Wellington School

Knowledge Organisers
Year 8
Autumn 2019

Knowledge Organisers

Autumn Term Knowledge Organisers still need to be brought to school every day, alongside this one.

Some subjects like Design Technology organise the curriculum on a carousel, as such all the organisers for that subject are in the Autumn Term booklet.

Contents

An Introduction to Knowledge Organisers

What is a Knowledge Organiser?

A knowledge organiser is a document, usually one side of A4, occasionally two, that contains key facts and information that children need to have a basic knowledge and understanding of a topic, or in some cases a series of topics.

Students are expected to bring their Knowledge Organiser Booklet to school every day. Students will be issued with a new booklet each term. However, it is import they keep the booklets to help with revision for end of year exams.

What are the benefits of knowledge organisers?

The main benefit of knowledge organisers is that they give students and parents the 'bigger picture' of a topic or subject area. Some topics can be complicated, so having the essential knowledge, clear diagrams, explanations and key terms on one document can be really helpful.

Research shows that our brains remember things more efficiently when we know the 'bigger picture' and can see the way that nuggets of knowledge within that subject area link together. Making links, essentially, helps information move into our long-term memory.

How can the students use them?

As mentioned earlier, students are expected to bring their Knowledge Organiser Booklet to school everyday. In lessons they can be used in a number of ways, for example, to look up the meaning of key words, spell words correctly and do some additional work if they have finished classwork.

At home knowledge organisers can be used to support homework, independent work and revise for tests and exams. Two quick and easy ways to do this are:

1. Look, cover write, check – look at part of the knowledge organiser, cover it, write as much as you can remember and then check it
2. Word up – Pick out any words you don't understand. Use a dictionary or thesaurus to find the meaning. If they don't help as your teacher.

The more often you do this the better. YouTube has some clips on them; search 'Mr Garner look, cover, write, and check 'and 'Mr Garner word up'

How can parents use them?

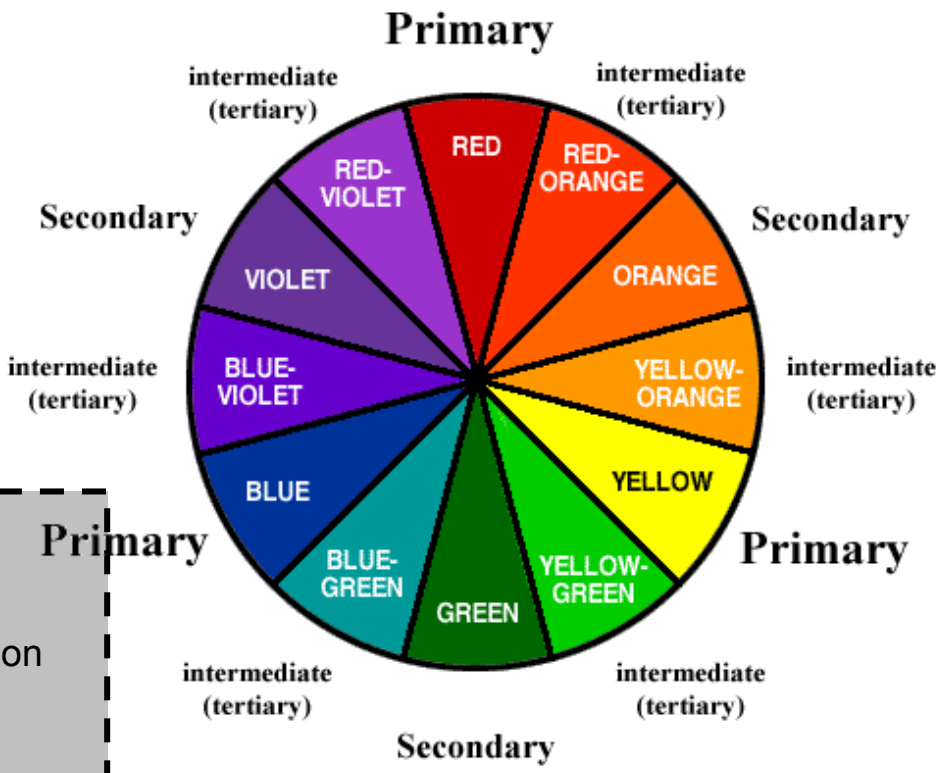
- Read through the organiser with your son/daughter – if you don't understand the content then ask them to explain it to you – 'teaching' you helps them to reinforce their learning.
- Test them regularly on the spellings of key words until they are perfect. Get them to make a glossary (list) of key words with definitions or a list of formulae.
- Read sections out to them, missing out key words or phrases that they have to fill in. Miss out more and more until they are word perfect.

How the booklet is organised

The knowledge organisers are in alphabetical order by subject.

YEAR 8 ART COLOUR

Knowledge Organiser - Term 1 & 2



KEY WORDS

- Primary
- Secondary
- Tertiary
- Complementary
- Highlight
- Abstract
- Shadow
- Shade
- Tone
- Cool
- Warm
- Application
- Foreground
- Background

SKILLS

- Colour theory
- Colour mixing
- Colour application
- Design
- Presentation
- Composition
- Artist analysis

Colour Theory:

The primary colours are the three main colours. They cannot be made but when mixed together they make all other colours.

The secondary colours are made by mixing two primary colours together

The tertiary colours are made by mixing a primary and secondary colour together.

Complementary colours are opposite on the colour wheel. They contrast each other to have a vibrant look.

To make a lighter colour you add white, this is called a tint.

Artists inspired by colour

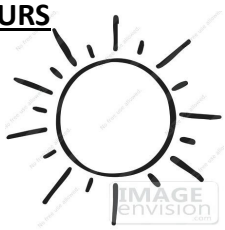
- Claude Monet
- Henri Matisse
- Barbara Rae
- Georgia O'Keeffe
- Mark Rothko
- David Hockney

Warm colours - attract attention and are generally perceived as energetic or exciting.

Cool colours– are generally perceived as soothing and calm.

WARM COLOURS

- RED
- ORANGE
- YELLOW



COOL COLOURS

- BLUE
- GREEN
- VIOLET

KS3 Computing: Computational thinking and spreadsheet software

"Computational thinking allows us to take a complex problem, understand what the problem is and develop possible solutions. We can then present these solutions in a way that a computer, a human, or both, can understand." **BBC**

In other words, computational thinking is understanding a problem, then expressing the solution in the simplest form possible. You will use spreadsheet software to record your working out when solving a problem.

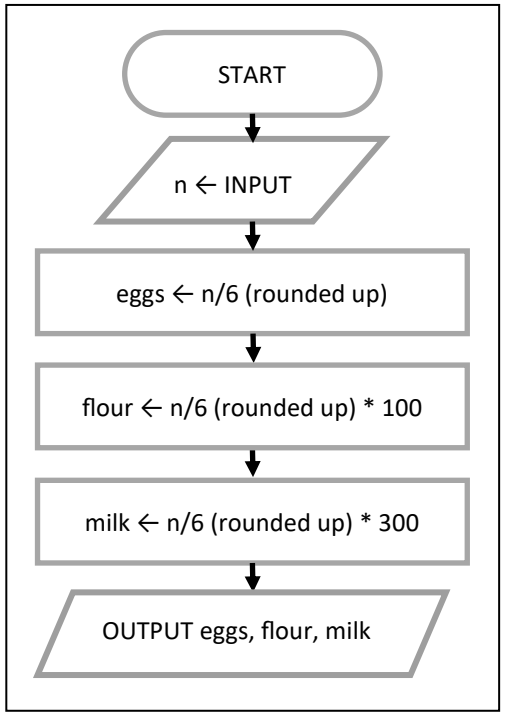
Abstraction	Ignoring unnecessary details when solving a problem. This helps to clarify and understand a problem.
Decomposition	Breaking down a problem into smaller sub-problems that are easier to solve.
Algorithm	A step-by-step process to perform a task or solve a problem.
Input	Data required to make an algorithm work.
Output	Data produced as a result of an algorithm.

