



WOOTTON PARK

'Ipsum quod faciendum est diutius'

Knowledge Maps

Year 7

Term 3

Overview

In this term, learners will be studying up to three units which will include fractions, decimals, percentages, constructions and loci.

Key Terms:

Unit 5: Percentage
Fraction Convert
Mixed Number F/D/P of
Improper amounts
Fraction

Unit 6: Experimental
Probability
Outcome Chance
Likely Random
Impossible Expected
Certain

Unit 7: Ratio
Proportion
Direct
Simplify

Key skills

Unit 5 Fractions

- 5.1 Comparing fractions
- 5.2 Simplifying fractions
- 5.3 Working with fractions
- 5.4 Fractions and decimals
- 5.5 Understanding percentages
- 5.6 Percentages of amounts
- 5 Check up
- 5 Strengthen
- 5 Extend
- 5 Unit test

Unit 6 Probability

- 6.1 The language of probability
- 6.2 Calculating probability
- 6.3 More probability calculations
- 6.4 Experimental probability
- 6.5 FINANCE: Expected outcomes
- 6 Check up
- 6 Strengthen
- 6 Extend
- 6 Unit test

Unit 7 Ratio and proportion

- 7.1 Direct proportion
- 7.2 Writing ratios
- 7.3 Using ratios
- 7.4 Scale and measures
- 7.5 Proportions and fractions
- 7.6 Proportions and percentages
- 7 Check up
- 7 Strengthen
- 7 Extend
- 7 Unit test

Unit 5:

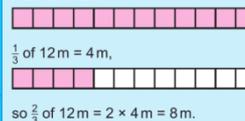
Worked example

Work out $\frac{2}{3}$ of 12m.

$$\frac{1}{3} \text{ of } 12\text{m} = 12 \div 3 = 4\text{m}$$

$$\frac{2}{3} \text{ of } 12\text{m} = 2 \times 4 = 8\text{m}$$

Here are 12m.



so $\frac{2}{3}$ of 12m = $2 \times 4\text{m} = 8\text{m}$.

Worked example

Write 0.32 as a fraction in its simplest form.

$$0.32 = \frac{32}{100} \xrightarrow{\div 4} \frac{32}{100} = \frac{8}{25}$$

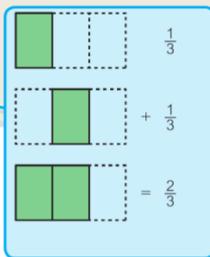
Key point

You can write any **percentage** as a fraction with denominator 100.

Worked example

Work out $\frac{1}{3} + \frac{1}{3}$

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



Key point

100%
10% 10% 10% 10% 10% 10% 10% 10% 10% 10%
20%
 $10\% = \frac{10}{100} = \frac{1}{10}$
To find 10% of an amount, you divide by 10.
You can then use 10% to find other percentages.

Key point

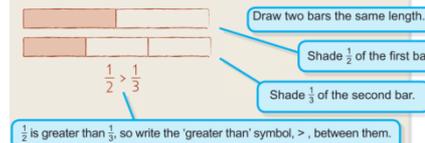
An **improper fraction** has a numerator that is bigger than its denominator, for example $\frac{4}{3}$.
A **mixed number** has a whole number part and a fraction part, for example $1\frac{1}{3}$.

Key point

Equivalent fractions are fractions that have the same value.
For example,
 $\frac{1}{2}$ is the same as $\frac{2}{4}$
You can find equivalent fractions by multiplying or dividing the numerator and denominator by the same number.

Worked example

Write the correct sign, > or <, between these fractions: $\frac{1}{2}$... $\frac{1}{3}$



Unit 6:

Worked example

Find the probability that this spinner will land on blue.



Probability that spinner lands on blue = $\frac{3}{5}$

There are three successful outcomes: blue, blue, blue.
The total number of possible outcomes is 5.

Key point

Probabilities range from impossible to certain. You can show a probability on a **probability scale**.

Key point
To find the probability of something **not** happening, subtract the probability of it happening from 1.

Key point

All probabilities have a value between 0 and 1. You can use fractions, decimals and percentages to describe probabilities.

Key point

Probability of an event happening = $\frac{\text{number of successful outcomes}}{\text{total number of possible outcomes}}$

Key point
Probability is the **chance** that something will happen.
Even chance means that something is as likely to happen as it is not.

Worked example

Andrew dropped a drawing pin lots of times. It could fall point up or down. He recorded the results in a frequency table.

- Work out the total frequency.
- Work out the experimental probability that the pin will fall point up.
- Work out the experimental probability that the pin will fall point down.

