



Harrow Way
Community School
Learning for life, success for all

Year 8 Knowledge Organiser

Spring Term





How do I complete Knowledge Organiser Homework?

Link to self-quiz video: <https://youtu.be/cFUuhtPIMPU>

Step 1

Check on:
ShowMyHomework for what words / definitions / facts you have been asked to learn.

Step 2

Write today's date and the title from your Knowledge Organiser in your self-quizzing book.

Step 3

Read the section of the Knowledge Organiser that you are studying. Read it slowly, you can read it aloud and with a ruler if this helps.

Step 4

Cover up the section and try to write out the information exactly as it is written on the Knowledge Organiser in your self-quizzing book.

DO NOT PEEK!

Step 5

Uncover the section and compare it to what you have written. If you have made mistakes or missed parts out, add them in using a pencil or a different colour.

Step 6

Repeat steps 3-5 again until you are confident.
You will need to bring your self-quizzing book in every day and your teacher will check your work.
You will be tested in class.



Knowledge Organiser - YEAR 8 - SPRING TERM

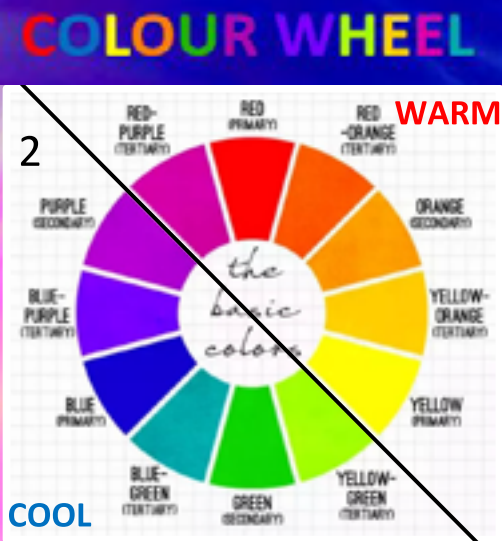
Contents

Art - Colour	4
Art - Drawing	5
Art - Formal Elements	6
Art - Painting	7
Art - Photography & Critique	8
Art - Surrealism	9
Art - Pop Art	10
Art - Textiles and Clay	11
D&T - Apron 1	12
D&T - Apron 2	13
D&T Food Technology - Special Diets	14
D&T - Board Game 1	15
D&T - Board Game 2	16
D&T - LED Desk Tidy 1	17
D&T - LED Desk Tidy 2	18
Drama 1	19
Drama 2	20
English	21
French - Core Language	22
French - Mes Loisirs	23
French - Paris	24
Geography - Volcanoes	25
Geography - Remarkable Resources	26
History	27
ICT - Data Representation	28
ICT - Networking	29
Maths - Circles	30
Maths - Ratio and Proportion	31
Maths - Compound Measures	32

Maths - Data Handling	33
Maths - Standard Form	34
Maths - Linear Graphs	35
Music - Reggae / Pop	36
PE - Hockey	37
PE - Basketball	38
PE - Netball	39
PE - Badminton	40
PE - Football	41
PE - Rugby	42
PE - Theory 1	43
PE - Theory 2	44
PSHE - Family and Feelings	45
PSHE - Smoking	46
RE - Part 1	47
RE - Part 2	48
Science - Biology - Variation	49
Science - Chemistry - Chemical Reactions	50
Science - Physics - Electricity	51
Science - Physics - Magnets	52
Spanish - A Comer	53
Spanish - ¿Qué Hacemos?- Part 1	54
Spanish - ¿Qué Hacemos?- Part 2	55
Spanish - Tenses - El Presente	56
Spanish - Tenses - El Preterito	57
Spanish - Tenses - Near Future	58

1 COLOUR

Colour plays a vitally **important** role in the world in which we live. **Colour** can sway thinking, change actions, and cause reactions. It can irritate or soothe your eyes, raise your blood pressure or suppress your appetite. As a powerful form of communication, **colour** is irreplaceable.



Cool colours painting



Warm colours painting



ADJECTIVES TO DESCRIBE COLOURS

Light Bright Vivid Glowing Vibrant Brilliant Intense Dazzling Subdued Diluted Gloomy Depressing Pale Dull Murky Muted Monotonous Fluorescent Saturated Opaque Transparent

3

4

Primary	+	Secondary	=	Tertiary
YELLOW	+	ORANGE	=	YELLOW-ORANGE
RED	+	ORANGE	=	RED-ORANGE
RED	+	VIOLET	=	RED-VIOLET
BLUE	+	VIOLET	=	BLUE-VIOLET
BLUE	+	GREEN	=	BLUE-GREEN
YELLOW	+	GREEN	=	YELLOW-GREEN

TINT
is adding white to a colour



TONE
is adding grey to a colour



SHADE
is adding black to a colour



5

COLOUR SCHEMES

6

PRIMARY



Uses the primary colours: Red, Yellow & Blue. They can not be made by mixing other colours.

COMPLEMENTARY



Uses a pair of colours that are opposite each other on the colour wheel. The pairs are: Green/Red; Blue/Orange; Yellow/Purple.

SECONDARY



Uses the secondary colours: Orange, Green & Purple. Each secondary colour is made by mixing two primary colours.

HARMONIOUS



Uses three or four colours (primary, secondary and tertiary) that are next to each other on the colour wheel.

TERTIARY



Uses the tertiary colours. They are made by mixing a primary and a secondary colour next to each other on the colour wheel.

MONOCHROMATIC



Uses Tints, Tones & Shades of one colour. The word MONO means ONE and the word CHROMA means INTENSITY OF COLOUR.

DRAWING

The basic craft of drawing is about two things: 1. To control your hand and 2. Learn to see.

Line drawing

1 ELLIPSES:

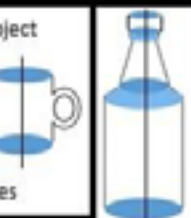
The circle found at the top and the base of a cylindrical object; i.e. bottle, cylinder, etc. Ellipse can also occur when the sides of the bottle change direction, i.e. get narrower or wide.



2 CENTRE LINE: Divides the object vertically in two equal parts.

LINE OF SYMMETRY: the line at which the bottle is symmetrical.

Mirror image symmetry: exactly matching opposite sides



3 POSITIVE SPACE: (Object in white)

The space occupied by the object/s.



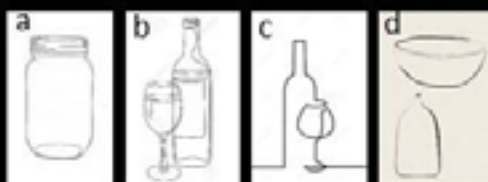
NEGATIVE SPACE: (All in black)

The rest of the space around or in between the object/s.

4 LINEAR DRAWING

A drawing using line only to:

- outline the shape of the object;
- to add detail;
- using continuous line (without lifting your pencil of the paper from start to finish.
- Minimalist drawing



Tonal drawing

5 FLAT TONE:

A solid block of tone, see Tonal Ladder. It has no outlines. Different flat tones next to each other define shapes.



6 SHADING:

When the tone gradually changes from dark to light. It can appear a) smooth or b) rough by using lines called Hatching or Cross Hatching.



SHADING (light from the side):

On the outside of the object the tone changes gradually from one side to the other. Light and dark areas swap direction on the inside opening of the object like in this cup.



SHADING (light from the centre):

The tone is dark on both sides and smoothly gets light in the middle. It gives a 3D effect and looks very realistic.



7 TEXTURE and MARK-MAKING:

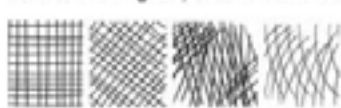
Texture is the surface quality of something. Artists use mark-making techniques to represent different textures.



8 Hatching



Cross-Hatching in 2, 3 or more directions



Other elements of drawing

9 PERSPECTIVE:

the art of representing three-dimensional objects on a two-dimensional surface so as to give the right impression of their height, width, depth and position in relation to each other.



10 RANGE OF PENCILS:

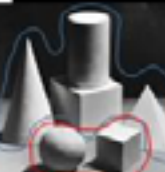
ART RANGE GRAPHITE PENCILS



11 FOREGROUND: An art term that describes the objects in the scene that are closest to the viewer. It is the part in front of everything else and has the most detail.



MIDDLE GROUND: lies between the foreground and background of a painting. The objects in this area appear smaller. They are usually placed behind the objects in the foreground.



BACKGROUND: is the part of a scene or picture that is farthest from the viewer. It usually has the least detail.



12 COMPOSITION:

Refers to the organisation, arrangement, and combination of objects within the borders of a drawing space. For a great drawing, you want to bring the eyes of the viewer toward your centre of interest within an aesthetically pleasing composition.



FORMAL ELEMENTS

1 The Formal Elements are: **line, shape, form, tone, texture, pattern and colour**. They are used together to create artwork.

2 COLOUR

The color wheel shows primary colors (red, yellow, blue) and secondary colors (orange, green, purple). It also includes tertiary colors and a grayscale bar.

TINT is adding white to a colour

NEUTRAL is adding grey to a colour

SHADE

Primary	Secondary	Tertiary
YELLOW	ORANGE	YELLOW-ORANGE
RED	ORANGE	RED-ORANGE
RED	VIOLET	RED-VIOLET
BLUE	VIOLET	BLUE-VIOLET
BLUE	GREEN	BLUE-GREEN
YELLOW	GREEN	YELLOW-GREEN

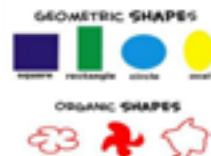
3 PATTERN is a symbol or shape that is repeated. A design that is created by repeating lines, shapes, tones or colours. The design used to create a pattern is often referred to as a **motif**. Motifs can be simple shapes or complex arrangements. Tessellating any image creates a Repetitive pattern.



4 LINE is the path left by a moving point, i.e. a pencil or a brush. A line can take many forms. It can be horizontal, diagonal or curved. Line can be used to show: contours (the shape and form of something); movements, feelings



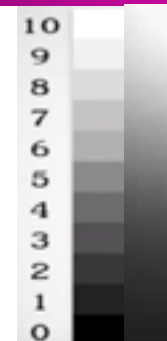
5 SHAPE is an area enclosed by a line. It could be just an outline or it could be shaded in. When drawing shapes, you must consider the size and position as well as the shape of the area around it. The space between the shapes is called **negative space**.



6 FORM is a three dimensional shape (**3D**), such as a cube, sphere or cylinder. Sculpture and 3D design are about creating forms. In 2D artworks, lines, tones and perspective can be used to create an illusion of form. The three dimensions of form are width, length and depth.



7 TONE is the lightness or darkness of an object. This could be a shade or how dark or light a colour appears. Tones are created by the way light falls on a 3D object. In every 3D object there are minimum of 3 tones; light, mid-tone and dark. Tone can be flat or it can vary from dark to light.



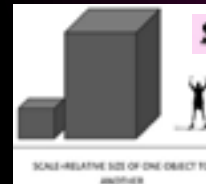
8 TEXTURE is the **surface quality** of something, the way something feels or looks like it feels. **Actual texture** really exists, so you can feel it or touch it.



Visual texture is created using marks to represent actual texture. It gives the illusion of a texture or surface. You can create visual texture by using different lines, shapes, colours or tones.



9 SCALE is the size of one object in relation to the other objects in a design.



10 PROPORTION refers to the relationship of the sizes of two or more subjects or elements.



PAINTING

1. The act of **painting**, using a brush, palette knife, sponge, or airbrush to apply the paint; 2. The result of the action – the **actual picture**.

1 Watercolour brushes:

Are specially made to allow the artist to control the flow of the colour from the brush onto the paper. A watercolour brush should hold a fine point when wet and spring back into shape after each stroke. It should carry the colour allowing the artist to:

- lay it down on the paper evenly
- consistency.



2 WATERCOLOUR:

a) Paints that are made of pigments suspended in a water-based solution (binder).



b) The art of painting with watercolours, especially using a technique of producing paler colours by diluting rather than by adding white.



WATERCOLOUR PAPER:

Best watercolour papers are made from **cotton fibres**. There are three types of w/c paper. HP - Hot Press. Smooth surface for detailed work. CP (NOT) - Cold press. Slightly textured for most types of work. Rough - Heavily textured paper enhances the final piece of work.



3 WATERCOLOUR TECHNIQUES:

a) **Wash:** When watercolour mixture is gradually diluted with water.



b) **Blending:** When two colours seamlessly merge into one another.



c) **Wet-on - Wet:** Water is applied onto the paper and then paint is applied onto it.



d) **Masking Fluid**

It is a rubber type product that prevents the paint from reaching the paper and is peeled off to expose the white paper left untouched.

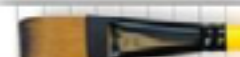


4 ROUND BRUSHES:

Good for sketching, outlining, detailed work, controlled washes, filling in small areas.



FLAT BRUSHES: Good for bold strokes, washes, filling wide spaces, impasto. Edge can be used for fine lines, straight edges and stripes.



5 ACRYLIC PAINT: Opaque and semi-opaque fast-drying paint made of pigment and acrylic polymer emulsion dilutable with water.



ACRYLIC PAINTING SURFACES:

Canvas, paper, wood, or anything which is neither greasy nor too glossy.



ACRYLIC PAINTING BRUSHES:

A good selection of round and flat stiff synthetic brushes. Palette knives.



6 ACRYLIC PAINTINGS TECHNIQUES:

UNDERPAINTING: A layer of paint applied first to a canvas or board.



a) **Tonal Grounds Under Painting**

This type of painting has the entire canvas covered in a single transparent colour. This layer will create backlighting shadows that will tone the entire painting and provide contrast.

b) **A Tonal Under-Painting**
A layer of paint applied first that acts as a foundation for the painting with some built in contrast and tonal values.



IMPASTO: A technique used in painting where paint is laid on in very thick layers that the brush or palette-knife strokes are visible. Paint can also be mixed right on the canvas. When dry, impasto provides texture; the paint appears to be coming out of the canvas.



7 POSTERPAINT:

A semi-opaque paint with a water-soluble binder, used mainly in schools.

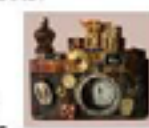


8 OIL PAINTS: is a type of slow-drying paint that consists of pigment suspended in a drying oil, commonly linseed oil. Not used in schools.



9 MIXED MEDIA:

A Technique that uses more than one medium or material. Assemblages and collages are two common examples of art using different media that will make use of different materials including cloth, paper, wood and found objects.



ASSEMBLAGE:

The making of 3D art, often involves using found objects.

MIXED MEDIA COLLAGE:

This is an art form which involves combining different materials with paint to create a whole New artwork.



10 SGRAFFITO TECHNIQUE:

Used in painting, pottery, and glass. Consists of putting down a preliminary surface, covering it with another, and then scratching the top layer. The pattern or shape that emerges is of the colour below.

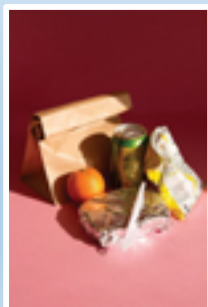




Types of Photography

Landscape

- Shows **space** within the world- think 'land' to remember, but can include sea
- Can make use of **water for reflections**
- Often **symmetrical**
- Usually **all in focus**



Still Life

- Inanimate objects
- Simple background such as fabrics, wood & plain surfaces
- lighting** usually from the side, usually natural



Portraiture

- Photo of a person or a group of people
- Plain background
- Face fills the frame
- Focus usually on the eyes
- Controlled lighting
- Can be posed or natural

Critiquing artwork
You need a specific vocabulary to comment on all the elements of art. Here are some to get you started.

Colour

Colour is very important. No matter what type of artwork colour helps define the piece and the artist. A lot of artwork can be determined on who did the work just by looking at the colours.

- Bold
- Vibrant
- Subtle
- Pale
- Earthy
- Naturalistic
- Harmonious
- Complementary

Movement

Movement is seen in every piece of art. Movement helps to create or define a piece of art.

- Swirling
- Flowing
- Dramatic
- Still

Tone

This will describe the light and dark areas in a piece of art.

- Subtle
- Contrasting
- Muted
- Dramatic

Contrast

This relates to the differences of the elements in an artwork.

- Dramatic
- Subtle
- Strong

2. How to use the camera

Portrait mode

Camera needs to be this way up to take a portrait photograph

Shutter

The large round button. Hold half way down to focus, listen for the beep, then hold all the way down to take.

On/off button

Strap **ALWAYS** on wrist



3. Tips

- Do not use **flash** (especially indoors)
- Make sure your lighting is even
- Be still when you take your photograph to avoid camera shake
- Make sure your image is focused before you take it
- Use **simple backgrounds**; plain walls work well
- Get closer. **DO NOT use zoom**
- Don't rush
- Take more than one photo

Shape

Art comes in various shapes whether it is a painting or a sculpture. All will contain shapes.

- Organic
- Curvaceous
- Geometric
- Angular
- Elongated

Texture

Texture can be actual (it exists) or visual (made to look like it exists). It is often used when referring to clothing, furniture and hair.

- Rough
- Fine
- Smooth
- Coarse
- Uneven

Scale

This relates to the size of the work and the size of the objects in relation to each other.

- Large
- Small
- Intimate
- Miniature
- Monumental
- Distorted

Line

Line in art is similar to how a musician follows lines and creates expression using notes played for different lengths of time.

