Fader, Cue Sheet, Channel, Lighting Board, Plotting, Rig, Transition.



## Theatre Design and Production

## Week 7 - 10

**Lighting Designer** - Responsible for designing the lighting within a production, working closely with the director and the design team to create lighting states for atmosphere and mood on stage. The lighting designer will often have an initial idea about how the lighting will look for a show and will then make adjustments during the rehearsal process. Once their design work is complete, technicians will rig and programme the lights.

**Sound Designer** - Responsible for designing the use of sound within a production, eg sound effects or music, working with the director to create and develop sound that enhances a production. They will also advise the director on whether the production requires microphones and other technical equipment.

**Costume Designer** - Responsible for designing the costume, hair and make-up for a production, working closely with the design team to ensure that the costumes match the style of the show. They will often create designs ahead of the production being cast and can then make changes once they have met the performers. The costume designer works closely with the costume department, who are responsible for making the outfits and wigs.

**Set Designer** - Responsible for designing the set, working closely with the director and the design team to create the world of the show. They may begin by providing the director with a concept, before moving on to the technical drawing stage. Once the design is complete, the set is constructed and completed by various departments that specialise in materials such as metal, wood and paint.

**SETTING**

SPACE

STAGING FORM  
RELATIONSHIP TO

AUDIENCE

ENVIRONMENT

LOCATION

PERIOD

GENRE

TEXTUAL DEMANDS

SET DRESSING

SHAPE

SCALE

MATERIALS

COLOUR &amp; TEXTURE

DURABILITY

SYMBOLISM

ATMOSPHERE

LEVELS

IMAGERY

STAGE MACHINERY

**DESIGN ELEMENTS**

**LIGHTING=** SPACE / INTENSITY / COLOUR / TIMING & PACE / ATMOSPHERE / CONVENTIONS / FOCUS / LANTERNS / GELS OR FILTERS / SPECIAL EFFECTS / TEXTURE / SCALE / LINE / SHAPE / BARN DOORS / GOBOS / ANGLE / PROFILE / FRESNEL / PARCAN / FLOOD / LED / INTELLIGENT LIGHTING

**COSTUME=** COLOUR / TEXTURE / FIT / CUT / SHAPE / PERIOD / SYMBOLISM / ENVIRONMENT / DURABILITY / GENRE / MOVEMENT / ACCESSORIES / CONTEXT / MASK / MAKE-UP / PERSONAL PROPS

**SOUND=** VOLUME / PITCH / TONE / PACE / MUSIC / SOUND EFFECT / SOUNDSCAPE / PERIOD / ENVIRONMENT / MOOD / ATMOSPHERE / SPECIAL EFFECTS / TIMING / CONTEXT

**Theory - Arrangements**

**Week 1 - 3**

**Exploring Genre and Style**

Develop the technical ability to identify the use of musical elements in different styles of music.

**Music theory focus:**

Listen to a wide range of music and identify how the elements learnt in previous schemes of work are used while starting to think about the impact this has on the listener

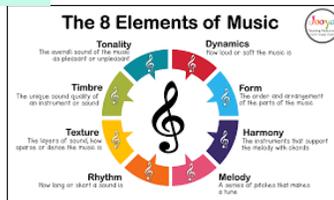
**What will we study?**

Pupils learn about the importance of Hooks and Riffs, Popular Song Structure and the various difference components/sections within, Melodic Motion (Conjunct and Disjunct Motion) and Lyrics within both these case studies and a range of other popular songs. We will listen to a range of songs from Classical to Jazz, Pop to Rock and everything in between. We will learn to compare elements and analyse the composers purpose.



**BIG QUESTION:**

How can we describe the form and structure and texture of different songs?



**Key Words, Concepts and Musical Knowledge**

Popular Song Structure: Introduction (intro), Verse(s), Strophic, Link, PreChorus, Chorus, Bridge/Middle 8, Coda (outro); Lyrics, Hook, Riff, Melody, Counter-Melody, Texture, Chords, Accompaniment, Bass Line, Lead Sheet, Arrangement, Cover Version, Melodic Motion: Conjunct, Disjunct, Range; Instruments, Timbres and Sonorities in Songs.