Problem: I know a recipe and method for making 6 pancakes. How do I change the recipe if I want to make 12 pancakes? What about 15, or 40?

Pancake batter for 6 : Mix an egg and 100g of flour together. Add 300ml of milk, a little at a time, whilst continuing to mix so the mixture is smooth. Fry

13:46

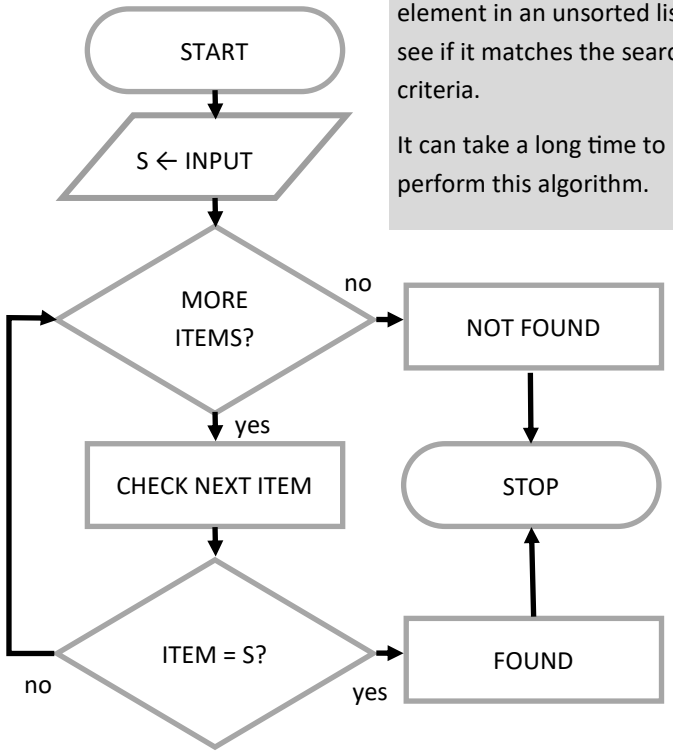
1. **Abstraction.** Ignore anything that is not to do with the quantity of ingredients.
2. **Decomposition.** Work on one ingredient at a time.
3. **Algorithm.** Express the solution as a step-by-step process.



	A	B	C
1	Pancake batter recipe (makes 6)		
2			
3	Eggs	1	
4	Flour	100	grams
5	Milk	300	ml
6			
7	Enter number to make		7
8			
9	You will need:		
10	Eggs	2	
11	Flour	200	grams
12	Milk	600	ml

KS3 Computing: Algorithms

"A step-by-step process to perform a task."



A **linear search** checks each element in an unsorted list to see if it matches the search criteria.

It can take a long time to perform this algorithm.

A **binary search** works by looking for items in an **ordered list**. The middle item is examined and half the list discarded. This happens until there are no items in the list or the item is found. The middle of the list is found by this calculation: 1 + LEN(list) DIV 2, where DIV is *floor division*, ignoring remainders. Here is an example:

A. Search for **77**

B. Examine middle element of list (54)

3	29	34	39	54	57	59	63	77	91

C. 77 > 54, so discard 54 and below

3	29	34	39	54	57	59	63	77	91

D. Examine middle element of list (63)

3	29	34	39	54	57	59	63	77	91

E. 77 > 63, so discard 63 and below

3	29	34	39	54	57	59	63	77	91

F. Examine middle element of list (77). Search item found!

3	29	34	39	54	57	59	63	77	91

A binary search is much more *efficient* than a linear search.

A **merge sort** compares the first item in a two lists, removing the lowest and adding it to a new list.

[40]	[88]	[8]	[2]	[1]	[3]	[54]	[36]
[40,88]		[2,8]		[1,3]		[36,54]	
[2,8,40,88]				[1,3,36,54]			
[1,2,3,8,36,40,54,88]							

A **bubble sort** compares the first two items in a list, swapping if they are in the wrong order. It then moves to the next two items, until the end is reached. This happens repeatedly until there are no more items to swap. One pass through the list sends the highest value to the rear.

77	73	95	22
73	77	95	22
73	77	95	22
73	77	22	95
73	77	22	95
73	22	77	95
22	73	77	95

A bubble sort is much less *efficient* than a merge sort. It will take much longer to carry out on larger lists.

Drama Knowledge Organiser: Year 8

Humpty Dumpty

- Creating and devising performances based around the theme 'Bullying'.
- Basic technique – Tableaux, thought track and hot seating.
- Improvisation- creating a performance on the spot.
- Using a script to create a character on stage.
- Non-naturalistic performance style.
- Sound scape – creating noise using voice and body as an ensemble.
- Engaging the audience through creating a tense atmosphere on stage.

Soap Opera

- Soap Opera is a genre. A radio or television drama dealing with daily events and real life situations.
- Soap opera have stereotypical characters such as: The grandparent, the naughty teenager, the lad and the strong female.
- Storylines reflect real life issues such as mental health, marriages and death.
- Role on the wall- develop characterisation.
- Crosscutting – Two scenes happening at the same time with a split stage.
- Marking the moment – highlighting an important moment in the play.

Christmas Carol

- An interpretation of the book 'A Christmas Carol' about a rich and selfish man called 'Scrooge'.
- Charles Dickens is a writer, journalist and editor in the 1800's.
- Role-play – acting out scenes from the book to develop characterisation.
- Scrooge- selfish, cruel and stubborn who has pushed his family away. His personality changes after Christmas to a joyful and selfless man who appreciates his family.
- Tiny Tim – A character who is disabled and needs the help of his uncle.
- The Ghosts – Christmas past, present and future.

Blood Brothers

- Willy Russle wrote the play Blood Brothers in the 1970's.
- The main characters are Edward and Mickey; two twins separated by birth.
- Mrs Johnstone and Mrs Lyons demonstrate the class divides in Liverpool at the time. They are both the parents of the boys.
- Linda is both brothers' best friend and Mickey's future wife.
- Prologue – Piece of text before the action explaining what is about to happen.
- Musical theatre- Theatre created with song.

STUDYING DRAMA THROUGH TEXT

- Understanding language and dialogue to interpret plot and character
- Monologues – One-character revealing information to an audience
- Exploring how characters develop as the plot progresses
- What is the purpose of the play? Why was it written?

Borstal

- Borstal is a youth offending prison in the early 1900's.
- Monologue – One speech on stage in character telling the audience about yourself.
- Non- naturalistic style – Tableaux, thought tracking, transitions, ensemble and narration.
- Teacher in role – teacher acting in role to create a sense of realism for the students.
- Script writing – to develop a monologue using stage directions.
- Research into real life people using real life accounts.