- Flowing
- Delicate
- Simple
- Bold
- Thick
- Thin

1.

One Point perspective

A drawing method that shows how things appear to get smaller as they get further away, converging towards a single 'vanishing point' on the horizon line. It is a way of drawing objects upon a flat piece of paper (or other drawing surface) so that they look three-dimensional and realistic.



2.



<https://www.tate.org.uk/kids/exploring/who-is/who-rene-magritte>

Year 8 Project 1 SURREALISM

Literacy Focus

- | | |
|---|--|
| <p>A. Metamorphosis</p> <p>B. Juxtaposition</p> <p>C. Silhouette</p> <p>D. Distorted scale</p> <p>E. Motif</p> | <p>The transformation of one thing into a completely different one (a)</p> <p>Two things positioned close together with contrasting effect (b)</p> <p>The shape and outline of something visible against a contrasting background (c)</p> <p>An unfamiliar scale on a familiar object or image (d)</p> <p>A dominant or recurring idea in an artistic work</p> |
|---|--|

3.

Artist focus
René Magritte



A.



B.



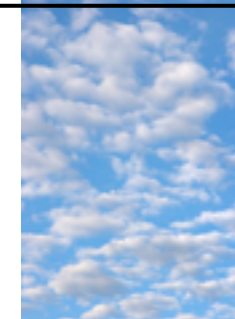
C.



D.



E.



5.

Year 8
Project 2 **POP ART**

Literacy Focus

Pop Art
Popular culture
Onomatopoeia
Ben Day dots
Relief
Colour
Characteristics
Contemporary
Context

3.

4.

Genre Focus POP ART

1.

<https://www.tate.org.uk/kids/explore/what-is/pop-art>



Pop Art began as a revolt against the main approaches to art, culture and the traditional views on what art should be. Young artists felt that what they were taught at art school and what they saw in museums did not have anything to do with their lives or the things they saw around them every day. Instead, they turned to sources such as Hollywood movies, advertising product packaging, pop music and comic books for their imagery.

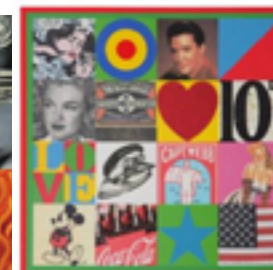
ARTIST FOCUS Lichtenstein

2.



<https://www.tate.org.uk/kids/explore/who-is/who-roy-lichtenstein>

Pop Art is: **Popular** (designed for a mass audience)
Transient (short-term solution)
Expendable (easily forgotten)
Low cost, Mass produced
Young (aimed at youth)
Witty, Sexy, Gimmicky, Glamorous, Big business

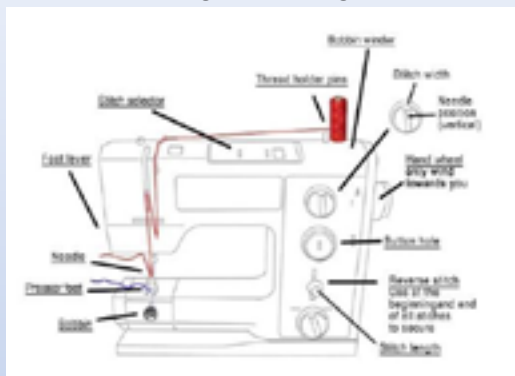


Shepard Fairey James Rosenquist Peter Blake

TEXTILES

1. SEWING MACHINE

A machine with a mechanically driven needle for sewing or stitching cloth.



2. HEAT PRESS

A machine which uses heat and pressure, to transfer a design or a graphic on another surface, and to heat and fuse man-made materials.



3. BATIK

A method (originally used in Java) of producing coloured designs on textiles by dyeing them, having first applied wax to the parts to be left undyed.



Key Stage 3

Do not use ANY equipment before training

4. TAKE CARE

Electrical equipment

Tuck in ties
Tie hair back
No water near equipment
Be aware of sharp/hot objects
Electrical machines, take care with wires

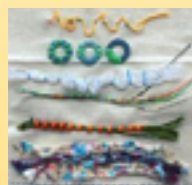
Handstitching

Needles/Pins - Use a pin cushion
Pick fabric scraps off the floor
Scissors - pass safely

Clay

No eating/drinking whilst using clay
ALL equipment to be wiped with damp cloth
Wear an apron
Pass knives safely
Clear clay from floor

5. Couching



Applique



Stitching by hand



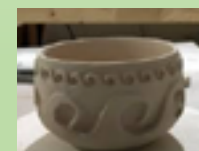
CLAY MAKING



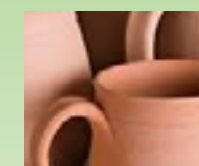
6. Clay Equipment + Process

Fire = method of heating clay
Kiln = oven in which clay is fired
Bisque ware = clay that has been fired to 1000oC
Greenware = clay that has not been fired
Board, guide sticks, rolling pin for rolling out clay to an even level
Tools = for joining
Slip = clay glue
Knives = for cutting only

7. Greenware



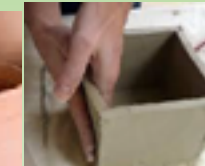
Bisqueware



Pinch pot



Slab building



Coil pot



Glazing



Year 8 Design and Technology TEXTILES / APRON Knowledge Organiser

Smart Materials

Smart materials

A **smart material** has a property that can change depending upon its environment. This change can be reversed if the environment changes again. For example, in some sunglasses the lenses get darker when the light gets brighter; when the light dims, the lenses become clear again.

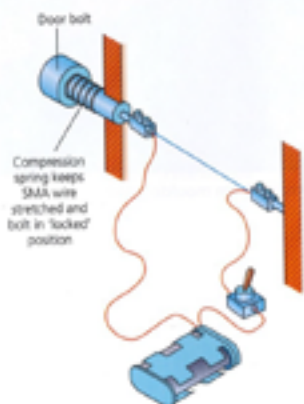
▼ Examples of smart materials

Smart material	Smart property	Examples of use
Thermochromic pigments	Change colour with temperature	Plastic strip thermometers Mugs or spoons that change colour when hot Test strips on batteries (a printed resistor under the film generates heat when current flows through it)
Photochromic pigments	Change colour with light	Lenses in sunglasses that get darker as the light gets brighter Security markers that can only be seen in ultraviolet light
Shape-memory alloys (SMA)	If bent, will return to their original shape when heated (either directly or when an electric current is passed through them)	Spectacle frames Sensors in fire sprinkler systems (heat causes the change in shape) Electric door locks

Interactive textiles

Conductive threads

Conductive fibres and threads made from carbon, steel and silver can be woven into textile fabrics and made into clothing. Conductive threads can also be sewn into a product to connect a circuit. Common uses include performance monitors for athletes, GPS tracking systems and heating elements, as well as communication devices, such as mobile phones.



▲ An electric door lock using an SMA

Environmental Factors

When a product is designed, the designer doesn't just think about how it will work. They may have to alter the design due to the effect it has on the environment, our society or the economy.

Environmental challenges

Products can affect the environment in many ways:

- The materials that are needed to make them might use up natural resources.
- The processes used to make them may need energy.
- The way they are used may affect the environment, for example electrical items need energy.
- When they are no longer needed, disposing them may cause pollution.

Designers must consider the impact that the products will have on the environment. One method of doing this is to apply the 6 Rs of **sustainability** when designing a product.

▼ The 6 Rs of sustainability

Refuse	Is the product necessary?
Rethink	Are there alternative materials or design options that are more sustainable?
Reduce	Can the product be made from fewer materials? Can the amount of unsustainable materials be reduced?
Reuse	Can parts of the product be reused in a different product?
Recycle	Can the materials used be recycled ? Is the product made from recycled materials?
Repair	Can the product be repaired rather than being thrown away if it breaks?



▲ The recycle logo shows that a product can be recycled

Year 8 Design and Technology TEXTILES / APRON Knowledge Organiser

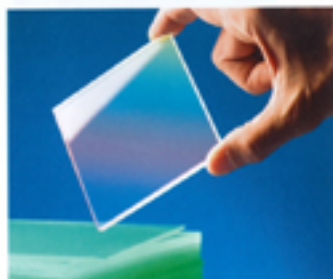
New Materials

The development of new materials can offer improved properties or combinations of properties that were not previously possible. In turn, this allows the development of improved or completely new products. This section outlines some of the recent developments in materials.

Graphene

Graphene was discovered in 2004 and is a form of the chemical element carbon. It is harder than diamond, about 300 times stronger than steel and conducts electricity better than copper. It is also extremely flexible, which is unusual for such a tough, strong material.

Graphene flakes are already being used to make ink that conducts electricity, and sheet graphene is used in some solar cells that make electricity from sunlight. Although graphene is still in the early stages of development, manufacturers are investigating its use for touchscreens. This could lead to foldable phone screens and televisions.



▲ A sheet of graphene

Glass-reinforced polymer (GRP, also called fibreglass) reinforces a polymer with strands of glass fibres. The polymer is flexible and the glass fibres are strong but brittle. Together they make a composite that is tough and strong. GRP is used to make hulls for boats.

Similarly, carbon-reinforced polymer (CRP) reinforces a polymer with carbon fibres. This is even stronger than GRP. CRP is used to make crash helmets and the frames for high-performance racing bikes.



▲ Canoes made from reinforced GRP

Composites

A **composite material** is made up of two or more different materials. The properties of the materials that they are made from are combined. If you look at the structure of the composite material under a microscope, you can still see the separate materials it is made from.

One of the most common composites is reinforced concrete. This contains cement, which has very good compressive strength but poor tensile strength, with steel reinforcement bars, which have good tensile strength. It is widely used to build buildings and bridges.



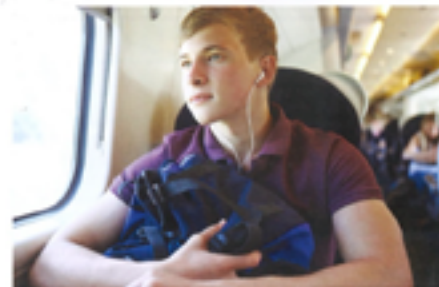
▲ A reinforced concrete bridge

Social and Moral Issues

Social challenges

Products can have both positive and negative effects on people. For example, the ability to play music from a phone or MP3 player gives people entertainment no matter where they are. However, if the music is too loud, it could also damage the user's hearing. Further, the noise from the earphones can irritate other people, for example fellow passengers on public transport. The designer has to consider both the wants of the user and how the design will affect other people.

Another **social issue** is the working conditions and safety of the people who manufacture products.



▲ Listening to music while on public transport may irritate other passengers

In the UK there are very strict laws regarding this. However, not all countries have these rules in place. For example, in some countries child labour is used to make products, with children working long days in harsh conditions. Some customers may not buy products if they have been made in ways they do not agree with.

Economic challenges

The **economy** is the way money is made, organised and used by a society. Successful designs can have a really positive impact on the economy. If a product sells well, the company producing it can open new factories, creating more jobs and paying more workers. The more **profit** a company makes, the more tax it pays, which helps to fund public services such as healthcare and education. However, if an economy is not performing well and people are less well-off, it might be difficult for a designer to get the money needed to develop a product.

Key words

sustainability – the level to which resources can be used without them becoming unavailable in the future.

reusing – using the parts of a product in a new product, without reprocessing the materials.

recycling – the reprocessing of materials for use in new products.

social issue – an issue that has an impact on a community or group of people.

economy – how money is made, organised and used in a society.

profit – the money that a company makes after all of its costs have been paid.

Knowledge Organiser – Year 8 Food Special Diets

Food Allergy	Food Intolerance
Symptoms come on within seconds and include an itchy, red rash, Swelling of the lips, tongue, eyes and face Stomach pains, diarrhoea and vomiting .	Symptoms come on more slowly, are long-lasting and include bloating, stomach cramps and diarrhoea.
It is easily diagnosed with tests.	It's difficult to diagnose as there are only a few reliable tests and you may be intolerant to a number of different foods.
Even a tiny trace of the food can cause a reaction.	A reasonable portion of food is usually needed to cause a reaction
In extreme cases it can be life threatening.	It's never life threatening, symptoms are often bloating and stomach cramps
Most allergic reactions to food are to peanuts, milk, soya, nuts from trees, eggs and wheat.	Most common ones are wheat, gluten, dairy, yeast and alcohol.

Diabetes

There are two types of Diabetes:

Type 1 occurs in children and young adults

Type 2 occurs in adults and is linked to a poor diet and not exercising enough.



Diabetes is a condition that causes a person's blood sugar level to become too high.

When you eat food, it releases glucose into your bloodstream.

Insulin (hormone) then moves the glucose from your blood to your cells, where it is then used to produce energy.

If you have diabetes your body can't break the glucose down into energy.

BRITISH FOOD

British food is reared, grown and produced under strict guidelines and is some of the best quality world wide



Lactose Intolerance

- Lactose intolerance is the inability to absorb lactose - the sugar in milk - into the digestive system.
- If lactose is not absorbed properly, it ferments (goes off) inside your stomach
- Symptoms include:
Stomach rumbling, increased wind, Diarrhoea, abdominal colic, nausea.
- You can get a test to see for sure from your doctor
- Cut back on certain food products like:
Cows milk, butter, cheese, certain breads and chocolate.



Diet

- There are many reasons why people **choose** to or even **have** to follow a special diet.
- There are also many other factors which affect what a person eats.
 - The food available to them
 - Time
 - Whether they can cook
 - Their likes and dislikes
 - Culture and religion

Vegans eats no animal products at ALL! This includes red and white meats, fish, eggs and dairy. They also can't eat anything that comes from or is made by animals such as honey and beef stock.

A Vegetarian doesn't eat red and white meats, fish and who also avoids slaughter by-products such as gelatine (made from horns, hooves, bones etc).

There are many reasons why people chose a vegetarian diet:

- HEALTH**-Reduce fat intake, decreases risk of heart disease, high cholesterol, no growth hormones etc.
- Religious reasons**-Buddhism, Hinduism
- Texture** – They don't like the way it tastes or feels in their mouth
- Animal Cruelty**- Do not like the way animals are treated before they get to our plates



A vegetarian diet is considered healthy because of the emphasis...

on fresh fruit and vegetables. Protein is obtained mainly from beans, lentils, peas, nuts, tofu and wholegrain cereals, which are also rich in vitamins and minerals.

Coeliac's Disease



Coeliac disease is a digestive disease that damages the small intestine. You struggle to digest and absorb gluten.

Gluten is a protein found in wheat.

Gluten is like a glue which holds food together. In bread dough it is what makes it stretchy when we knead it.

People with coeliac disease cannot eat cereals, pasta, grains and most processed foods.

Most food in supermarkets are now labelled to say if they are made with wheat or grain products because of people with Coeliac's.

8 Government Guidelines for Healthy Eating

- Base your meals on starchy foods
- Eat lots of fruit and vegetables
- Eat more fish (1 portion of oily fish a week)
- Cut down on saturated fat and sugar
- Try to eat less salt
- Get active and try to be a healthy weight
- Drink plenty of water
- Don't skip breakfast

Year 8 Design and Technology Knowledge Organiser Board Game

Branding

You can consider a brand as the idea or image people have in mind when thinking about specific products, services, and activities of a company, both in a practical (e.g. “the shoe is light-weight”) and emotional way (e.g. “the shoe makes me feel powerful”).

Logos with meaning



The yellow arrow in their logo starts at the letter ‘a’ and ends at the letter ‘z’, implying that they sell everything from a to z. The arrow also represents a smile, with the arrowhead being a stylized dimple or smile line. The smile indicates the happiness

Key terms

Branding	A logo or image associated by the public
Cooperate image	The branding of a company
Corporate identity	The qualities or values a company wishes to be associated with and recognised by and its

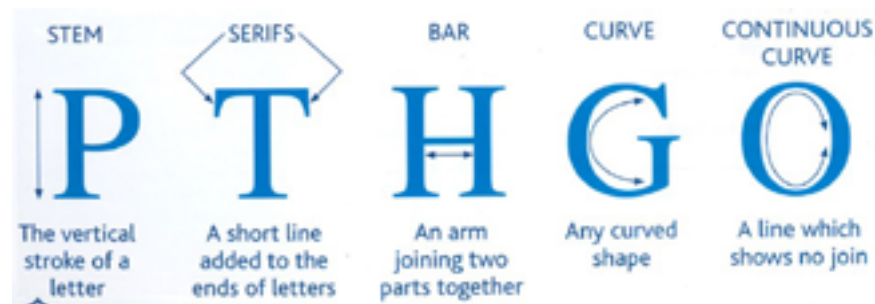
Typography

In essence, typography is the art of arranging letters and text in a way that makes the copy legible, clear, and visually appealing to the reader. Typography involves font style, appearance, and structure, which aims to elicit certain emotions and convey specific messages. In short, typography is what brings the text to life.

Key terms

Typography	The art form of letter style and design
Font	A specific letter type consisting of upper and lower case letters. You can change the style of
Type face	The style of the text you can use, for example
Kerning	Adjusting letter space to achieve the best visual

The parts of a letter.



Year 8 Design and Technology Knowledge Organiser Board Game

Common print processes

Because there are so many variations in printing surfaces, the quantity of prints required, the quality of the print and the costs involved, a range of different print processes have been invented.