Position	Frequency	Experimental probability
Point up	83	$\frac{83}{100}$
Point down	17	$\frac{17}{100}$
Total frequency	100	

The total number of times Andrew dropped the drawing pin = $83 + 17 = 100$
Experimental probability = $\frac{\text{number of times pin pointed up}}{\text{total number of drops}} = \frac{83}{100} = 83\% \text{ or } 0.83$

Notice that the probabilities add up to 1 because $\frac{83}{100} + \frac{17}{100} = \frac{100}{100} = 1$

Websites and further reading

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

Unit 7:

Worked example

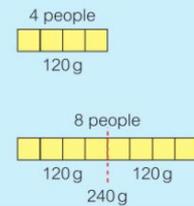
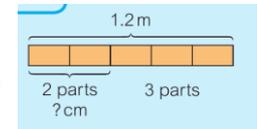
A recipe for four people uses 120g of cheese. How much cheese is needed for

a 8 people

$$4 \times 2 = 8 \text{ people}$$

$$120\text{g} \times 2 = 240\text{g}$$

4 people need 120g
8 people would need twice as much.
 $120\text{g} \times 2 = 120\text{g} + 120\text{g} = 240\text{g}$



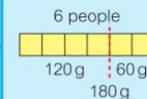
b 6 people?

$$4 \text{ people} + 2 \text{ people} = 6 \text{ people}$$

$$2 \text{ people} = \text{half of } 4 \text{ people}$$

$$\text{Half of } 120\text{g} = 60\text{g}$$

$$120\text{g} + 60\text{g} = 180\text{g}$$



Q5a hint

$$m : cm$$

$$1 : 100$$

$$\times 9 \quad \times 9$$

$$9 : \square$$

Key point

When two quantities are in **direct proportion**, as one increases or decreases, the other increases or decreases at the same rate. Two quantities in direct proportion have a straight-line graph through zero.

Subject: Maths – 7D (Delta Scheme)

Term: 3

Topic: Year 7 Units 5-7

Overview

In this term, learners will be studying up to three units which will include equations, functions and formulae, fractions and angles and shapes.

Key Terms:

Unit 3:
Expression
Like Terms
Variable
Formula
Expand

Indices
Factorise

Unit 4:
Fractions
Equivalent
Simplest Form
Mixed Number

Improper
Fraction
Common-Denominator

Unit 5:
Parallel
Vertically Opposite
Alternate Angles
Corresponding Angles
Line of Symmetry
Rotational Symmetry
Interior Angles

Key skills

Unit 3 Equations, functions and formulae

3.1	Simplifying algebraic expressions	56
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Unit 3:

Worked example

Expand

a $2(x + 3)$

$$2(x + 3) = 2 \times x + 2 \times 3$$

$$= 2x + 6$$

b $5(y - 2)$

$$5(y - 2) = 5 \times y + 5 \times -2$$

$$= 5y - 10$$

Worked example

Factorise $3x + 9$.

$$3x + 9$$

$$= 3(x + 3)$$

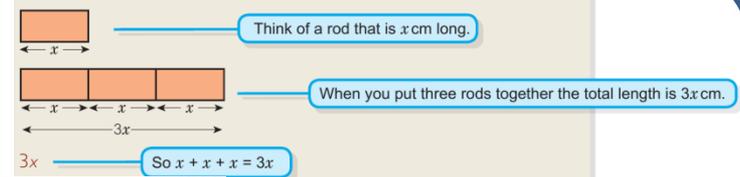
3 is a common factor of both $3x$ and 9 .
Write 3 in front of the bracket.
Divide both terms by 3 to find the values in the bracket.

Key point

A **formula** is a general rule for a relationship between quantities.
You use a formula to work out an unknown quantity by substituting.

Worked example

Simplify $x + x + x$



Key point

Expanding removes brackets from an expression. **Factorising** inserts brackets into an expression.

$$6(a + 3) = 6a + 18$$

expand

$$6(a + 3) = 6a + 18$$

factorise

To factorise $6a + 18$, write the common factor of its terms, 6, outside the brackets. This is called 'taking out the common factor'.

Worked example

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

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

$$\text{Speed} = \frac{1000}{20}$$

$$= 50 \text{ m/s}$$

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

Worked example

Simplify
a $3b \times 2b$

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

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

$$= 6b^2$$

The order of multiplication does not matter.

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

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

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

Unit 4:

Key point

Equivalent fractions have the same value.

Key point

You can write a fraction in its **simplest form** by dividing the numerator and denominator by their highest common factor (HCF) to give an equivalent fraction.

Key point

When you add or subtract fractions with different denominators, first write them as equivalent fractions with the same denominator (**common denominator**).

Key point

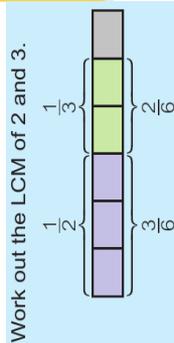
Equivalent fractions, decimals and percentages have the same value. You can convert a fraction to a decimal by dividing the numerator by the denominator.