**Compose, Rehearse, Perform**

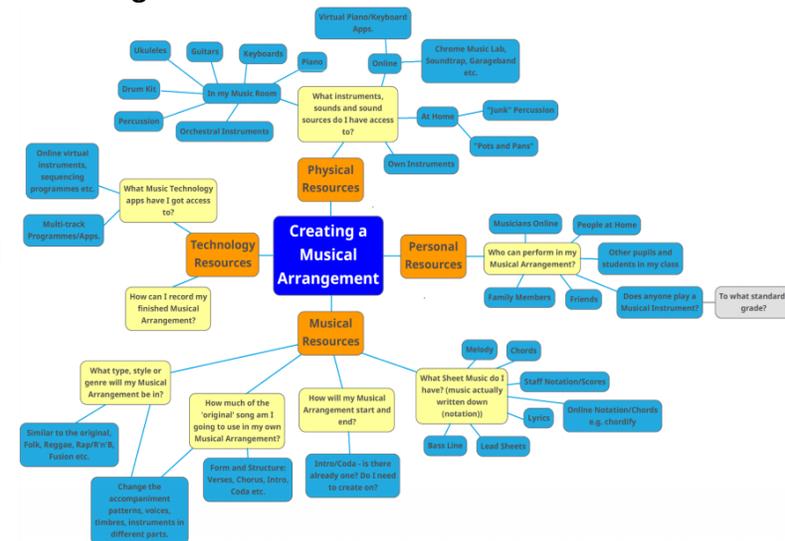
**Week 4 - 7**

**Composition**

Creating cover versions of a chosen song

**Performance**

Performing a cover version of a Song and creating a musical arrangement based on a chosen song



**BIG QUESTION:**

*How do you compose effectively?*

**Self Discipline:** To be able to work independently and stay on task

**Collaboration:** To work positively with your partner

**Repetition:** To practice your use of skills over and over again to improve.

**Analyse:** To listen to your work and be able to make sure you have correct time, notated score and are playing correctly



# Week 8 -10

### Introduction to GCSE:

Course content – Understanding Music, Composing Music, Performing Music

Key Elements of Music – How we use them in performance and Composition

GCSE specification

Study pieces and Areas of Study



### Composition Techniques and Set Briefs

Each composition must demonstrate selection and use of at least four types of musical element as follows:

- at least two of rhythm, metre, texture, melody, structure, form.
- at least two of harmony, tonality, timbre, dynamics, phrasing, articulation.

### Areas of Study

Western classical tradition 1650–1910

Popular music

Traditional music

Western classical tradition since 1910

Edexcel GCSE (9-1) Music Practice Papers Component 3 Appraising

Task 1: 'Clock' Symphony - Haydn (2nd movt.)

Task 2: 'The Musician's Wife' - The Beatles

Task 3: 'The Musician's Wife' - The Beatles

Task 4: 'The Musician's Wife' - The Beatles

### Performing live music:

- instrumental (including DJ)/vocal
- production via technology



### Composing Music:

- Creative and effective selection and use of musical elements
- Appropriate selection and use of musical elements (to the compositional intention)
- Technical and expressive control in the use of musical elements.





## Timbers & Manufactured Boards

### Week 1-2

#### What you need to know:

- Know the primary sources of materials for producing papers & boards
- Be able to identify a range of natural timbers & manufactured boards.
- Understand their properties and the functions they provide and how they are used?

Natural Timbers		Manufactured Boards
Hardwood	Softwood	
		
<p>Hardwoods are usually obtained from deciduous trees, which lose their leaves in autumn.</p> <ul style="list-style-type: none"> <li>□ usually grow in warmer more humid climates, mainly in South America and Asia</li> <li>□ grow slowly (80+ years)</li> <li>□ are more difficult to sustain than softwoods</li> <li>□ are more expensive than softwoods</li> <li>□ are strong and hardwearing.</li> </ul>	<p>Softwoods are usually obtained from coniferous trees, which keep their leaves in winter and are also known as evergreens. These grow quickly which makes them sustainable as they are renewable. This also makes them cheaper when compared to hardwoods.</p> <ul style="list-style-type: none"> <li>□ Usually grow in colder climates and are mainly grown in Scandinavia and Northern Europe</li> <li>□ Grow thin, needle-like leaves</li> <li>□ Grow relatively quickly (30 years)</li> <li>□ Are easier to sustain than hardwood trees</li> <li>□ Are easy to cut and shape</li> <li>□ Are usually cheaper than hardwoods</li> </ul>	<p>Manufactured boards are made from the waste sections of felled trees – the parts which are of little use as planks. The wood is reduced to pulp, particles or thin strips and bonded together using special adhesives or resins. Manufactured boards are made as alternative to natural timber.</p> <ul style="list-style-type: none"> <li>□ Come in sheet form (usually 1.2 x 2.4m)</li> <li>□ Are extremely stable and of uniform thickness</li> <li>□ Are less expensive than laminating planks of timber</li> <li>□ Can be covered with veneers</li> <li>□ Are available in a variety of thicknesses (3, 6, 9, 12, 15, 18, 22mm)</li> </ul>

#### Types of Softwoods

	Example	Properties	Uses
Larch		Tough and durable, good water resistance and finishes well	Fencing, cladding, decking, furniture
Pine		Lightweight easy to work with but can be knotty	Interior joinery and furniture and window frames.
Spruce		Easy to work with and is lightweight	Furniture, musical instruments and construction

#### Sustainable Timber

Wood is considered to be sustainable material as trees can be grown to replace those used for timber or fuel. A big issue is in many parts of the world timber is being used faster than trees are being replanted. This causes deforestation which is seen as a key factor to global warming.

To regulate this The Forest Stewardship Council (FSC) are dedicated to ensuring that timber supplies are regulated and sustainably harvested.