A The main qualities of each printing method

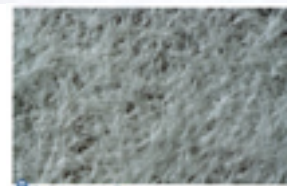
Print process	Common use	Advantages	Disadvantages	Cost (10 = high)	Print quality (10 = high)
Offset lithography	Newspapers Magazines Books	Most common method High quality Fast Prints onto paper extremely well	Expensive set-up costs	5	9
Flexography	Packaging Corrugated boxes Shopping bags 3D surfaces like bottles	Very fast	Expensive set-up costs	6	8
Screen printing	Short print runs T-shirts Big posters	Good for short print runs Can print on absorbent surfaces	Not as good quality as the other processes Slow	4	6
Gravure	Expensive high-quality magazines Stamps	Best quality print process Very fast	Very expensive setup costs	8	10
Laser	One-off items	Immediate printing No set-up costs	Very expensive individual print	10	7



Paper and boards

Why are there so many different types of paper?

We all use many types of paper and board in graphics. They are made from the vegetable fibres found in wood, which are carefully extracted through the process of crushing wood to make a 95 per cent water-based pulp. This looks a bit like milk. It is then refined by being passed through a series of dryers and rollers to achieve the basic quality that paper-makers need for board or paper.



Weight and thickness

Paper is sold by weight in **grams per square metre (gsm)** up to 220 gsm, when it is called board. Board is sold and measured for thickness in units called **microns**, represented by the symbol μm . There are 1000 microns in 1 mm and a typical birthday card is around 300 microns thick, compared with the paper this book is printed on which is about 90 microns thick and 90 gsm in weight.

Recycling

Virgin paper makes up 90 per cent of all paper, and the remaining 10 per cent of paper has some recycled content. Compared with recycled paper, virgin paper tends to be stronger and easier to make whiter. Virgin paper is used generally for food containers because it reduces the contamination risk to the food products.









It is also possible to make paper from all sorts of materials other than wood pulp, such as corn, straw, cotton and hemp, and each of these materials gives the paper different properties. It is important that we try to recycle as much as possible in order to try to save our planet from additional global warming.

Year 8 Design and Technology Knowledge Organiser LED Desk Tidy

Electronics components—input, output and passive

Input devices

An input device is usually a sensor or **switch**. It detects a signal from the environment around it, such as light, temperature or movement (for example, when a switch is pressed). The input device normally transforms this signal into an electronic signal.

Type	Picture	Circuit symbol	What it does
Light dependent resistor (LDR)			Detects changes in light
Thermistor			Detects changes in temperature
Push-to-make switch			Allows electricity to flow through it when the switch is pressed
Reed switch			Allows electricity to flow through it when placed in the 'on' position

Output devices

An output device transforms the electronic signals from the process blocks in a system into signals that we can understand in the 'real world', such as light, sound or movement.

Type	Picture	Circuit symbol	What it does
Lamp			Produces light when electricity flows through it
Light emitting diode (LED)			Produces light when electricity flows from the + leg to the - leg. Uses much less energy than a lamp
Buzzer			Produces a 'buzzing' sound when electricity flows through it
Motor			Produces a turning motion when electricity flows through it

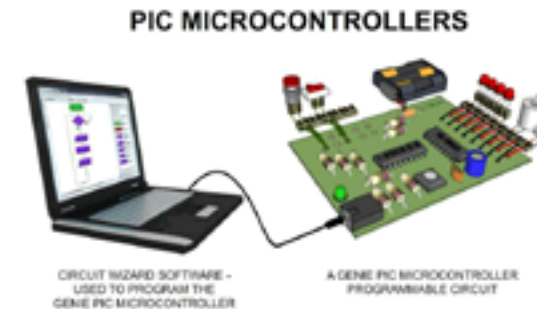
Passive components

If a component is not an input, process or output device, or a power supply, then it is usually a **passive component**. Passive components are needed to allow the input, process and output devices to work properly. They do not add energy into a circuit and do not use electrical power to carry out their function.

Type	Picture	Circuit symbol	What it does
Resistor			Limits the flow of electricity in a circuit
Diode			Allows electricity to flow in one direction only
Capacitor			Stores electrical charge

Microcontrollers

Microcontrollers are quickly replacing computers when it comes to programming robotic devices. These microcontrollers are small and can be programmed to carry out a number of tasks and are ideal for school and industrial projects. A simple program is written using a computer, it is then downloaded to a microcontroller which in turn can control a robotic device.



Advantages

- They can be programmed to perform many different tasks such as timing, counting and reading sensors.
- Can be reprogrammed many times, allowing circuits to be used for different things.
- Makes circuits smaller, one of them can replace many non-programmable components saving many and reducing the amount of waste produced.

Disadvantages

- They can cost more than most non programmable components. This means they may not be the best option for simple circuits.
- Access to a computer and software is needed to program them.
- If the system doesn't work, then checks need to be made on both the electronic circuit and the program. This can take time.

Year 8 Design and Technology Knowledge Organiser LED Desk Tidy

Flow charts






Programming flow charts

This is a flow chart representing the making of tea. It starts with filling the kettle with water all the way through every possible stage. Imagine a robot had to be programmed to perform this basic task. The programmer would have to give the robot every instruction. Remember - computers will only do what we instruct them to do. They cannot not decide anything for themselves.

Manufacturing flow charts.

Planning the manufacture of a design, is an important aspect of the design process. Plain flowcharts are often associated with planning a mass production line, so that thousands of a product can be manufactured efficiently in a factory. At the beginning of the century, the first mass production line was set up in the USA. The Ford Motor Company set up a 'line' of workers who put together each 'Model T' car. The production line was composed of hundreds of people, each doing only one job. When you plan your production line, you need to keep each stage of manufacture very simple. This is planning for 'mass production'

Common flowchart symbols

Symbol	Name of symbol	Typical use in a flowchart program
	Start/end	Marks the start or end point of a program
	Decision/compare	Checks whether a digital input is 'on' or 'off', or whether a sensor value is within a certain range
	Process	Performs various processing functions, such as counting and timing
	Input/output	Turns an output device 'on' or 'off'
	Sub-routine	Activates a separate flowchart, then returns to the original flowchart

Computer-aided manufacture (CAM)

Computer-aided manufacture (CAM) is about the manufacturing process linked to a computer system. There are also lots of advantages when using CAM, for example it ensures that each product is produced exactly the same as the previous one. CAD and CAM can be linked together by converting the numerical data of a design into machine data that can be used to drive the machine.



Examples of computer-aided design machines



Laser Cutting is a non-contact process which utilises a laser to cut materials, resulting in high quality, dimensionally accurate cuts. The process works by directing the laser beam through a nozzle to the work piece. A combination of heat and pressure creates the cutting action



3D printing, also known as additive manufacturing, is a method of creating a three dimensional object layer-by-layer using a computer created design. 3D printing is an additive process where-by layers of material are built up to create a 3D part



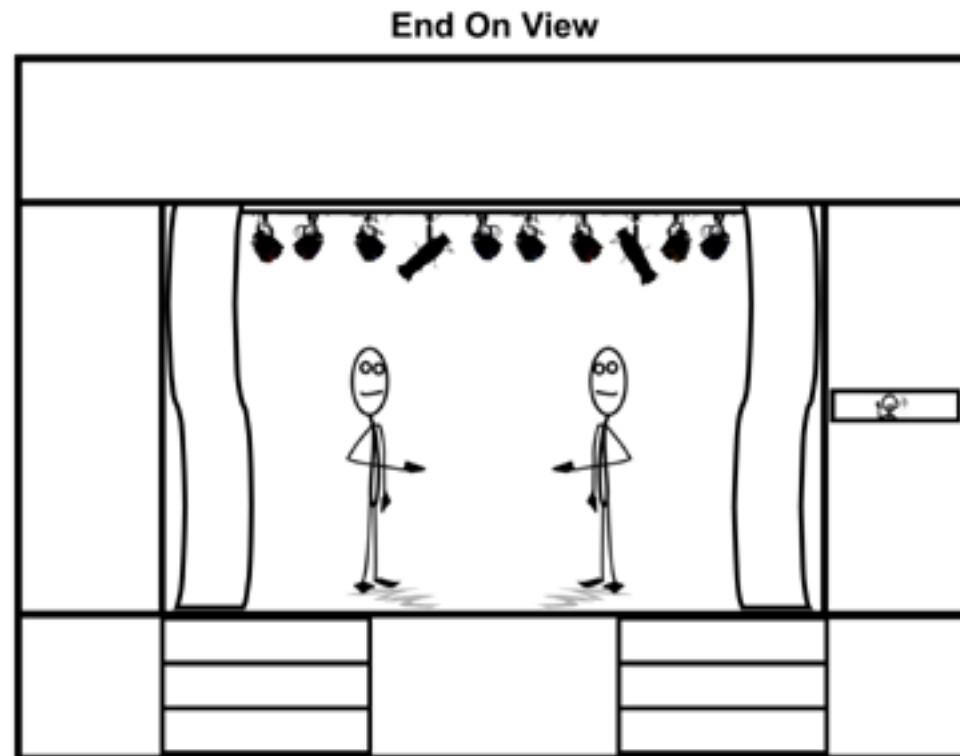
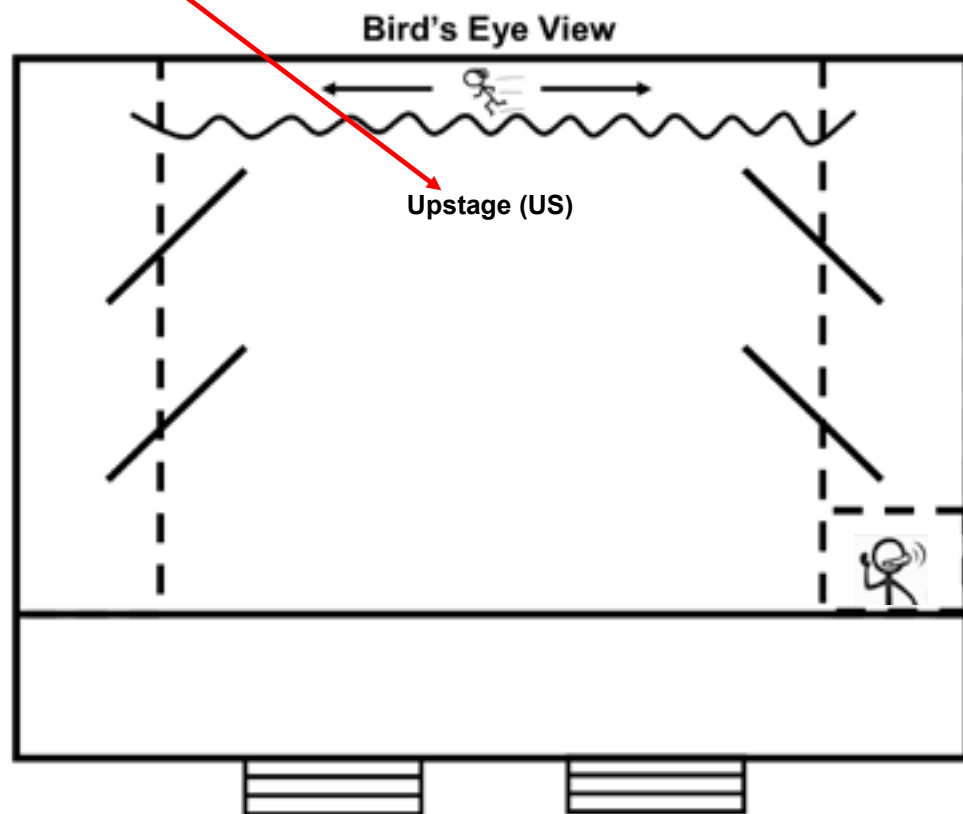
Stage Terminology

Definition	Term	↓ ↓ Cover & Test ↓ ↓
The left hand side of the stage from the actors' point of view.	Stage Left (SL)	
The right hand side of the stage from the actors' point of view.	Stage Right (SR)	
The back of the stage / area furthest away from the audience.	Upstage (US)	
The front of the stage / area nearest the audience.	Downstage (DS)	
Areas at the side of the stage where actors can wait, unseen.	Wings	
Curtains that hang from the ceiling and hide actors in the wings.	Legs	
An extra bit of stage in front of the main tabs.	Thrust / Forestage	
The back wall of the stage, often white to reflect light.	Cyclorama or 'Cyc'	
The small room from which lights and sound are operated.	Tech Box	
A part of the wings where the Stage Manager sits.	Prompt Corner	
Curtains at the front of the stage that can be opened or closed.	Tabs	
The metal poles in the ceiling from which the lights are hung.	Bars	
A theatre term for steps.	Treads	
The 'frame' through which the audience watch the play.	Proscenium Arch	
The imaginary 'missing wall' through which the audience watches the play.	The Fourth Wall	
A corridor or route that takes you from one side of the stage to the other without being seen.	The Cross-Over	

Stage Jobs

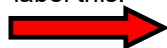
Definition	Term	↓ ↓ Cover & Test ↓ ↓
They organise props and move the set during scene changes.	Stage Managers SM	
They make the sound effects and play them during the show.	Sound Operator SFX	
They operate the lighting and special effects during the show.	Lighting Operator LX	
The FoH Manager is in charge of the whole venue (theatre). FoH is in charge of checking that the show is safe and ready to begin.	Front of House Manager FoH	
Everyone who works on the show but is not a performer.	Tech Crew	

EXAMPLE: Upstage (US)	Stage Right (SR)	Legs	Cyclorama / 'Cyc'	The Cross-Over	Bars	Proscenium Arch	The Fourth Wall
The back of the stage .	The right hand side of the stage from the actors' point of view.	Curtains that hang from the ceiling and hide actors in the wings.	The back wall of the stage, often white to reflect light.	A corridor or route that takes you from one side of the stage to the other without being seen.	The metal poles in the ceiling from which the lights are hung.	The 'frame' through which the audience watch the play.	The imaginary 'missing wall' through which the audience watches the play.



Stage Left (SL)	Downstage (DS)	Wings	Thrust / Forestage	Prompt Corner (In both diagrams)	Treads (In both diagrams)	Tabs	Tech Box
The left hand side of the stage from the actors' point of view.	The front of the stage / area nearest the audience.	Areas at the side of the stage where actors can wait, unseen.	An extra bit of stage in front of the main tabs.	A part of the wings where the Stage Manager sits.	A theatre term for steps.	Curtains at the front of the stage that can be opened or closed.	The small room from which lights and sound are operated.

Don't forget to label this!



SENTENCE TYPES

Sentences fall into three categories: **simple**, **compound** and **complex**.

SIMPLE SENTENCE – A simple sentence contains only one **clause**. A clause is a unit of a sentence containing a subject and a verb, or a subject, verb and object. Here are two examples:

Josie drew a picture.

Concentrating intensely, Josie drew a picture using pens and coloured pencils.

Although the second sentence is much longer, it is still only a simple sentence because the other parts are phrases, not clauses.

COMPOUND SENTENCE – A compound sentence contains two clauses joined together with a coordinating conjunction. There are only seven coordinating conjunctions in the English language, which you can remember with the acronym **FANBOYS**: For, And, Nor, But, Or, Yet, So. Here is an example:

Josie drew a picture and Selma made a sculpture.

COMPLEX SENTENCE – A complex sentence is made up of a main clause and a subordinate clause joined by a subordinating conjunction. There are lots of subordinating conjunctions in our language; examples include *because*, *although*, *whereas*, *however*, *until*, *while*, *as*, *after*, *since*, *when*.

Subordinate means 'less important'. We call it this because its meaning is tied in with the main clause: it cannot stand alone as a sentence on its own. Here is an example:

Josie drew a picture because Selma asked her to.

With complex sentences, you can also switch the clauses around so that the subordinate clause comes first, like this:

Because Selma asked her to, Josie drew a picture.

Or even in the middle, like this:

Josie, because Selma asked her to, drew a picture.

English Department

YEAR 8

SUBORDINATE CLAUSES

Subordinate clauses appear in **complex** sentences. They are sometimes called *dependent* clauses, because their full meaning depends on the information given in the main clause of the sentence.

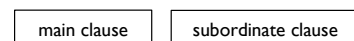
HOW CAN WE TELL IF A CLAUSE IS SUBORDINATE?

Let's look more closely at this. Here are two similar sentences – the first is a **compound** sentence, i.e. two main clauses joined together, and the second is a **complex** sentence made up of a main clause joined to a subordinate clause.



The cat ran away and the dog barked.

The coordinating conjunction *and*, signals that the two things happening in this sentence (cat running away; dog barking) are separate events – there is no relationship between them. The information in both clauses is *independent*.



The cat ran away when the dog barked.

In this example, it is clear that there is a relationship between the two events. The subordinating conjunction *when* signals that the cat ran away *at the same time* as the dog barked, leading us to infer that the dog's bark may have *caused* the cat to run away. So, in this way, the information in the subordinate clause *depends* on the main clause.

WHO OR WHOM?

These two words mean the same thing, so why do we have both? If we are referring to the **subject** of a clause, we say 'who', but if we are referring to the **object** of a clause, we say 'whom'.