Key point

A **mixed number** has a whole number part and a fraction part. In an **improper fraction** the numerator is greater than the denominator. A fraction greater than 1 can be written as a mixed number or an improper fraction.

Key point

When you add mixed numbers, add the whole numbers first, then add the fraction parts.



Worked example
Work out $\frac{3}{8}$ of 12 kg.

$$\frac{3}{8} \times 12 = \frac{3 \times 12}{8} = \frac{36}{8}$$

36 ÷ 8 = 4 remainder 4

$$\frac{36}{8} \text{ of } 12 \text{ kg} = 4\frac{4}{8} \text{ kg} = 4\frac{1}{2} \text{ kg}$$

12 ÷ 8 isn't a whole number, so work out 3×12 first.

Divide 36 by 8 and write as a whole number and a remainder.

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

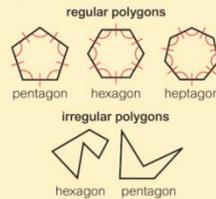
Websites and further reading

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

Unit 5:

Key point

A **polygon** is a closed shape with straight sides. In a **regular polygon**, the sides and angles are all equal.

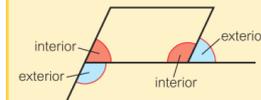


Key point

Sum of interior angles of an n -sided polygon
 $S = (n - 2) \times 180^\circ$

Key point

An **interior angle** is inside a shape. An **exterior angle** is outside the shape on a straight line with the interior angle.



Key point



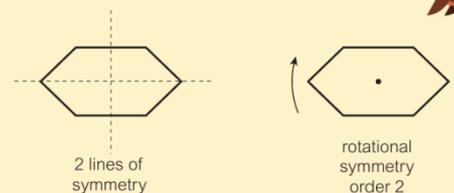
Key point

Vertically opposite angles are equal. The green angles are equal. The blue angles are equal.



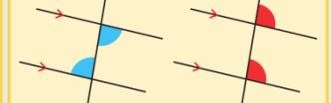
Key point

A **line of symmetry** divides a shape into two halves that fit exactly on top of each other. The **order of rotational symmetry** of a shape is the number of times it exactly fits on top of itself when rotated a full turn.



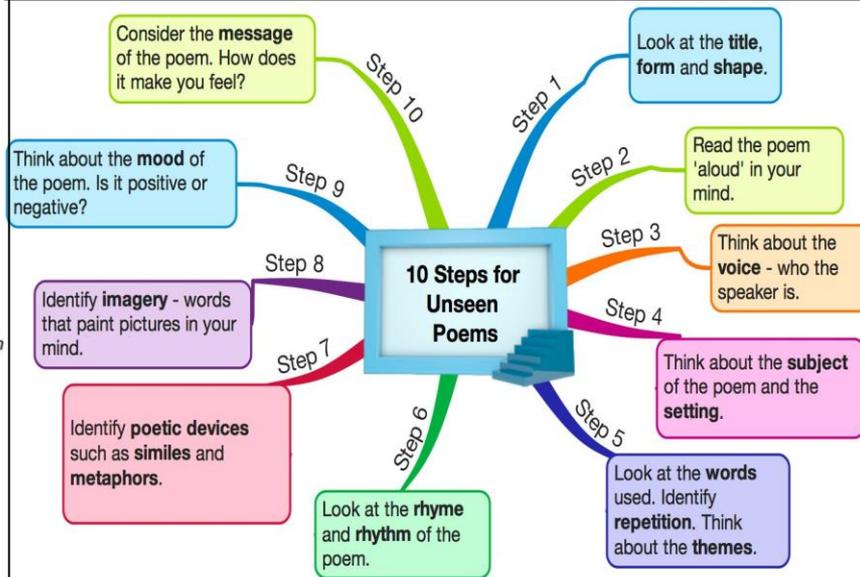
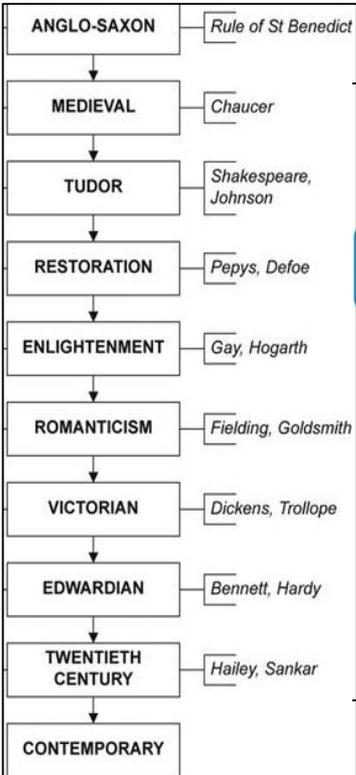
Key point

The blue angles are **alternate angles**. They are on different (alternate) sides of the diagonal. The red angles are **corresponding angles**. They are on the same (corresponding) sides of the diagonal.





