



Harrow Way
Community School
Learning for life, success for all

Year 8 Knowledge Organiser

Summer 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 - SUMMER TERM

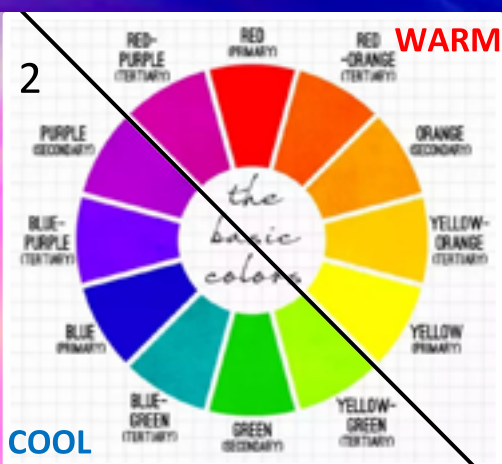
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1 COLOUR

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.

COLOUR WHEEL



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



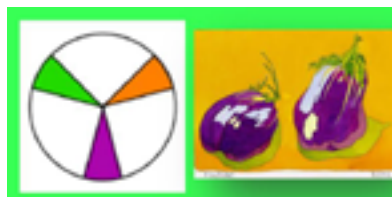
Uses the primary colours: Red, Yellow & Blue. They can not be made by mixing other colours.

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:

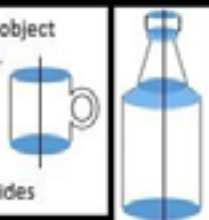
The circle found at the top and the base of a cylindrical object; i.e. bottle, cylinder, etc. Ellipse can also occur when the sides of the bottle change direction, i.e. get narrower or wide.



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.



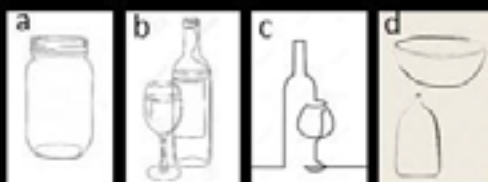
NEGATIVE SPACE: (All in black)

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:

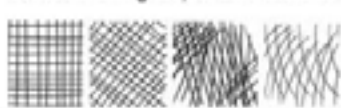
Texture is the surface quality of something. Artists use mark-making techniques to represent different textures.



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:

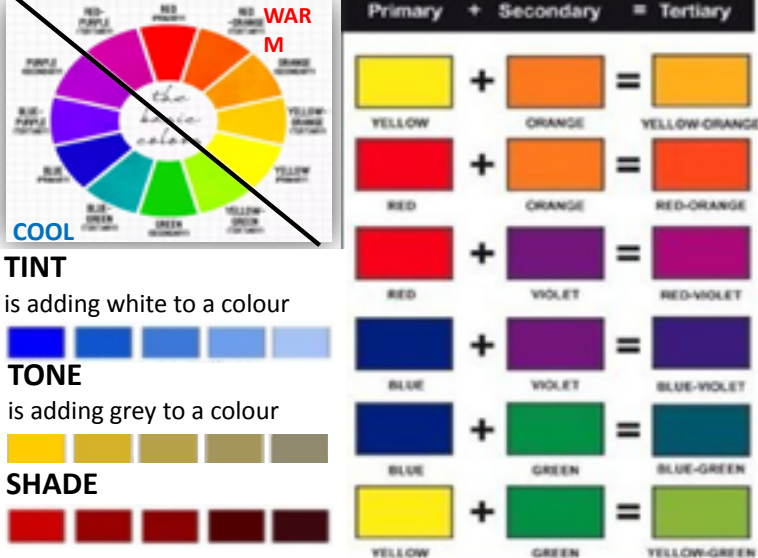
Refers to the organisation, arrangement, and combination of objects within the borders of a drawing space. For a great drawing, you want to bring the eyes of the viewer toward your centre of interest within an aesthetically pleasing composition.



FORMAL ELEMENTS

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

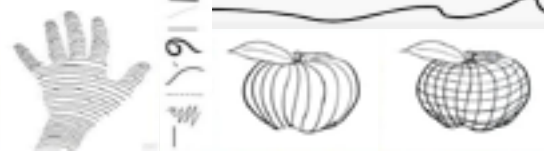
2 COLOUR



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**.



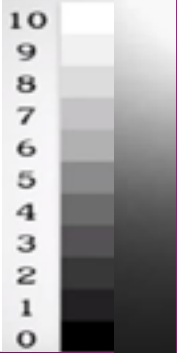
6 FORM

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.



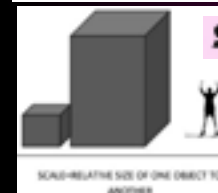
3 PATTERN

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.



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.

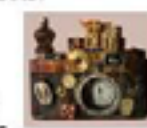


8 OIL PAINTS: is a type of slow-drying paint that consists of pigment suspended in a drying oil, commonly linseed oil. Not used in schools.



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.

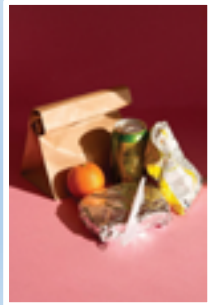




Types of Photography

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

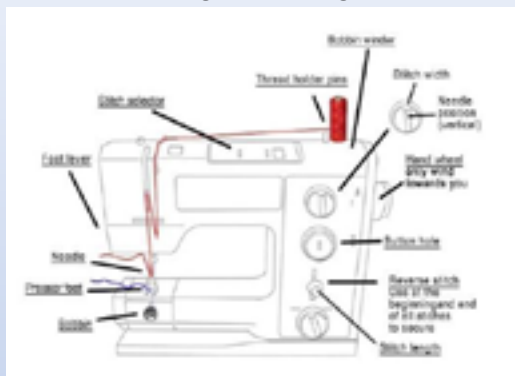
Line in art is similar to how a musician follows lines and creates expression using notes played for different lengths of time.

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

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

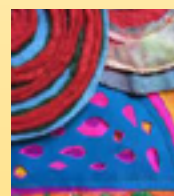
Clay

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



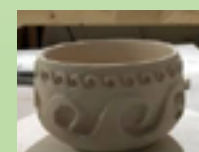
CLAY MAKING



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



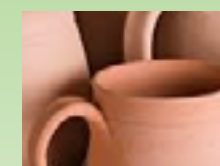
Pinch pot



Coil pot



Bisqueware



Slab building



Glazing



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/explore/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
Rene Magritte



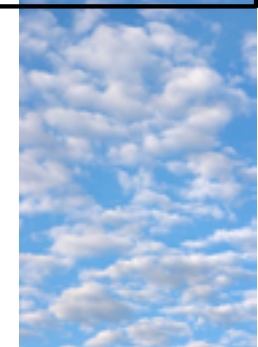
A.

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**

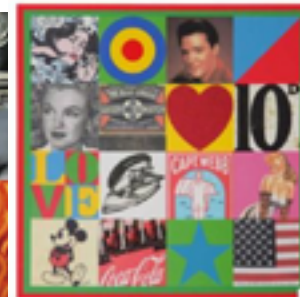
1.

<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.

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

ARTIST FOCUS Lichtenstein

2.



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

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.

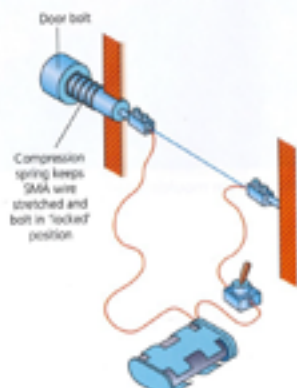
Examples of smart materials

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 recycle logo shows that a product can be recycled

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?

Year 8 Design and Technology TEXTILES / APRON Knowledge Organiser

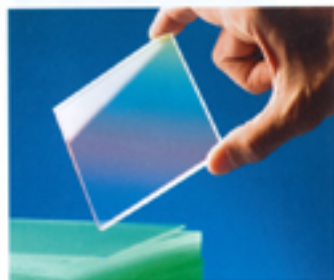
New Materials

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.

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

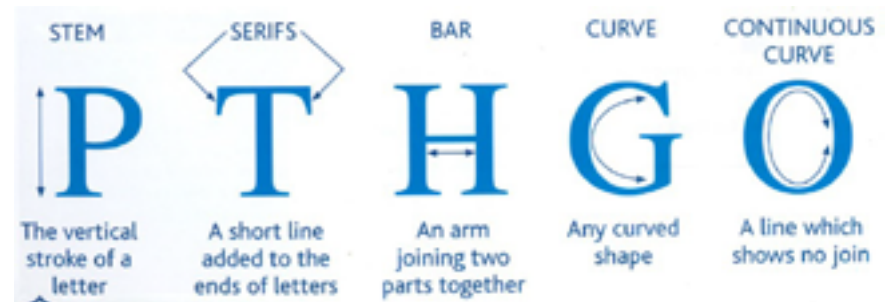
Typography

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

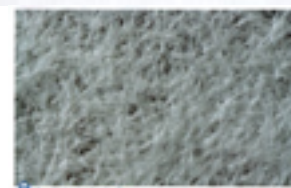
Print process	Common use	Advantages	Disadvantages	Cost (10 = high)	Print quality (10 = high)
Offset lithography	Newspapers Magazines Books	Most common method High quality Fast Prints onto paper extremely well	Expensive set-up costs	5	9
Flexography	Packaging Corrugated boxes Shopping bags 3D surfaces 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 (makes the circuit) when pressed
Rocker 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 movement when electricity flows through it

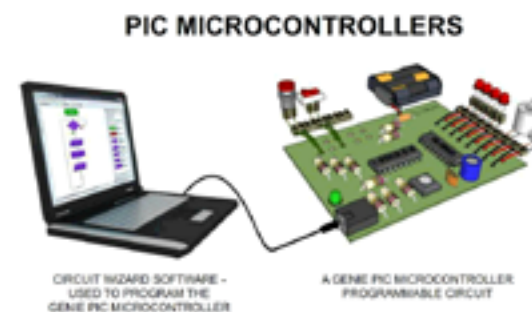
Passive components

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 whereby layers of material are built up to create a 3D part

Knowledge Organiser – Year 8 Food Special Diets

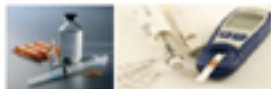
Food Allergy	Food Intolerance
Symptoms come on within seconds and include an itchy, red rash. Swelling of the lips, tongue, eyes and face Stomach pains, diarrhoea and vomiting.	Symptoms come on more slowly, are long-lasting and include bloating, stomach cramps and diarrhoea.
It is easily diagnosed with 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



Scripted Skills

Term	Definition
Script	The things the characters do and say.
Dialogue	The words the characters say on stage.
Stage Directions	The things the characters do on stage.
Casting	Deciding which actor will play which character.
Highlighting	Highlighting your lines helps you find them quickly while you're rehearsing. Do not highlight your name or stage directions , only your
Read Through	Sit in a circle and read the play out loud, play-
Staging	Deciding how you will set up your stage.
Blocking	Deciding where you will stand on stage.
Rehearsing	Practicing how you will perform the scene.
Dress Rehearsal	The final rehearsal before the performance. You treat this as if it were a performance - you don't stop, you cover any mistake and you

Script Format

Term	Definition
Dialogue	Name: Dialogue, dialogue, dialogue.
Stage Directions	Written in <i>italics</i> or (brackets).
Stage Diagram	Draw a bird's eye view of your stage and draw arrows showing where everyone stands and moves.