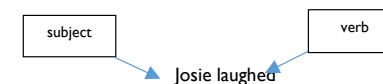
CLAUSE STRUCTURE

Sentences are built out of smaller units called **clauses** and **phrases**. The most basic type of sentence is called a **simple sentence** and consists of only one clause.

A clause must contain two elements: a **subject** and a **verb**.

The subject of a clause must be a **noun** or **noun phrase**.

Here is an example of a basic clause:



A clause can also contain a third element, called the **object**, which must also be a **noun** or **noun phrase**.

You can think of the subject as the 'thing' which *does* the action indicated by the verb. In the example above, Josie is the one laughing, which is why she is the subject of the sentence.

The object is the 'thing' which *receives* the action indicated by the verb. Here is an example of a clause with an object:



Here, Selma is the one being *laughed at* – she is not the one doing the laughing. Therefore, she is the object in the clause.

Most clauses in English follow the order *subject, verb, object*.

RELATIVE CLAUSES

A relative clause is a special type of **subordinate clause** which tells us more about the noun or noun phrase in the sentence. Unlike a normal subordinate clause, the position of a relative clause cannot be moved around in the sentence.

Relative clauses are easy to spot because they always start with a **relative pronoun**. The relative pronouns are *who/whom*, *which*, *that*, and *whose*.

Here is an example. The relative clause is underlined:

The cat ran up the tree which stood at the end of the garden.

VERB INFINITIVES

- | | |
|--------------------|------------------------|
| 1- ETRE = to be | 6. REGARDER = to watch |
| 2- AVOIR = to have | 7. ECOUTER = to listen |
| 3- FAIRE = to do | 8. AIMER = to like |
| 4- ALLER = to go | 9. MANGER = to eat |
| 5- JOUER = to play | |

PRESENT TENSE VERBS WITH "JE"

- | | |
|---------------------|-------------------------|
| 1- je suis = I am | 6. Je regarde = I watch |
| 2- j'ai = I have | 7. J'écoute = I listen |
| 3- Je fais = I do | 8- Je mange = I eat |
| 4- je vais = I go | |
| 5- je joue = I play | |

PAST TENSE VERBS WITH "JE"

- 1- je suis allé(e) = I went
- 2- j'ai joué = I played
- 3- j'ai regardé = I watched
- 4- J'ai mangé = I ate

FUTURE TENSE VERBS WITH "JE"

- 1- je vais aller = I'm going to go
- 2- je vais jouer = I am going to play
- 3- je vais regarder = I am going to watch
- 4- je vais manger = I am going to eat

OTHER VERY IMPORTANT PHRASES

- 1- ne...pas = not
- 2- ne... jamais = never
- 3- il y a = there is / il n'y a pas de = there isn't
- 4- dans = in

French y8 Core Language

KnowIT

TIME MARKERS

PAST

- 1- hier = yesterday
- 3- la semaine dernière = last week

FUTURE

- 1- demain = tomorrow

PRESENT

- 1- quelquefois = sometimes
- 2- tous les jours = everyday
- 3- une fois par semaine = once a week
- 4- souvent = often
- 5- soir = evening
- 6- matin = morning
- 7- d'habitude = usually

CONNECTIVES AND INTENSIFIERS

- | | |
|--------------------------|----------------------|
| 1- d'abord = firstly | 1- trop = too |
| 2- puis / ensuite = then | 2- très = very |
| 3- enfin = finally | 3- assez = quite |
| 4- et = and / ou = or | 4- un peu = a little |
| 5- mais = but | 5- vraiment = really |
| 6- cependant = however | |
| 7- si = if | |
| 8- quand = when | |

OPINIONS

- | | |
|---|---------------------------------|
| 1- j'aime = I like | j'ai horreur de = I really hate |
| 2- je n'aime pas = I don't like | |
| 3- j'adore = I love | |
| 4- Je déteste = I hate | |
| 5- je trouve ça = I find it | |
| 6- parce-que / car c'est= because it is | |

- génial / chouette = great
Intéressant = interesting
marrant / drôle = fun
ennuyeux / barbant = boring
Pénible = annoying
nul / horrible = rubbish

FRENCH Y8- TOPIC 2 - MES LOISIRS

À la télé • On TV

je regarde ...	<i>I watch ...</i>
les dessins animés	<i>cartoons</i>
les documentaires	<i>documentaries</i>
les émissions de sport	<i>sports programmes</i>
les émissions de télé-réalité	<i>reality TV shows</i>
les émissions musicales	<i>music shows</i>
les infos	<i>the news</i>
les jeux télévisés	<i>game shows</i>
la météo	<i>the weather</i>
les séries	<i>series</i>
les séries policières	<i>police series</i>
les séries américaines	<i>American series</i>
Mon émission préférée, c'est ...	<i>My favourite programme is ...</i>
j'adore	<i>I love</i>
j'aime bien	<i>I like</i>
je n'aime pas	<i>I don't like</i>
je ne regarde jamais	<i>I never watch</i>
je ne rate jamais	<i>I never miss</i>

Les films • Films

j'aime ...	<i>I like ...</i>
je suis fan de ...	<i>I'm a fan of ...</i>
je ne suis pas fan de ...	<i>I'm not a fan of ...</i>
j'ai une passion pour les ...	<i>I have a passion for ...</i>
j'ai horreur des ...	<i>I really dislike ...</i>
je déteste ...	<i>I hate ...</i>
les comédies	<i>comedies</i>
les films d'action	<i>action films</i>
les films d'amour	<i>romantic films</i>
les films d'arts martiaux	<i>martial-arts films</i>
les films d'aventure	<i>adventure films</i>
les films fantastiques	<i>fantasy films</i>
les films d'horreur	<i>horror films</i>
les films de science-fiction	<i>science-fiction films</i>
mon acteur préféré, c'est ...	<i>my favourite actor is ...</i>
mon film préféré, c'est ...	<i>my favourite film is ...</i>

Sur Internet • On the internet

J'envoie des e-mails.	<i>I send emails.</i>
Je fais beaucoup de choses.	<i>I do lots of things.</i>
Je fais des recherches pour mes devoirs.	<i>I do research for my homework.</i>
Je fais des achats.	<i>I buy things.</i>
Je fais des quiz.	<i>I do quizzes.</i>
Je joue à des jeux en ligne.	<i>I play games online.</i>
Je mets à jour ma page perso.	<i>I update my homepage.</i>
Je vais sur mes sites préférés.	<i>I go onto my favourite sites.</i>
Je vais sur des blogs.	<i>I go onto blogs.</i>
Je vais sur des forums.	<i>I go onto forums.</i>

PRESENT of -ER verbs

To form the present of **-er** verbs,
1- we chop off the **ER**
2- we add the endings-

Je-e
Tu-es
Il-e
Elle-e
On-e
Nous-ons
Vous-ez
Ils-ent
Elles-ent

Je regarde
Tu regardes
Il regarde
Elle regarde
On regarde
Nous regardons
Vous regardez
Ils regardent
Elles regardent

Qu'est-ce que tu lis? • What are you reading?

je lis ...	<i>I'm reading ...</i>
une BD	<i>a comic book</i>
un livre sur les animaux	<i>a book on animals</i>
un livre d'épouvante	<i>a horror story</i>
un magazine sur les célébrités	<i>a magazine about celebrities</i>
un manga	<i>a manga</i>
un roman fantastique	<i>a fantasy novel</i>
un roman policier	<i>a thriller</i>
un roman d'amour	<i>a love story</i>



Hier soir • Last night

J'ai discuté.	<i>I discussed/chatted.</i>
J'ai écouté la radio.	<i>I listened to the radio.</i>
J'ai envoyé des SMS.	<i>I sent text messages.</i>
J'ai joué à des jeux en ligne.	<i>I played games online.</i>
J'ai posté des photos.	<i>I posted photos.</i>
J'ai regardé la télé/des clips vidéo.	<i>I watched TV/video clips.</i>
J'ai surfé sur Internet.	<i>I surfed the net.</i>
J'ai tchatté sur MSN.	<i>I chatted on MSN.</i>
J'ai téléchargé des chansons.	<i>I downloaded some songs.</i>

PAST of -ER verbs

To form the past of **-er** verbs,
1- we use **AVOIR**
J'ai
Tu as
Il a
Elle a
On a
Nous avons
Vous avez
Ils ont
Elles ont
2- We chop off the ER and write a "é" at the end of the verb.

J'ai regardé
Tu as regardé
Il a regardé
Elle a regardé
On a regardé
Nous avons regardé
Vous avez regardé
Ils ont regardé
Elles ont regardé

A Paris – In Paris

J'ai passé une semaine à Paris.	<i>I spent a week in Paris.</i>
J'ai visité la tour Eiffel.	<i>I visited the Eiffel Tower.</i>
J'ai mangé au restaurant.	<i>I ate in a restaurant.</i>
J'ai admiré la Pyramide du Louvre.	<i>I admired the Louvre Pyramid.</i>
J'ai regardé le feu d'artifice.	<i>I watched the fireworks.</i>
J'ai acheté des souvenirs.	<i>I bought some souvenirs.</i>
J'ai rencontré un beau garçon/une jolie fille.	<i>I met a good-looking boy/a pretty girl.</i>
J'ai envoyé des cartes postales.	<i>I sent some postcards.</i>
J'ai pris des photos.	<i>I took some photos.</i>
J'ai vu la Joconde.	<i>I saw the Mona Lisa.</i>
J'ai attendu le bus.	<i>I waited for the bus.</i>
J'ai très bien dormi.	<i>I slept very well.</i>
Je n'ai pas visité Notre-Dame.	<i>I didn't visit Notre-Dame.</i>
On a fait les magasins.	<i>We went shopping.</i>
On a bu un coca.	<i>We drank a cola.</i>
On a fait un tour de la ville en segway.	<i>We did a tour of the town by segway.</i>
On a fait une balade en bateau-mouche.	<i>We went on a boat trip.</i>

Tu as voyagé comment? • How did you travel?

en avion	<i>by plane</i>
en bus	<i>by bus</i>
en car	<i>by coach</i>
en métro	<i>by underground</i>
en train	<i>by train</i>
en voiture	<i>by car</i>
à vélo	<i>by bicycle</i>
à pied	<i>on foot</i>

La Tour Eiffel - Le Sacré Coeur - Le Louvre
Notre Dame - L'arc de Triomphe-
Le Champs Elysées - Le Centre Pompidou



Some verbs have irregular past participles.

Infinitive	Perfect tense with je
boire (to drink)	<i>j'ai bu</i> (I drank)
faire (to do/make)	<i>j'ai fait</i> (I did)
prendre (to take)	<i>j'ai pris</i> (I took)
voir (to see)	<i>j'ai vu</i> (I saw)

To make a perfect tense verb negative, put **ne ... pas** around **the part of avoir**.

Je n'ai pas mangé au restaurant.

Change *un/une* and *du/de la/de l'/des* to **de** after a negative:

J'ai envoyé une carte postale à mes parents. → Je n'ai pas envoyé de carte postale à mes parents.

FRENCH Y8- TOPIC 3 - PARIS

Un voyage • A journey

Je suis allé(e) (à Paris).	<i>I went (to Paris).</i>
Je suis parti(e)/arrivé(e) à (dix heures).	<i>I left/arrived at (ten o'clock).</i>
Le train est parti/arrivé à (huit heures).	<i>The train left/arrived at (eight o'clock).</i>
Je suis sorti(e).	<i>I went out.</i>
Je suis resté(e) (chez moi).	<i>I stayed (at home).</i>
Je suis rentré(e) (chez moi).	<i>I went/got home.</i>
Je suis monté(e).	<i>I went up.</i>

Perfect tense with être

ALLER – RESTER – ARRIVER-
PARTIR – SORTIR – RENTRER



Je suis allé.


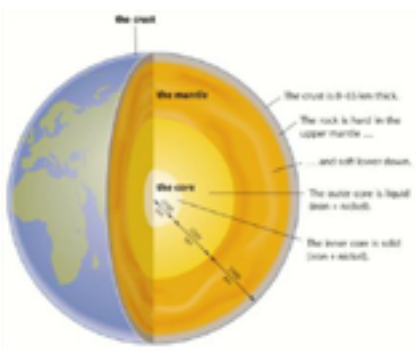





Je suis allée.

C'était comment? • What was it like?

C'était ...	<i>It was ...</i>
J'ai trouvé ça ...	<i>I found it ...</i>
bien	<i>good</i>
bizarre	<i>weird</i>
cool	<i>cool</i>
cher	<i>expensive</i>
effrayant	<i>scary</i>
ennuyeux	<i>boring</i>
fabuleux	<i>wonderful/fantastic</i>
génial	<i>great</i>
horrible	<i>horrible/terrible</i>
intéressant	<i>interesting</i>
marrant	<i>funny/a laugh</i>
nul	<i>rubbish</i>
Ce n'était pas mal.	<i>It wasn't bad.</i>

Year 8 Geography Knowledge Organiser Term 3: Volcanoes

Location and Distribution	Structure of the Earth	Plate Boundaries	Volcano Structure
<p>Volcanoes are found along plate boundaries and hot spots.</p> 	<p>The earth is made up of 4 layers.</p> 	<p>Convection currents drive the movement of tectonic plates. When the tectonic plates meet they create 4 types of boundary:</p> <p>Collision, Constructive Destructive Conservative</p> <p>Volcanoes are formed at constructive and destructive plate boundaries.</p>	<p>A volcano is where magma is able to escape from the earth's surface.</p> <p>The two types of volcano are shield (gentle, flat and runny lava) and composite (violent, steep and thick lava).</p> 
Volcanic Hazards	Speak Like a Geographer	Fieldwork	Skills
<p>Volcanoes produce fertile warm land which has many benefits. However, there are many hazards which can be mitigated through the 3 P's; Plan, Predict and Prepare</p> <p><u>Yellow Stone Super Volcano</u> The Yellowstone Caldera is a supervolcano in Yellowstone National Park in Wyoming (USA). Beneath Yellowstone Park is a monstrous plume of hot rock. Past volcanoes have erupted with a thousand times the power of Mount St. Helens.</p>	<p>Volcano, Magma, Magma Chamber, Shield Volcano, Composite Volcano, Pyroclastic Flow, Plume, Vent, Crater, Primary Impact, Plan Predict, Prepare, Geothermal Energy, Agriculture, Fertile, Tourism, Minerals, Geology</p>		<p>A hazard map is a map that highlights areas that are affected by or are vulnerable to a particular hazard</p> <p>Advantages: provide important information to help people prepare and evacuate safely</p> <p>Disadvantages: It's not always 100% accurate</p> 

Year 8 Geography Knowledge Organiser Term 4: Remarkable Resources

Earth's Natural Resources	Location and Distribution	Humans' Use of Resources	Types of Energy
<p>A resource is something of use. The main resources are; food, energy, minerals and water.</p>	<p>Resources are not evenly spread around the world e.g. oil shown in dark orange. Demand and supply drives international trade and it is worth billions of dollars.</p>	<p>ACs have become very dependent on resources and have often depleted their own supplies.</p> <p>They therefore depend on links with EDCs and LIDC's to supply them with resources.</p> <p>Humans have over exploited many resources having a negative impact on the environment e.g. deforestation.</p>	<p>Fossil fuels such as coal, oil and natural gas take millions of years to form. They are cheap to produce, however, they release a lot of energy when burnt and give off a lot of pollution.</p> <p>Renewable energy comes from a source that will not run out including; solar, geothermal, hydropower, wind and biomass. They are expensive to set up and generate less energy but release minimal pollutants.</p>
The Middle East	Speak Like a Geographer	Fieldwork	Skills
<p>The Middle East is south east of the UK, in Asia. It is rich in oil (fossil fuel) and therefore exports to many ACs like the UK. There have been many conflicts in oil rich countries.</p>	<p>Natural Resources, Fossil Fuels, Non-Renewable, Consumption, Fracking, Environment, Mining, Deforestation, Food Security, Water Crisis, Commercial Fishing, Mechanisation, Sustainability, Demand and Supply</p>		<p>A pie chart is a circular chart that shows how data sets relate to one another.</p> <p>Advantages: summarize a large data set in visual form and be visually simpler than other types of graphs.</p> <p>Disadvantages: If too many pieces of data are used, pie chart becomes less effective.</p>

Year 8 History: Spring Term

Key Words

Democracy	A way of governing which depends on the allowing people to choose	Britain is a democracy
Elections	The process of voting to choose a political leader	Britain has elections to choose a new Prime Minister
Strike	Workers deliberately stopping work to protest something	The Match girls went on strike due to low pay
Suffrage	The right to vote in political elections	The Suffragists and Suffragettes fought for women's suffrage
Middle passage	The forced voyage of enslaved Africans across the Atlantic Ocean from Africa to the New World.	Millions of African people forcibly travelled the Middle passage.
Slavery	The practice of people owning other people. Enslaved people have to work for the owners, doing whatever the owners ask them to do.	America and Britain participated in slavery.
Abolition/abolish	To stop something/making it illegal.	The British government passed an act abolishing slavery in 1807.