#### Keywords

#### Types of Hardwoods

	Example	Properties	Uses
Ash		Tough and flexible, wide grained, shock resistant and finishes well	Sports equipment, hand tools and ladders
Beech		Strong, dense close grain but is prone to warping and splitting	Furniture, children's toys, bench tops
Mahogany		Strong and durable, easy to work with finishes well.	High end furniture
Oak		Strong and lightweight	Flooring, furniture and timber framed buildings
Balsa		Strong and durable but very lightweight. If too thin can snap & break.	Model making, floats and rafts

# Plastics (Polymers)

## Week 3 - 5

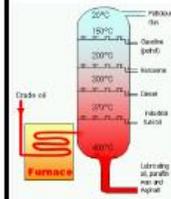
### What you need to know:

- Know the primary sources of materials for producing polymers
- Be able to recognise and characterise different types of polymers
- Understand the physical working properties for a range of thermosetting and thermoplastics.

Man made (synthetic) plastics have replaced wood and metal in the manufacture of a wide range of products. The 1<sup>st</sup> synthetic plastic was celluloid. It was made from cotton and camphor and used for table tennis balls and film.

Commercial production of plastics really started after the 2nd World War. The raw materials used were either coal or oil. They contain a number of different chemicals which can be separated into parts by a process called **Fractional Distillation**.

Some of the fractions contain chemicals that are small molecules (**Monomers**). The monomers are chemically joined together to make longer molecular 'chains' called **Polymers**



There are many different types of plastic and can be split into four groups:

**THERMOPLASTICS** are made from long chain polymers, joined by weak chemical bonds. When the plastic is softened by heat the bonds break making the plastic 'semi fluid' and able to be shaped. As the plastic cools, new weak bonds form and the shape will be fixed. Because no chemical reaction has taken place this process can be repeated many times, making them recyclable, however excessive heat will permanently damage the chemical structure.



**THERMOSETS** or thermosetting plastics are plastics which are converted into their final form by heat. Once set, they cannot be softened by further heating as they undergo a chemical change. They have strong chemical bonds that hold the long chains together. These make thermosets heat resistant but not recyclable. It is difficult to make products by extrusion or injection moulding as they harden as soon as heated. Manufacturing methods include casting, moulding and laminating.



**ELASTOMERS** are a type of thermoset. The bonds between the chains are 'springy' giving them a rubbery quality. Natural rubber is an example it can be vulcanised to make a rigid (ebonite). Latex is a stretchy elastomer used to make surgical gloves. Lycra is an elastomer used to make stretchy clothing.



Ebonite is an early form of plastic that was used to simulate ebony and is hard and used for bowling balls

**COMPOSITES** are when materials are combined to achieve specific advantages. Examples of composites are Kevlar, GRP (Glass reinforced plastic), Graphite and Carbon Fibre. These are used extensively for sporting uses e.g Bike parts, motor racing car bodies and tennis rackets.



**Plasticisers** are added to make plastic bendy.



**Pigments** are added to change colour.



**Antistatics** are used to reduce static charge



**Antioxidants** to reduce attack by air



**Flame retardants** to reduce burning



### Thermoplastics

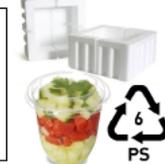
**Acrylonitrile Butadiene Styrene (ABS)** is strong, tough, scratch resistant and resists heat and chemicals. It is injection moulded to make Lego bricks and is used extensively for household appliances like Kettles, vacuum cleaners and housings for cameras and telephones.



**High Density Polythene (HDPE)** is tough and can be blow moulded (bottles for bleach and shampoo) injection moulded (toys and buckets) and extruded (piping)



**Polystyrene (PS)** is used to make vending cups and model kits. It is light, transparent but quite brittle. It is vulcanised to make **High Impact Polystyrene (HIPS)** This is used for Vacuum forming in thin sheets, which are cheap and easy to work with. Expanded **Polystyrene (EPS)** is used as thermal insulation for packaging and food cartons. It is 90% air.



**Low Density Polythene (LDPE)** is Made into thin film (Carrier bags, wiring insulation and squeeze bottles)



### Thermosetting plastics

**Polyester Resins** which are combined with fibreglass to produce GRP



**Phenol Formaldehyde** is tough and heat resistant often black in colour. (Used for saucepan handles)



**Epoxy Resins** which are mixed with a hardener and left to set. They can be used to make adhesives and flooring.



## Keywords

### Problems of using plastics

- Plastic products have a long shelf life, however it also means that they are difficult to dispose of
- Because they do not rot or corrode they are difficult to dispose of
  - If burnt they produce black choking gasses
  - When molten they are sticky and can cause severe burns
  - Thermoplastics can be recycled by melting them down and reforming their shape, but usefulness can be become limited with frequent heating
  - Plastic production itself can be polluting
  - PVC contains many nasty pollutants and it is one of the most difficult plastics to recycle.

## Introducing computers

General purpose machines including historical computing, types of computers; embedded computers, wearable tech.

Extended learning: <https://www.bbc.co.uk/bitesize/guides/zbgg4qt/revision/9>

## Week 1



## Purpose of a computer

Purpose of a computer; automation, robotics, modelling, data. Robots used in environments that are too dangerous or impractical for humans to work in - exploring Mars without the risks involved in sending an astronaut into space.