Example Script

(A wood at night. Dave and Kelly enter from USL. Dave is struggling to carry a big bag heavy looking backpack. Kelly is carrying an identical one and making it look easy.)

Dave: This bag is so heavy! I need a rest.

(He dumps his bag on the floor and sits down)

Kelly: Don't be such a wimp! Give it here.

(Kelly picks up the bag with ease and walks off USR)

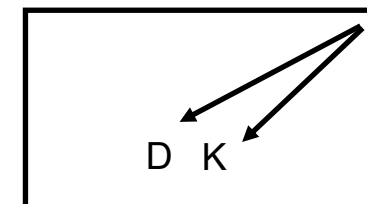
Dave: Fine! Go! I'm staying here and having a rest.

(In the bushes something growls)

Dave: Ummm... on second thoughts, wait for me!

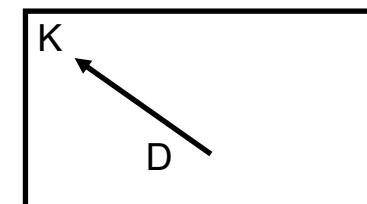
(Dave jumps up and runs off after Kelly)

U.S



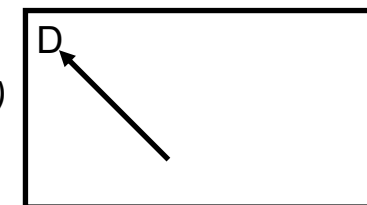
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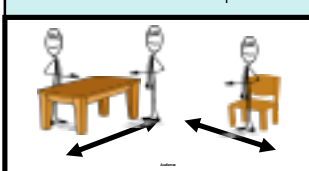


Rehearsal Tasks

What you need to do.

Casting	Deciding which actor will play which character.
Highlighting	Highlighting your lines helps you find them quickly while you're rehearsing. Do not highlight your name or stage directions , only your
Read Through	Sit in a circle and read the play out loud, play-
Staging	Deciding how you will set up your stage.
Blocking	Deciding where you will stand on stage.
Rehearsing	Practicing how you will perform the scene.
Dress Rehearsal	The final rehearsal before the performance. You treat this as if it were a performance - you don't stop, you cover any mistake and you don't use scripts.

How are you going to set up your stage?
Remember the 'V' shape.



Rehearsal Schedule:

What you're going to do.

When you're going to do it.

Week 1	What are you going to do? Cast the play? Highlight your lines? Read through in character?
Week 2	What are you going to do? Staging & Blocking?
Week 3	What are you going to do? Rehearse it?
Week 4	What are you going to do? Dress Rehearsal?
Week 5	What are you going to do? Performance?

During Rehearsals:

When you are directing other actors, there are 6 key questions you should ask:

Are they all 'open' to the audience (making the 'V' shape)?
Are they moving like their characters?
Are they speaking like their characters?
Are they speaking loudly enough?
Are they concentrating as they perform / rehearse?
Does their performance make sense without them having to explain it to you?

Evaluation Skills

Term	Definition
Evaluation	Working out what was good about the performance and what could have been better.
Strength	What was good about the performance.
Weakness	What could have been better about the performance.
Example	The specific moment or line that you are talking about. Not just a general comment about the show as a whole.
Target	What you will do next time to make your work better.

When you make a comment about a strength or a weakness you must always do these four things:

- ★ **Describe** the strength/weakness. ★ Give an **example** of the strength/weakness.
- ★ **Explain why** it made the performance better/worse. ★ Set a **target** to improve.

APOSTROPHES

,

There are two correct usages of the apostrophe:

1. To show **ownership**, e.g. *the cat's tail*.
2. To show where letters have missed out to form a **contraction**, e.g. *the cat didn't like the dog*. (*Didn't* is a contraction of *did not*. For further examples, see the box on the right.)

APOSTROPHES AND PLURALS

When we add an apostrophe to show ownership, we always follow it with an s to form the inflectional suffix *-s*, e.g. *the student's pen*. Some confusion arises, however, when we use apostrophes with **plurals**. This is because most plural nouns already have the inflectional suffix s, so where do we place the apostrophe?

The answer is that the apostrophe is placed *after the s*, e.g.

The students' work

This means the work belong to *several* students.

The cats' toys

This means the toys belonging to *several* cats.

The trees' leaves

This means the leaves belonging to *several* trees.

DIRECT SPEECH

When using direct speech, there are a few rules that you must follow:

You must enclose the speech inside speech marks. *You can choose to use single speech marks or double speech marks, but don't switch between the two!*

Direct speech is normally followed by a **reporting clause** which indicates who is speaking and how. In the example above, the reporting clauses are 'said Josie' and 'said Selma, reassuringly'.

You must insert a punctuation mark before the closing speech mark. This will normally be a comma, but can be a question mark, exclamation mark or, if you do not intend to follow the speech with a reporting clause, a full stop.

When a new character speaks, you must start a new paragraph.

HWCS

English Department

YEAR 8

Summer Term – Grammar

TENSE

In grammar, **tense** is the system for indicating the timeframe for the events you are writing about. The word 'tense' comes from the Latin word 'tempus', which means 'time'.

There 12 tenses in English, and they fall into three groups: **present tenses**, **past tenses**, and **future tenses**. The tense of a piece of writing is indicated by **verb forms**; which means that, to change the tense, you need to change the verb forms in some way. *When writing, you should keep your tense consistent: shifting randomly between tenses is a grammatical error and can quickly become confusing for readers.*

Here are the twelve tenses. Notice how the verb forms change for each tense:

PRESENT TENSES

Present simple tense: Josie plays netball

Present continuous tense: Josie is playing netball

Present perfect tense: Josie has played netball

Present perfect continuous tense: Josie has been playing netball

PAST TENSES

Past simple tense: Josie played netball

Past continuous tense: Josie was playing netball

Past perfect tense: Josie had played netball

Past perfect continuous tense: Josie had been playing netball

FUTURE TENSES

Future simple tense: Josie will play netball

Future continuous tense: Josie will be playing netball

Future perfect tense: Josie will have played netball

Future perfect continuous tense: Josie will have been playing netball

PHRASES

In grammar, the term **phrase** indicates a unit of a sentence which is below the clause in rank. A clause must contain a **subject** and **verb**, and can therefore stand alone as a sentence in its own right, whereas a phrase lacks one or both of those elements, so it cannot form a complete sentence.

NOUN PHRASE – A group words containing a noun that can function as the subject or object in a clause, e.g. *the beautiful weather*.

VERB PHRASE – A group of words that convey an action, e.g. *was staring*.

ADVERBIAL PHRASE – A group of words that give more information about how an action occurred, e.g. *very successfully*.

PREPOSITIONAL PHRASE – A group of words that show the relationship between two things in a sentence, normally to do with location or time, e.g. *beside the path*.

SENTENCE FUNCTIONS

Sentences can be grouped into four categories, based on their **function** (i.e. what the sentence is *doing*).

DECLARATIVE – A sentence that makes a factual statement, e.g. *Josie is eating an apple*. (Sometimes called the 'indicative mood'.)

IMPERATIVE – A sentence that is a command or instruction, e.g. *Eat this apple, Josie*.

INTERROGATIVE – A sentence that is a question, e.g. *Why is Josie eating an apple?*

EXCLAMATION – A sentence that expresses surprise or strong emotion, usually followed by an exclamation mark, e.g. *Josie ate my apple!*

CONTRACTIONS

Sometimes, in informal contexts, we 'contract' (shrink) two words to make one word. Letters that are lost get replaced by an apostrophe. Here are some common contractions:

do not = don't
should not = shouldn't
did not = didn't
could not = couldn't
shall not = shan't
would not = wouldn't
does not = doesn't

have not = haven't
are not = aren't
Could have = could've
should have = should've
would have = would've
will not = won't*
cannot = can't*

*these don't quite fit the normal pattern – can you see what is different?

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 4 - MON IDENTITE

Mon caractère • My character

Je suis ...	<i>I am ...</i>
Je pense que je suis ...	<i>I think I'm ...</i>
Je ne suis pas ...	<i>I'm not ...</i>
Je ne suis pas du tout ...	<i>I'm not at all ...</i>
Mon meilleur ami/Ma meilleure amie est ...	<i>My best friend is ...</i>
adorable	<i>adorable</i>
arrogant(e)	<i>arrogant</i>
amusant(e)	<i>funny</i>
casse-pieds	<i>annoying</i>
curieux/curieuse	<i>curious</i>
débrouillard(e)	<i>resourceful</i>
drôle	<i>funny</i>
égoïste	<i>selfish</i>
gentil(le)	<i>nice</i>
intelligent(e)	<i>intelligent</i>
optimiste	<i>optimistic</i>
paresseux/paresseuse	<i>lazy</i>
patient(e)	<i>patient</i>
pénible	<i>annoying</i>
pessimiste	<i>pessimistic</i>
rigolo(te)	<i>funny</i>
sociable	<i>sociable</i>
sympa	<i>nice</i>

ETRE

Je	suis
Tu	es
Il/elle/on	est
Nous	sommes
Vous	êtes
Ils/Elles	sont

La musique • Music

le hard rock	<i>hard rock</i>
le jazz	<i>jazz</i>
la musique classique	<i>classical music</i>
le pop-rock	<i>pop</i>
le rap	<i>rap</i>
le R'n'B	<i>R'n'B</i>
un peu de tout	<i>a bit of everything</i>
les chorégraphies	<i>choreography</i>
les mélodies	<i>tunes</i>
les paroles	<i>words</i>

Les opinions • Opinions

Mon chanteur/ma chanteuse préféré(e), c'est ...	<i>My favourite singer is ...</i>
Mon groupe préféré, c'est ...	<i>My favourite group is ...</i>
J'adore/Je déteste la musique de X.	<i>I love/I hate X's music.</i>
J'adore la chanson ...	<i>I love the song ...</i>
Ça me donne envie de ...	<i>It makes me want to ...</i>
danser/chanter/pleurer/dormir	<i>dance/sing/cry/sleep</i>
Ça me rend joyeux/joyeuse/triste.	<i>It makes me happy/sad.</i>

Les vêtements • Clothes

Normalement, je porte ...	<i>Normally, I wear ...</i>
des baskets	<i>trainers</i>
des bottes	<i>boots</i>
des chaussures	<i>shoes</i>
une chemise	<i>a shirt</i>
un chapeau	<i>a hat</i>
un jean	<i>jeans</i>
une jupe	<i>a skirt</i>
un pantalon	<i>trousers</i>
un pull	<i>a jumper</i>
un sweat à capuche	<i>a hoodie</i>
un tee-shirt	<i>a T-shirt</i>
une veste	<i>a jacket</i>

Le style • Style

J'ai un style plutôt ...	<i>My style is rather ...</i>
classique	<i>classic</i>
décontracté	<i>relaxed</i>
skateur	<i>skater</i>
sportif	<i>sporty</i>
C'est ...	<i>It's ...</i>
moche	<i>ugly</i>
horrible	<i>horrible</i>
cool	<i>cool</i>

NEAR FUTURE

To form the future of -er verbs,

1- we use **ALLER**

Je **vais**

Tu **vas**

Il **va**

Elle **va**

On **va**

Nous **allons**

Vous **allez**

Ils **vont**

Elles **vont**

2- We use the **infinitive** of the verb in ER.