Part 1: Slavery

Arguments used to justify it

- Belief that Africans needed to convert to Christianity
- Economic benefits
- Supposed superiority of white people (racism)

Arguments against

- Kidnapping Africans
- Treatment of slaves (starvation, disease, beatings, murder)
- Forced labour



Key individuals

William Wilberforce	British MP who campaigned for the abolition of slavery in Parliament.
Olaudah Equiano	A slave who bought his freedom and published a description of life as a slave. He became an anti slavery campaigner

Part 2: Women's suffrage

Suffragists (National Union of Women's Suffrage Societies)

1897 - Led by **Millicent Fawcett**. Aimed to gain the vote by **peaceful** persuasion. Wrote letters gather signatures & went on peaceful marches.

Suffragettes (Women's Social & Political Union)

1903 - . Led by **Christabel Pankhurst** they aimed at **"deeds not words"** - using arson, hunger strikes and violent demonstrations. **Emily Davison** died at 1913 Derby while trying to pin a votes for women banner on the King's race horse. Government responded with arrests and forced feeding of hunger strikers.

WW1

Women gave support to the war effort and the government promised vote in return.

Tactics

Hunger Strike

When people refuse to eat as a form of protest.

Petition

A formal written request, usually signed by lots of people, asking the government or another important group to do something.

Arson

The act of deliberately setting fire to property with a view to causing extensive damage.

Cat and Mouse Act

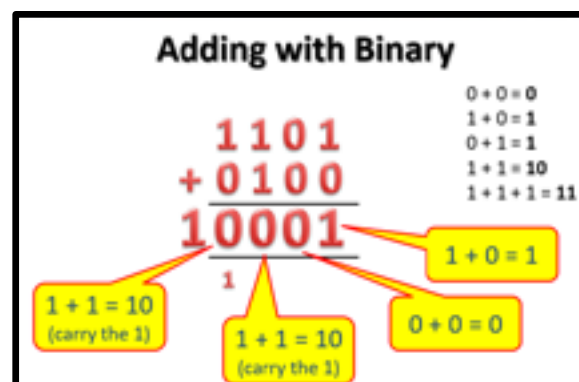
Permitted suffragettes on hunger strike to be released but re-arrested once well again to complete their sentences.

Year 8 ICT Knowledge Organiser – Data representation

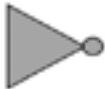


Key words

Binary	Counting using base 2 (0's & 1's) the only language that computers truly understand.
Denary	Counting using base 10 (0-9)
Bit	The smallest amount of data (stands for Binary digit (0 or 1))
Nibble	4 bits – ½ a Byte
Byte	8 bits – representing a character on the keyboard
Kilobyte	1024 bytes
Megabyte	1024 Kilobytes
Gigabyte	1024 Megabytes
Terabyte	1024 Gigabytes
Image file size equation	An image 1000 x 800 pixels with 16 bit colour depth would be: (1000 x 800) x 16 = 12,800,000 bits or 12 MB
Resolution	how big the pixels are in the image
Meta Data	The data to help the computer process the image. It includes Size of the image grid (width and height), Colour depth (number of bits per pixel) and Resolution to display the image in (pixels per inch)

IMAGES - Bitmaps are types of images. They are laid out in a grid format with each box on the grid containing one “**Picture element**” which is better known as a “**Pixel**”.



Logic Gates and Truth Tables

Binary Logic Gate Diagrams																	
NOT		<table><tr><th>A</th><th>Out</th></tr><tr><td>0</td><td>1</td></tr><tr><td>1</td><td>0</td></tr></table>	A	Out	0	1	1	0									
A	Out																
0	1																
1	0																
AND		<table><tr><th>A</th><th>B</th><th>Out</th></tr><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td></tr><tr><td>1</td><td>1</td><td>1</td></tr></table>	A	B	Out	0	0	0	0	1	0	1	0	0	1	1	1
A	B	Out															
0	0	0															
0	1	0															
1	0	0															
1	1	1															
OR		<table><tr><th>A</th><th>B</th><th>Out</th></tr><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>1</td></tr></table>	A	B	Out	0	0	0	0	1	1	1	0	1	1	1	1
A	B	Out															
0	0	0															
0	1	1															
1	0	1															
1	1	1															

SOUND - To improve the quality of the digital signal so that it becomes closer to the original analogue signal you need to

- Increase how often the sample is taken - this is known as the “Sample Rate”.
- Increase the number of bits per sample to allow a more precise recording of the sample to be taken – for instance, have a range between 0 and 255 (8 bits) rather than 0 – 31 (5 bits)

These changes will increase the size of the file.

Year 8 ICT Knowledge Organiser - Networking

Network Hardware:

Switch
Server
Router
Wire/Cable
Wireless

A NETWORK - 2 or more computers connected together using wired or wireless media to share resources, files, programs and to communicate.

Peer to Peer Network – Computers are connected directly together and there is NO central server . Each user is responsible for their own hardware, software and security but can share files and resources.

Client Server Network – A central server provides services to client computers. The server allows the computers to have a central backup, communicate, share files and monitor and maintain everything from a central point 24/7.

Topologies

STAR – Computers connected via a central switch.

Topologies



MESH – Each computer is connected to every other computer.

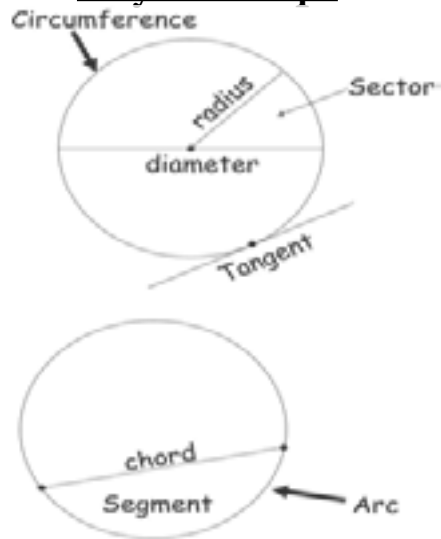
Types of Computer Network

A LAN - A collection of computers connected together over a small geographic area. There are found in homes, schools, and single-site companies. The hardware required is owned and maintained by the organisation that uses it.

A WAN - A collection of computers that are connected over a large geographic area. The hardware required is owned and maintained by large telecommunication companies. The Internet is the largest WAN in the world.

Knowledge organiser Year 8:
Spring Term 1, Topic 1 :
Circles

Key Concept



Tip

If you don't have a calculator you can leave your answer in terms of π .

Formula

$$\begin{aligned} \text{Circle Area} &= \pi \times r^2 \\ \text{Circumference} &= \pi \times d \\ &\text{or } = 2\pi r \end{aligned}$$

Key Words

Diameter: Distance from one side of the circle to the other, going through the centre.

Radius: Distance from the centre of a circle to the circumference.


Chord: A line that intersects the circle at two points.

Tangent: A line that touches the circle at only one point.

Compound (shape): More than one shape joined to make a different shape.

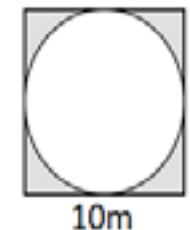
Examples

Find the area and circumference to 2dp.



$$\begin{aligned} \text{Circumference} &= \pi \times d \\ &= \pi \times 8 = 25.13\text{cm} \\ \text{Area} &= \pi \times r^2 \\ &= \pi \times 4^2 = 50.27\text{cm}^2 \end{aligned}$$

Find shaded area to 2dp.



$$\begin{aligned} \text{Square area} &= 10 \times 10 \\ &= 100\text{m}^2 \\ \text{Circle area} &= \pi \times r^2 \\ &= \pi \times 5^2 \\ &= 78.54\text{m}^2 \\ \text{Shaded area} &= 100 - 78.54 = 21.46\text{m}^2 \end{aligned}$$

MathsWatch References

- 116** Circle Definitions
- 117** Area of a Circle
- 118** Circumference of a Circle
- 149** Tangents, Arcs, Segments and Sectors

Knowledge organiser Year 8: Spring Term 1, Topic 2: Ratio and Proportion

Key Words

Ratio: Relationship between two numbers.

Part: This is the numeric value '1' of, would be equivalent to.

Simplify: Divide both parts of a ratio by the same number.

Equivalent: Equal in value.

Convert: Change from one form to another.

Direct proportion: as one amount increases, another amount increases at the same rate

Inverse proportion: when one value increases and the other decreases

Key Concept

$$\begin{array}{ccc} 2 \text{ parts} & \swarrow & \searrow \\ & 2:6 & \\ & = & \\ & 1:3 & \end{array}$$

Tip

It is a good idea to write the letters above the ratio. This helps you keep the order the correct way round.

Simplify 60 : 40 : 100

This could have been done in one step by dividing by 20.

$$\begin{array}{l} \div 10 \\ 6 : 4 : 10 \\ \div 2 \\ 3 : 2 : 5 \end{array}$$

Share £45 in the ratio 2 : 7

Add: $2+7=9$

Divide: $45 \div 9 = 5$

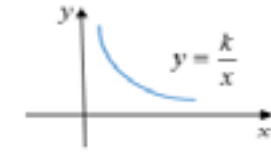
Multiply: 2×5 and 7×5

£10 : £35

Direct proportion



Inverse proportion



Joy and Martin share money in the ratio 2 : 5. Martin gets £18 more than Joy. How much do they each get?

$$\begin{array}{cc} 2 : 5 \\ \begin{array}{|c|c|} \hline 6 & 6 \\ \hline 6 & 6 \\ \hline 6 & 6 \\ \hline 6 & 6 \\ \hline 6 & 6 \\ \hline \end{array} \\ \hline 18 \div 3 = 6 \\ \hline =12 \quad =30 \end{array}$$

£12 : £30

Examples

Write 2 : 5 in the form 1 : n

$$\begin{array}{ccc} & 2 : 5 & \\ \div 2 & \swarrow & \searrow \div 2 \\ & 1 : 2.5 & \end{array}$$

a : b = 4 : 5 and b : c = 6 : 7

Find a : b : c.

The LCM of 5 and 6 is 30

$$\begin{array}{ccc} a & : & b & : & c \\ 4 & : & 5 & & \\ \times 6 & \swarrow & \searrow \times 5 & & \\ 24 & : & 30 & : & 35 \end{array}$$

Cake recipe for 6 people.

3 eggs

300g flour

150g sugar

What would you need for 8 people?

	6	2	8
eggs	3	1	4
flour	300g	100g	400g
sugar	150g	50g	200g




Knowledge organiser Year 8: Spring Term 1, Topic 3 : Compound Measures

Key words

Units

Kinematics

Compound Formula

<p>Distance = Time \times Speed</p> <p>Speed = Distance \div Time</p> <p>Time = Distance \div Speed</p>	
<p>Mass = Density \times Volume</p> <p>Density = Mass \div Volume</p> <p>Volume = Mass \div Density</p>	
<p>Force = Pressure \times Area</p> <p>Pressure = Force \div Area</p> <p>Area = Force \div Pressure</p>	

Speed is a **compound measure**, because it is calculated from two other measurements, distance and time.

$$\text{average speed} = \frac{\text{total distance travelled}}{\text{total time taken}}$$

The units of your answer will depend on the units of the question.

An athlete runs 100 metres in 20 seconds.

$$\text{average speed} = \frac{100 \text{ m}}{20 \text{ s}} = 0.5 \text{ m/s}$$

Calculate the density of a piece of metal that has a mass of 2000 kg and a volume of 0.5 m³.

$$d = \frac{m}{v} \quad d = \frac{2000 \text{ kg}}{0.5 \text{ m}^3} \quad d = \frac{4000 \text{ kg}}{1 \text{ m}^3} \quad d = 4000 \text{ kg/m}^3$$

The density of gold is 9.3 g/cm³. Calculate the mass of a gold bar with a volume of 30 cm³



$$\begin{aligned} m &= d \times v \\ m &= 9.3 \text{ g/cm}^3 \times 30 \text{ cm}^3 \\ m &= 279 \text{ g} \end{aligned}$$



A crate is placed on the floor.

The crate exerts a force of 3500N on the floor.
The area of the crate in contact with the floor is 5m²

Find the pressure exerted by the crate on the floor.



$$\begin{aligned} P &= \frac{F}{A} \\ P &= \frac{3500}{5} = 700 \text{ N/m}^2 \end{aligned}$$

These are three kinematics formulae:

$$v = u + at$$

$$s = ut + \frac{1}{2}at^2$$

$$v^2 = u^2 + 2as$$

where a is constant acceleration, u is initial velocity, v is final velocity, s is displacement from the position when $t = 0$ and t is time taken

You do not need to learn these but you do have to be able to put the right numbers in the right places!

Knowledge Organiser: Year 8, Spring 1, Topic 4 Data Handling

Key vocabulary:

Frequency polygon – a graph using lines to join the midpoints of intervals in order

Time series graph – a line graph of repeated measurements taken over regular time intervals

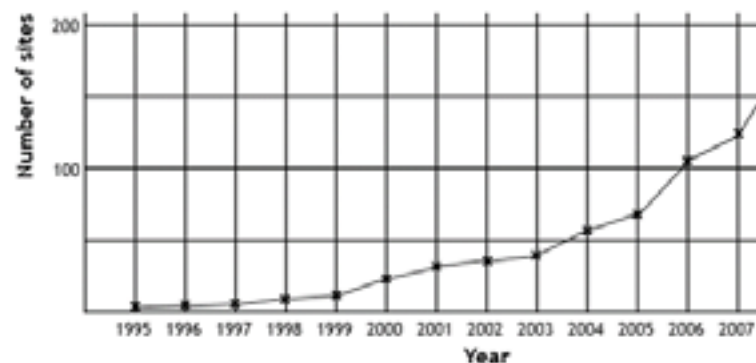
Trend on a graph – a general pattern, upward or downward, in which data is changing over time

Mode – the most frequent value

Median – the middle value when the data is ordered

Range – the difference between highest and lowest value

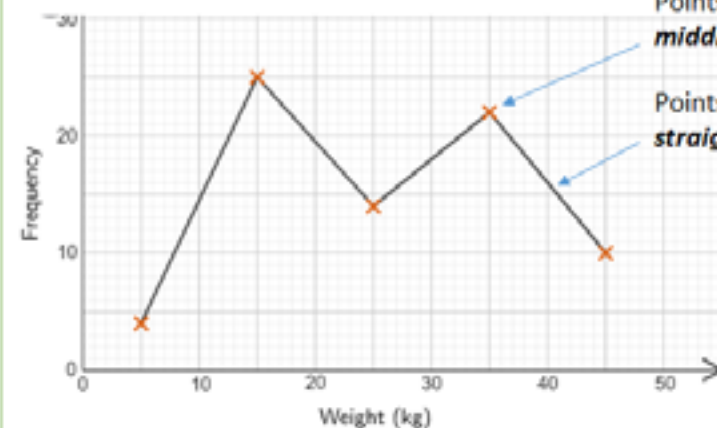
Time series graph



This graph shows an **upward trend** as the values go up year on year

Frequency polygon from grouped data

Weight of children (w , kg)	Frequency
$0 < w \leq 10$	4
$10 < w \leq 20$	25
$20 < w \leq 30$	14
$30 < w \leq 40$	22
$40 < w \leq 50$	10



Points are plotted in the **middle** of the interval

Points are joined with **straight** lines

Mode = $10 < w \leq 20$ (most frequent)

Median = $20 < w \leq 30$ (middle value)

Range = 50 (highest – lowest)

Note that the mode and the median are **intervals**

Knowledge organiser Year 8:
Spring Term 2, Topic 1 :
Standard Form

Key Concept

Format for a standard form number is
 $a \times 10^{\text{power}}$
Where a is an integer
 $1 \leq a < 10$

Examples

Calculations using Standard Form

Multiplying - Add the Indices

$$3 \times 10^4 \times 4 \times 10^9$$

$$(3 \times 4 = 12)(4 + 9 = 13)$$

$$= 12 \times 10^{13}$$

Dividing - Subtract the Indices

$$6 \times 10^9 \div 3 \times 10^4$$

$$(6 \div 3 = 2)(9 - 4 = 5)$$

$$= 2 \times 10^5$$

Adding - Make Indices the same then add Numbers

$$3 \times 10^4 + 4 \times 10^5$$

$$(0.3 \times 10^5) + (4 \times 10^5)$$

$$= 4.3 \times 10^5$$

Subtracting - Make Indices the same then subtract Numbers

$$3 \times 10^4 - 4 \times 10^5$$

$$(0.3 \times 10^5) - (4 \times 10^5)$$

$$= 3.7 \times 10^5$$

TIGER MOON

Basic Structure

$$1 \leq a < 10 \leftarrow a \times 10^b \rightarrow \text{Whole number}$$

$$2.83 \times 10^6 = 2830000$$

Positive power of 10 = Large number

$$3.14 \times 10^{-4} = 0.000314$$

Negative power of 10 = Small decimal number

Tip

A positive power means the number is very BIG

A negative power means the number is very SMALL

Standard Form and your Calculator

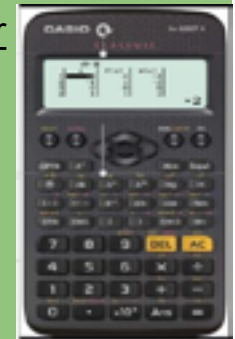
Into standard form:

SHIFT/Menu Set up

3 Number Format

2 Sci

9



Knowledge organiser Year 8: Spring Term 2, Topic 2 : Linear Graphs

Key Concept

$y = mx + c$ is an important real-life equation. The gradient, m , represents rate of change (eg, cost per concert ticket) and the y -intercept, c , represents a starting value (eg, an admin. fee).