Extended learning: <https://www.youtube.com/watch?v=6lOH7b68byk>

## Week 2



## Bionics;

Advances in robotics also have great medical benefits. Advanced prosthetics, such as replacement arms and legs, are becoming much more intuitive thanks to computer technology.

Extended learning: <https://www.youtube.com/watch?v=zKhm89FWOy8>



## Week 3

## Computational thinking;

Computational thinking; What is decomposition – breaking the problem down, abstraction – removing what's not important, pattern recognition – have I solved a problem like this before – what worked? , algorithms – step by step instructions.

Extended learning: <https://www.youtube.com/watch?v=qbnTZCj0ugI>



## Future technologies;

The future of computing; Moore's Law, artificial intelligence, augmented reality, Nano technology

Extended learning: <http://www.teach-ict.com/glossary/M/mooreslaw.htm>

## Week 5



Key Skills

## Serving:

- Short
- Long

## Return of serve

## Forehand Shots:

- Overhead clear
- Drop shot
- Lift/underarm clear
- Smash
- Drive

Teamwork and communication with partner  
(doubles only)

## Serving:

- Flick

## Net shots

## Backhand shots:

- Overhead clear
- Drop shot
- Lift/underarm clear
- Smash
- Drive

## Footwork and court positioning

Badminton at Wootton Park School

Badminton is a racquet sport played using racquets to hit a shuttlecock across a net. Although it may be played with larger teams, the most common forms of the game are "singles" (with one player per side) and "doubles" (with two players per side). Each side may only strike the shuttlecock once before it passes over the net. Play ends once the shuttlecock has struck the floor or if a fault has been called by the umpire, service judge, or (in their absence) the opposing side. The shuttlecock is a feathered or (in informal matches) plastic projectile which flies differently from the balls used in many other sports. In particular, the feathers create much higher drag, causing the shuttlecock to decelerate more rapidly. Shuttlecocks also have a high top speed compared to the balls in other racquet sports. The flight of the shuttlecock gives the sport its distinctive nature.



Leadership will be an integral part of the Year 9 curriculum for learners at WPS. Leadership might broadly be considered the behavioural process of influencing individuals and groups towards set goals. In sport and exercise, leadership includes; making decisions, motivating participants, giving feedback, establishing interpersonal relationships, and directing the group or team confidently. Leadership will be developed in Badminton through learners taking on different roles such as; coaches, umpires, and scorers using the correct Badminton terminology throughout.

Key Words

Disguise

Variety

Ready Position

Grip

Tramlines

# Key Words

**Ready position** – the position in which you await the next shot from your opponent.

**Variety** – the use of different shots in a game situation e.g. Serve, smash, clear, drop.

**Grip** – a way of holding the racket in order to hit shots during a match.  
The most used grip is the orthodox forehand grip.

**Disguise** – give your shot a different appearance in order to conceal its identity e.g.  
feint a smash shot but playing a drop shot.

**Tramlines** – the singles side lines are not the outermost lines, but the next ones in.  
Taken together with the outermost (doubles) side lines, these make narrow alley shapes along the sides of the court. These alleys are often called the tramlines.



Subject: Year 9 PE

Term: 1-2

Topic: Badminton

**Task- Define the following key terms in the text boxes provided;**

**Disguise:**

**Ready Position:**

**Tramlines:**

**Grip:**

**Variety:**

Key Skills

- Motivational
- Inspirational
- Good communication
  - Organisation
  - Pro-active
  - Integrity
  - Honesty
  - Trustworthy
- Builds relationships

**Roles within Leadership**

Coach – helping and leading others during sessions.

Official – umpiring games/activities whilst consistently making the correct decisions.

Analyst – Watching learners and giving feedback to improve their performance.

Motivators – Ensuring learners are fully engaged in the activity and encourage them to do their best and complete the activities.

Organisers – Setting up equipment for activities and planning tournaments and games.



Leadership - Leadership will continue to be an integral part of the Year 9 curriculum for learners at WPS. Leadership might broadly be considered the behavioural process of influencing individuals and groups towards set goals. In sport and exercise, leadership includes; making decisions, motivating participants, giving feedback, establishing interpersonal relationships, and directing the group or team confidently. Leadership will be developed in Leadership through learners taking on different roles such as; coaches, umpires, motivators and organisers.

**Sports Leaders Programme at Wootton Park School**

Do you think you have what it takes to be a Sports Leader at WPS? If so demonstrate your skills in leadership lessons and other sports within P.E lessons or enrichment clubs. If successful you will have the chance to lead in sports events at school for younger year groups in the secondary phase and plan, organise events for the primary phase too. Furthermore, WPS have established leadership links for Northamptonshire Sport and if successful learners will have the opportunity to lead within the county at events for primary school learners in Northampton.

Key Words

Motivation

Inspiration

Communication

Organisation

Honesty

**Motivation:**

To be able to encourage others to succeed.

**Inspiration:**

To be able to boost learners and get them to do the best they can.