Poetry Through the Ages Timeline



POETRY TERMS

- Line-** A single line in a poem.
- Stanza-** The "paragraph" in a poem.
- Rhyme-** When the ending words sound alike
- Alliteration-** repetition of the same beginning sound
"seven snakes slither south of Sacramento"
- Repetition-** I'm digging for diamonds.
I'm digging for gold.
I'm digging for rubies.
- Meter (rhythm)-** The beat of a poem (Sounds like a song).
- Sensory details (imagery)-** describing using the five senses.
- Verse-** A line of metrical writing.
- Hyperbole-** An exaggeration
- Simile-** compares two things using words "like" or "as".
"As sweet as honey" "As fast like a cheetah".
- Metaphor-** comparison saying one thing "IS" another
"She is a mother hen" "He is the wind".
- Idiom-** phrase with hidden meaning.
- Personification-** giving human characteristics
"the teapot sang", "the shadow danced".
- Acrostic Poems-** Poems that use words to elaborate on the topic of that word.

Structuring your Analytical Paragraphs

- P: Make your point
- E: Use word/line from the poem to support your point
- A: Name the poetic technique used and discuss the why the poet has used it
- C: Has the poet been influenced by something happening at the time they were writing?
- E: Conclude your point

Revising Types of Poetry

<https://www.youngwriters.co.uk/glossary-poetry-types>

How to Analyse Poetry

<https://www.bbc.co.uk/education/topics/zccx-p39>

Subject: Science

Term: 3

Topic: Year 7 Matter, Electromagnets and Ecosystems

Overview

In this term, you will learn about Matter in Chemistry, electromagnets in physics and ecosystems in biology.

To revise log into

<https://www.kerboodle.com/users/login> and look through the Activate 1 book.

BBC Bitesize:

<http://www.bbc.co.uk/education/subjects/zng4d2p>

Topics Covered Chemistry – Matter, separating mixtures

- 5.2.1 Pure substances and mixtures
- 5.2.2 Solutions
- 5.2.3 Solubility
- 5.2.4 Filtration
- 5.2.5 Evaporation and distillation
- 5.2.6 Chromatography

Matter: 5.2.1 Pure substances and mixtures

A **pure substance** contains one substance only, all the particles are the same.

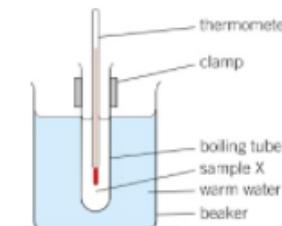
A **mixture** contains two or more substances which may be elements or compounds.

How can you identify a pure substance?

A pure substance has a fixed melting point and a fixed boiling point. You could heat up a liquid to see if it would boil at different temperatures.

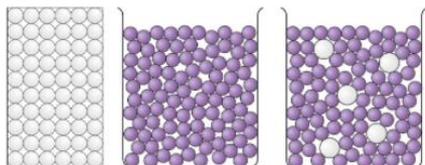


▲ A mixture of two elements, iron and sulfur.



Matter: 5.2.2 Solutions

Catherine adds sugar to water, and stirs. The sugar **dissolves** in the water. Water is the **solvent**. Sugar is the **solute**. This makes a **solution**. When a substance dissolves into a solvent the solute surrounds itself with the solvent.



▲ Particles in solid sugar. ▲ Particles in liquid water. ▲ Particles in sugar solution.

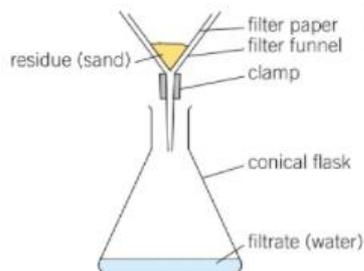
Matter: 5.2.3 Solubility

If a substance can dissolve it is described as **soluble**, something that is **insoluble** will not dissolve.

When dissolving a something like sugar in a particular amount that would dissolve, when sugar can no longer be dissolved we describe it as a **saturated solution**.

Matter: 5.2.4 Filtration

Filtration is a separation technique that is used to separate an insoluble solid from a liquid. For example, sand and water. If you pass sand and water through filter paper, the sand stays in the paper and the liquid passes through, the liquid that passes through the paper is called the **filtrate** and the sand is the **residue**.



◀ Apparatus for a filtration experiment.



▲ Sand filtration helps make water safe to drink.



▲ This is a LifeStraw. It contains hollow fibres. The fibres filter the water, removing bacteria and parasites.

Filtration can be used to separate coffee solution from coffee beans, or to separate oil from dirt or to separate water from gravel or sand.