KEY WORDS FOR YEAR 8 DRAMA

Pitch	Pace	Pause	Volume	Tone	Diction
Choral Speaking	Role on the wall	Gait	Body Language	Facial Expression	Posture
Cross – cutting	Marking the moment	Direct Address	Interpretation of text	Genre	Style

Year 8 Design & Technology (Textiles) Knowledge Organiser

Sustainable Children's Toy

Key Skills

- Responding to a Design Brief
- Analysing existing products
- Identifying a target audience
- Designing & annotating to include a range of a range of decorative and construction techniques
- Demonstrating ability to complete decorative techniques:
  - Appliqué
  - Reverse appliqué
  - Embroidery stitches (running stitch, blanket stitch, french knots)
  - Hand sewing (slip stitch)
- Using a sewing machine to complete a range of construction techniques:
  - 3D features
  - Inserting wadding
  - Applying buttons & beads
  - Seams & bagging out

Product features	
Features are in proportion	Machine appliqué or reverse appliqué
Interactive	Creative
Components used as decoration	Even seam allowance
Sensory fabrics used	Accurate machine stitches
3D features	Consideration of a specified target market
Hand embroidery	Educational elements

Health & safety
Follow teacher instructions
Move slowly around the room do not run
Tie long hair back
Hold scissors or shears correctly when walking around the room.
Only one person operating a sewing machine at one time
Never use a sewing machine unless supervised by a teacher/ technician
Turn off the sewing machine when not in use.
Report any injuries or breakages to the teacher immediately

Key vocabulary	
Interactive	Components or features that can be attached/detached or have different textures.
Materials	What the product is made from?
Components	The parts/materials/threads needed to make a product.
3D features	Use of wadding to make a feature stand up or raised off the backing fabric
Function	What a product does, how it works and what it will be used for?
Aesthetics	How a product or design looks?
Target Audience	The person or people most likely to be interested or use your design or product.
Embroidery	Even stitch widths and lengths completed by sewing by hand or machine
Reverse appliqué	A decorative technique whereby a fabric placed on the back and visible on the front and is sewn in place by hand or machine.
Sensory	A product that has a variety of textures, components that make noises, the use of Microencapsulated material (has a scent) & is attractive to look at.
Appliqué	A decorative technique whereby one material is sewn on top of another by hand or machine.
Design Brief	An written outline which explains the aims and objectives and milestones of a design project.

Year 8 Cooking & Nutrition Mediterranean Cuisine Knowledge Organiser

design technology

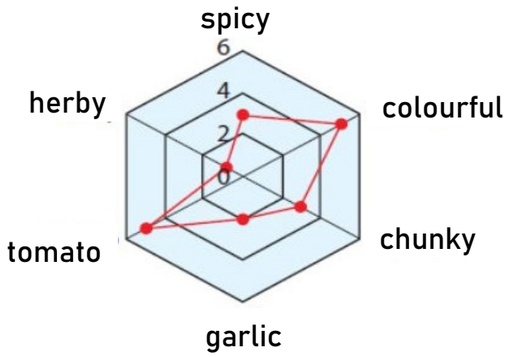
Food Hygiene

Cross-contamination is the transfer of harmful bacteria to food from other foods, cutting boards, utensils, etc., if they are not handled properly.

- Contaminants can be transferred
  - Indirectly
    - Hands
    - Equipment
    - Work surfaces
    - Food contact surface (chopping boards & knives
  - Directly
    - When one food ouches or drips onto another

Sensory Testing/Star Profile Charts

- These kind of tests can be used to find out what people particularly like about a food product to help build up a profile of it according to a range of sensory qualities such as saltiness, smoothness, crispiness, flavour.
- Star profile –This type of test gets testers to describe the appearance, taste and texture of a food product on a star chart.



Hygiene & Safety Rules
Tie up long hair
Wear an apron
Tuck tie in
Wash hands
No running
Use oven gloves when necessary
Clean practical equipment thoroughly

Key abbreviations: Weights and Measurements		
L	Litres	
g	Grams	
ml	millilitres	1000ml =1 litre
Kg	kilograms	1000g
Tbsp	tablespoons	15ml
Tsp	teaspoon	5ml
1pt	1 pint	568ml

Bread Production Flow Chart

Flour and Other Ingredients
↓
Weighing
↓
Mixing → Resting
↓
Kneading
↓
Dividing/Moulding
↓
Proofing
↓
Baking → Cooling → Slicing
↓
Packaging

Key vocabulary	
Design Brief	An written outline which explains the aims and objectives and milestones of a design project.
Task Analysis	Breaking a design brief down to understand the requirements of the task.
Target Audience	The person or people most likely to be interested in your design or product.
Mediterranean Cuisine	Food from the countries that surround the Mediterranean Sea.

Example Time Plan

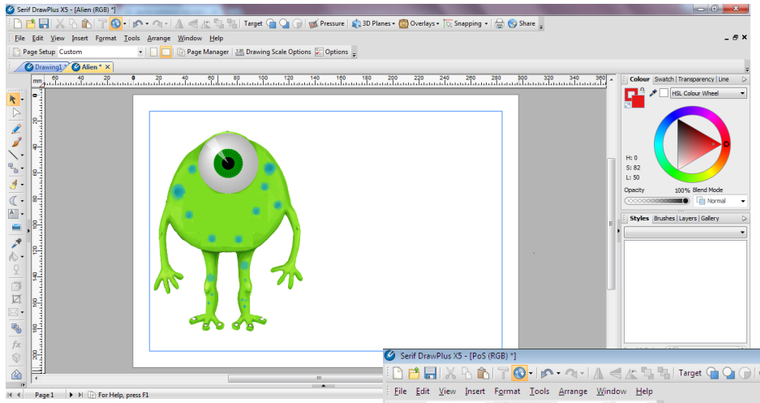
Time	Process	Hygiene & Safety
8:50 – 9:00	Collect all equipment and ingredients. Wash hands.	Is fridge 0°C - 4°C?
9:00 – 9:15	Dice onion, peppers and mushrooms.	Use a green chopping board. Use bridge and claw techniques.
9:15 – 9:30	Thread vegetables onto a skewer. Make dressing.	Ensure skewer has been soaked in cold water.

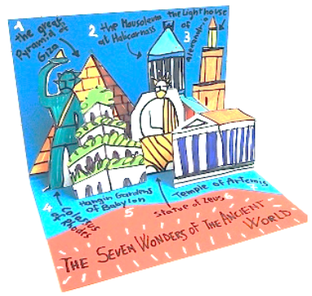
Year 8 Design & Technology (Graphic Products) Knowledge Organiser