Near future of -er verbs

Je	vais	JOUER
Tu	vas	REGARDER
Il / elle / on	va	AIMER
Nous	allons	MANGER
Vous	allez	PORTER
Ils / elles	vont	ECOUTER

JOUER

REGARDER

AIMER

MANGER

PORTER

ECOUTER

TELECHARGER




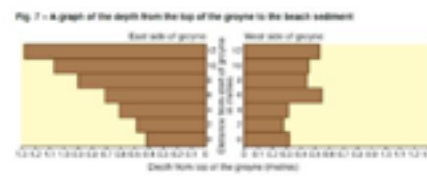
Possessive adjectives

Possessive adjectives are the words for 'my', 'your', 'his/her', 'our'. They are different according to whether the noun they refer to is masculine, feminine or plural.






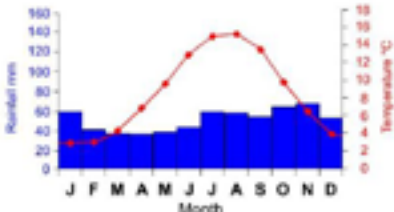
Masculine	Feminine	Plural	
mon	ma	mes	my
ton	ta	tes	your
son	sa	ses	his/her
notre	notre	nos	our



Year 8 Geography Knowledge Organiser Term 5: Cool Coasts

Coasts	Coastal Properties	Coastal Landforms	Coastal Management
<p>Coasts are where the land meets the sea. The UK has over 30 000km of coastline e.g. Durdle Door (Dorset). No coastline is the same but they do share similar properties.</p> 	<p>Waves and tides affect the coast. The stronger the backwash and fetch of the waves the more erosion (hydraulic action, abrasion, attrition and solution) and transportation (longshore drift). The stronger the swash the more deposition and beach building will occur.</p> 	<p>Coasts are always changing and evolving with their surroundings. Coastal processes create erosional and depositional landforms.</p> <p>Erosional Landforms: Headlands, Bays, Cave, Arch, Stack, Stump, Wave Cut Platform</p> <p>Depositional Landforms: Beaches, Tombolo, Lagoon</p>	<p>Coasts have valuable commodities and most are open to the public so they need to be carefully managed.</p> <p>There are four ways to manage the coastline; do nothing, hold the line, advance the line and managed retreat.</p> <p>The most popular beaches like Hill Head in Fareham are managed with groynes and sea walls to protect the beach and wildlife.</p>
The Jurassic Coast	Speak Like a Geographer	Fieldwork	Skills
<p>The UNESCO world heritage site stretches 95 miles from Devon to Dorset in south west England.</p> <p>The Jurassic Coast is one of the most popular destinations in Britain.</p> <p>Tectonic activity has pushed up rocks that the dinosaurs once walked on exposing fossils and creating dramatic landscapes.</p>	<p>Erosion, Weathering, Deposition, Coastal Management, Human Activity, Longshore Drift, Cliff Retreat, Landforms, Geology, Attrition, Abrasion, Solution, Hydraulic Action, Crack, Cave, Arch, Stack, Stump, Beach, Headland, Bay, Wave Cut Platform, Tombolo, Lagoon</p>		<p>A bar chart is a graphical display of data using bars of different heights.</p> <p>Advantages: summarize a large data set in visual form and clarify trends better than tables.</p> <p>Disadvantages: requires additional written or verbal explanation</p> 

Year 8 Geography Knowledge Organiser Term 6: Tropical Rainforests

Tropical Rainforests	Location	Flora and Fauna	Human Activity
<p>Tropical rainforests are very hot and humid. They hold 50% of the world's biodiversity. Rainforests have four distinctive layers. Each layer has it's own unique flora and fauna.</p> 	<p>Tropical rainforests are found in hot and humid climates. These are usually found on the equator between the tropics of Cancer and Capricorn. The largest rainforest is the Amazon Rainforest in South America.</p> 	<p>Due to their unique climates e.g. climate graph of Manaus (Brazil), rainforests have unique flora (the 330 foot yellow Meranti tree, pitcher plants, ferns, lichens, mosses and orchids) and fauna (sloths, tree frogs, butterflies, snakes and jaguars).</p> 	<p>60 million people live in areas with tropical rainforest. Human use the rainforest for it's climate, water, food, minerals, medicines and raw materials. In some areas up to 1000 football pitches of rainforest are deforested a day to make way for cattle ranches, mining or palm oil plantations. Humans are the biggest threat to rainforests.</p> 
Sustainable Future	Speak Like a Geographer	Fieldwork	Skills
<p>Rainforests are valuable commodities which need protecting without preventing the host country from developing. Shifting cultivation is a traditional method of farming the landscape without lasting damage to the rainforest. Many countries are also ensuring all palm oil plantations are grown sustainably and that they open areas of the forest to Eco tourist activities like zip wiring through the canopy.</p>	<p>Distribution, Equator, Tropics, Biodiversity, Deforestation, Social, Economic, Environmental, Carbon Sink, Emergent, Canopy, Under-Canopy, Shrub Canopy, Hydrological Cycle, Nutrient Cycle, Flora, Fauna, Medicines, Shifting Cultivation, Sustainability</p>		<p>A climate graph shows how temperature and precipitation vary throughout the year for a particular location.</p> 

Year 8 History: Summer Term 1

Part 1 Steps to War 1933-39

Throughout the 1930s the British, led by Neville Chamberlain used a policy of **Appeasement** towards Germany. This was the policy of giving in to Hitler's demands in the hope of avoiding war. This policy was influenced by a desire to avoid war, lack of military preparation and a hope that German expansion east would create a barrier to Communist Russia.

1933 Germany begins **re-armament**

1935 Germany introduces **conscription**.

1936 Germany moves troops into the demilitarised **Rhineland**.

1938 Germany annexes **Austria**

Munich Conference: Britain, France & Italy agree to give the **Sudetenland** area of Czechoslovakia to Germany.

1939 Germany invades **Czechoslovakia**.

Nazi-Soviet Pact: Germany signs deal with USSR to divide up Poland.

September: Germany invades **Poland**. Britain declares war on Germany.



Part 2 Blitzkrieg

September 1939 Germany launches its "Lightning War" attack on Poland. The attack is in several stages:

1. Aerial bombardment to weaken the target and cause civilian panic.
 2. Paratroopers seize strategic positions such as bridges.
 3. Tanks smash through Polish frontier defences.
 4. Infantry advance behind tanks.
- Poland is conquered in six weeks.



Part 3 The Home Front

Germany bombers targeted British cities in the hopes of killing civilians, crushing morale, disrupting supply chains. These attacks were known as The Blitz. Major cities like London, Coventry, Newcastle & Southampton were targeted.

Government responded with evacuation of children out of major cities. Public air raid shelters were created. Air raid sirens and searchlights became a common sight. Civilians were issued with gas masks. Food was controlled through a system of rationing.



Home Guard known as Dad's Army was set up to help with defence against German invasion.

Part 4 Theatres of War

Military personnel from Britain and the empire fought in many parts of the world.

1. Air war- bombing of targets on the continent such as Dresden carried out by Bomber Command (RAF).
2. Naval- Battleships hunted German submarines and protected food supplies in the Atlantic.
3. 6th June 1944 D-Day landings in France- begins liberation of Nazi occupied Europe.
4. British soldiers also fought in the Far East- for example in Burma.
5. Atomic warfare- USA drops first atomic bomb on Japan, August 1945.



Key words:

Tier 2

Chronology, government, explain, analyse, evaluate, describe, account, judgement, conclusion, propaganda, recruitment, mobilisation, Pact, rearmament, Conference, conscription, Appeasement, rationing, atomic, liberation, Nazi, Soviet

Tier 3

Causes, consequences, interpretation, progress, regress, change, continuity, Blitzkrieg, Significance

Year 8 ICT Knowledge Organiser - Programming

Linear Search - Searches through a set of data, one item after the other, until the item we are looking for is found. Searching for the number 36.

INDEX	0	1	2	3	4	5	6
Item	23	25	26	34	36	45	47

Merge Sort The list is repeatedly divided into two until all the elements are separated individually. Pairs of elements are then compared, placed into order and combined. The process is then repeated until the list is recompiled as a whole.

Bubble Sort Each item is compared with the one on its right, and swapped if it is larger. At the end of the first pass the largest item bubbles through to the end of the list.

Insertion Sort compares values in turn, starting with the second value in the list. If this value is greater than the value to the left of it, no changes are made. Otherwise this value is repeatedly moved left until it meets a value that is less than it.

Binary search

Is a 'divide and conquer' **algorithm** which requires the initial **array** to be sorted before searching.

It is called binary because it splits the array into two halves as part of the algorithm. Initially, a binary search will look at the item in the middle of the array and compare it to the search terms.

Knowledge organiser Year 8:
Summer Term 1, Topic 1 :
Simultaneous Equations

Key Concept

Simultaneous equations require algebraic skills to find the values of letters within two or more equations.

They are called simultaneous equations because the equations are solved at the same time.

Key Words

Variables
Substitution
Elimination
Algebraic
Graphic
Rearranging
Unknown

Examples - Elimination

$$\begin{array}{rcl} 5x + y & = & 20 \quad \dots(1) \\ 2x + y & = & 11 \quad \dots(2) \end{array}$$

$$\begin{array}{rcl} 3x & = & 9 \\ x & = & 3 \end{array}$$

$$\begin{array}{rcl} 5(3) + y & = & 20 \\ 15 + y & = & 20 \\ y & = & 5 \end{array}$$

Scale up (if necessary)

Add or subtract (to eliminate)

Solve (to find x)

Substitute in (to find y)

$$\begin{array}{rcl} 12x - 2y & = & 8 \quad \textcolor{red}{\times 1} \dots(1) \\ 5x + y & = & 18 \quad \textcolor{red}{\times 2} \dots(2) \end{array}$$

$$\begin{array}{rcl} 12x - 2y & = & 8 \\ 10x + 2y & = & 36 \end{array}$$

$$\begin{array}{rcl} 22x & = & 44 \\ x & = & 2 \end{array}$$

$$\begin{array}{rcl} 12x - 2y & = & 8 \\ 24 - 2y & = & 8 \end{array}$$

$$\begin{array}{rcl} -2y & = & -16 \\ y & = & 8 \end{array}$$

Tip

Subtract if the signs in front of these are the **same**.

Add if the signs in front of these are the **different**.

Knowledge organiser Year 8:
Summer Term 1, Topic 1 :
Simultaneous Equations

Key Concept

Simultaneous equations require algebraic skills to find the values of letters within two or more equations.

They are called simultaneous equations because the equations are solved at the same time.

Key Words

Variables
Substitution
Elimination
Algebraic
Graphic
Rearranging
Unknown

Examples – Substitution

$$\begin{array}{l} y = 2x \quad \dots(1) \\ x + y = 6 \quad \dots(2) \end{array}$$

$$x + 2x = 6$$

$$3x = 6$$

$$x = 2$$

$$2 + y = 6$$

$$y = 4$$

Label the equations first

Substitute the value of y from equation (1) into equation (2)

To find y use the x value in equation (1)

$$\begin{array}{l} y = x + 2 \quad \dots(1) \\ 2x + y = 11 \quad \dots(2) \end{array}$$

$$2x + (x + 2) = 11$$

$$3x + 2 = 11$$

$$3x = 9$$

$$x = 3$$

$$y = 3 + 2$$

$$y = 5$$

Tip

When the value of one variable is found, always use either (1) or (2) to find the value of the other variable

Knowledge organiser Year 8: Summer Term 1, Topic 1 : Simultaneous Equations

Key Concept

When solving simultaneous equations algebraically, you can solve them by rearranging them into the form $y = mx + c$, so that you can plot them as straight line graphs.