Subject: Science

Term: 3

Topic: Year 7 Matter

Topics Covered

Chemistry – Matter, particle model

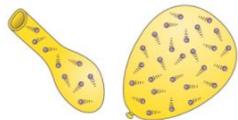
- 5.1.1 The particle model
- 5.1.2 States of matter
- 5.1.3 Melting and freezing
- 5.1.4 Boiling
- 5.1.5 More changes of state
- 5.1.6 Diffusion
- 5.1.7 Gas pressure
- 5.1.8 Inside particles

Chemistry – Matter, separating mixtures

- 5.2.1 Pure substances and mixtures
- 5.2.2 Solutions
- 5.2.3 Solubility
- 5.2.4 Filtration
- 5.2.5 Evaporation and distillation
- 5.2.6 Chromatography

Matter: 5.1.7 Gas pressure

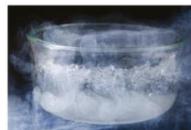
Gas pressure is related to the force per unit area.



Pressure can change with temperature, the higher the temperature the higher the pressure.
The cooler the gas the lower the pressure.

Matter: 5.1.4 Boiling

When a liquid boils it changes state into a gas, the temperature at which this happens is called the **boiling point**.

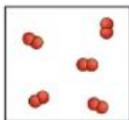


▲ The boiling point of nitrogen is -196°C .

Matter: 5.1.8 Inside Particles

An **element** is a substance that cannot be broken down into other substances, for example copper.

An **atom** is the smallest particle of an element that can exist. Oxygen is different from copper. Its atoms are joined together in



▲ Oxygen molecules in oxygen gas. Each red sphere is one oxygen atom. Oxygen atoms are joined together in pairs, called molecules.

A **compound** is a substance that is made up of atoms of two or more elements, strongly joined together.

Matter: 5.1.5 More changes of state

Evaporation is where the particles in a liquid gain energy, spread out and form a gas to mix with air particles. Evaporation is useful to help you cool down, sweat on your skin takes heat energy from your body to evaporate therefore leaving you feel cooler.



Condensation is when water particles in the air touch and form water, changing from gas to liquid is called condensation.

Matter: 5.2.1 Pure substances and mixtures

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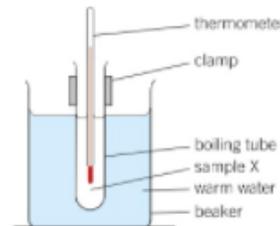
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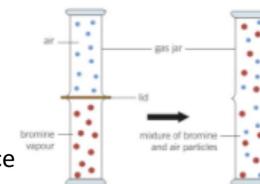


Matter: 5.1.6 Diffusion

Diffusion in chemistry is the same as in biology, it is the movement from an area of high concentration to low concentration.

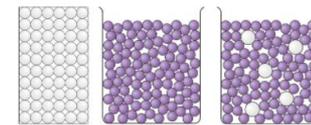
Diffusion can happen at different speeds depending on:

- Temperature
- Particle size
- The state of the diffusing substance



Matter: 5.2.2 Solutions

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▲ Particles in solid sugar. ▲ Particles in liquid water. ▲ Particles in sugar solution.

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Topics Covered**Chemistry – Matter, particle model**

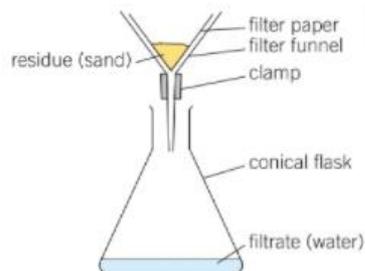
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Chemistry – Matter, separating mixtures

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- 5.2.6 Chromatography

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▲ Sand filtration helps make water safe to drink.



▲ This is a LifeStraw. It contains hollow fibres. The fibres filter the water, removing bacteria and parasites.

Filtration can be used to separate coffee solution from coffee beans, or to separate oil from dirt or to separate water from gravel or sand.

Matter: 5.2.5 Evaporation and distillation

Evaporation is used to make glue or to make crystals that can be used for medicines or to form salt crystals. **Distillation** is a separation technique that can separate a soluble solid from a liquid, for example salt and water. Salt and water have different boiling points so when we heat up salt water the water evaporated and salt is left behind.



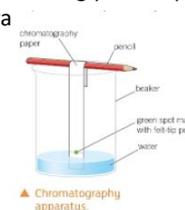
▲ Bolivia's salt desert.



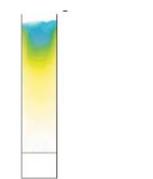
▲ Removing the salt from salty water.

Matter: 5.2.6 Chromatography

Chromatography is another separation technique that can be used to separate the dyes. Dyes are used for things like colouring sweets or pen inks. It works by water being absorbed and moving up paper. A dye that is strongly attracted to the water than to the paper it travels further than a dye that is attracted more strongly to the paper than to the water so the dyes separate, to make a chromatogram. Chromatography can be used to show the pigments in spinach, or nutrients in foods.



▲ Chromatography apparatus.



▲ Chromatogram of ink from a green felt-tip pen.