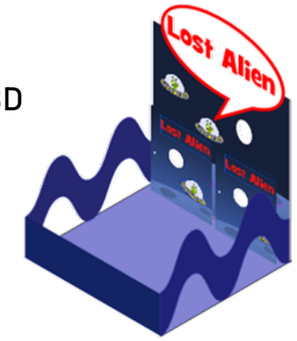
Pop Up Story Book

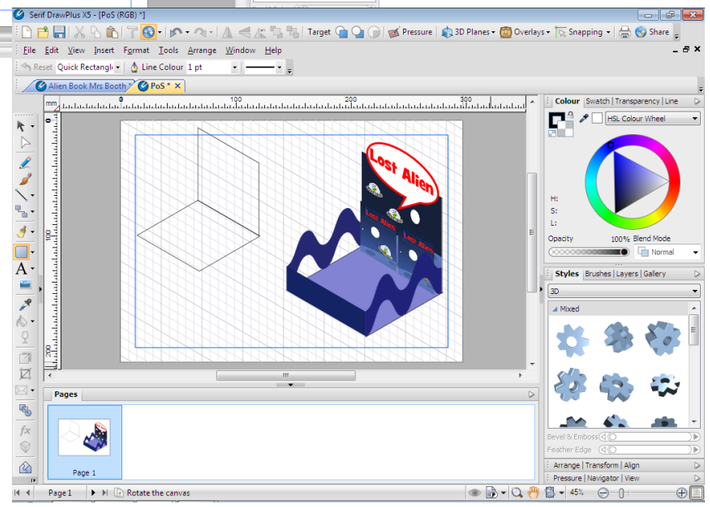
Key Skills

- Responding to a Design Brief
- Analysing & researching information
- Creating a suitable and appealing story idea for an identified target audience
- Developing CAD drawing skills using:
  - Serif Draw Plus
- Manipulating/ editing images & graphics in 2D & 3D
- Rendering shapes, images with colour & texture
- Layout & placement of images and text to scale
- Developing & testing Pop-Up mechanisms
- CAD modelling & presentation skills
- Using a Stanley knife (cutting mat, safety ruler) to cut, score & fold
- Manufacturing with modelling materials (card & paper)
- Marketing - point of sale display design
- Evaluating the design & making process





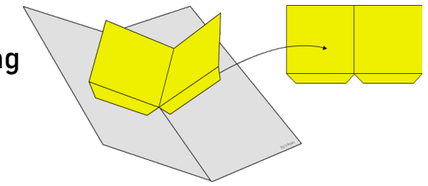




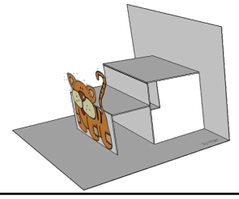
Paper Engineering

Pop-Up mechanisms provide movement to make parts work together

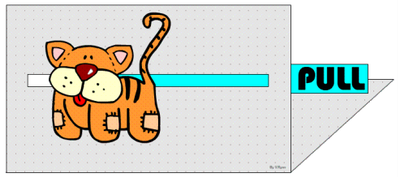
V Folds
Reciprocating movement



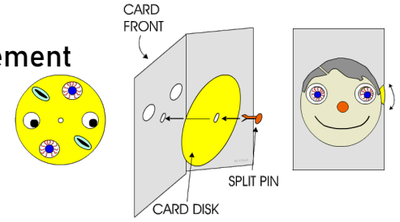
Parallelograms
Reciprocating movement

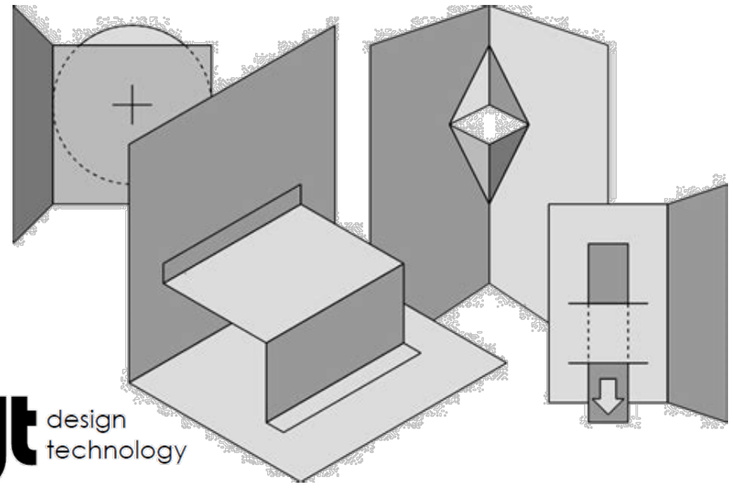


Pull Strips
Reciprocating movement



Pivots
Rotating movement





Key vocabulary

Design Brief	An written outline which explains the aims and objectives and milestones of a design project.
Target Audience	The person or people most likely to be interested in your design or product.
Function	What a product does, how it works and what it will be used for?
Aesthetics	How a product or design looks
CAD	Computer aided design
Rendering	The process of adding shading, colour, texture or material to a drawing.
Materials	What something is made from e.g. paper & card.
Modelling	To present ideas to the user (target audience) or client.
Point of sale display	A specialised form of sales promotion found near or next to a checkout to draw the customers' attention to the products,

design technology

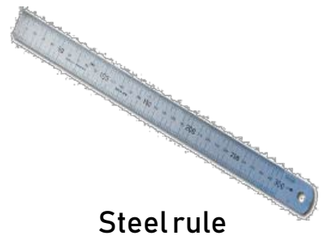
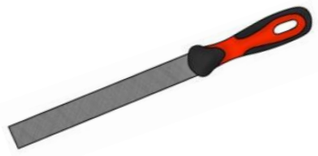
Year 8 Design & Technology (Product Design) Knowledge Organiser

Picture Frame Clock Design

Key Skills

- Responding to a Design Brief & identifying an audience
- Developing CAD skills using 2D Design tools to create a clock face design appropriate for a target audience
- Applying Health & Safety procedures and PPE in the workshop environment
- Identify specific workshop tools and equipment
- Developing practical skills to create lap & rebate joints to join materials
- Knowledge of specific timbers & their origins
- Inserting a clock mechanism
- Prototype modelling including finishing & presentation skills
- Evaluating the manufacturing process

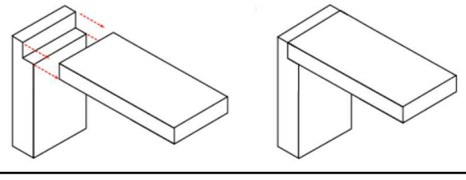
Tools for working with Timber

 Try square	 Bench vice
 Steel rule	 Marking gauge
 Tenon saw	 File
 Belt & Disc Sanders	 Coping Saw
 Bench hook	 Pillar drill

Joining materials – construction techniques

Lap & Rebate joints

A lap or rebate joint is where two pieces of material overlap. This joint can be used to join wood, plastic, or metal.



Key vocabulary

Function	What a product does, how it works and what it will be used for?
Target Audience	The person or people most likely to be interested in your design or product.
Wood grain	Wood grain is the pattern made by the wood fibres in trees when it grows.
Materials	What something is made from.
Clock mechanism	This is the engine of a watch that makes the clock and its functions work.
Finishing	The process of applying a finish to preserve or protect a material & improve aesthetics.
Modelling	To present ideas in 2D & 3D to the user (target audience) or client.
Prototype	A prototype is a model that is built to test to see if it is successful or whether it needs further modification or improvements.
PPE	Personal protective equipment are items such as goggles and aprons.

Timber is a natural material with imperfections, knots and grain – always sand with the grain

Softwood 	From coniferous trees that are evergreen, which are faster to grow and are less expensive than hardwoods. Softwoods are a sustainable material as the resource can be regrown and not depleted. Softwoods are strong and easy to work with.

Manufactured boards are timber produced by gluing wood layers or wood fibres together.

Medium Density Fibreboard 	Medium Density Fibreboard or also known as MDF is made from wood fibres which are glued together. MDF has a smooth even surface which makes it easier to work than natural timber.