**Communication:**

To be able to speak confidently and clearly to others.

**Organisation:**

To be able to plan an effective session and group learners correctly.

**Honesty:**

To be able to be open to your group and have trust amongst your learners.

**GCSE Core Skills, to include:**

Stance and footwork:

- Triple threat position
- Pivoting

Passing:

- Chest
- Bounce
- Javelin/overhead

Shooting:

- Set shot
- Jump shot
- Dominant hand lay up

Dribbling:

- Use of dominant hand

Marking:

- Player with the ball

**GCSE Advanced skills, to include:**

Shooting:

- Non dominant hand Lay up
- Hook shot

Rebounding

Dribbling:

- Use of either hand

Beating opponents: (individual)

- Fake and drive
- Cross over step

Beating opponents: (team)

- Cutting

Marking:

- Intercepting passes.



Leadership in Basketball - Leadership will continue to be an integral part of the Year 9 curriculum for learners at WPS. Leadership might broadly be considered the behavioural process of influencing individuals and groups towards set goals. In sport and exercise, leadership includes; making decisions, motivating participants, giving feedback, establishing interpersonal relationships, and directing the group or team confidently. Leadership will be developed in Basketball through learners taking on different roles such as; coaches, umpires, motivators and organisers.

**GCSE Decision making and tactical awareness, to include:** • When to run/pass/shoot/dribble, • Where to run/pass/shoot/dribble, • Which pass to make, • Awareness of team strategies/tactics in both attacking and defending situations e.g. man to man marking, zone defence, fast break, tandem defence (against fast break) • Appropriate use of defensive ploys – zone defence, full/half court press • Finding space • Attacking positioning on court • Defensive positioning on the court • Defensive ploys – man to man marking • Awareness of strengths/weaknesses and actions of other players e.g. adopt a variety of roles in attack and defence in the game • Awareness of the rules and regulations of the game and their application (including refereeing signals)

## Key Words

Travelling



Double Dribble



Screening



Guarding



### Travelling:

**Travelling** is a violation of the rules that occurs when a player holding the ball moves one or both of their feet illegally.

### Double Dribble:

Once a player picks up his dribble by catching the ball with both hands, he must pass it or shoot it. The player cannot begin a second dribble after ending the first. If he begins a second dribble after voluntarily ending the first, he commits a double dribble violation.

### Screening

A screen is a blocking move by an offensive player in which they stand beside or behind a defender in order to free a teammate to either shoot a pass or drive in to score.

### Guarding:

Guarding is the act of legally placing the body in the path of an offensive opponent. There is no minimum distance required between the guard and opponent, but the maximum is 6 feet when closely guarded.



**Task- Define the following key terms in the text boxes provided;**

**Double Dribble:**

**Guarding:**

**Travelling:**

**Screening:**

Key Skills

## Serving

## Return of serve

## Offensive strokes: (forehand and backhand)

- Hit
- Flick
- Smash

## Defensive strokes: (forehand and backhand)

- Push/slice
- Chop

## Application of spin on strokes:

- Topspin
- Backspin

Teamwork and communication with partner  
(doubles only)

## Offensive strokes: (forehand only)

- Loop
- Counter-hit

## Defensive strokes: (forehand only)

- Block
- Lob

## Application of spin on strokes:

- Sidespin
- Corkspin

Table Tennis at Wootton Park School

Table tennis, is a sport in which two or four players hit a lightweight ball, also known as the ping-pong ball, back and forth across a table using small rackets. The game takes place on a hard table divided by a net. Except for the initial serve, the rules are generally as follows: players must allow a ball played toward them to bounce one time on their side of the table, and must return it so that it bounces on the opposite side at least once. A point is scored when a player fails to return the ball within the rules. Play is fast and demands quick reactions. Spinning the ball alters its trajectory and limits an opponent's options, giving the hitter a great advantage.



Leadership will be an integral part of the Year 9 curriculum for learners at WPS. Leadership might broadly be considered the behavioural process of influencing individuals and groups towards set goals. In sport and exercise, leadership includes; making decisions, motivating participants, giving feedback, establishing interpersonal relationships, and directing the group or team confidently. Leadership will be developed in Table Tennis through learners taking on different roles such as; coaches, umpires, and scorers using the correct table tennis terminology throughout.

Key Words

Slice

Topspin

Backspin

Ready Position

Grip

## Key Words

Slice

Topspin

Backspin

Ready Position

Grip

### Slice:

A **slice** resembles a **tennis slice**: the racket cuts underneath the ball, creating backspin causing the ball to float slowly to the other side of the **table**

### Grip:

Grip in table tennis is the way one player holds the racquet. There are three different styles of holding a bat and different player has either one or both styles of holding the racquet.

### Topspin:

**Topspin** strokes are created when your racket brushes against the ball using an upward action. This causes the ball to accelerate and dip. After the ball makes contact with your racket, the **topspin** will cause it to rebound in an upward direction.

### Backspin

**Backspin** is a shot such that the ball rotates backwards (as though rolling back towards the player) after it is hit. This direction of spin creates an upward force that lifts the ball.