Key Words

Gradient

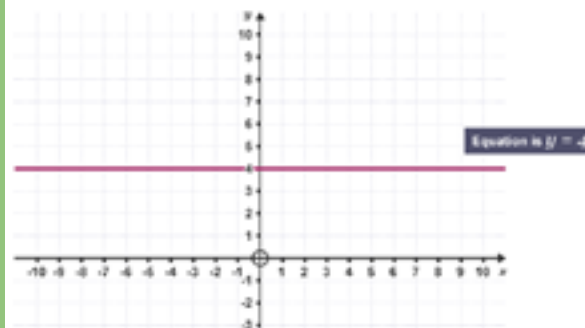
Intercept

Equation

Midpoint

Intersecting

All the points on the horizontal line below have a **y-coordinate** of 4, so you can say that the equation of the line is $y = 4$.



Equations of other straight line graphs

The equation of a straight line on a graph is made up of a y term, an x term and a number, and can be written in the form of $y = mx + c$.

- The slope of the line is known as the **gradient** and is represented by the value of m in the equation.
- The point at which the line **crosses the y-axis** is the value of c in the given equation, and is referred to as the **y-intercept**.

All the points that lie on the green line have a y -coordinate that is the same as the x -coordinate, eg:

$(-1, -1)$ and $(2, 2)$

We say that the equation of the line is $y = x$.

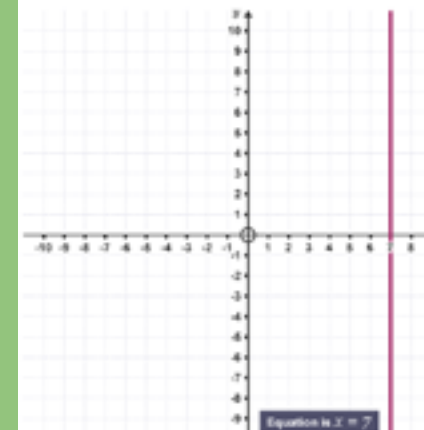
All the points that lie on the purple line have a y -coordinate that is one number higher than the x -coordinate of the same line, eg:

$(-3, -2)$ and $(0, 1)$

In other words, the y -coordinate equals the x -coordinate + 1.

So the equation of the line is $y = x + 1$.

All the points on the vertical line below have an **x-coordinate** of 7, so you can say that the equation of the line is $x = 7$.



Examples





KNOWLEDGE ORGANISER – Year 8 – Reggae / Pop

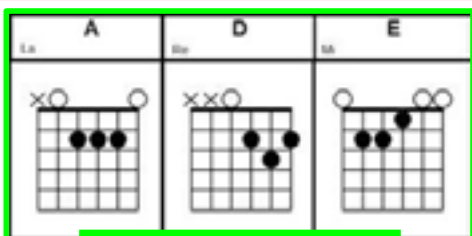
Reggae

“Three Little Birds” is made up of the three **PRIMARY** chords (I, IV and V) in the key of A:

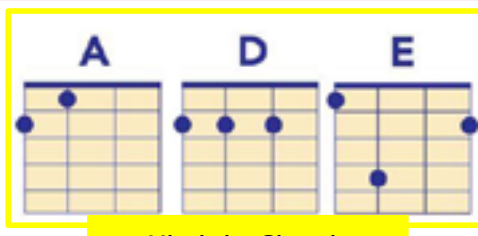
Chord I = A (A+C#+E)

Chord IV = D (D+F#+A)

Chord V = E (E+G#+B)

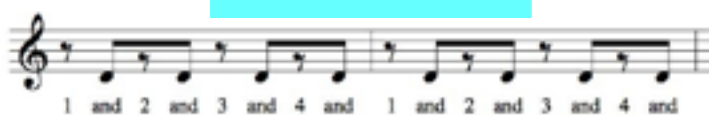


Guitar Chords



Ukulele Chords

The Off-beat



In Reggae music the chords are played on the off-beat. This means that they are not played on the usually stressed beats. You need to play on the “and”.

Reggae started in Jamaica around the late 1960s. The earliest reggae lyrics spoke mostly of love but as the music and the musicians making it made their way into the 1970s, reggae started taking on a heavy Rastafarian influence. Now the love being sung about was not just romantic love, but spiritual love, the love of God, or “Jah”. When reggae singers weren’t singing about love, they were singing about rebellion and revolution against the forces preventing that love, like the extreme violence, poverty, racism, and government oppression they were witnessing or experiencing on a regular basis.

Tick when done	Reggae Listening - Identify the instrumentation
	https://www.youtube.com/watch?v=2XiYUYcpsT4 “I Shot The Sheriff” - Bob Marley
	https://www.youtube.com/watch?v=xICmQcRpTg “Welcome To Jamrock” - Damien Marley

Pop - 4-chord songs

Chord	Keyboard	Ukulele	Notes
C			C E G
F			F A C
G			G B D
Am			A C E

Most Pop songs are made up of the same four chords in a key, these are:

Chord I
Chord IV
Chord V
Chord vi (minor)

In the key of C they are listed below:

I	ii	iii	IV	V	vi	vii°
C	Dm	Em	F	G	Am	Bdim

Pop Song Structure

Tick when done	Watch the following video on pop song structure https://www.youtube.com/watch?v=oXifpcE7ewU “Learn Popular Music Song Structure” - Mr D. Morley
----------------	--

Keywords

Chord	Two or more notes played at the same time.
Key	Adds a sense of space to a sound
Riff	A short, repeated melodic pattern usually 1-4 bars long.
Hook	A short catchy melodic idea designed to be instantly memorable
Fills	Short flourishes used to fill a gap between phrases - often played on drums
Middle 8	The section of a song where there is a new, different tune/chord progression. Usually 8 bars in length.
Reverb	Adds a sense of space to a sound.

HOCKEY

THEORY IN ACTION



Coordination may be advantageous to hockey player in producing an effective dribble, coordinating footwork and arm action.

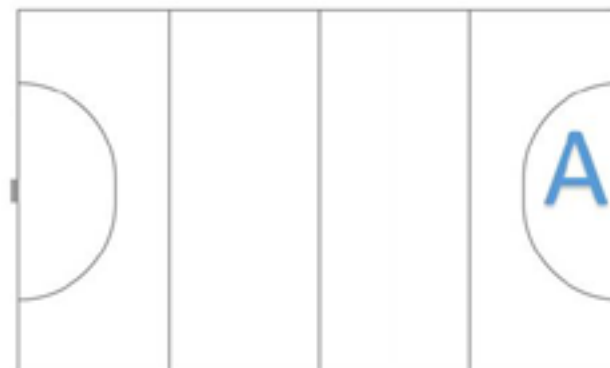
DEFINE THIS

"Co-ordination is the ability to move two or more body parts under control, smoothly and efficiently."

Overview of the rules

The rules of hockey are very similar to the rules of football except that players must use sticks instead of their feet to play the ball. There are 11 players on a team made up of a goalkeeper, defenders, midfielders and attackers.

1. Use the "front" (flat) side of the stick.
2. Cannot use feet.
3. At re-starts or free hits, the defending team must stand 5m from the ball.
4. Can only score from inside the "D" (A).
5. From a re-start a players is allowed to move the ball to themselves. Known as a self-pass.



BASKETBALL

Rules for Offence

When a player has the basketball (offence) there are certain rules they must follow:

1. The player must bounce the ball with one hand while moving both feet. If both hands touch the ball or the player stops dribbling, the player must only move one foot.
2. Once a player has stopped dribbling they cannot start another dribble. A player who starts dribbling again is called for double-dribble.
3. A player can only start another dribble after another player from either team touches or gains control of the basketball.
4. Back court violation. Once you advance beyond the half way line you cannot return to your half in possession of the ball.

Defensive Rules

The team on defence is the team without the basketball.

1. The main rule for the defensive player is not to foul. This means the defensive player may not touch the offensive player in a way that causes the offensive player to lose the ball or miss a shot.

Rules for everyone

1. Although the foul rule is described as a defensive rule, it applies exactly the same to all players on the court.
2. Basketball players cannot kick the ball or hit it with their fist.
3. The positions in basketball are just for basketball strategy and there are no positions in the rules.

THEORY IN ACTION

Power is important in explosive movements like jumping.

DEFINE THIS

"Power is the ability to exert maximum muscular contractions in an explosive burst."



NETBALL

Overview of rules

1. 3 seconds on the ball – Players are only allowed to have the ball in possession for 3 seconds.
2. Start of a game – a game starts with a pass that must be received in the centre third. This is also how a game re-starts.
3. Shooting – Players can only shoot from inside the "D".
4. Footwork – Players cannot move their landing foot (first foot to hit the floor) when they have the ball.
5. Contact – contact is not allowed in netball
6. Penalty pass – Awarded for major fouls: Contact and obstruction.
7. Distance – Defending players must be 0.9m away from the ball before putting up their arms to defend. 2.
8. Replaying the ball: You must not pick the ball up or bounce the ball if you have dropped it



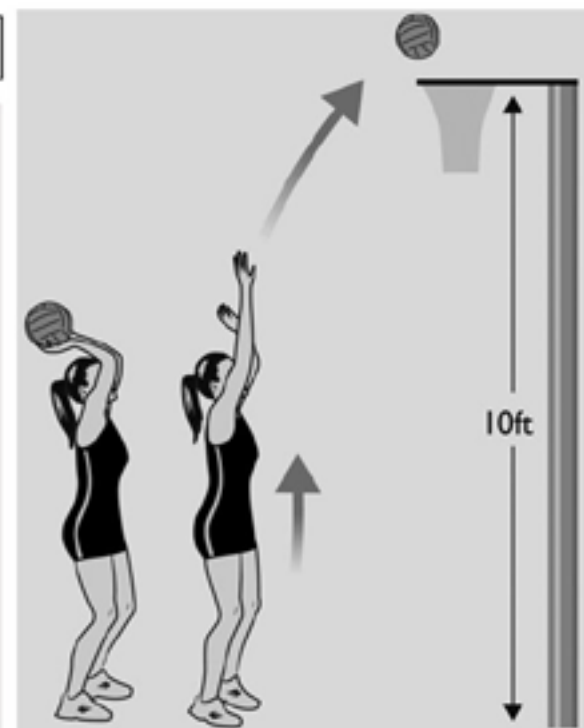
THEORY IN ACTION

To generate the **power** to shoot the ball toward the hoop, the **triceps** must **contract** to **extend** the arm at the **elbow**. The **biceps** relax.

DEFINE THIS

Antagonistic pairs:

Muscles can only **pull**; they cannot push. This is why they usually work in pairs. One muscle **contracts** to move the body part, the other muscle in the pair then **contracts** to **return** the body part back to the original position.



BADMINTON

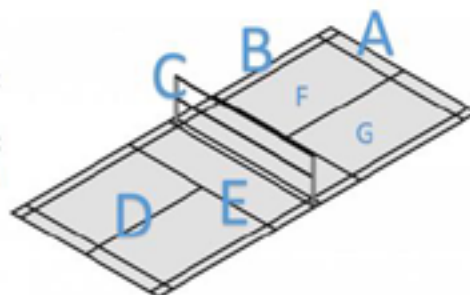
Overview of the rules

Badminton is a net game and played as singles (two opposing players) or doubles (two opposing pairs). The aim of the game is to win points by hitting a shuttlecock across the net and into your opponent's court forcing your opponent to make an error and be unable to return the shuttlecock back.

The basic rules

1. You must serve underarm.
2. A serve must reach the front service line.
3. If the shuttle lands **on** the edge line of the court, this is IN.
4. If you win a rally, **you** get a point added to your score and **you** serve next.
5. You can only hit the shuttle once in a row.
6. In a full game, the game is the first player to 21 points.
7. If your score is "even" (0,2,4,6...) you serve from the right-side service box (F).
8. If your score is "odd" (1,3,5,7...) you serve from the left-side service box (G).

A: Baseline: the end of the court
 B: Side line: the side edge of the court
 C: The net
 D: Centre line: the middle of the court
 E: Service line: where a rally is started
 F: Right-side service box
 G: Left-side service box



THEORY IN ACTION



Athletes with good **Agility** keep their entire body under control throughout. Agility is especially important in sports that require a sharp movement or turn. i.e. returning a shuttle in badminton.

DEFINE THIS

"Agility is the ability to change the position of the body quickly and with control."

FOOTBALL

THEORY IN ACTION

Femur

Patella

Tibia

Fibula

Tarsals

Meta-tarsals

Phalanges



DEFINE THIS

Balance can be static *i.e.* handstand or dynamic *i.e.* dribbling around defenders.

"Balance is the ability to stay upright or stay in control of body movement."

Overview of the rules

1. A football match is played by two teams, with each allowed no more than 11 players on the field.
2. All players must use their feet head or chest to play the ball. Only the goalkeeper is allowed to use their hands, and only within their designated goal area (box A).
3. The aim of the game is to outscore the opposition. A goal (score) is achieved by kicking or heading the ball into the opposition team's goal (B).
4. If the ball touches or crosses the side line (C), it is thrown back in by the team that was not the last to touch the ball.
5. The game is controlled by a central referee. They award free kicks and penalties when rules are broken.
6. A player is in an **offside** position if, when the ball is played by a team-mate, they are nearer to the opposition's goal line than the ball and the second last opponent.



RUGBY

Overview of the general rules

Rugby has many variations but the aim of the game is very simple - use the ball to score more points than the other team.

1. Scoring a "try". A try is scored when the ball is placed down on the playing surface with pressure in the in-goal area by the attacking team.
2. Moving the ball. To move the ball toward the line you can run with it, kick it and pass it. However, passing or knocking the ball *forwards* (unless kicked) is not allowed.
3. Kicking. Kicking is allowed but must be kicked from the hands and not while the ball is on the floor.
4. Offside. Players are not allowed to receive the ball if they were in front of the ball when it was passed or kicked.
5. Penalties. A penalty can be awarded by the referee if any player breaks the laws of the game, this will lead to a turnover of possession. The opposition can choose to tap and run, tap and pass or kick to resume the game.
6. Starts and re-starts. If the ball goes out of play the ball is passed back in by the opposition. The ball is kicked from the half way line forward at the start of the match and after each try.

1. Tackling rules:
2. The tackler must grasp/ wrap the ball carrier below the armpits, on the shirt, shorts or around the legs. The grasp must be simultaneous with, or prior to, shoulder contact.
3. The tackler must not shoulder barge their opponent.
4. When a tackle is called the player can pass the ball to team mate or present the ball on the ground for a team mate.
5. If the ball is presented or loose, then a defending player may make an attempt to claim (turn over) the ball.
6. TOUCH VERSION – use two hands to touch the player at the waist. They then have 2-3 seconds to pass or present the ball.

THEORY IN ACTION



As the player begins to kick the ball his "kicking leg" is in **flexion**. As he follows through the kick, the leg is in **extension**.



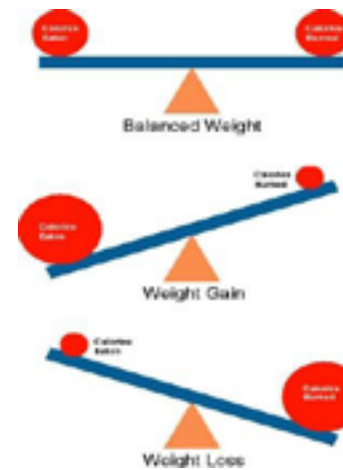
DEFINE THIS

Flexion – a decrease in the angle at the joint.

Extension – an increase in the angle at the joint.

Nutrition and Balanced Diet

Carbohydrates:	Provides quick energy. 60% of our diet should comprise 'carbs'.	Running. Athletes in training will eat more 'carbs'. Marathon runners will 'load' (build up stores of fuel in the muscles by resting and eating lots of pasta etc) for three days before the event.	Pasta, cereals and potatoes
Fats	Provides slow energy. 25% of our diet should be fat.	Walking and low impact exercise - it produces energy too slowly to be used when working hard.	Oils, dairy products, nuts and fish
Protein	Builds and repairs muscle. We only need 15% of our diet to be protein.	When training hard and recovering from injury. 'Power' athletes such as weight lifters will eat more protein.	Meat, pulses and fish
Vitamins	Helps the body work. Helps concentration.	Staying calm, making quick decisions.	Fresh fruit and vegetables
Minerals	Helps release energy from food. Helps decision making.	When training hard and competing	Fruit, vegetables and fish
Fibre	Can't be digested. Fills you up and keeps you regular.	Healthy digestion, (no constipation) helps in sport. Also helps with weight control.	Fresh fruit, vegetables and wholegrain cereals
Water	Maintains fluid levels.	Whenever you sweat. It prevents dehydration.	The top! It's all you need most of the time



A **Balanced Diet** is one that contains the correct proportions of nutrients necessary to maintain good health".