ENGLISH KNOWLEDGE ORGANISER: TRAVEL WRITING

YEAR: 8 **UNIT: 1**

TYPES OF TRAVEL WRITING

Guide books: books and websites for tourists or travellers that provides details about a geographic location, tourist destination, or itinerary. It is the written equivalent of a tour guide.

Travel journals and blogs: Generally in diary form, a travel journal contains descriptions of the traveller's experiences, and is normally written during the course of the journey, with the intention of updating friends or family on the journey. Travel journals may be published in printed form, or online as blogs.

Information of travel and destinations can also be found in **travel brochures** and guides. **Reviews** can be found online for destinations. Even **postcards** can be viewed as travel writing as they describe travellers' experiences.

STYLE

INSTRUCTIVE: Providing information

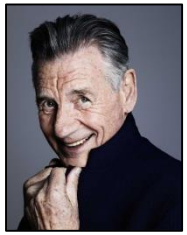
EVOCATIVE: Capturing the emotions of an experience

NARRATIVE: Retelling of events, stories and anecdotes from travel experiences

DESCRIPTIVE: Providing detailed information of the settings, experiences and people met on travel experiences

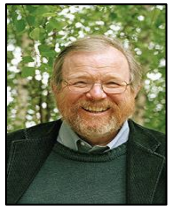
POPULAR TRAVEL WRITERS

MICHAEL PALIN (1943 -)



Michael Palin is a popular English writer, actor and comedian. He found fame as part of Monty Python but later in his career produced a number of travel programmes – and accompanying books – for the BBC. His books include: *Around the World in 80 Days*, *Pole to Pole*, *Himalaya*, *Sahara* and *Brazil*.

BILL BRYSON (1951 -)



Bill Bryson is a very popular travel writer from America. Some of his most popular pieces of travel writing are: *Notes from a Small Island* which is all about the UK and *A Walk in the Woods* which was also made into a film.

GEORGE ORWELL (1903-1950)

While famous for his political and journalistic writing, Orwell travelled extensively. He wrote about the working classes in Northern England in *The Road to Wigan Pier*, about Paris in *Down and Out in Paris*, fighting in the Spanish Civil War in *Homage to Catalonia* as well as his experiences in Burma as a policeman where he had to shoot an elephant to protect the villagers.

CONVENTIONS OF TRAVEL JOURNAL WRITING

First person narrative	Humour	Clear narrative structure	Exclamation
Detailed descriptions	Facts as well as opinions	References to the senses	Use of the past tense
Temporal (time) connectives	Dramatic tension	Emotive language	Dialogue

KEY SPELLINGS FOR THIS SCHEME OF WORK

Modes	instructive	conventions	juxtaposition	prioritises
guide book	narrative	Structural Analysis	parallel	exposition
blog	evocative	foregrounds	sequence	complication
journal	descriptive	foreshadows	zoom in/zoom out	narrative shift

ENGLISH KNOWLEDGE ORGANISER: SHAKESPEAREAN TRAGEDY AND HISTORY

YEAR: 8 UNIT: 2

HAMLET – A REVENGE TRAGEDY

FIRST PERFORMED: circa 1600
PROTAGONIST: Prince Hamlet
SETTING: Elsinore Castle, in Denmark; medieval era

OTHER SIGNIFICANT CHARACTERS:
Claudius: Hamlet's uncle, and the new king; the antagonist who murdered Old Hamlet
Gertrude: Hamlet's mother, the Queen
Horatio: Hamlet's friend and confidant
Ophelia: Hamlet's girlfriend; she is driven mad
Laertes: Ophelia's brother; a foil for Hamlet as he is driven to revenge
Polonius: Father of Ophelia and Laertes; the Lord Chamberlain
The Ghost: Hamlet's father returns to tell him that he was murdered by his brother

THEMES:
- Madness
- Revenge and Delay
- Death
- Parent-child relationships
- Machiavellian politics

WHY THE PLAY IS A TRAGEDY:
Hamlet is a noble prince whose flaw (hamartia) is his inability to enact the revenge on his Uncle that his father wants.

ROMEO AND JULIET – A TRAGIC ROMANCE

FIRST PERFORMED: circa 1595
PROTAGONISTS: Romeo Montague and Juliet Capulet
SETTING: Verona, in Italy; medieval era

OTHER SIGNIFICANT CHARACTERS:
The Capulet family: Juliet's family
The Montague family: Romeo's family; bitter rivals with the Capulets
Tybalt: Juliet's cousin who hates the Montagues
Mercutio: Mercurial and unpredictable (like his name); Romeo's best friend
The Friar: Secretly marries Romeo and Juliet and creates a plan to help them be together after Romeo's banishment

THEMES:
- Love
- Parent-Child relationships
- Family rivalries
- Hastiness

WHY THE PLAY IS A TRAGEDY:
Romeo is a noble man whose flaw (hamartia) is being overhasty and reckless. He makes a lot of decisions that would have benefitted from reflection rather than acting on his emotions – mainly love and anger.

RICHARD III – A HISTORY

FIRST PERFORMED: circa 1593
PROTAGONIST: Richard III
SETTING: England; 1483-1485

OTHER SIGNIFICANT CHARACTERS:
Richmond: The future Henry VII
Edward IV: the dying King
George, Duke of Clarence: the middle of the York brothers who Richard has killed
The Princes: The sons (and heirs) of Edward IV who were famously murdered in the Tower of London
The Duke of Buckingham: a loyal supporter of Richard until he goes too far
There are also a number of significant historical figures, including Duchess Cecily, Elizabeth Woodville, Margaret Beaufort and Anne Neville who all conspire against Richard.

WHY THE PLAY IS AN INTERESTING HISTORY:
This play has influenced how we have viewed Richard III, as a hunchbacked Machiavellian tyrant. He is perhaps the chief suspect in the murder of the princes but not the only one. This play also claims him responsible for many other murders, including his own wife, Anne Neville. There is no historical proof of this. This play can be seen as tutor propaganda because Henry VII, who defeated Richard at the Battle of Bosworth, was Elizabeth I's grandfather. Shakespeare wouldn't have wanted to displease the queen would he!

TRAGIC CONVENTIONS

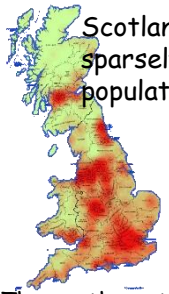
According to Aristotle, the famous Greek philosopher, a tragedy should feature a tragic hero of noble birth and whose fortunes go from good to bad because of a flaw (hamartia) that they have. The tragic hero always dies as a consequence.