Topics Covered**Chemistry – 5 Matter, separating mixtures**

5.2.1 Pure substances and mixtures

5.2.2 Solutions

5.2.3 Solubility

5.2.4 Filtration

5.2.5 Evaporation and distillation

5.2.6 Chromatography

Physics – Electromagnets, potential difference

2.1.1 Potential Difference

2.1.2 Resistance

2.1.3 Series and Parallel Circuits

Electromagnets: 2.1.1 Potential Difference

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

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

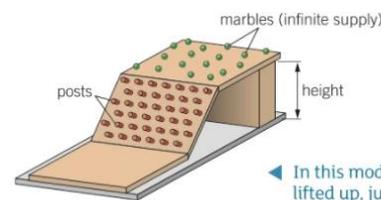
To measure p.d. you use a **voltmeter**, and it is measured in **volts**.

Electromagnets: 2.1.2 Resistance

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

We can calculate it using;

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



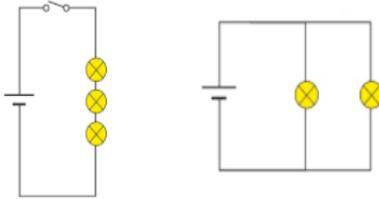
◀ In this model the marbles are lifted up, just like a battery provides a potential difference.

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

Electromagnets: 2.1.3 Series and parallel circuits

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

Parallel circuits are when there is more than one loop.



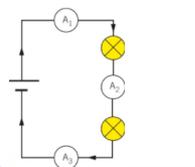
P.d. in a series circuit will be split across each component in the circuit.

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

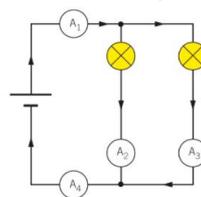
Electromagnets: 2.2.1 Current

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

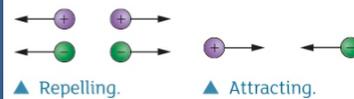
In a series circuit the current is the same everywhere in the circuit.



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

**Electromagnets: 2.2.2 Charging Up**

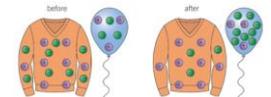
There are two types of **electric charge**, positive (+) and negative (-) charge. Charged particles can **attract** or **repel**, this is called an **electrostatic force**.



Atoms are made of three types of even smaller particles:

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

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



8.1 Movement

8.1.1 Levels of organisation

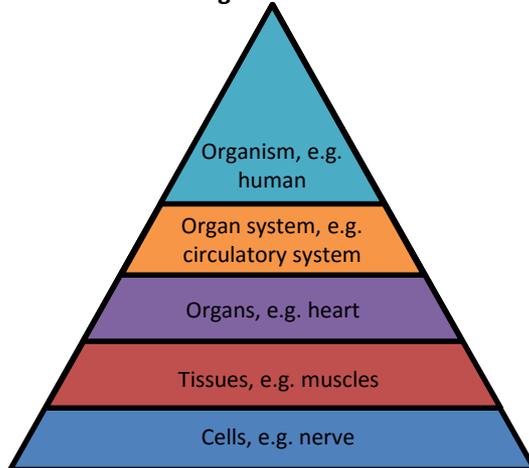
8.1.2 The skeleton

8.1.3 Movement: Joints

8.1.4 Movement: Muscles

Summary and Question Session

8.1.1 Levels of organisation

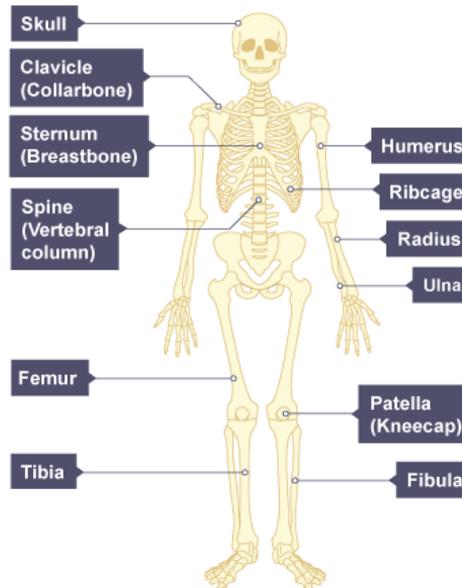


An organism that is made up of many **cells** is called a **multi-cellular** organism.

8.1.2 The skeleton

A skeleton is made up of bones. We have a skeleton for 4 main reasons:

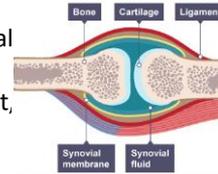
- Support the body
- Protect vital organs
- Help the body move
- Make blood cells in the soft centre called the **bone marrow**



8.1.3 Movement: Joints

A joint occurs where two or more bones join together and they allow you to move. There are 3 types of joint:

- **Hinge joint** – for movement backwards and forwards, e.g. knee
- **Ball-and-socket joint** – for movement in all directions, e.g. shoulder
- **Fixed joints** – do not allow any movement, e.g. skull



8.1.4 Movement: Muscles

Muscles are attached to bones by **tendons**.