Health, Fitness and Wellbeing

Physical Health	Emotional Health	Social Health
Cardiovascular Fitness: your ability to exercise your whole body for long periods of time, sometimes called stamina or aerobic endurance Body Composition: the percentage of body weight that is muscle, bone or fat Muscular Strength: the amount of force a muscle can exert against a resistance Muscular Endurance: the ability to use voluntary muscles many times without getting tired Flexibility: the total range of motion possible at a joint.	Feeling Good: doing exercise produces serotonin, a 'feel good' chemical in the body Relieving Stress & Tension: provide a distraction from the problems of daily life Increasing Self Esteem & Confidence: overcoming a challenge in sport gives a sense of achievement Enjoyment: most people who exercise and play sport do so because they enjoy it Emotional/Psychological Challenge: challenging yourself can boost your confidence Aesthetic Appreciation: enjoying something because it is pleasing to look at	Cooperation: working in groups helps to improve teamwork and communication Developing Friendships & Social Mixing: you get to know more people, make new friends and develop lasting friendships Gaining a Good Attitude to Competing: to compete well in sport you need to have a strong sense of self; and learn to respect your opponent
Health, Fitness and Wellbeing		
Fitness: the ability to meet the demands of the environment Wellbeing: being comfortable, healthy & happy so impacting on emotional/psychological health and happiness Health: a complete state of physical, mental and social wellbeing, not merely the absence of disease or infirmity.		

Types of Movement and Muscle Action

- **Flexion**- bending and decreasing the angle at a joint e.g. performing a bicep curl.
- **Extension**- straightening and increasing the angle at a joint e.g. when throwing/releasing a dart.
- **Adduction**- moving a limb towards the centre line of the body e.g. when jumping up to do a star jump.
- **Abduction**- moving a limb away from the centre line of the body e.g. when returning back to the ground at the end of a star jump.

Classification of joint

- Pivot (neck – atlas and axis)
- Hinge (elbow and knee)
- Ball and socket (hip and shoulder)
- Condylloid (wrist)



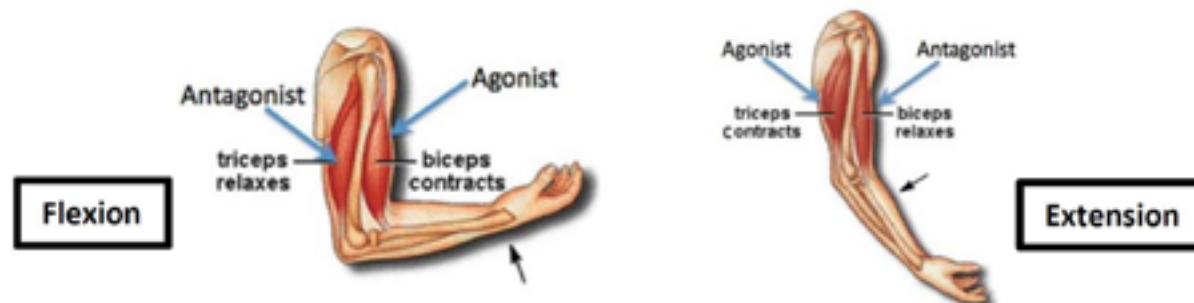
Connective tissue

Ligaments – attaches bone to bone to add joint stability.

Tendons – attaches muscles to bone and contributes to joint movement as a result of muscle contraction.

Antagonistic pairs - Muscles are arranged in antagonistic pairs.

As one muscle contracts (shortens) its partner relaxes (lengthens) *i.e. Biceps and Triceps.*



Agonist = the muscle that contracts to produce movement.

Antagonist = the muscle that relaxes to allow the movement to occur.

Examples in the body:

- Biceps & Triceps
- Quadriceps & Hamstring

Effects of Exercise

Immediate effects of exercise (during exercise)

- hot/sweaty/red skin
- increase in depth and frequency of breathing
- increased heart rate.

Short-term effects of exercise (up to 36 hours after exercise)

- tiredness/fatigue
- light headedness
- nausea
- aching/delayed onset muscle soreness (DOMS)/cramp.

Long-term effects of exercise (months and years of exercising)

- body shape may change
- improvements in specific components of fitness
- build muscle strength
- improve muscular endurance
- improve speed
- improve suppleness
- build cardio vascular endurance
- improve stamina
- increase in the size of the heart (hypertrophy)
- lower resting heart rate (bradycardia).

Define:

Body Language

Nonverbal signals that you use to communicate your feelings and intentions. It includes your posture, your facial expressions and your hand gestures.

Define:

Emotional Intelligence

The ability to understand and manage your own emotions, and those of the people around you.

Define:

Nuclear Family

A family unit consisting of two parents (usually married) and one or more children

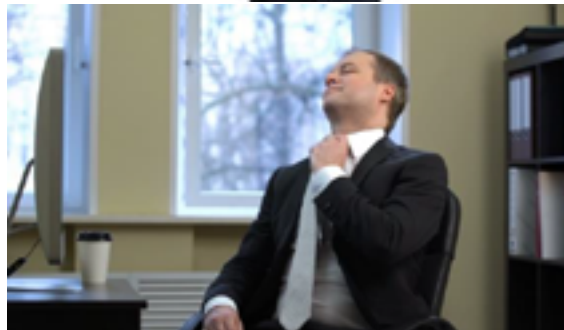
Define:

Siblings

A sibling is one of two or more individuals having one or both parents in common. A full sibling is a first-degree relative. A male sibling is a brother, and a female sibling is a sister.

Indications that someone is lying to you.

- Going over the top with detail
- Covering mouth and eyes
- Not looking at you
- Gesturing
- Pausing a lot when telling a story

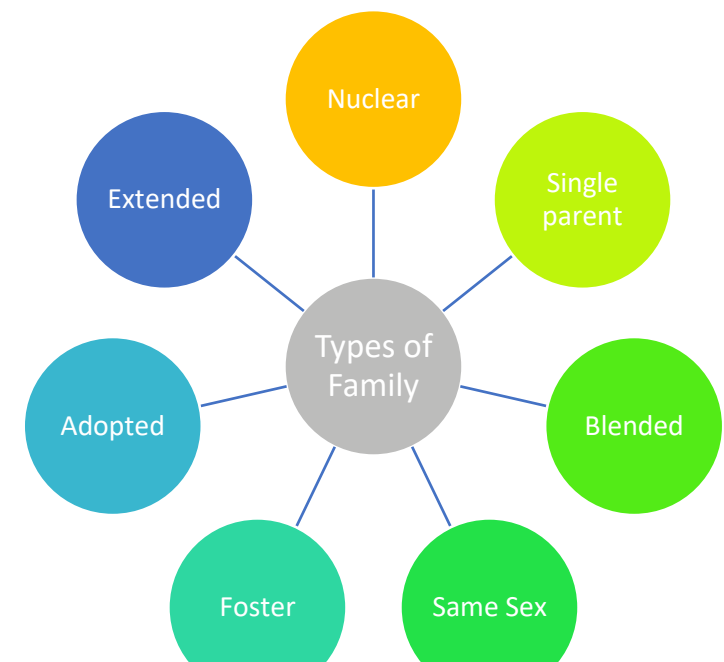


Facial Expressions

Facial expressions can help us determine how someone is feeling. Usually, if you have high emotional intelligence, you are good at determining someone's feelings based on their facial expressions.



Anger Compassion Contempt Embarrassment Pride Politeness Happiness Shame



Define:

Nicotine

A toxic colourless or yellowish oily liquid which is the chief active constituent of tobacco. It acts as a stimulant in small doses, but in larger amounts blocks the action of autonomic nerve and muscle cells.

Define:

Vaping

The action or practice of inhaling and exhaling the vapour produced by an electronic cigarette or similar device

Define:

Smoking

The action or habit of inhaling and exhaling the smoke of tobacco or a drug. Usually through cigarettes or cigars

Define:

E-Cigarette

E-cigarettes are electronic devices that heat a liquid and produce an aerosol or mix of small particles in the air. Which is then inhaled.

Effects of Nicotine

Nicotine is both a sedative and a stimulant.

When a body is exposed to nicotine, the individual experiences a "kick." This is partly caused by nicotine stimulating the adrenal glands, which results in the release of adrenaline.

This surge of adrenaline stimulates the body. There is an immediate release of glucose, as well as an increase in heart rate, breathing activity, and blood pressure. Indirectly, nicotine causes the release of dopamine in the pleasure and motivation areas of the brain.

Risks from Smoking



Smoking and the Law

You must be over 18 to buy cigarettes in the UK. If you're under 16 the police have the right to confiscate your cigarettes.

It's illegal:

- For shops to sell you cigarettes if you are underage
- For an adult to buy you cigarettes if you are under 18
- To smoke in all public enclosed or substantially enclosed area and workplaces.
- To smoke in a car with a child.

Vaping and the Law

- You must be 18 or over to purchase e-cigarettes or e-liquids in the UK. It also became illegal for an adult to buy e-cigarettes for someone under the age of 18.
- Although there is no legal restriction on where you can vape in the UK there are local laws and bylaws in force that prohibit the practice. The choice of whether or not to allow vaping is that of the property owner.
- Vaping generally is not allowed on the underground, planes, buses or trains and train stations in the United Kingdom.
- Vaping while you drive may not seem like such a big deal but it could land you with up to nine penalty points and a fine of £2,500.

How do E-Cigarettes work?

E-cigarettes produce an aerosol by heating a liquid that usually contains nicotine, flavorings, and other chemicals that help to make the aerosol.

The liquid used in e-cigarettes often contains nicotine and flavorings. This liquid is sometimes called "e-juice," "e-liquid," "vape juice," or "vape liquid."

Users inhale e-cigarette aerosol into their lungs. Bystanders can also breathe in this aerosol when the user exhales it into the air. E-cigarette aerosol is NOT harmless "water vapor." The e-cigarette aerosol that users breathe from the device and exhale can contain harmful and potentially harmful substances, including:

- Nicotine
- Ultrafine particles that can be inhaled deep into the lungs
- Flavoring such as diacetyl, a chemical linked to a serious lung disease
- Volatile organic compounds
- Cancer-causing chemicals
- Heavy metals such as nickel, tin, and lead

It is difficult for consumers to know what e-cigarette products contain. For example, some e-cigarettes marketed as containing zero percent nicotine have been found to contain nicotine.

**Year 8 Spring Term
Knowledge Organizer
Self-Quizzing**

Key words:

- Sacrifice: giving something up for something of greater value.
- Martyrdom: someone who dies for a cause.
- Resurrection: body coming back to life.
- Ascension: body and soul rising to heaven.

While they were wondering about this, suddenly two men in clothes that gleamed like lightning stood beside them.⁵ In their fright the women bowed down with their faces to the ground, but the men said to them, "Why do you look for the living among the dead?"⁶ He is not here; he has risen!



Crucifixion

Facts of crucifixion are; nails through wrists and feet, crown of thorns, sign saying INRI ('king of the Jews') above his head and his legs were likely broken.

Questions to which to know answers...

- What was the hill he was crucified on called?
- What happened to his body?
- Do you think there would be a religion called Christianity if the crucifixion had not happened?

Steps to crucifixion are:

1. JC was **betrayed by Judas**; who revealed his whereabouts to the Romans for 30 pieces of silver.
2. He had become a **threat to the Romans**; they ruled the country and had ultimate power but JC was preaching and drawing large crowds.
3. He had been popular but **eventually the crowd turned against him**.

Key aspect of the Last Supper is that Jesus had the opportunity to flee but didn't. Think of reasons why; cowardice is never respected, he had to die in order to resurrect.

Simon of Cyrene helped him when he fell carrying the cross. The Romans cast lots for his clothes. Both these people/groups show the difference in attitude using agape.

Year 8 Spring Term Knowledge Organizer Self-Quizzing

We all know what it is, we all want it but it can be very difficult to achieve in some countries/situation.

Freedom is having the right/ability to think what you want and, within the law, behave in the way you wish.

It isn't being able to do anything you want.



There are certain freedoms which have been gained in Britain such as women getting the vote and free education for all. Countries such as Saudi Arabia and North Korea have very low levels of freedom for the individual. These are gained through struggle, hard work and occasionally violence. The Peasants' Revolt and the Suffragettes both utilized these ideas to gain freedoms denied to them.



Keeping freedom is reliant on the people in a society being vigilant as people who live in totalitarian regimes say it is a gradual erosion of rights which stopped their freedom.

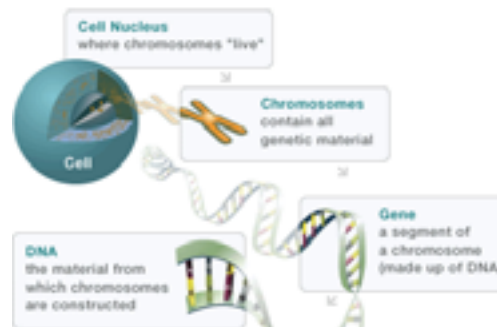
1. Democracy; this means that the majority will win an election but it generally keeps out dictators.
2. Education; on the whole the more you have the more money you get and that often ties in with freedom.
3. Crime; having a criminal record limits your freedom immeasurably. Can't go to certain countries or get certain jobs etc.

Freedom:

Democracy is the majority voting for a party. Best way of assuring freedom for the individual.

Section 1 Definitions		
1	Cell	The unit of a living organism, contains organelles o carry out life processes
2	nucleus	Contains genetic material (DNA) which controls the cell's activities
3	Chromosome	Thread-like structures containing tightly coiled DNA.
4	Gene	section of DNA that determines an inherited characteristic
5	DNA	A molecule found in the nucleus of cells that contains genetic information.
6	Variation	The differences within and between species.
7	Mutation	A change in the genetic code (DNA)
8	Inherited variation	Features that are passed from parents to their offspring.
9	Environmental variation	Feature that are due to the surrounding and conditions where an organism lives.
10	Population	Group of organisms of the same kind living in the same place
11	Natural selection	Process by which species change over time in response to environmental changes and competition for resources.
12	Biodiversity	The variety of living things. It is measured as the differences between individuals of the same species, or the number of different species in an ecosystem
13	Competition	When two or more living things struggle against each other to get the same resource.
14	Evolution	Theory that the animal and plant species living today descended from species that existed in the past.
15	Extinct	When no more individuals of a species remain.

Section 2 genetic material



The genetic material in the **nucleus** of a cell is composed of a chemical called **DNA**. DNA is a polymer made up of two strands forming a double helix. The DNA is contained in structures called **chromosomes**. A **gene** is a small section of DNA on a chromosome. Each gene codes for a particular sequence of amino acids, to make a specific protein. The **genome** of an organism is the entire genetic material of that organism. The whole human genome has now been studied and this will have great importance for medicine in the future.

Variation and inheritance

Section 3 Passing on characteristics

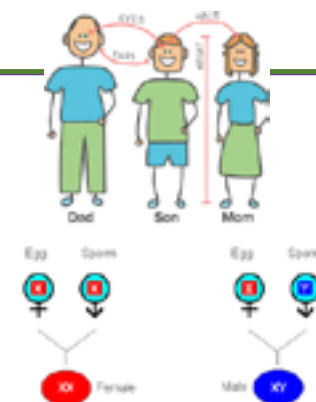
Differences in the characteristics of individuals in a population is called variation and may be due to differences in:

- the genes they have **inherited** (genetic causes)
- the conditions in which they have developed (**environmental** causes)
- a combination of genes and the environment

Ordinary human body cells contain 23 pairs of chromosomes.

22 pairs control characteristics only, but one of the pairs carries the genes that determine sex.

- In females the sex chromosomes are the same (XX).
- In males the chromosomes are different (XY).



Section 4 Changes over time

The theory of **evolution** by **natural selection** states that all species of living things have evolved from simple life forms that first developed more than three billion years ago.

Natural selection – the process

1. Within any population there is variation caused by a mutation.
2. The organisms within the population compete for resources.
3. The organisms that are best adapted will survive
4. The organisms will breed and pass on the adaptations to the next generation



Biodiversity is vital to maintaining populations. Within a species variation helps against environment changes, avoiding extinction. Within an ecosystem, having many different species ensures resources are available for other populations, like humans.

Extinction may be caused by:

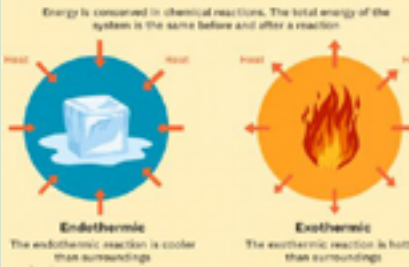
- changes to the environment over geological time
- new predators
- new diseases
- new, more successful competitors
- a single catastrophic event, eg volcanic eruptions or collisions with asteroids

Section 1: Definitions

1	Chemical reaction	When bonds are broken and made
2	Exothermic	Process of making bonds (releasing heat)
3	Endothermic	Process of breaking bonds (taking heat from the surrounding)
4	Physical reaction	A physical change where a compound is not changed
5	Chemical reaction	A chemical change where a new compound is formed
6	Combustion	Burning of fuel
7	Displacement	When a more reactive element removes a less reactive element from a compound
8	Thermal decomposition	When compounds break down when heated, forming two or more products from one reactant
9	Catalyst	A substance that speeds up the rate of reaction. It is not used up or changed chemically during the reaction.
10	Catalytic Converter	Exhaust systems of cars are fitted with catalytic converters. These help reduce the release of toxic gases from the exhaust pipe.