### Ready Position:

The **ready position** is a neutral starting **position** from which all **table tennis** strokes can be played. Whenever you are receiving service in **table tennis** you should take up the **ready position**. It's also the neutral **position** which you should try to return to after playing your stroke during a rally



**Task- Define the following key terms in the text boxes provided;**

**Slice:**

**Topspin:**

**Backspin:**

**Ready Position:**

**Grip:**

Key Skills

Serving:

- Tennis
- Float

Return of serve

Overhead techniques:

- Volley
- Setting
- Spike

Underhand techniques:

- Dig
- Receiving service

Rebounding

Teamwork and communication

Overhead techniques:

- Block

Underhand Techniques:

- Emergency retrieve techniques

Net play

Back court play

Anticipation of and reactions to the ball

Footwork and court positioning

Serving:

- Jump-topspin
- Jump-float

Volleyball at Wootton Park School

Volleyball is a team sport in which two teams of six players are separated by a net. Each team tries to score points by grounding a ball on the other team's court under organized rules. It has been a part of the official program of the Summer Olympic Games since Tokyo 1964. The complete set of rules is extensive, but play essentially proceeds as follows: a player on one of the teams begins a 'rally' by serving the ball (tossing or releasing it and then hitting it with a hand or arm), from behind the back boundary line of the court, over the net, and into the receiving team's court. The receiving team must not let the ball be grounded within their court. The team may touch the ball up to 3 times, but individual players may not touch the ball twice consecutively. Typically, the first two touches are used to set up for an attack, an attempt to direct the ball back over the net in such a way that the serving team is unable to prevent it from being grounded in their court.



Leadership will be an integral part of the Year 9 curriculum for learners at WPS. Leadership might broadly be considered the behavioural process of influencing individuals and groups towards set goals. In sport and exercise, leadership includes; making decisions, motivating participants, giving feedback, establishing interpersonal relationships, and directing the group or team confidently. Leadership will be developed in Volleyball through learners taking on different roles such as; coaches, umpires, line judges and scorers using the correct volleyball terminology throughout.

Key Words

Disguise

Variety

Ready Position

Communication

Line Markings

## Key Words

Slice

Topspin

Backspin

Ready Position

Grip

### Slice:

A **slice** resembles a **tennis slice**: the racket cuts underneath the ball, creating backspin causing the ball to float slowly to the other side of the **table**

### Grip:

Grip in table tennis is the way one player holds the racquet. There are three different styles of holding a bat and different player has either one or both styles of holding the racquet.

### Topspin:

**Topspin** strokes are created when your racket brushes against the ball using an upward action. This causes the ball to accelerate and dip. After the ball makes contact with your racket, the **topspin** will cause it to rebound in an upward direction.

### Backspin

**Backspin** is a shot such that the ball rotates backwards (as though rolling back towards the player) after it is hit. This direction of spin creates an upward force that lifts the ball.

### Ready Position:

The **ready position** is a neutral starting **position** from which all **table tennis** strokes can be played. Whenever you are receiving service in **table tennis** you should take up the **ready position**. It's also the neutral **position** which you should try to return to after playing your stroke during a rally.



**Task- Define the following key terms in the text boxes provided;**

**Disguise:**

**Variety:**

**Line Markings:**

**Ready Position:**

**Communication:**

**Core Skills include:**

Starting the game.

Throwing

- Single-arm overhead.
- Sling shot.
- Double-armed overhead.
- Underarm.

Catching

- One-handed/two-handed.
- In front of body.
- Above body.

Dodging

Blocking

Attacking

Defending

Communication

Teamwork

Positioning

**Advanced skills include**

Speed approaching the ball when starting.

Throwing

- Consistent power and accuracy.

Catching

- Catching more powerful shots.
- Catching while moving.

Dodging

- Demonstrating fast reaction times.

Useful websites and links

<https://www.britishdodgeball.org/>

<https://www.Englanddodgeball.com/>

<https://www.theukrules.co.uk/rules/sport/dodgeball/terminology.html>

Leadership in Dodgeball - Leadership will continue to be an integral part of the Year 9 curriculum for learners at WPS. Leadership might broadly be considered the behavioural process of influencing individuals and groups towards set goals. In sport and exercise, leadership includes; making decisions, motivating participants, giving feedback, establishing interpersonal relationships, and directing the group or team confidently. Leadership will be developed in Handball through learners taking on different roles such as; coaches, umpires, motivators and organisers.



# Key Words

**Deflection-** Deflection refers to the ball when it ricochets off another ball or a player.

**Live ball** - A 'live ball' is any ball that is in play and is not dead. Dodgeballs become live when a player throws them.

**Fault-** A fault is any action (other than being hit) which results in a player being ruled out. Dodgeball faults include stepping over the attack line, going out of bounds, or repeatedly making high throws.