Key Words

Variables
Substitution
Elimination
Algebraic
Graphic
Rearranging
Unknown

Use the graphical method to solve the simultaneous equations:

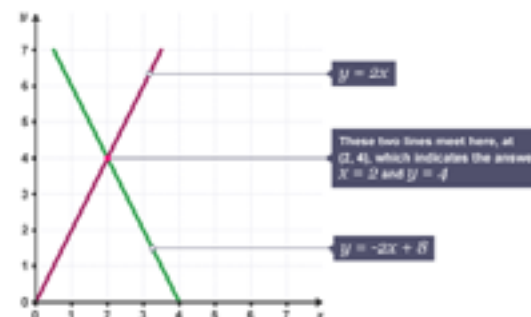
$$\begin{array}{rcl} y & = & 2x \\ 2x + y & = & 8 \\ \hline y & = & 2x \\ y & = & -2x + 8 \end{array}$$

Examples - Graphically

Start by rearranging the two equations to get them in the form (if required):
 $y = mx + c$

Where the two lines cross, this is called the point of intersection.

The values of x and y at this point are the solutions of the simultaneous equations.



The solution of this pair of simultaneous equations is:
 $x = 2, y = 4$

Tip

Always rearrange in the form of $y = mx + c$.
Your **solutions** are where the two lines **intersect**.

Knowledge organiser Year 8 Summer: 1 Topic: 2 Mixed Numbers

Key Words

Numerator: the number above the line on a fraction. The "top number". Represents how many parts are taken.

Denominator: the number below the line on a fraction. The "bottom number". The number represent the total number of parts.

Mixed Number: a whole number and a fraction shown together.

Improper Fraction: a fraction where the numerator (the "top number") is larger than the denominator (the "bottom number").

Common Denominator: two fractions have a common denominator if the denominators are the same.

Lowest Common Multiple: this is the lowest whole number that divides two (or more) numbers without leaving a remainder.

Example: The lowest common multiple (LCM) of 12 and 18 is 6. It is the lowest whole number that divides both numbers.

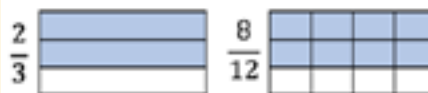
Key Skills

Equivalent Fractions

If you multiply or divide both the top and the bottom of a fraction by the same amount you get an **equivalent fraction**. Both fractions will have the same value.

$$\frac{2}{3} = \frac{8}{12}$$

×4
×4



Adding Fractions

When adding (or subtracting) fractions they must have a **common denominator**.

Examples:

$$\frac{2}{3} + \frac{1}{9} = \frac{6}{9} + \frac{1}{9} = \frac{7}{9}$$

LCM = 9

$$\frac{3}{5} + \frac{1}{3} = \frac{9}{15} + \frac{5}{15} = \frac{14}{15}$$

LCM = 15

Multiplying Fractions

To multiply fractions together multiply the two **numerators** and multiply the two **denominators**.

Examples:

$$\frac{2}{3} \times \frac{1}{5} = \frac{2 \times 1}{3 \times 5} = \frac{2}{15}$$

$$\frac{3}{5} \times \frac{2}{7} = \frac{3 \times 2}{5 \times 7} = \frac{6}{45} = \frac{2}{15}$$

Simplify if possible

Converting between Mixed Numbers and Improper Fractions

Mixed Number $3\frac{2}{5} = \frac{3 \times 5 + 2}{5} = \frac{17}{5}$ Improper Fraction

Improper Fraction $\frac{18}{7} = \frac{2 \times 7 + 4}{7} = 2\frac{4}{7}$ Mixed Number

Remember: "Multiply the bottom, add the top". ...and, the denominator does not change.

Improper Fraction $\frac{16}{5}$ $16 \div 5 = 3 \text{ r } 1$ Mixed Number $3\frac{1}{5}$

Improper Fraction $\frac{13}{8}$ $13 \div 8 = 1 \text{ r } 5$ Mixed Number $1\frac{5}{8}$

Remember: Divide the numerator by the denominator, the remainder stays on top... and, the denominator does not change.

Adding (or Subtracting) Mixed Numbers

(1) First convert to **improper fractions**

$$3\frac{2}{5} + 1\frac{1}{4} = \frac{17}{5} + \frac{5}{4} = \frac{68}{20} + \frac{25}{20} = \frac{93}{20} = 4\frac{13}{20}$$

(2) Find a **common denominator** and add the fractions (and **simplify** if necessary)

(3) Convert to a **mixed number**

$$4\frac{5}{8} - 2\frac{4}{7} = \frac{37}{8} - \frac{18}{7} = \frac{259}{56} - \frac{144}{56} = \frac{115}{56} = 2\frac{3}{56}$$

Knowledge organiser Year 8 Summer: 1 Topic: 2 Mixed Numbers

Key Words

Numerator: the number above the line on a fraction. The "top number". Represents how many parts are taken.

Denominator: the number below the line on a fraction. The "bottom number". The number represent the total number of parts.

Mixed Number: a whole number and a fraction shown together.

Improper Fraction: a fraction where the numerator (the "top number") is larger than the denominator (the "bottom number").

Common Denominator: two fractions have a common denominator if the denominators are the same.

Lowest Common Multiple: this is the lowest whole number that divides two (or more) numbers without leaving a remainder.

Example: The lowest common multiple (LCM) of 12 and 18 is 6. It is the lowest whole number that divides both numbers.

Multiply Mixed Numbers

(1) First convert to improper fractions

(2) Multiply the numerators and multiply the denominators. (Simplify if possible)

(3) Convert back to a mixed number

$$3\frac{2}{5} \times 1\frac{1}{4} = \frac{17}{5} \times \frac{5}{4} = \frac{17 \times 5}{5 \times 4} = \frac{85}{20} = \frac{17}{4} = 4\frac{1}{4}$$

Simplify

$$2\frac{4}{7} \times 3\frac{2}{3} = \frac{18}{7} \times \frac{11}{3} = \frac{18 \times 11}{7 \times 3} = \frac{198}{21} = \frac{66}{7} = 9\frac{3}{7}$$

Divide Mixed Numbers (using Keep, Flip, Change)

(1) First convert to improper fractions

(2) Use **Keep, Flip, Change** to simplify the sum

(3) Multiply the numerators and multiply the denominators. (Simplify if possible)

(4) Convert to a mixed number

- Keep the first fraction
- Flip the second fraction
- Change the divide to a multiply

$$3\frac{2}{5} \div 1\frac{1}{4} = \frac{17}{5} \div \frac{5}{4} = \frac{17}{5} \times \frac{4}{5} = \frac{68}{25} = 2\frac{18}{25}$$

$$2\frac{4}{7} \div 1\frac{2}{8} = \frac{18}{7} \div \frac{10}{8} = \frac{18}{7} \times \frac{8}{10} = \frac{144}{70} = \frac{72}{35} = 2\frac{2}{35}$$

Simplify

Knowledge organiser Year 8: Summer Term 1, Topic 3 : Transformations

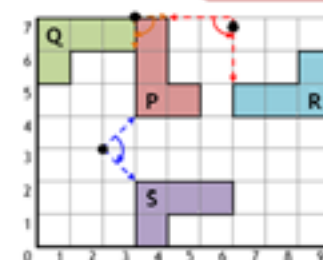
Key Concept and Words

Key Words	Meaning	Example
Transformation	Changing a shape using a turn, flip, slide or resize. These four transformations are described better below	This is an example of a turn (rotational) transformation:
Rotation	A circular movement Rotation has a central point that stays fixed and everything moves around that point in a circle	
Reflection	An image or shape as it would be seen in a mirror	
Enlargement	To make larger	
Scale Factor	The amount by which something has been enlarged	A scale factor of 2 means the enlargement is twice as big as the original
Translation	Sliding; moving a shape without rotating or flipping it. The shape still looks exactly the same, just in a different place	
Vector	A column vector is used to describe a translation i.e. how far right / left and up / down a shape has moved	Translate by $\begin{pmatrix} 2 \\ 1 \end{pmatrix}$

Examples

Rotation

The shape 'turns'



To describe a rotation, state:

1. **ROTATION**
2. The **ANGLE** turned
3. The **DIRECTION**
4. The **CENTRE** of rotation

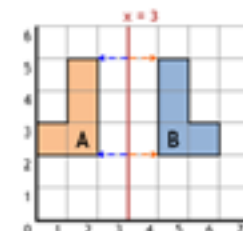
P to Q is a **ROTATION**
90° clockwise,
centre (3,7)

P to R is a **ROTATION**
90° anticlockwise,
centre (6,7)

P to S is a **ROTATION**
90° clockwise,
centre (2,3)

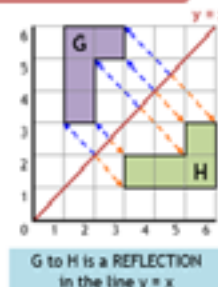
Reflection

(The shape 'flips')



A to B is a **REFLECTION**
in the line $x = 3$

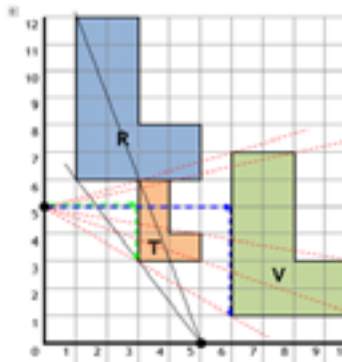
Distances
are the same on
both
sides of
the mirror



G to H is a **REFLECTION**
in the line $y = x$

Enlargement

(The shape 'changes size')



To describe an enlargement, state:

1. **ENLARGEMENT**
2. The **SCALE FACTOR**
3. The **CENTRE** of enlargement

T to V is an **ENLARGEMENT**,
scale factor 2, centre (0,5)

V to T would be an enlargement
scale factor 0.5, centre (0,5)

T to R is an **ENLARGEMENT**,
scale factor 2, centre (5,0)

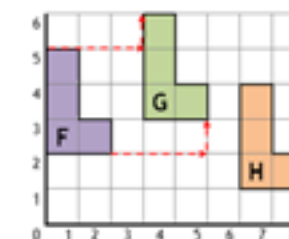
R to T would be an enlargement
scale factor 0.5, centre (5,0)

All distances are multiplied by
the scale factor, including the
distance away from the centre
of enlargement, e.g. 3 right 2
down becomes 6 right 4 down

Changing the centre of
enlargement puts the enlarged
shape in a different position

Translation

(The shape 'slides')



To describe a translation, state:

1. **TRANSLATION**
2. The **MOVEMENT** using a vector

Corresponding corners make
the same movement

F to G is a **TRANSLATION** $\begin{pmatrix} 3 \\ 1 \end{pmatrix}$

F to H is a **TRANSLATION** $\begin{pmatrix} 6 \\ -1 \end{pmatrix}$

H to G is a **TRANSLATION** $\begin{pmatrix} -3 \\ 2 \end{pmatrix}$

Tip: Use Tracing paper for translation, rotation and reflection.

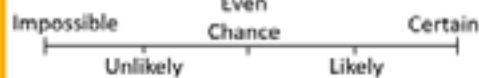
Mathswatch clips:

Transformations : 48,49,50,148
Congruent triangles 166

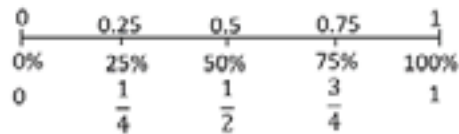
Knowledge organiser Year 8: Summer Term 2, Topic 1 : Probability

Key Concept

Chance



Probability



Probabilities can be written as:

- Fractions
- Decimals
- Percentages

Tip

Probabilities always add up to 1.