At each joint a pair of muscles work together to cause movement these are known as **antagonistic muscle pairs**



To bend the arm:

- The biceps muscle (on the front of the upper arm) contracts
- The triceps muscle (on the back of the upper arm) relaxes

To straighten the arm:

- The biceps muscle relaxes
- The triceps muscle contracts

Key concept 1: Who was Jesus?

Jesus came to teach people God's will for them, and to show them what life would be like in the Kingdom of God.

Jesus of Nazareth, **the Messiah (Christ)** for Christians, is important. He was born in a stable and his birth is celebrated at **Christmas**. He not only taught people about God, he showed them what God is like. However he was unpopular and disliked by those in power and he was sentenced to death. Jesus was put to death on the cross. This was called **crucifixion**, this is remembered through the Christian celebration of Easter.

**Key concept 3: The resurrection of Jesus**

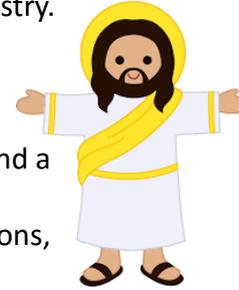
The **resurrection of Jesus** or **resurrection of Christ** is the Christian religious belief that, after being put to **death**, **Jesus** rose again from the dead.

However some people believe that this could not be possible. It is thought that there are different theories on how Jesus was able to bring himself back from the dead. Theories include hallucination, the body was stolen and the Swoon Theory.

**Key concept 2: Key Teachings – Miracles and Parables**

The New Testament of the Bible records more than 30 **miracles** that **Jesus** performed during his ministry.

This included healing people of blindness, deafness, muteness and a variety of physical disabilities and afflictions, as well as other kinds of **miracles**, such as walking on water, calming a storm and raising people from the dead.



While **Jesus** was with his disciples and went around teaching to all the crowds who came to hear him. He often spoke and told **parables**.

A **parable** isn't a true story, it's a story that **Jesus** made up to teach a lesson.

Jesus told many Parables the most famous being the Good Samaritan and the Lost Sheep.

Websites and further reading:

<http://www.bbc.co.uk/schools/gcsebitesize/rs/god/christianityrev3.shtml>

<http://www.primaryhomeworkhelp.co.uk/religion/christian.htm>

<http://www.about-jesus.org/miracles.htm>

<http://www.about-jesus.org/life-of-jesus.htm>



Key vocabulary to define and learn:

Christianity

Jesus

Parables

God

Christmas

Resurrection

Bible

Crucifixion

Swoon theory

Church

Disciples

Messiah

Miracles

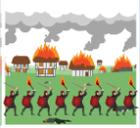
Key concept 1: How did William take control after the Battle of Hastings?

Harrying the North

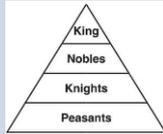
Feudal System

Domesday Book

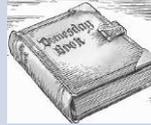
Edgar the Atherling raised a rebellion against William. William beat him and in return burned all the villages and crops – people began to die of starvation



William couldn't keep control by himself so he kept control by lending land to people he trusted. In return they gave loyalty and taxes to William.



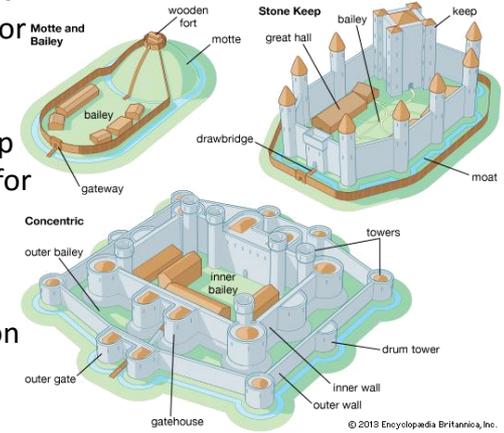
William wanted to know more about the country he had taken over so he ordered a census. With the information he could decide how much money he could gather



Key concept 2: Medieval Castles

Types of Castles

1. Motte and Bailey: Quick to build. Motte = a wooden fort on top of a hill, Bailey = protected area for soldiers and supplies
2. Stone Keep: Introduces stone against fire attacks, strong keep for lasting out a siege, towers for high view points.
3. Concentric: at least 2 layers of stone curtain walls with drum towers for maximum protection against trebuchets.