KEY SPELLINGS FOR THIS SCHEME OF WORK

Aristotle	hubris	dialogue	Machiavellian	Elizabethan
tragedy/tragic hero	revenge	gesture	exposition	propaganda
catharsis	soliloquy	stichomythia	climax	political
hamartia	aside	melancholy	denouement	dramaturgical

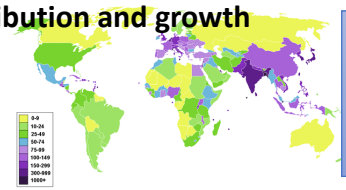
Year 8 Geography
Unit 1: Population and Migration

Lesson 1-3: Distribution and growth



Scotland – sparsely populated

The south east of England= densely populated

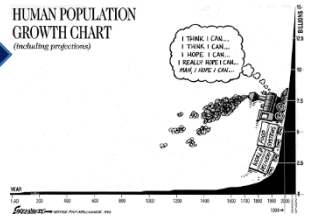


UK and world population density

Densely populated	Sparsely populated
Fertile soil Jobs Flat/ gently sloping land Natural resources Good transport links/ close to other places	Too hot/ cold Steep relief Little industry Poor soils Poor transport links

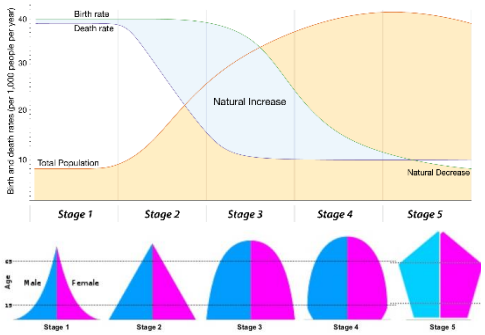
Population growth = overpopulation

Problems with population growth: Overcrowding, distribution of resources (food/water), aging populations



Skills= choropleth maps (see the world map). The darker the colour, the higher the value of an area

Lesson 4-6: Pyramids and DTM



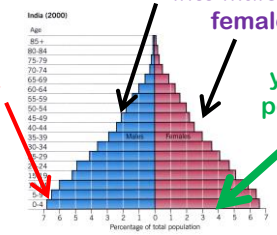
The shape changes based on how develop a country is.
This links to the 5 stages of the DTM.
Factors to consider:
Family planning, Children needed for farming, Improvements in sanitation and healthcare , Emancipation of women (women's rights), Later marriages, Religious believes
Better food/water supply

Skills= Population pyramids

The data is sorted into different age groups

They are divided up into males and females

The youngest people are at the bottom



Lesson 7-8: Aging Population

WHY: life expectancy has increased due to better health care

PROBLEMS: increase pressure on healthcare and money spent on pensions

Lesson 14-15: One Child Policy

1979. To control population/ reduce growth rate

- +ve= famine never happened/ economic growth
- -ve = gender imbalance, abortions, 'little emperors', aging population

Lesson 9-13: Migration

- *Voluntary* = Poland to UK (legal); Mexico to USA (Illegal)
- *Forced*= Refugee (E.G. Darfur/ Syria) Refugees are forced to migrate due to war/ instability or a natural disaster

Push factors = push AWAY (bad)

Pull factors= pull TOWARDS (good)

Impacts (similar for both types of voluntary migration)

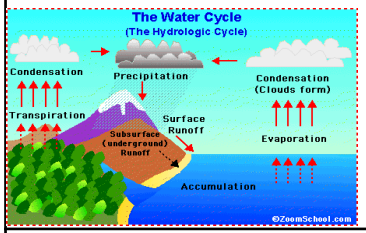
Skills=Histogram

	UK	Poland	People
Advantages	Help economy (jobs/ hard working) Cultural diversity	Less pressure on services Women= more job opportunities	Better paid jobs Money sent back home
Disadvantages	Conflict Overcrowding Pressure on services	Brain drain- less skilled worker Negative effect on economy	Exploitation- work very long hours Families separated

	Definition
Birth Rate	The number of births in a year per 1000 of the total population.
Death Rate	The number of deaths in a year per 1000 of the total population.
Demographic Transition Model	A model showing how populations should change over time in terms of their birth rates, death rates and total population size.
Infant mortality	The average number of deaths of infants under 1 year of age, per 1000 live births, per year.
Life expectancy	The average number of years a person might be expected to live.

Year 8 Geography
Unit 2: River Landscapes

Lesson 1-3



The water cycle is the never ending movement of water from the **air** to the **land**, to the **sea** and back to the air again. This continues over and over. Key transfers of water from these three areas are Surface Runoff, Evaporation, Precipitation and Transpiration.

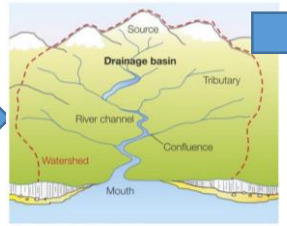
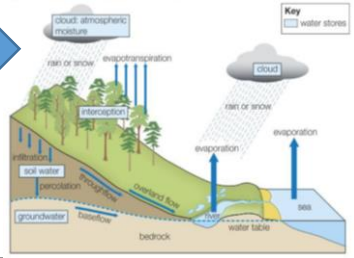
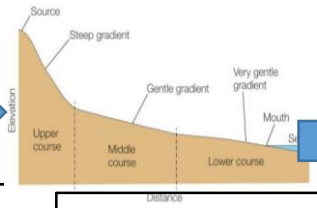


Figure 1 The drainage basin



Lesson 4-6

The **long profile** shows the side view of the river from **source** to **mouth**. It is steepest in the upper course and more gentle in the middle and lower course. However, the river is slower in the upper course – Know why!



Erosion = Abrasion and Hydraulic Action
Transport = Traction Suspension
Deposition = Dropping of material

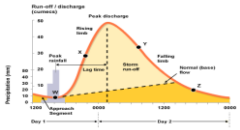
Upper Course landforms like a waterfall is formed when soft rock gets eroded quicker than hard rock and leaves a cliff . Here the soft rock undercuts the hard rock until it collapses into a plunge pool beneath.

Lesson 9-11

Middle course landforms are meanders and sometimes oxbow lakes.
These are bends in a river that get larger to faster moving water and erosion on the outside of the bend.

In the lower course the land is flat on each side of the river, this is where flooding can occur. This is called a floodplain. Farming takes place here and the floods deposit Nutrients which is good for crops.

Flooding can be caused be different features of a drainage basin. Eg steep slopes



Hydrographs!

Lesson 12,14 – 16 HIC FLOODING EXAMPLE

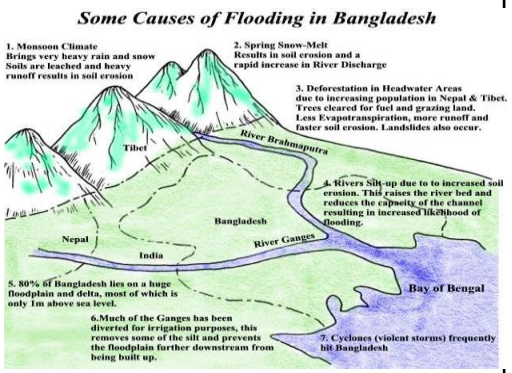
Boscastle floods in 2004 devastated the village in August.
A flash flood caused by natural and human reasons.
The effects were environmental, social and economic.
Since then a number of hard and soft management methods have been used to prevent this happening again.

HARD

SOFT

Lesson 17-18 LIC FLOODING EXAMPLE

Bangladesh flooding in 2012 devastated large parts of this very flat country. Natural and human causes are responsible for this. However, the effects are often a lot more serious – For example people rely on crops for food. Also flood water contaminates well water and cholera spreads.
Despite being a LIC Bangladesh has installed a number of basic but often effective flood protection methods – E.g. Earth Embankments, Stilt houses, Flood shelters and basic warning systems. Each has advantages and disadvantages. Which is best? Which are given by Aid?



KEYWORDS

LOOK
SAY
COVER
WRITE
CHECK

	Definition
Drainage Basin	An area of land drained by a main river channel and it's tributaries.
Water Cycle	Where water is moved from the Air to the Land and then to the Sea in a never ending cycle.
Long Profile	The side view of a river from source to mouth. Then it enters the sea.
Meander	This is a bend in a river in the middle section usually.
Hard Engineering	Where expensive methods using concrete and steel are used to stop flooding.
Soft Engineering	Less expensive natural ways are used to cope with floods.