Key Words

Probability: The chance of something happening.

Impossible: The outcome cannot happen.

Certain: The outcome will definitely happen.

Even chance: There are two different outcomes each with an equal chance of happening.

Expectation: The amount of times you expect an outcome to happen based on probability.

Examples

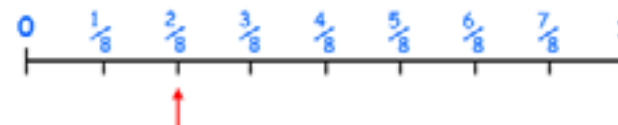


1) What is the probability that a bead chosen will be **yellow**.

Show the answer on a number line.

$$\text{Probability} = \frac{\text{Number of favourable outcomes}}{\text{Total number of outcomes}}$$

$$P(\text{Yellow}) = \frac{2}{8} = \frac{1}{4}$$



2) How many **yellow** beads would you **expect** if you pulled a bead out and replaced it 40 times?

$$\frac{1}{4} \times 40 = \frac{1}{4} \text{ of } 40 = 10$$

Knowledge organiser
Year 8
Summer 2 Topic 2:
Bearings and Loci

Key words

Loci

Clockwise

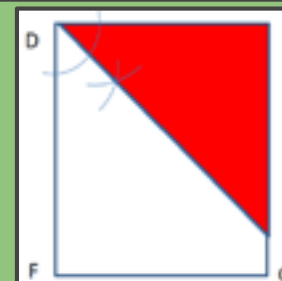
Bearing

Construct

Loci

A point, line, or curve moving according to mathematically defined conditions.

The red line is the loci of all the points equidistant from the black line.

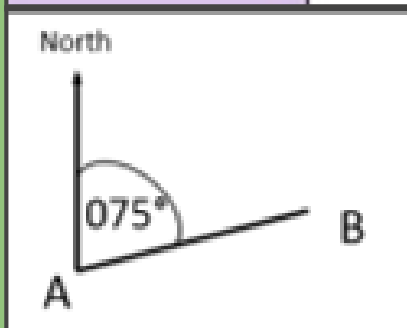


This is the locus of all the points closer to the line DE than to the line DF.

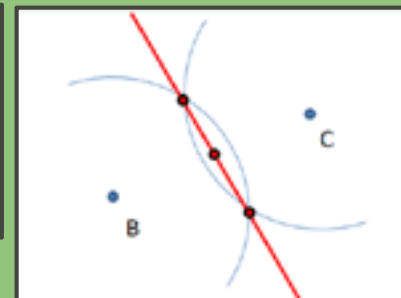
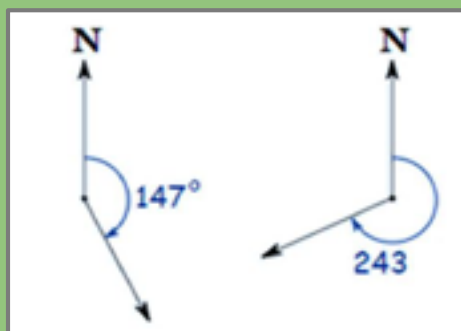
Bearings

A 3-digit angle showing the direction of one object to another.

Measured in a clockwise direction from the north.

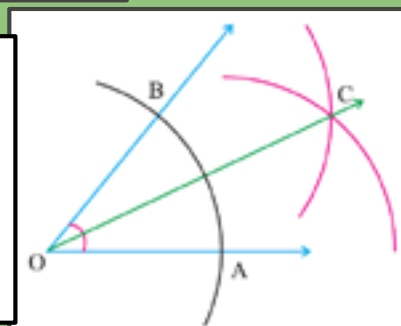


This is the bearing B **from** A



This is the locus of the points equidistant between B and C. (Perpendicular Bisector)

We use constructions (like this Angle Bisector) to show our Loci.



Knowledge organiser Year 8: Summer Term 2, Topic 3 : Congruence and Similarity

Key Concept and Words

Key Words	Meaning	Example
Transformation	Changing a shape using a turn, flip, slide or resize. These four transformations are described better below	This is an example of a turn (rotational) transformation:
Rotation	A circular movement Rotation has a central point that stays fixed and everything moves around that point in a circle	
Reflection	An image or shape as it would be seen in a mirror	
Enlargement	To make larger	
Scale factor	The amount by which something has been enlarged	A scale factor of 2 means the enlargement is twice as big as the original
Translation	Sliding: moving a shape without rotating or flipping it. The shape still looks exactly the same, just in a different place	
Vector	A column vector is used to describe a translation i.e. how far right / left and up / down a shape has moved	

If the shape has been resized, then the shapes are 'Similar'.

Similar Triangles



Similar Triangles are the exact Same Shape, but are Different Sizes.

$\triangle ABC \sim \triangle DEF$ (\sim means similar to)

Similar Triangles

- Same shape, but not necessarily the same size.
- Corresponding angles are equal.
- Corresponding sides are in the same ratio.

$$\frac{a}{p} = \frac{b}{q} = \frac{c}{r}$$



To test for similar triangles:

- AA – If 2 corresponding angles are equal.
- SSS – If 3 corresponding sides are in the same ratio.
- SAS – Ratio of 2 pairs of corresponding sides are equal and their included angles are equal.

CONGRUENT SHAPES

Same SHAPE

Same SIZE



Polygons are **congruent** if they are the same size and shape.

- **Size:** All corresponding sides are the same length
- **Shape:** All corresponding angles have the same measure.

If one shape can be made from another using Rotations, Reflections, or Translations then the shapes are **Congruent**.

Conditions for Congruence of Two Triangles

SSS (Side – Side – Side)



3 sides are respectively equal

SAS (Side – Angle – Side)



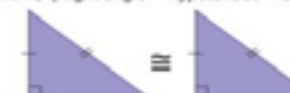
2 sides and the included angle are respectively equal

ASA (Angle – Side – Angle)



2 angles and the included side are respectively equal

RHS (Right angle – Hypotenuse – Side)



Hypotenuse and one side are respectively equal

Knowledge organiser Year 8:
Summer Term 2, Topic 4:
Scatter Graphs

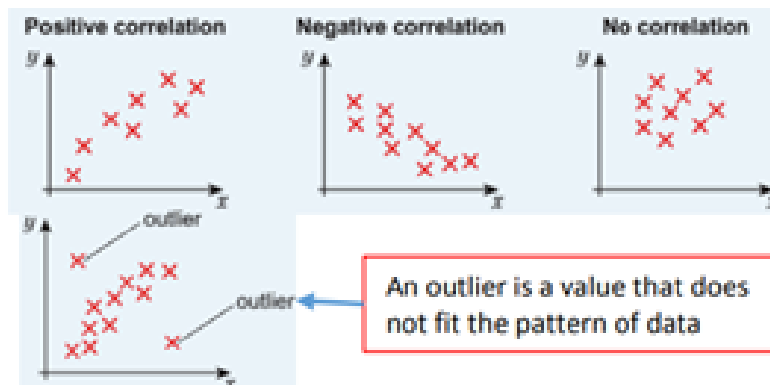
Key Concepts

- A scatter graph allows you to see the relationship between 2 sets of data. E.g. your height and your stride length
- The data is **bi-variate**
- Correlation** is used to describe a relationship between 2 variables
- The **line of best fit** represents the **trend** of the plotted points

Key Words

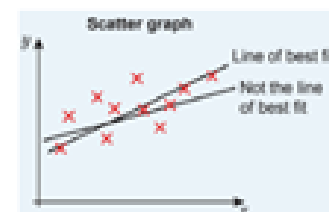
- Positive correlation
- Negative correlation
- Relationship
- Line of best fit
- Trend
- Prediction
- Extrapolation
- Interpolation
- Causation

Examples



Data is plotted as co-ordinate points. If there is correlation a line of best fit **must be** added. This is a straight line drawn through the middle of the points on a scatter graph. It should pass as near as many points as possible.

A line of best fit can be used to predict data values within the range of data given. This is called **interpolation**. Predictions outside of the range of data given are unreliable. This is called **extrapolation**.



Tips

- Correlation is either positive or negative
- If asked to describe the relationship between the variables, for positive state "as (insert x axis label) increases, so does (insert y axis label)" but for negative state "as (insert x axis label) increases, (insert y axis label) decreases"

KNOWLEDGE ORGANISER – Year 8 – Songwriting



Keywords

Time Signature	How many beats are in a bar. In Popular music this is usually 4.
Pentatonic Scale	A musical scale made up of five notes per octave.
Chord Progression	Chord progressions are series of two or more chords used in a piece of music.
Tempo	The speed of the music, usually measured in beats per minute (BPM).
Major	Music that sounds happy/cheerful
Minor	Music that sounds sad/serious
Conjunct	Melodic movement where most notes are close in pitch (move by step) ("Mary Had A Little Lamb").
Rhythm Track	A regular repeated pattern, often heard on drums.

Creating a melody using pentatonic scales

Once you have created a chord sequence, use the below **pentatonic scales** to help you if you are struggling for melodic ideas.

E.g. if you are playing a C chord, use notes from the C pentatonic scale. If you are playing an F chord, use notes from the F pentatonic scale.

C Major = C D E G A

F Major = F G A C D

G Major = G A B D E

A Minor = A C D E G

In order to make your melody catchy, try to move mostly by step. In order to keep your melody interesting you may want to add a few leaps in.

Don't be afraid to repeat ideas!

Creating a harmonic progression in C

- The most commonly used chord progression in popular music is: **I - V - vi - IV**
- Each Roman numeral represents a note of the scale.
- If we were in the key of C this would mean that the harmonic progression was:

I = C (C-E-G)

V = G (G-B-D)

vi = Am (A-C-E)

IV = F (F-A-C)

Usually, each chord is held for four beats.

Writing Lyrics

Step 1: Write down any ideas you have.

Step 2: Pick a title - A song's title is often the hook or chorus of a song.

Step 3: Write your melody first (unless you are a singer). It is a lot easier to write lyrics to a melody because you will know how many syllables to use.

Step 4: The main part of your story should be the chorus. What do you want your listener to know? The verse should be for extra information.

Step 5: Use a Thesaurus - sometimes you will need a synonym with more/less syllables.

Songwriting Videos

Write down five tips for each video - Cross off when done.

[youtube.com/watch?v=XZ3bn2Yk4Bg](https://www.youtube.com/watch?v=XZ3bn2Yk4Bg)

"How to write a hit song in 3 steps" - Lucas Brar

[youtube.com/watch?v=54n0kaKOJNY](https://www.youtube.com/watch?v=54n0kaKOJNY)

"How to write a song in 5 minutes" - Pianote

[youtube.com/watch?v=eXv4KVduKjw&t=96s](https://www.youtube.com/watch?v=eXv4KVduKjw&t=96s)

"How to write great lyrics - 5 tips for beginners" - Swift Lessons

M	A	D	T	S	H	I	R	T
melody	articulation	dynamics	texture	structure	harmony	instruments	rhythm	tempo
the tune	how notes are played	loud / soft and any other volume changes	layers of sound and how they fit together	sections of music and how they are organised	chords used	types of instruments heard	the pattern of notes	the speed

Striking and Fielding

Fielders and post players: catch the ball and return the ball to a stump.

Bowler: delivers underarm balls from the bowling square

Batter: strikes the ball into the outfield before running around the bases to score "rounders".