**Opening Run** - The opening run refers to the initial run for getting the balls at the attack line.



**Task- Define the following key terms in the text boxes provided;**

**Deflection:**

**Live Ball:**

**Opening Run:**

**Fault:**

**GCSE Core Skills, (applies to all positions, except where stated) to include:**

Footwork:

- Stopping/landing
- Pivoting

Dodging

Ball handling:

- Catching whilst stationary

Passing over short distances:

- Chest
- Overhead
- Bounce
- Shoulder pass

Shooting: (GS and GA only)

- Stationary

Rebounds (GA, GS, GD, GK only)

Marking:

- Player with the ball

**GCSE Advanced skills, (applies to all positions, except where stated) to include:**

Ball handling:

- Catching on the run,
- Catching in the air

Passing over mid-long distance:

- Chest,
- Overhead,
- Bounce,
- Shoulder pass

Shooting: (GS and GA only) • Stepping

Defence:

- Shadowing,
- Interception,
- Marking player without the ball



Leadership in Netball - Leadership will continue to be an integral part of the Year 9 curriculum for learners at WPS. Leadership might broadly be considered the behavioural process of influencing individuals and groups towards set goals. In sport and exercise, leadership includes; making decisions, motivating participants, giving feedback, establishing interpersonal relationships, and directing the group or team confidently. Leadership will be developed in Netball through learners taking on different roles such as; coaches, umpires, motivators and organisers.

**GCSE Decision making and tactical awareness, to include:** • When to pass/shoot/dodge, • Where to pass/shoot/dodge • Which pass to make, • Awareness of team strategies/tactics in both attacking and defending situations e.g. set piece plays, shot/penalty • Attacking positioning on the court, • Defensive positioning on the court • Defensive plays – man to man marking • Awareness of strengths/weaknesses and actions of other players e.g. adopt a variety of roles in attack and defence in the game, • Awareness of the rules and regulations of the game and their application (including refereeing signals) • Positioning and organisation at set pieces, communication

## Key Words

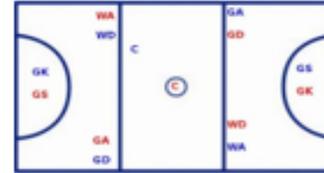
Footwork



Intercepting



Positions in Netball



Pivoting



### Footwork

**Footwork** in **netball** applies when a player is stepping, landing and pivoting while in possession of the ball. A maximum of 2 steps is allowed before the ball must be passed.

### Interception

**Interception** of the ball in **netball** is when a player regains possession of the ball during a pass by the opposition. It requires the player to anticipate where the opposition or ball is heading.

### Positions in netball

Centre (C)  
Wing Defence (WD)  
Wing Attack (WA)  
Goal Defence (GD)  
Goal Attack (GA)  
Goalkeeper (GK)  
Goal Shooter (GS)

### Pivoting

The **pivoting** action is a swivel movement that allows the player to move on a fixed axis to either pass or shoot.



Subject: Year 9 PE

Term:

Topic: Netball

**Task- Define the following key terms in the text boxes provided;**

**Positions:**

**Interception:**

**Pivoting:**

**Footwork:**

**GCSE Core Skills, (applies to all positions, except where stated) to include:**

Catching: (two handed)/shot stopping (goalkeeper only)

- Upper, • Half upper, • Lower, • Mid-air, • From bounce
- From the ground
- 'putting down'
- Jumping
- lunging

Positions for catching the ball:

- Frontal
- Sideways
- Backwards

Dribbling with dominant hand

Passing:

- Standing
- Running

Shooting:

- Shot in place
- Leaning back shot

Offensive and defensive movement:

- Feinting with the body
- Feinting a shot
- Feinting a pass

**GCSE Advanced skills, (applies to all positions, except where stated) to include:**

Catching: (one handed assisted on both sides)/shot stopping (goalkeeper only)

- Upper, • Half upper, • Lower, • Mid-air, • From bounce, • From the ground
- 'putting down', • Jumping, • lunging

Dribbling with either/both hand(s)

Passing: • Forward jumping, • Vertical jump

Shooting:

- Vertical jump shot
- Striding/jump shot
- Shot whilst falling

Offensive and defensive movement:

- Stealing the ball
- Screening an opponent without the ball
- Screening an opponent with the ball



Leadership in Handball - Leadership will continue to be an integral part of the Year 9 curriculum for learners at WPS. Leadership might broadly be considered the behavioural process of influencing individuals and groups towards set goals. In sport and exercise, leadership includes; making decisions, motivating participants, giving feedback, establishing interpersonal relationships, and directing the group or team confidently. Leadership will be developed in Handball through learners taking on different roles such as; coaches, umpires, motivators and organisers.

**GCSE Decision making and tactical awareness, to include:** • When to pass/shoot/dribble • Where to pass/shoot/dribble • Which pass to make • Awareness of team strategies/tactics in both attacking and defending situations e.g. set piece plays • Attacking positioning on the field • Defensive positioning on the field • Defensive plays – man to man marking, zonal marking • Awareness of strengths/weaknesses and actions of other players e.g. adopt a variety of roles in attack and defence in the game • Awareness of the rules and regulations of the game and their application (including refereeing signals) • Positioning and organisation at defensive set pieces, communication

# Key Words

**Passing** – In **handball**, the perfect **pass** is not always possible due to many factors e.g.: Opposition players trying to stop the **pass**. Players need to be able to catch the ball from many situations:- Low. **pass**; High **pass**; Chest **pass**; in midair; from a bounce; from the ground

**Defending** – Defending in handball is strategically preventing the opposition gaining a clear sight on goal and denying goal scoring opportunities. Individual defending techniques include blocking and tackling, while this should be progressed into defending in units and as a team.