HISTORY - What was it like to live in Renaissance Britain?

Big Question – How did life change for the people of Britain during the Renaissance?

Timeline of Key Events

1588
Spain tried to invade England. Spain's Armada failed and Queen Elizabeth celebrated a famous victory.

1605
Guy Fawkes and the Gunpowder Plotters were discovered planning to blow up the King and his Parliament in an attempt to make England Catholic again.

1642
A Civil War between supporters of King Charles I and supporters of Parliament broke out.

1649
Parliament won the Civil War and King Charles was executed.

1653
Oliver Cromwell led England as a Republic. He gave himself the title of Lord Protector and aimed to make England a strict Protestant country. The Monarchy was restored after Cromwell died in 1660.

1665
Great Plague hits London.

1666
Great Fire of London

1689
The Bill of Rights was agreed. The Bill gave people living in England, and eventually the UK, rights protected by law and created some really important political changes.

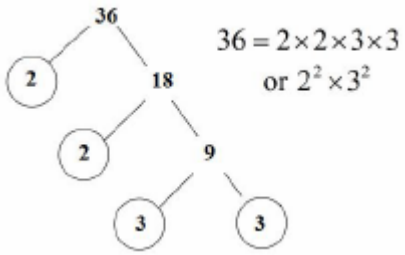
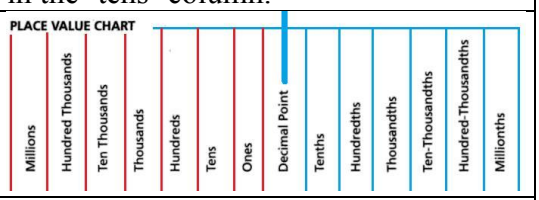
Assessment Objectives

- To **reach a judgement** about how successful a Monarch Elizabeth I was.
- To know and understand how religious change **caused** conflict for James I.
- To learn about the **causes** of the English Civil War.
- To learn about the **consequences** of Cromwell's victory in the Civil War.
- To understand the role of Parliament today and what makes the Bill of Rights **significant**.

Keyword	Definition
Renaissance	Rebirth
Monarch	A sovereign Head of State
Parliament	A body of government that represents the people, makes laws and governs.
Republic	A state without a Monarch
Catholic	Christians that follow the authority of the Pope
Protestant	Christians that don't follow the authority of the Pope
Puritan	A strict Protestant
Civil War	A war between two groups in the same country
Battle	A fight between two armed forces
Execution	The planned killing of an individual
Disease	A disorder in living things
Heir	Next in line for a position of power
Invention	A new device
Useful Websites	http://www.bbc.co.uk/bitesize/ks3/history/tudors_stuarts/ https://www.bbc.com/education/topics/zynp34j https://www.historyonthenet.com/the-tudors-monarchs/

Key People	
Elizabeth I	
King Philip of Spain	
Charles I	
Oliver Cromwell	
Archbishop Laud	
Charles II	

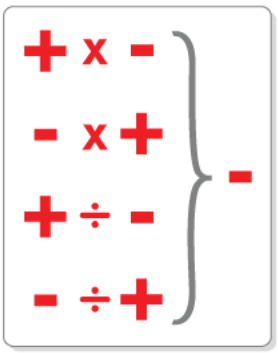
Year 8: Numbers and the Number System

Topic/Skill	Definition/Tips	Example
1. Multiple	The result of multiplying a number by an integer. The **times tables** of a number.	The first five multiples of 7 are: $7, 14, 21, 28, 35$
2. Factor	A number that **divides exactly** into another number without a remainder. It is useful to write factors in pairs	The factors of 18 are: $1, 2, 3, 6, 9, 18$ The factor pairs of 18 are: $1, 18$ $2, 9$ $3, 6$
3. Lowest Common Multiple (LCM)	The **smallest** number that is in the **times tables** of each of the numbers given.	The LCM of 3, 4 and 5 is 60 because it is the smallest number in the 3, 4 and 5 times tables.
4. Highest Common Factor (HCF)	The **biggest** number that **divides exactly** into two or more numbers.	The HCF of 6 and 9 is 3 because it is the biggest number that divides into 6 and 9 exactly.
5. Prime Number	A number with **exactly two factors**. A number that can only be divided by itself and one. The number **1 is not prime**, as it only has one factor, not two.	The prime numbers up to 50 are: $2, 3, 5, 7, 11, 13, 17, 19, 23,$ $29, 31, 37, 41, 43, 47$
6. Prime Factor	A factor which is a prime number.	The prime factors of 18 are: $2, 3$
7. Product of Prime Factors	Finding out which **prime numbers multiply** together to make the **original** number. Use a **prime factor tree.** Also known as 'prime factorisation'.	
8. Place Value	The **value** of where a **digit** is within a number.	In 726, the value of the 2 is 20, as it is in the 'tens' column.
9. Place Value Columns	The names of the columns that **determine the value of each digit**. The 'ones' column is also known as the 'units' column.	
10. Rounding	To make a number simpler but keep its value close to what it was. If the **digit to the right** of the rounding digit is **less than 5, round down**. If the **digit to the right** of the rounding digit is **5 or more, round up**.	74 rounded to the nearest ten is 70, because 74 is closer to 70 than 80. 152,879 rounded to the nearest thousand is 153,000.

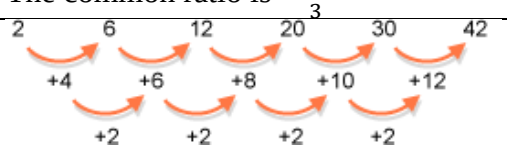
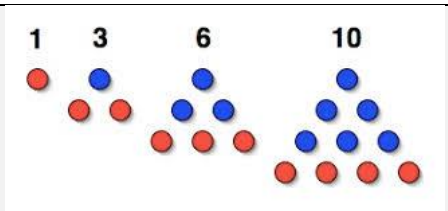
Year 8: Numbers and the Number System

11. Decimal Place	The **position** of a digit to the **right of a decimal point**.	In the number 0.372, the 7 is in the second decimal place. 0.372 rounded to two decimal places is 0.37, because the 2 tells us to round down. Careful with money - don't write £27.4, instead write £27.40
12. Significant Figure	The significant figures of a number are the digits which **carry meaning** (ie. are significant) to the size of the number. The **first significant figure** of a number **cannot be zero**. In a number with a decimal, trailing zeros are not significant.	In the number 0.00821, the first significant figure is the 8. In the number 2.740, the 0 is not a significant figure. 0.00821 rounded to 2 significant figures is 0.0082. 19357 rounded to 3 significant figures is 19400. We need to include the two zeros at the end to keep the digits in the same place value columns.
13. Estimate	To find something **close to the correct answer**.	An estimate for the height of a man is 1.8 metres.
14. Approximation	When using approximations to estimate the solution to a calculation, **round each number in the calculation to 1 significant figure**. ≈ means 'approximately equal to'	$\frac{348+692}{0.526} \approx \frac{300+700}{0.5} = 2000$ 'Note that dividing by 0.5 is the same as multiplying by 2'
15. Standard Form	$\boldsymbol{A \times 10^{b}}$ $\boldsymbol{where\ 1 \leq A < 10,}$ $\boldsymbol{b = integer\ (whole\ number)}$	8400 = 8.4 x 10^{3} 0.00036 = 3.6 x 10^{-4}