Rounders

Fielders and base players: catch the ball and return the ball to the bases.

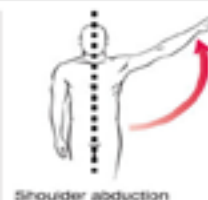
Softball

Bowler: delivers underarm balls from the bowling square

Batter: strikes the ball into the outfield before running around the square.

THEORY IN ACTION

Abduction
occurs when we perform a movement to make a reaching catch.



Shoulder abduction



DEFINE THIS

Abduction – a movement away from the midline.

Adduction – a movement toward the midline.

Cricket



Wicket-keeper
Stops deliveries that pass the wicket, like a catcher.

The wicket:
Made up of two parts.

Two Bails:
9 inches

Stumps:
28 inches

Bowler
Delivers six balls at one wicket completing an "over."

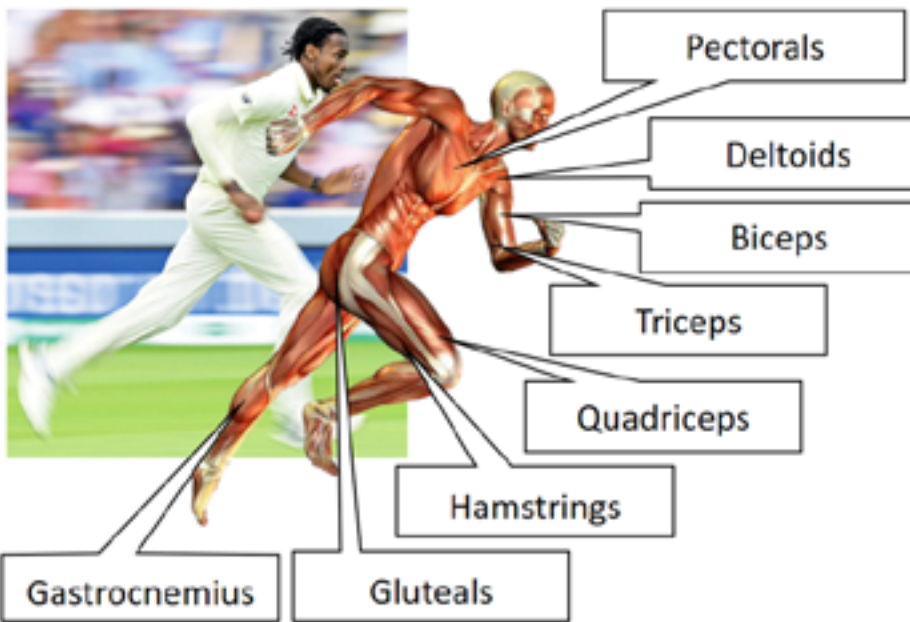
Batsman
"Striker"

Umpire

12 feet

Cricket

THEORY IN ACTION



One long term effect of exercise is an increase in muscular endurance. This means that as this bowler repeats this action more often during training, his ability to bowl fast for longer will increase, enhancing his chances of getting wickets.

DEFINE THIS

“Muscular endurance is the ability of a muscle or group of muscles to repeatedly exert force against a resistance. ”

Overview of the rules

How to Score - Batting

1. Batter runs from crease to crease after the bowler bowls at the them = 1 run
2. Ball is hit past the the boundary but touches the ground on its way = 4 runs
3. Ball is hit past the boundary rope without touching the ground = 6 runs
4. Wide Bowl = 1 run
5. No Ball Bowl = 1 run
6. The Teams score is the total of all players score

How to prevent scoring – Bowling/fielding

1. The ball hits the stumps after being bowled.
2. Batter hits the ball and is caught by a fielder before the ball bounces.
3. Batter tries to make a run but does not make the crease they are running toward before the stumps are hit with the ball (run out).
4. Batter steps leaves the crease and the ball is touched / thrown at the wickets and hits them (stumped).
5. Leg before wicket (LBW) – The ball is bowled and hits the batters leg preventing the ball from hitting the stumps.
6. The batter hits their own wicket with their bat while attempting to strike the ball.

Rounders

THEORY IN ACTION



Rounders is an example of a life-long sport. It is open to all ages and genders and can be adapted to allow people to play almost anywhere. It is very good for the development of emotional and social health.

DEFINE THIS

"Health is a state of physical, (mental) emotional and social wellbeing. Not merely the absence of disease or infirmity"

Overview of the rules

Batting

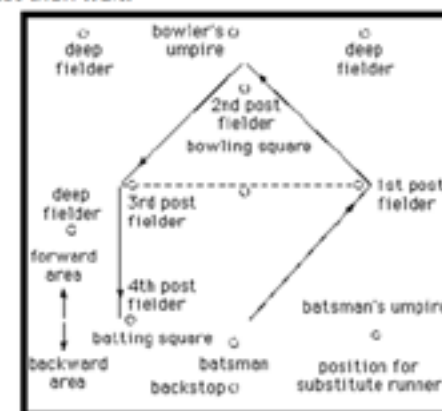
1. Batters must always keep in contact with the post, either with their hand or bat.
2. You cannot run back to a post once you have committed to run to the next post.
3. If you hit the ball backwards, the batter must stay at 1st post until it reaches the forward area.
4. Batter can leave a post as soon as the ball leaves the bowler's hand.

Bowling

1. A good bowled ball = bowled between knee and head & must be the bat side of the batter.
2. The batter must run on a good bowled ball.
3. Two no balls in a row = $\frac{1}{2}$ a rounder scored.
4. The ball being held in the bowling square means that a batter can continue to a post they may be running to but must then wait.

Getting the batter out, fielding

1. Hit ball being caught.
2. The base batter is running to being stumped before the batter arrives.
3. Batter running inside of a post.
4. Two batters running to/waiting at the same post.



Softball

THEORY IN ACTION



As the batter swings to play the shot their hips rotate to generate **power**. The more flexible a person is, the further that rotation can go, meaning they can generate more power and distance on the strike.

DEFINE THIS

"Flexibility is the range of movement at a joint"

Overview of the rules

Each team consists of 9 players and teams can be of mixed gender

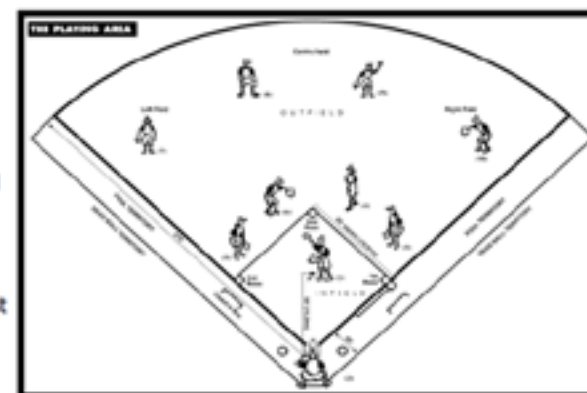
Batting

1. A game lasts for at least one "innings" per team
2. Each team bats once in each innings before the sides switch
3. A batter must successfully strike the ball and run around as many bases as possible. Once they get all the way around and back to home plate without being given out a run is scored.
4. If the ball is struck out of the first and third base line it is in a foul area. Once the ball crosses this line before it bounces the ball is deemed 'dead' and play restarts with a new pitch.
5. A home run can be scored by hitting the ball over the outfield (beyond the field of play) and into a dead ball area. The batsmen can then stroll around the bases to score along with any additional batsmen on base.

Fielding

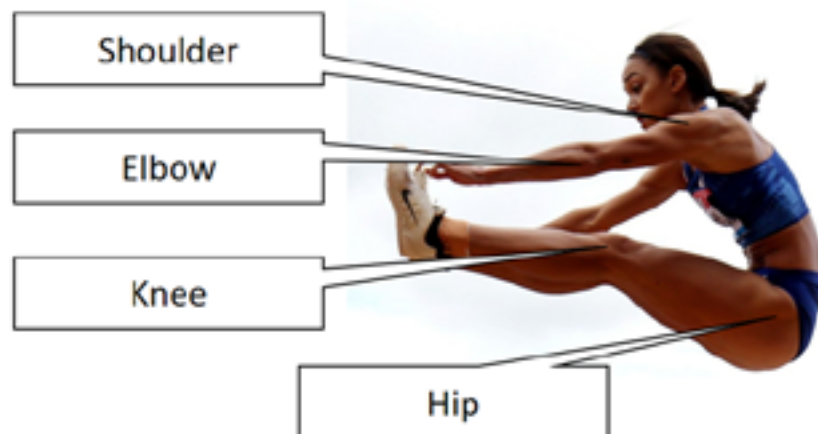
The fielding team can prevent the batsmen scoring runs by:

1. Making them miss the ball
2. Catching the ball
3. Tagging one of the bases before they reach it
4. Tagging the batsmen whilst they are running with the ball in hand



Athletics

THEORY IN ACTION



We have four main **joints** in the body where **gross (big) movements** occur.

They are all used in a full body sport like **long jump**, during the run up, the take-off, flight and lastly, landing.

DEFINE THIS

"A joint is where two or more bones meet. It is where movement occurs."

Field Rules

1. Field events are measured in metres and centimetres
2. Throwing events are measured from the throwing line to the place where the projectile first lands on the ground.
3. Javelins must land front tip first, but do not need to dig into the ground.
4. Long jump is measured from the front of the take-off board to the mark in the sand closest to the board.
5. If the athlete takes off over the board it is a no jump
6. In high jump, you have 3 attempts to clear each height attempted, without knocking over the bar. If you fail to do so, you are out of the competition

Athletics

THEORY IN ACTION



The Eat Well Plate



Diet is an important part of everyday lifestyle, but as athletes nutrition becomes vital to perform to their best.

- A 3000m runner will require the slow release energy from complex carbohydrates.
- Somebody performing shot putt will require more protein to build and repair muscle.

DEFINE THIS

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

General Rules

Throwing	Jumping	Track
Javelin	Long Jump	100m
Shot Putt	High Jump	200m
Discus	Triple Jump	400m
Hammer		800m
		1500m
		3000m
		Hurdles

Short distance

Middle distance

1. Athletics is split into Track (running) events, and Field (throwing and jumping) events.
2. You start a track race with the instructions Take Your Marks, Set, Go.
3. You win a field event by throwing or jumping the highest or furthest.

Track Rules

1. All competitors must start a track race at the same time. If you don't, this is called a False Start.
2. For sprint events (100m, 200m, 400m) each competitor must stay in their lane. Failure to do so will result in disqualification
3. For middle distance events (800m, 1500m), competitors will run most of their race from the inside lane, as this is the shortest distance around the track.
4. Times are measured to the hundredth of a second e.g. 13.42

Etiquette

Etiquette in sport refers to taking part in the correct way and following the **unwritten rules**.

Some examples are:

- Kicking the ball out of play when a player goes down injured
- Shaking hands with opponents before and after a game
- Bowing to your opponent in certain martial arts
- Respecting the official's decisions
- Adhering to the rules and the spirit of the game

This allows the games to be played fairly and safely.

Rules

Participants have to follow the rules of the sport or activity.

In organised sport, these are developed by each sport's governing body and are upheld by officials during play. Rules make sure that play is safe and fair. Players are penalised if they do not respect the rules or the officials.

During informal or adapted activities, participants often agree their own rules. Agreeing adaptations to the rules can make sport more inclusive, but still ensure fairness and safety.

Sportsmanship

Is a positive thing that should be encouraged in all sporting activities.

It is a fair or generous act from one person or team to another person or team.

It is about showing respect to yourself, your opponents and the game or sport you are playing.