Section 2: Exothermic and Endothermic

Endothermic vs. Exothermic Reactions

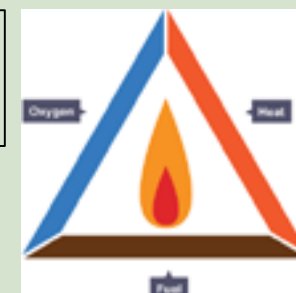


Cold Pack is an example of an endothermic reaction

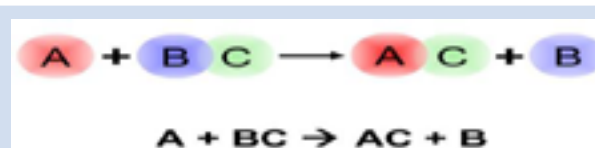
Instant Cold Pack



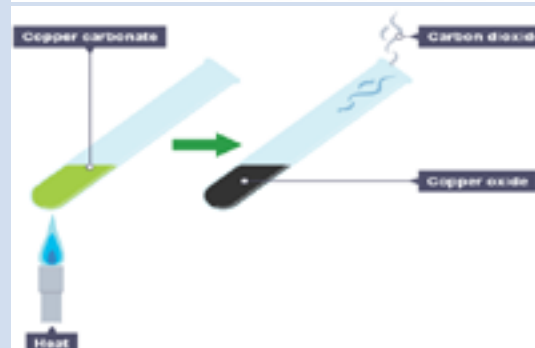
Combustion is an exothermic reaction



Section 3: Displacement and decomposition



Displacement reactions happens when the most reactive element takes the place of a less reactive element



Thermal decomposition is an example of an exothermic reaction

Metals can be arranged into a reactivity series

K	Potassium	Most reactive
Na	Sodium	
Ca	Calcium	
Mg	Magnesium	
Al	Aluminium	
C	Carbon	
Zn	Zinc	
Fe	Iron	
Sn	Tin	
Pb	Lead	
H	Hydrogen	Least reactive
Cu	Copper	
Ag	Silver	
Au	Gold	
Pt	Platinum	

C H added for comparison

Chemical Reactions

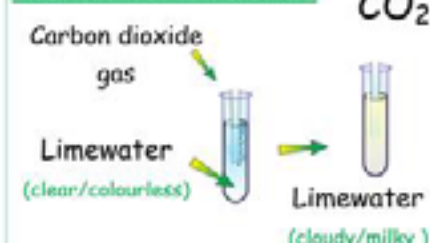
Section 4: Gas tests

Test for Oxygen



O₂

Test for Carbon dioxide



CO₂

Test for Hydrogen

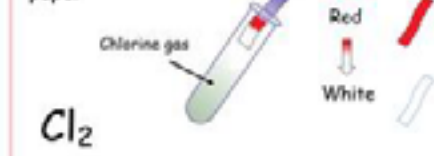
Hydrogen makes a **squeaky pop** with a lighted splint



H₂

Test for Chlorine

Chlorine bleaches damp blue litmus paper



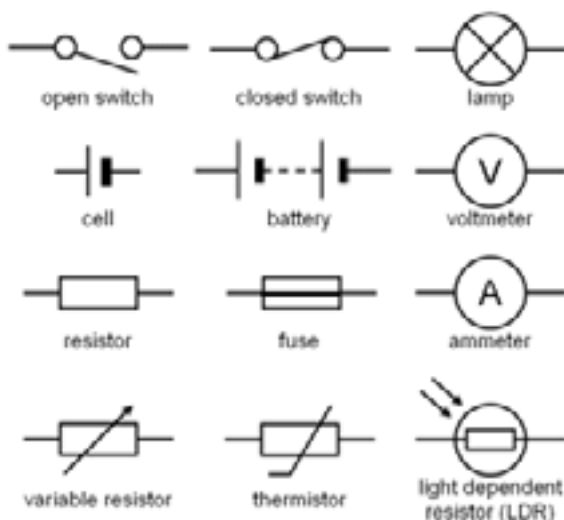
Cl₂

Electricity

Section 1 Circuits and current:

Current	The flow of electrical charge around a circuit per second
Amps	Units of measure for an electrical current (A)
Ammeter	Measures an electrical current
Cell	Provides the push that moves charge around a circuit

Section 2 – circuit symbols



Rules for drawing circuits:

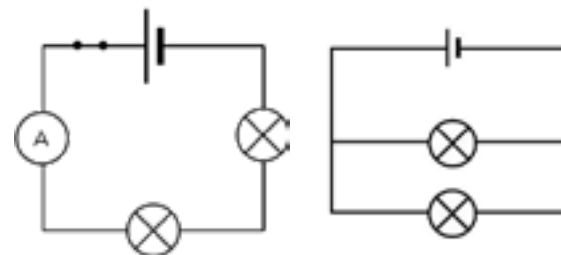
1. Always use a **ruler**
2. Leave **no gaps**
3. Set it out as a **square/rectangle**
4. **Don't** put components on **corners**

Section 3 Potential difference:

Potential Difference	The measure of the push that a cell/battery can supply
Volts	The measurement of potential difference
Voltmeter	Measures the potential difference

Section 3 series and parallel circuits:

Series circuits	All the components (parts of the circuit) are joined in one loop
Parallel circuits	There are two or more paths for the current to travel, more than one loop



Section 4 resistance:

Resistance	How difficult it is for current to flow through a component in a circuit
Ohms	The unit of measurement for resistance
Equation (Ohm's law)	Resistance (R) = $\frac{\text{potential difference (V)}}{\text{Current (A)}}$

Section 6 Generating energy

Fossil fuels	Non-renewable fuels coal, gas and oil. Made from the remains of sea creatures and plants.
Renewable energy	Energy sources which will not run out, such as wind, solar, tidal, geothermal, wave, biomass and hydrothermal.



Independent	The variable we change during an investigation
Dependent	The variable we measure during an investigation

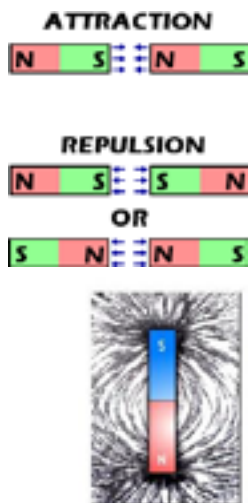
Magnets

Section 1 -Keywords

Magnet	An object that attracts iron, cobalt and nickel
Attract	To move towards something
Repel	To move away from something
Magnetic force	The force exerted between magnets or a magnetic and a magnetic material e.g. iron
Magnetic pole	Magnets have a north pole and a south pole. Like poles repel but opposite poles attract
Magnetic field	a region around a magnetic material where the force of magnetism acts.
Core	the piece of iron, bundle of iron wires forming the central or inner portion in an electromagnet
Permanent magnet	a metal that is always magnetic
Induced magnet	A material that becomes a magnet when it is placed in a magnetic field
Electromagnet	A magnet made by passing electric current through a coil surrounding

Section 2 – Attract or Repel?

		Attract or repel?
North	North	Repel
South	South	Repel
North	South	Attract



Section 3 – Magnetic fields

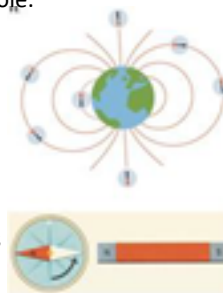
- This is the magnetic field of a bar magnet.
- The direction of magnetic field lines point from North to South
- Field lines have arrows on them

The magnetic field is strongest at the poles, where the lines are most concentrated

The magnetic field is weakest away from the poles, where the lines are least concentrated

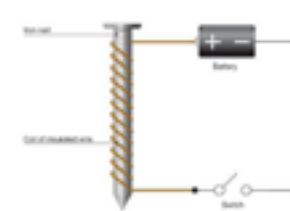
Section 4– Magnetic fields – part 2

- The Earth's core is made from iron and molten nickel. It has a magnetic field.
- The needle on a compass points towards the Earth's North pole.



- You can use a plotting compass or shake iron filings onto paper to show the shape of a magnetic field

Section 5 – Making an Electromagnet



1. Coil a piece of metal wire around an iron core
2. Use a power supply/battery to provide an electrical current to the circuit
3. Pass the current through the coil
4. To turn the magnet off, turn the power supply off

Advantages of an electromagnet over a permanent magnet

1. Electromagnet can be turned on and off
2. Strength of electromagnet can be changed

How to increase the strength of an electromagnet

1. Increase voltage
2. Increase no. turns in coil

Spanish Y8- A comer

¿Qué te gusta comer y beber?	What do you like to eat and drink?
Me gusta	I like
No me gusta	I don't like
Odio	I hate
Me encanta	I love
Prefiero	I prefer
El agua	Water
el arroz	Rice
La carne	Meat
Los caramelos	Sweets
La fruta	Fruit
Las hamburguesas	Hamburgers
Los huevos	Eggs
La leche	Milk
El marisco	Seafood
El pescado	Fish
El queso	Cheese
Las verduras	Vegetables

¿Qué desayunas?	What do you have for brekafast?
Desayuno	I have breakfast
Los cereales	Cereal
Los churros	Churros
Las tostadas	Toast
El yogur	Yoghurt
El café	Coffee
El té	Tea
El cola cao	Chocolate milk
El zumo de naranja	Orange juice
No desayuno nada	I don't have breakfast
Como	I eat
Un bocadillo	A sandwich
Las patatas fritas	Chips
El pollo con ensalada	Chicken with salad
Desayuno a las siete	I have breakfast at 7
Como a las dos	I eat at 2

En el restaurante	Opinions
Me gusta	I like
Me gusta mucho	I really like
Me encanta	I love
No me gusta	I don't like
No me gusta nada	I really don't like
Odio	I hate
Detesto	I detest
Pues...	Well
Depende...	It depends
No sé...	I don't know
Bueno/vale	Ok
A ver	Let's see

En el restaurante	In the restaurant
Buenos días	Good day
¿Qué van a tomar?	What are you going to have?
Voy a tomar	I am going to have
De primer plato	As a starter
De segundo plato	As a main
De postre	For dessert
Tengo hambre	I'm hungry
Tengo sed	I'm thirsty
Nada más	Nothing else
La cuenta por favor	The bill, please

Palabras muy frecuentes		High frequency words	
A las...	At...	Lugar	Place
Bastante	Quite	Para	For
Día	Day	Por ejemplo	For example
Favorito/a	Favourite	Pasado/a	Last
Hora	Hour	Que viene	Next

Spanish - ¿Qué Hacemos?- Part 1



Spanish Y8- ¿Qué hacemos? (1)

¿Te gustaría ir al cine?	Would you like to go to the cinema?
A la bolera	To the bowling alley
A la cafetería	To the cafeteria
Al centro comercial	To the shopping centre
Al museo	To the museum
Al parque	To the park
A la pista de hielo	To the ice skating rink
Al polideportivo	To the sports centre
Al castillo	To the castle
A la iglesia	To the church
Al catedral	To the cathedral
Al ayuntamiento	To the town hall

¿A qué hora?		At what time?	
A las...	At	Seis y media	6:30
Seis	6	Siete menos cuarto	6:45
Seis y cuatro	6:15	Siete menos diez	6:50

¿Dónde quedamos?	Where do we meet up?
Al lado de...	Next to
Delante de...	In front of
Detrás de	Behind of
Enfrente de	Opposite
En	In
A la izquierda de	To the left of
A la derecha de	To the right of
Lo siento, no puedo	I'm sorry, I can't
¿quieres salir?	Do you want to go out?
Tengo que...	I have to...
Cuidar a mi hermano	Look after my brother
Hacer los deberes	To do my homework
Pasear al perro	To walk the dog
Salir con mis padres	To go out with my parents
No quiero	I don't want to
No tengo dinero	I don't have money

¿Cómo te preparas?	How do you get ready?
Me baño	I have a bath
Me ducho	I have a shower
Me lavo la cara	I wash my face
Me lavo los dientes	I brush my teeth
Me visto	I get dressed
Me maquillo	I put on makeup
Me peino	I brush my hair
Me aliso el pelo	I straighten my hair

Palabras muy frecuentes

Al/a la	To the
Del/ de la	Of the
Demasiado/a	Too (much)
Por eso	For this reason
Por supuesto	Of course

Los colores	Colours
Amarillo/a	Yellow
Azul	Blue
Blanco/a	White
Gris	Grey
Marrón	Brown
Morado/a	Purple
Naranja	Orange
Negro/a	Black
Rojo/a	Red
Rosa	Pink
Verde	Green
De muchos colores	Multi-coloured

High frequency words

Demasiados	Too many
Siempre	Always
Puedo	I can
Quiero	I want
Hacer	To do / make

Spanish Y8- ¿Qué hacemos? (2)

¿Qué vas a llevar?	What are you going to wear?
¿Qué llevas normalmente los fines de semana?	What do you normally wear at the weekend?
Normalmente llevo...	Normally I wear
Una camisa	A t-shirt
Una camiseta	A shirt
Un jersey	A jumper
Una sudadera	A sweatshirt
Una falda	A skirt
Un vestido	A dress
Una gorra	A hat
Unos pantalones	Some trousers
Unos vaqueros	Some jeans
Unas botas	Some boots
Unos zapatos	Some shoes
Unos zapatos de deporte	Some trainers
Llevo	I wear
Voy a llevar	I am going to wear

Reacciones		Reactions	
De acuerdo	All right	Estoy de acuerdo	I agree
Vale	Ok	No estoy de acuerdo	I don't agree
Muy bien	Very good	Con tus padres	With your parents
Genial	Great	Contigo	With you
Sí, me gustaría mucho	Yes, I would really like to	Con mis amigos	With my friends
¡Ni hablar!	No way!	Eres demasiado joven	You are too young
¡Ni en sueños!	Not a chance!	En mi opinión	In my opinion
No tengo ganas	I don't feel like it	Tienes razón	You're right
¡Qué aburrido!	How boring!	¿Tú qué opinas?	What do you think?

Estrategia 4

Finding the right word

Be careful not to choose the wrong Spanish word when you use a dictionary.

Make sure you:

- 1 Look up the correct spelling of the English word (e.g. meet/meat, pair/pear).
- 2 Look for dictionary abbreviations (vt, nm, nf, etc. – see page 86). If it's a noun you want, don't choose a verb (e.g. a watch/to watch).
- 3 Look at any example sentences given.
- 4 Double-check the Spanish word in the Spanish-English half of the dictionary.

Find the correct Spanish translations of these items of clothing in a dictionary:

- tie
- cap
- trainers
- suit
- dress

Spanish Y8- El Presente

Verbos Claves	Key Verbs
Me llamo	My name is
Soy	I am
Es	He/she is
Somos	We are
Son	They are
Tengo	I have
Tiene	He/she has
Tienen	They have
Hago	I do
Juego	I play
Está	It is (location)
Voy	I go
Me gusta	I like
Me encanta	I love
Odio	I hate
Vivo	I live

Los verbos -AR		AR Verbs
Yo	I	O
Tú	You	As
Él/ella	He/she	A
Nosotros	We	Amos
Vosotros	You (pl)	Áis
Ellos/ellas	They	an

Los verbos -ER		ER Verbs
Yo	I	O
Tú	You	Es
Él/ella	He/she	Es
Nosotros	We	Emos
Vosotros	You (pl)	Éis
Ellos/ellas	They	En

Los verbos -IR		IR Verbs
Yo	I	O
Tú	You	Es
Él/ella	He/she	E
Nosotros	We	Imos
Vosotros	You (pl)	Ís
Ellos/ellas	They	En

Spanish Y8- El preterito

Verbos Claves	Key Verbs
Fui	I went
Fue	It was
Comí	I ate
Bebí	I drank
Estuve	I was (location)
Tuve	I had
Hizo buen tiempo	It was good weather
Hizo mal tiempo	It was bad weather
vi	I saw
Jugué	I played
Jugó	He/she played
Nadé	I swam
Bailé	I danced
Conocí	I met
Visité	I visited
compré	I bought

Los verbos -AR		AR Verbs
Yo	I	É
Tú	You	Aste
Él/ella	He/she	Ó
Nosotros	We	Amos
Vosotros	You (pl)	Asteis
Ellos/ellas	They	Aron

Los verbos -ER		ER Verbs
Yo	I	Í
Tú	You	Iste
Él/ella	He/she	Ió
Nosotros	We	Imos
Vosotros	You (pl)	Isteis
Ellos/ellas	They	Ieron

Los verbos -IR		IR Verbs
Yo	I	Í
Tú	You	Iste
Él/ella	He/she	Ió
Nosotros	We	Imos
Vosotros	You (pl)	Isteis
Ellos/ellas	They	Ieron

Spanish Y8- Near future

The steps

Use the verb 'ir' and decide who is going to be speak

I – voy

Followed by the Word 'a'

a

Followed by the infinitive

Comer

IR		IR
Yo	I	Voy
Tú	You	Vas
Él/ella	He/she	Va
Nosotros	We	Vamos
Vosotros	You (pl)	Vais
Ellos/ellas	They	Van

+ a +

Los infinitivos	Infinitives
Comer	To eat
Beber	To drink
Jugar	To play
Ir	To go
Mandar	To send
Ver	To watch
Visitar	To visit
Aprender	To learn
Hablar	To speak
Salir	To go out
Tener	To have
Ser	To be
Estar	To be (location)
Nadar	To swim
Bailar	To dance
vivir	To live

Voy a comer – I am going to eat

Va a visitar – he/she is going to visit



Harrow Way
Community School
Learning for life, success for all