Attack Methods

- Siege: surround the castle and starve the defenders out
- Battering Ram: to knock down the large gates
- Trebuchet: to knock down stone walls
- Mining: to topple towers and set underground fires
- Belfry (Siege tower and ladders): to scale the walls and get soldiers inside the castle

Defensive Features

- Moat: to stop attackers reaching the walls
- High stone walls: to stop fire attacks
- Murder holes: to drop hot tar onto attackers
- Drawbridge and Portcullis: to cut off entry to the castle

Websites and further reading:

- <https://www.dkfindout.com/uk/history/castles/>
- <https://www.exploring-castles.com/castle-designs/medieval-castle-defence/>
- <https://www.bbc.co.uk/education/guides/zsjnb9q/revision/6>

Key vocabulary to define and learn:

Harrying

Feudal
Census

Medieval
Attack
Rebellion

Defence

Siege
Trebuchet

Portcullis
Motte and Bailey
Belfry

Taxes

Key terms:

Settlement: where someone chooses to live. This can be as large as a city or as small as one house.

Site: the location of a settlement.

Urban: a built up area like a city

Rural: the countryside area like a farm.



CBD: Central Business District where all the shops and offices are in a town or city.

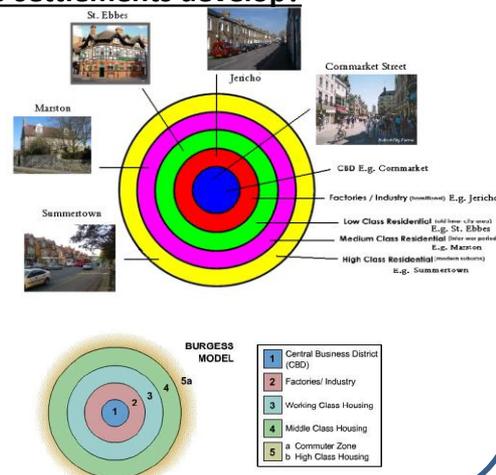
Inner City: The area where old factories once were and terraced housing.

Suburbs: The outskirts (edge) of the town or city.

Rural – Urban Fringe: The area where the town or city meets the countryside boundary.

Key question: How do settlements develop?

Settlements change and adapt as the need for new resources and technology develops. Most settlements follow a simple model called the **Burgess model** which builds outwards from the centre of the town or city.



Key question: How has Northampton developed?

Northampton has developed and changed a great deal throughout history. In 1084 a Norman castle was built by Simon De Senlis, today this very site is home to a newly redeveloped and upgraded train station that welcomes visitors to the town.

Northampton is also famous for shoe making which has spanned over 900 years. In 1841 there were 1,821 shoemakers in the town. Now we look at how we can develop Northampton further through the Northampton Alive scheme.



Websites and further reading:

http://www.bbc.co.uk/bitesize/ks3/geography/spaces/settlement_urban/revision/2/

<http://www.northamptonez.co.uk/alive/>

http://www.bbc.co.uk/schools/gcsebitesize/geography/urban_environments/urban_models_medcs_rev1.shtml

<https://www.s-cool.co.uk/a-level/geography/urban-profiles/revise-it/models-from-burgess-and-hoyt>



Key vocabulary to define and learn:



Settlement	Site	Urban	Rural	CBD	Inner City
	Suburbs				
Rural-Urban Fringe	Transport	Burgess model	Regeneration	Redevelopment	Derelict
		Traffic			

Key question 1 : Who is Sarah Graham?

Sarah Graham is a British artist who mostly works with oil paints on canvas in a photo realistic style. Her subject matter is still life objects. These show case her love of colour. She paints objects that make people happy. Her aim is to bring joy to her viewers. This work will inspire your textiles project this term. Key links will be in the textural elements and vibrant colours.

Key question 2 : What is Fabric Collage and Tie Dye?

Fabric Collage is the use of different fabrics to construct an image. This technique will form the base of our project this term. Tie Dye a process used to add colour and pattern to fabric there are multiple methods used to do this.

**Key vocabulary to define and learn**

Tie Dye	Loom	Photo Realism
Fabric Manipulation	Composition	
Yarn/Thread	Embroidery	Weaving
		Dye (Saturation)

Key question 3: What is Weaving?

Weaving is the interlacing (crossing) of two or more yarns/ threads to create a fabric.

In your lessons this term you will be learning about the textiles industry in Britain. You will create your own loom and learn a variety of weaving techniques to create your own fabric.

**Websites and further reading:**

BBC Bitesize:

<http://www.bbc.co.uk/schools/gcsebitesize/art/practicalities/mediaandtechniques7.shtm>

Pinterest:

Search "weaving on cardboard loom" and "fabric collage"

Youtube:

Tie Dye Techniques

<https://www.youtube.com/watch?v=gSse255eVUQ>

Weaving Techniques

<https://www.youtube.com/watch?v=5ul2PjhNdnQ>

Artist Research: Sarah Graham

<http://sarahgraham.info/gallery/>

Design Challenge:

Can you design your own weaving pattern using your mathematical skills to create a simple image? Templates will be available. Winning design will be displayed in the art class room. All entries due in the last week of term.