By demonstrating sportsmanship you are showing good qualities about yourself, and this should encourage those people around you to do the same.

Examples: shaking hands after the game, kicking the ball out of play so an injured player can receive treatment.

Deviance

Deviance in sport is different from sportsmanship and gamesmanship as it is ILLEGAL.

Athletes actively seek ways to improve their performance or win a contest by going outside the laws of that activity.

Deviance occurs because of factors such as: a win at all costs attitude, financial rewards for victory, a culture within a sport of deviance and cheating, media pressure to maintain success, a role model also cheats, or simply a lack of a moral code within that athlete.

High profile examples of deviance:

- Lance Armstrong (Cycling – EPO)
- Ben Johnson (Athletics – Anabolic Steroids)
- David Warner / Cameron Bancroft (Cricket – Ball tampering)
- Mohammad Asif / Mohammad Amir (Cricket – Spot fixing / betting)
- Terry Newton (Rugby – Human Growth Hormone (HGH))

Gamesmanship

This is deliberate act or tactic displayed by an individual or team to enable them to win a game or point.

It is NOT an illegal act though, it still falls within the laws of the game, and therefore may not be punished during the contest.

The act or tactic may be questionable but does not cross the line of breaking rules to be able to win.

Usually employed as a direct response to the amount of pressure now placed on winning.

Examples: time wasting to prevent the other team from scoring, distracting a player (sledging in Cricket).

Define:

Mental Wellbeing

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

Signs of good mental wellbeing

Feeling relatively confident in yourself and have positive self-esteem

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

Define:

Mental Illness

Mental illnesses comprise of a broad range of problems, with different symptoms. However, they are generally characterized by some combination of abnormal thoughts, emotions, behaviour and relationships with others.

They can only be diagnosed by a Doctor or Mental Health professional

Things that can affect our mental wellbeing

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

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

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

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

- Childhood abuse, trauma, violence or neglect
- Social isolation or discrimination
- Homelessness or poor housing
- A long-term physical health condition
- Social disadvantage, poverty or debt
- Unemployment
- Caring for a family member or friend
- Significant trauma as an adult, such as military combat, being involved in a serious accident or violent crime.

Define:

Primary Emotions

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

1. Joy
2. Anger
3. Sadness
4. Disgust
5. Fear

Causes of Eating Disorders

Eating disorders are not simply about food; the behaviours that accompany them may often serve as a coping mechanism or a way to feel in control. Eating disorders have many causes which are individual to the person however some common causes are:

- Distorted Body Image
- Bullying
- Depression and/or Anxiety

Symptoms of Eating Disorders

Symptoms of eating disorders will vary between individuals and type of eating disorder. Not matching the symptoms exactly does not mean that someone does not have an eating disorder, however, some common symptoms include:

- Eating very little food or eating large amounts of food in a short time in an uncontrolled way
- Having very strict habits, rituals, or routines around food
- Spending a lot of time worrying about your body weight and shape
- Changes in mood
- Deliberately making yourself ill after eating
- Avoiding socialising when food may be involved
- Withdrawing from social groups, hobbies you used to enjoy or from family life
- Physical signs such as digestive problems or weight being very high or very low for someone of your age and height

The Importance of self-care

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

Some self-care techniques include

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

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

Strategies can include:

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

Where to get help

- Parents and trusted family.
- School Staff and Wellbeing Team
- Your Doctor or Practice Nurse
- MIND - <https://www.mind.org.uk> Helpline - **0300 123 3393** open 9am to 7pm, Monday to Friday or Text: 86463
- Young Minds - <https://youngminds.org.uk> ext: 85258 or Parents Helpline: 0808 802 5544
- Stem4 - <https://stem4.org.uk/>

Harrow Way PSHE Department – Year 8 – Healthy Eating

Define:

Nutrition

The process of providing or obtaining the food necessary for health and growth.

Define:

BMI

This is a numerical value of your weight in relation to your height. A **BMI** between 18.5 and 25 kg/m² indicates a normal weight.

BMI is a person's weight in kilograms (kg) divided by his or her height in meters squared.

Define:

Obesity

Obesity has been defined by the National Institutes of Health (the NIH) as a BMI of 30 and above.

Define:

Vegetarianism

A diet where a person does not eat meat or fish.

Define:

Veganism

A diet where a person does not eat or use animal products.

The Eat Well Plate



What does one portion of your 5 a day look like?

80g of fresh, canned or frozen fruit and vegetables

•30g of dried fruit –which should be kept to mealtimes

•150ml glass of fruit juice or smoothie –but do not have more than 1 portion a day as these drinks are sugary and can damage teeth

•Just 1 apple, banana, pear or similar-sized fruit is 1 portion each.

•A slice of pineapple or melon is also 1 portion,

•3 heaped tablespoons of vegetables is another portion.

How much exercise should you do?



- Jogging or running
- Race walking
- Hiking uphill
- Cycling more than 10 miles per hour or steeply uphill
- Swimming fast or lap swimming
- Aerobic dancing, fast dancing, step aerobics
- Heavy gardening with digging, hoeing, shovelling heavy snow, moving or pushing heavy objects, carrying loads of 50 pounds on level ground or 25 pounds or more upstairs.
- Martial arts
- Playing sports with lots of running such as basketball, hockey, soccer
- Singles tennis
- Court sports such as handball, racquetball, squash

Impacts of poor nutrition

Short term:

- stress,
- tiredness
- limit capacity to work,

Long term

- being overweight or obese
- tooth decay
- high blood pressure
- high cholesterol
- heart disease and stroke
- type-2 diabetes
- osteoporosis
- some cancers
- depression
- eating disorders.



Year 8

Summer knowledge organizer
Summer Term

The Formation of Israel

Originally 'given' to the Jews after WW2 in part for reparations after the holocaust.

Israel is a sanctuary for Jews as it is the only Jewish nation on earth.

The gaining of Israel has not been the end of all problems and the creation of the country is beset with problems.



Judaism, Islam
and
Christianity are
monotheistic



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Genocide; 'the systematic slaughter of an entire group of people based on race, ethnicity, religion'

Stages to genocide; 1) the differences between people are not respected, 2) visual manifestation of hatred, 3) those who are 'different' have fewer rights, 4) genocides are planned, 5) propaganda is spread by the hate groups, 6) victims are identified based on their differences, 7) the hate group murders their identified victims systematically and deliberately, 8) perpetrators or later generations deny existence of any crime.

1. Holocaust; Jews, Communists, Romany, homosexuals...

2. Rwanda; Hutus killed Tutsis

3. Cambodia; Pol Pot killed educated

Key Words

Torture, genocide,
sanctuary.



Anti-Semitism is the hatred or fear of Jewish people and has been a problem for hundreds of years. It has led to the persecution of Jews in virtually every area of the world.

The holocaust is one of the worst genocides the world has seen with over 6 million Jews killed in concentration camps.

The Jewish populations of Europe never recovered from the holocaust.

After WW2 the Jewish people fought for a homeland, a place where they could feel safe.

A sanctuary.

Year 8
Summer knowledge organizer
Summer Term

Moses

1. Born to an Hebrew family when they were enslaved by the Egyptians.
2. Put in a basket on the Nile as boy babies were being killed.
3. Found by Pharaoh's daughter who raised him as her own.
4. He grew up in luxury and when the pharaoh died and his son succeeded he continued like this.
5. He saw an Egyptian man beat a Hebrew slave to death and killed him so fled.
6. Ran away and settled as a farmer when G-d appeared to him in a burning bush and told him to rescue the Hebrew people who were enslaved.
7. G-d sent 10 plagues to Egypt when Pharaoh refused to free them.
8. G-d parted the Red Sea to allow them to safety. Safety = Israel
9. Israel = sanctuary



Hebrew = Israeli



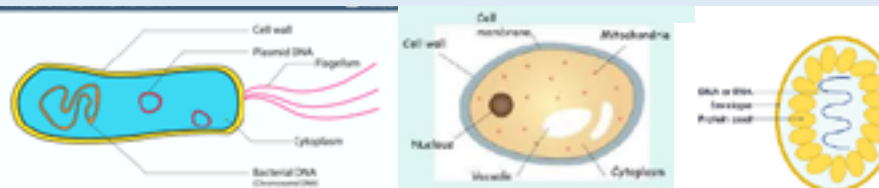
Anti-Semitic propaganda flourished before WW2 in Germany. The Jewish people who are a very cultured, intelligent people had suffered for hundreds of years before the Holocaust happened.

Plague	Meaning
1) Rivers turned to blood	Unable to drink the water
2) Frogs	A pest
3) Lice	Itchy and unpleasant
4) Flies	Dirty and carry disease
5) Disease of livestock	Can't eat the food so starve.
6) Boils	Look unhealthy and it's unpleasant.
7) Hail	Can't farm, crops ruined, no money
8) Locusts	Eat everything so crops decimated, no money.
9) Darkness	Can't see to do anything, crops fail.
10) Death of the firstborn	Emotionally difficult but no one to inherit.

Moses' most famous saying
'let my people go'

Section 1 Definitions		
1	Unicellular	An organism made up of one cell only
2	Multicellular	An organism made up of many cells
3	Eukaryotic	Eukaryotes are organisms whose cells have a nucleus enclosed within membrane eg animal and plant cells
4	Prokaryotic	a microscopic single-celled organism which does not have a nucleus eg bacteria
5	Micro-organisms	a microscopic organism or microbe, too small to be seen with the naked eye, especially a bacterium, virus, or some fungus.
6	Virus	Viruses live and reproduce inside cells, causing cell damage.
7	Bacteria	A single celled (unicellular) organism less than 10 micrometres in size
8	Fungus	A living organism includes mushroom, yeast and moulds
9	Pathogen	Pathogens are microorganisms that cause infectious disease.
10	Antigen	Antigens are molecules that are able to stimulating an immune response, often found on the surface of a pathogen
11	Antibody	Antibodies are Y-shaped proteins produced by white blood cells of the immune system in response to exposure to antigens .
12	Vaccine	A substance containing a harmless virus or bacterium given to a person to prevent them from getting a disease.
13	White blood cell	White blood cell is a specialised cell that is part of the body's immune system. They help the body fight infection and other diseases.
14	Symptom	any feeling of illness or physical or mental change that is caused by a disease, eg. A rash or headache
15	Antibiotic	are medicines that help to cure bacterial disease by killing infective bacteria inside the body. They cannot kill viruses

Section 2 Structure of micro-organisms (microbes)

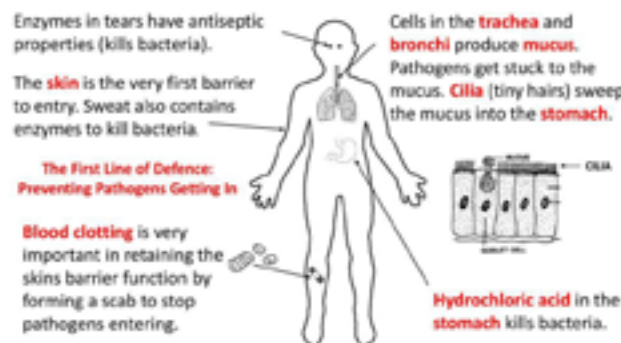


virus	bacteria	fungus
DNA strand	DNA strand and plasmid	nucleus
Protein coat	Cell membrane	Cell membrane
	Cell wall	Cell wall

Health and disease

Section 3 Defence against disease

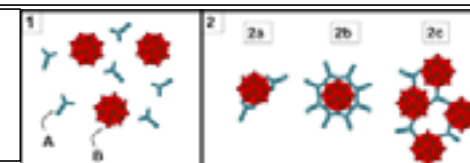
The immune system defends our body against invaders, such as viruses, bacteria and fungi



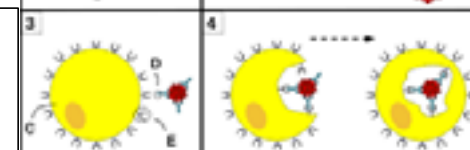
If a pathogen enters the body the immune system tries to destroy the pathogen.