**Goalkeeping** – The goalkeeper's primary task is to prevent the other team from scoring a goal, which is achieved when the ball fully passes the goal line.

**Shooting** – shooting is the final part of the action and it aims at scoring a goal. Technically it is similar to passing, but the action is much more forceful and fast.



**Task- Define the following key terms in the text boxes provided;**

**Goal Keeper:**

**Shooting:**

**Passing:**

**Defending:**

Key Skills

## Shapes:

- Tuck
- Straddle
- Pike

## Twists:

- Half
- Full

## Seat Drop

## Rotational movements:

- Front landing
- Back landing

## Combined movements:

- Swivel hips
- Half/full twist in/out of front and back landing
- Seat to front
- Front to seat

## Quality of execution:

## Form, to include:

- The quality of the individual elements of the sequence

- Sequence's accuracy as well as its conformity to regulations
- Height

## Consistency:

- Continuity/flow of the sequence

## Control, to include:

- Success in both the individual elements and the sequence as a whole;
- Centring;
- Phasing,
- Maintenance of height and body position

## Advanced skills, to include:

- Back to front
- Front to back
- Half turntable
- Cradle
- Front somersault (tucked)
- Back somersault (tucked)

Trampolining at Wootton Park School

Trampolining or trampoline gymnastics is a recreational activity, acrobatic training tool as well as a competitive Olympic sport in which athletes perform acrobatics while bouncing on a trampoline. In competition, these can include simple jumps in the straight, pike, tuck, or straddle position to more complex combinations of forward and/or backward somersaults and twists. Scoring is based on the difficulty and on the total seconds spent in the air. Points are deducted for bad form and horizontal displacement from the centre of the bed.

Leadership in Trampolining

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Key Words

Timing

Consistency

Height

Travel

# Key Words

Timing – to ensure that skills are executed accurately performers must time their moves correctly when bouncing on the trampoline.

Consistency – when performing a routine it is important that performers land on the middle of the trampoline and maintain the same height throughout.

Height – how high you perform skills in Trampolining.

Travel - describes movement away from the centre of the cross in excess of 50cms. Travel is caused by the Centre of Mass moving horizontally as well as vertically at last contact. This is also referred to as 'leaning off balance'



**Task- Define the following key terms in the text boxes provided;**

**Timing:**

**Consistency:**

**Height:**

**Travel:**

Key Skills

- Running – short and long distances.
- Team work – pairs and groups.
- Determination – the desire to complete exercise and activities.
- Resilience – the desire to keep on going.
- Pulse rate – being able to take your pulse.
- Heart rate – understanding maximum heart rate.

Websites, further reading and local information.

Components of fitness - <https://www.brianmac.co.uk/conditon.htm>

Effects of training and exercise -

[http://www.bbc.co.uk/schools/gcsebitesize/pe/exercise/2\\_exercise\\_effect\\_softtraining\\_rev1.shtml](http://www.bbc.co.uk/schools/gcsebitesize/pe/exercise/2_exercise_effect_softtraining_rev1.shtml)

Northampton Park Run - <http://www.parkrun.org.uk/northampton/>

**Health-related Exercise**

The definition of health-related fitness involves exercise activities that you do in order to try to improve your physical health and stay healthy, particularly in the categories of cardiovascular endurance, muscular strength, flexibility, muscular endurance and body composition.

**Cardiovascular fitness** is the ability to exercise the whole body for long periods of time and is sometimes called stamina.

**Muscular strength** is the amount of force a muscle can exert against a resistance. It helps sportspeople to hit, tackle and throw.

**Muscular endurance** is the ability to use voluntary muscles many times without becoming tired. It helps sportspeople to sprint or repeat quick actions for longer.

**Flexibility** is the range of movement possible at a joint. It helps performers to stretch and reach further.

**Body composition** is the percentage of body weight which is fat, muscle or bone. It helps sportspeople depending on the type of sport they play, e.g. heavy rugby players are more effective in the scrum than lightweight players, but light long distance runners will always beat heavyweights.

**Marathon WR holder** – Eliud Kipchoge is a Kenyan long-distance runner who competes in the marathon and formerly competed at the 5000 metre distance. He is the world record holder in the marathon with a time of 2:01:39, set on 16 September 2018, at the 2018 Berlin Marathon. His run broke the previous world record by 1 minute and 18 seconds. He has been described as "the greatest marathoner of the modern era".

Key Words

Cardiovascular Endurance

Muscular Strength

Muscular Endurance

Flexibility

Body Composition

# Key Words

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Key Words

Cardiovascular Endurance

Muscular Strength

Muscular Endurance

Flexibility

Body Composition

# Key Words

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