White blood cells help to defend against pathogens by:

Making **antibodies** and **antitoxins** (to neutralise toxins (poisons))



Phagocytosis - surrounding and destroying microbes



Section 4 Prevention of disease - vaccines



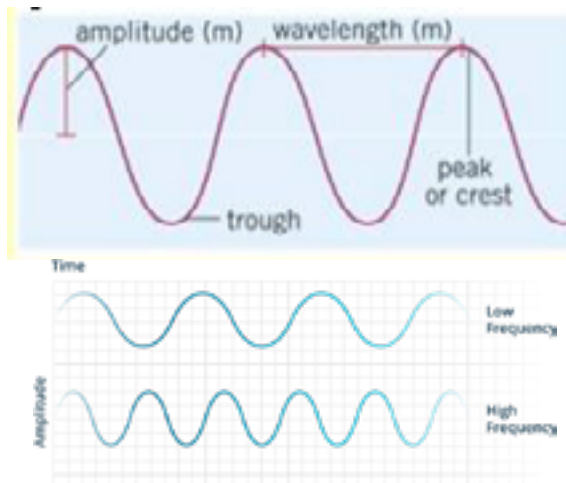
Edward Jenner was an English surgeon in 1796. Jenner noticed that milkmaids were immune to cowpox a similar disease to the deadly small pox This gave him an idea. He used the pus from a cowpox and injected into a young boy . The boy developed cowpox. He then gave the boy smallpox. The boy did not contract small pox. The first vaccine was made. Smallpox has now been eradicated (removed).

Vaccination involves introducing small quantities of **dead or inactive** forms of a **pathogen** into the body to stimulate the white blood cells to produce **antibodies**. If the same pathogen re-enters the body the white blood cells (memory cells) respond quickly to produce the correct antibodies, preventing infection.

Waves

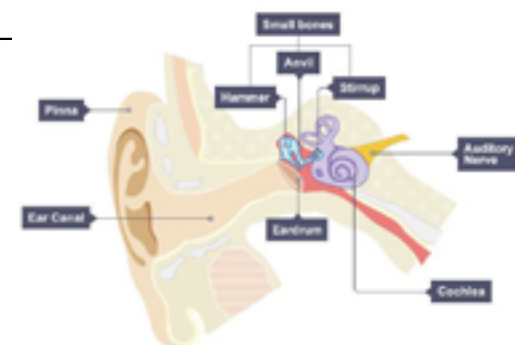
Section 1: Features of a Wave

1 Amplitude	The distance from the middle to the top or bottom of a wave
2 Frequency:	the number of waves that go past a fixed point per second. Measured in Hertz (Hz)
3 Wavelength:	the distance from peak to peak
4 Wave:	An oscillation or vibration that transfers energy or information



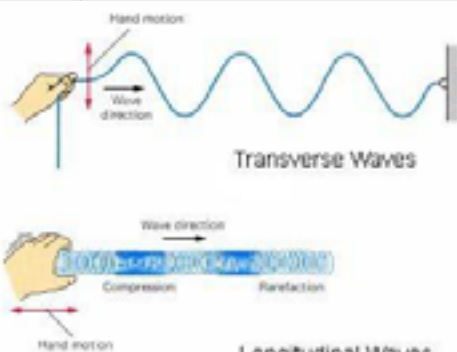
Section 4: Sound waves

Sound	Travels at 340m/s in air. Sound travels fastest in solids. It cannot travel in a vacuum .
Light	Travels faster than sound. It travels at 300, 000, 000 m/s.
Vacuum	A place with no particles . E.g. Space.
The ear	Vibrations travel from your eardrum to the hairs in your cochlea . This produces a signal which is sent to your brain.
Loud	Waves with a high amplitude
High pitched	Waves with a high frequency



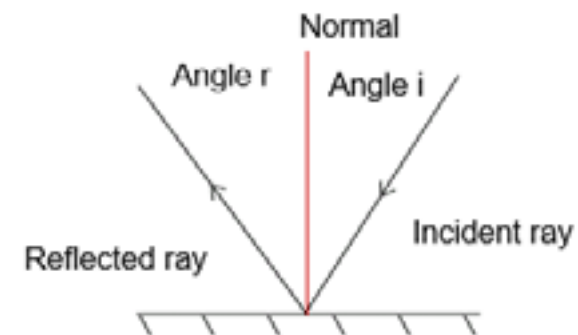
Section 2: Longitudinal vs Transverse

Longitudinal	the oscillation is parallel to the direction of the wave. E.g. Sound waves
Transverse	Oscillation is at 90 degrees/perpendicular to the direction of travel. E.g. Light, water waves
Rarefaction	A stretched-out section of a longitudinal wave
Compression	A bunched-up section of a longitudinal wave



Section 3

reflection	Reflection from a smooth surface is specular reflection . Reflection for a rough surface is diffuse scattering
refraction	As light moves between different mediums it can change direction, this is called refraction .
Incident ray	The ray that hits the mirror from your ray box is called the incident ray
Reflected ray	The ray that reflects off the mirror is called the reflected ray
normal	There is an imaginary line at 90° to the mirror is called the normal .
Angle of incidence	The angle between the incident ray and the normal is called the angle of incidence
Angle of reflection	The angle between the normal and the reflected ray is called the angle of reflection

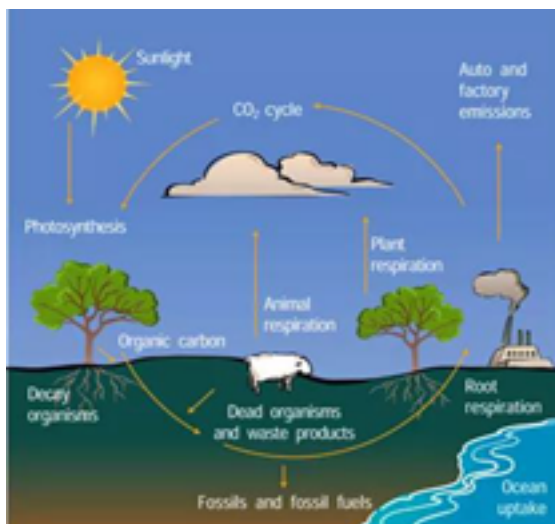


Section 1 Ceramics & Composites

Ceramics are solids made by baking a starting material in a very hot oven or kiln. They are hard and tough.

Composite materials are made from two or more different types of material.

Section 2 Carbon Cycle



Section 3 Biodiversity

Biodiversity is the variety of different species of organisms within an ecosystem

Biodiversity is affected by human activity - climate change, habitat loss, hunting, pollution.

Section 4 Energy Resources

Non-renewable - cannot be replenished as used

Fossil fuels

+ve - produce lots of energy, reliable, fast to start

-ve - produce greenhouse gases and coal produces sulfur dioxide (acid rain)

Nuclear

+ve - produces lots of energy, reliable

-ve - radioactive waste is hard to dispose of

Renewable - can be replenished as used

+ve - Do not produce greenhouse gases

-ve - less reliable (i.e. solar - it's not sunny all the time) and don't produce as much energy

Environmental Science

Section 5 Polymers

Monomer: small molecule used to make a polymer

Polymer: Long chain molecule formed from monomers

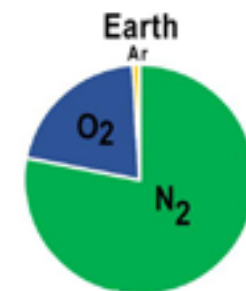
Section 6 Composition of the Atmosphere

Nitrogen = 78%

Oxygen = 21%

Argon = 0.9%

Carbon dioxide = 0.04%



Section 7 Combustion

Complete	Incomplete
Plenty of oxygen	Lack of oxygen
Produces carbon dioxide and water	Produces carbon monoxide and soot and water
Blue flame	Sooty flame
Lots of energy produced	Low energy produced

Spanish Y8- Operación Verano (1)

¿Qué casa prefieres?	What house do you prefer?
Esta casa es...	This house is
Este piso es...	This flat is
guay	Cool
Amplio/a	Spacious
Antiguo/a	Old
Bonito/a	Pretty
Cómodo/a	Comfortable
Enorme	Enormous
Feo/a	Ugly
Grande	Big
maravilloso/a	Marvellous
Moderno/a	Modern
Pequeño/a	Small
La casa/el piso está	The house/the flat is
Cerca de la playa	Close to the beach
En el centro	In the centre
En las montañas	In the mountains

La casa	The house
Tiene...	It has...
Una cocina	A kitchen
Un comedor	A dining room
Un cuarto de baño	A bathroom
Un dormitorio	A bedroom
Un salón	A living room
Una chimenea	A chimney
Un jacuzzi	A Jacuzzi
Un jardín	A garden
Una piscina	A pool
Una terraza	A terrace
Vistas al mar	Views of the sea
Opiniones	Opinions
Me gusta	I like
Me gusta mucho	I really like
No me gusta	I don't like
No me gusta nada	I really don't like
Me encanta	I love
Odio	I hate

¿Qué se puede hacer en...?	What can you do in...?
Se puede	You can
Hacer senderismo	Go hiking
Hacer actividades náuticas	Do water sports
Hacer artes marciales	Do martial arts
Ir a la bolera	Go bowling
Ir al cine	Go to the cinema
Ir de compras	Go shopping
Ir de paseo en bicicleta	To go for a ride on bike
Ir a la playa	To go to the beach
Ir al restaurante	To go to a restaurant
Jugar al tenis	To play tennis
Visitar un museo	To visit a museum

¿Dónde está...?	Where is...?
La catedral	Cathedral
La estación de tren	Train station
El minigolf	Minigolf
El parque de atracciones	Theme park
El parque acuático	water park
La pista de karting	Go karting
El zoo	Zoo
Sigue todo recto	Go straight ahead
Dobla a la derecha	Turn right
Dobla a la izquierda	Turn left
Cruza la plaza	Cross the square
Está a la derecha	It is on the right
Está a la izquierda	It is on the left

Spanish Y8- Operación Verano (2)

Expresiones de tiempo	Time expressions
Ayer	Yesterday
El fin de semana pasado	Last weekend
El verano pasado	Last summer
El año pasado	Last year
Hace dos años	2 years ago
Hoy	Today
Mañana	Tomorrow
Este fin de semana	This weekend
El verano que viene	This summer
El año que viene	Next year

Palabras muy frecuentes		High frequency words	
Bastante	Quite	Está	It is
Donde	Where	Muy	Very
Esta/este	This	También	Also

Estrategia 5

Building your vocabulary

Try to collect words so that you can use them again. Here are some ideas:

1 Note down words in different categories:

- verbs
- adjectives
- nouns
- cognates

2 Note down words under different topic headings:

- houses
- holidays
- places and directions
- time expressions
- opinions

3 Note down words as pairs of opposites:

moderno/a – antiguo/a

4 If you find a word difficult to remember, write out a sentence using it:

grande → big

Mi castillo es muy **grande** y tiene muchos dormitorios.

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



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