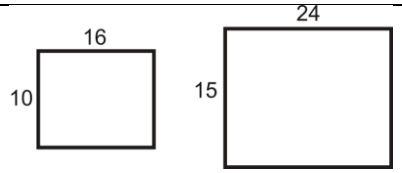
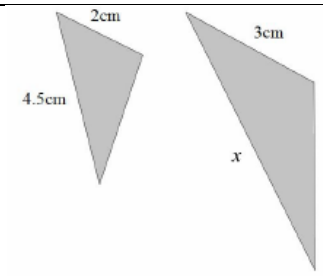
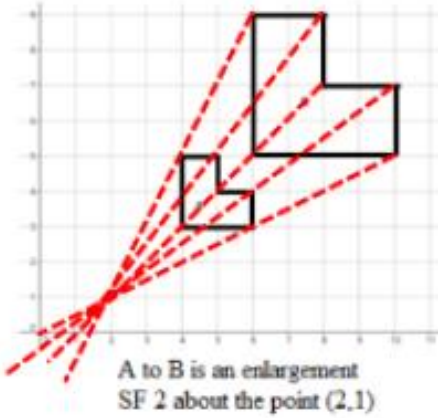
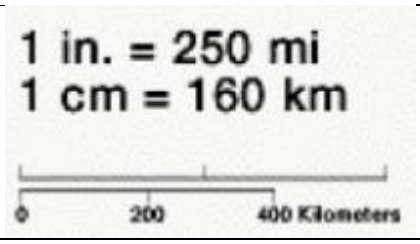
Year 8: Calculations

Topic/Skill	Definition/Tips	Example
1. Negative Number	A number that is **less than zero**. Can be decimals.	$-8, -2.5$
2. BIDMAS	An acronym for the **order** you should do calculations in. BIDMAS stands for **'Brackets, Indices, Division, Multiplication, Addition and Subtraction'**. Indices are also known as 'powers' or 'orders'. With strings of division and multiplication, or strings of addition and subtraction, and no brackets, work from left to right.	$6 + 3 \times 5 = 21, not\ 45$ $5^2 = 25$, where the 2 is the index/power. $12 \div 4 \div 2 = 1.5, not\ 6$
3. Substitution	**Replace letters with numbers**. Be careful of $5x^2$. You need to square first, then multiply by 5. When using a calculator to substitute, put any substituted value into brackets.	$a = 3, b = 2\ and\ c = 5$. Find: 1. $2a = 2 \times 3 = 6$ 2. $3a - 2b = 3 \times 3 - 2 \times 2 = 5$ 3. $7b^2 - 5 = 7 \times 2^2 - 5 = 23$ e.g. a = -5, calculate the value of $3a^2$- 2a $3x(-5)^2$- 2x(-5) = 85
4. Adding and Subtracting Negative Numbers	Adding a negative is equivalent to subtracting. Subtracting a negative is equivalent to adding. + - → - - - → +	5 + - 2 = 5 – 2 = 3 5 - - 2 = 5 + 2 = 7 -5+-2 = -5 -2 = -7 -5 - - 2 = -5 + 2 = -3
5. Multiplying and Dividing Negative Numbers	• When the signs are different the answer is negative. • When the signs are the same the answer is positive.  	6 x -2 = -12 -6 x -2 = 12 6 ÷ -2 = -3 -6 ÷ -2 = 3

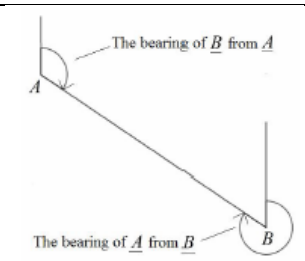
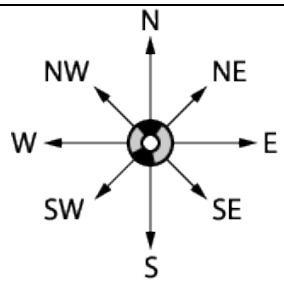
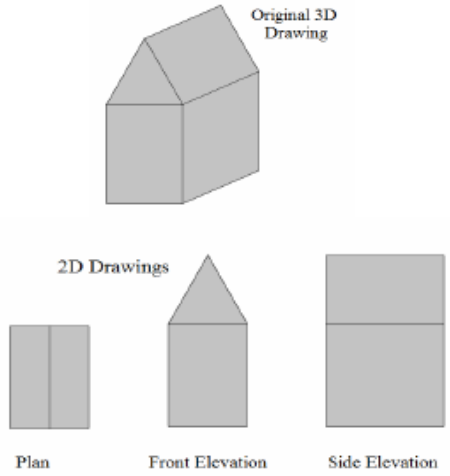
Year 8: Sequences

Topic/Skill	Definition/Tips	Example
1. Linear Sequence	A number pattern with a **common difference**.	2, 5, 8, 11… is a linear sequence
2. Term	**Each value** in a sequence is called a term.	In the sequence 2, 5, 8, 11…, 8 is the third term of the sequence.
3. Term-to-term rule	A rule which allows you to **find the next term** in a sequence if you **know the previous term**.	First term is 2. Term-to-term rule is 'add 3' Sequence is: 2, 5, 8, 11…
4. nth term	A rule which allows you to **calculate the term** that is in the **nth position** of the sequence. Also known as the 'position-to-term' rule. **n** refers to the **position** of a term in a sequence.	nth term is $3n - 1$ The 100th term is $3 \times 100 - 1 = 299$
5. Finding the nth term of a linear sequence	1. Find the **difference**. 2. **Multiply that by n**. 3. Substitute $n = 1$ to **find out what number you need to add or subtract to get the first number in the sequence**.	Find the nth term of: 3, 7, 11, 15… 1. Difference is +4 2. Start with $4n$ 3. $4 \times 1 = 4$, so we need to subtract 1 to get 3. nth term = $4n - 1$
6. Fibonacci type sequences	A sequence where the next number is found by **adding up the previous two terms**	The Fibonacci sequence is: 1,1,2,3,5,8,13,21,34 ... An example of a Fibonacci-type sequence is: $4, 7, 11, 18, 29$ ...
7. Geometric Sequence	A sequence of numbers where each term is found by **multiplying the previous one** by a number called the **common ratio, r**.	An example of a geometric sequence is: $2, 10, 50, 250$ ... The common ratio is 5 Another example of a geometric sequence is: $81, -27, 9, -3, 1$ ... The common ratio is $-\frac{1}{3}$
8. Quadratic Sequence	A sequence of numbers where the **second difference is constant**. A quadratic sequence will have a n^2 term.	
9. Triangular numbers	The sequence which comes from a pattern of dots that form a triangle. $1, 3, 6, 10, 15, 21$ ...	

Year 8: Visualising and Constructing

Topic/Skill	Definition/Tips	Example
1. Similar Shapes	Shapes are similar if they are the **same shape but different sizes**. The proportion of the matching sides must be the same, meaning the ratios of corresponding sides are all equal.	
2. Scale Factor	The **ratio of corresponding sides** of two similar shapes. To find a scale factor, **divide a length** on one shape **by the corresponding length** on a similar shape.	 Scale Factor = $15 \div 10 = 1.5$
3. Finding missing lengths in similar shapes	1. Find the **scale factor**. 2. **Multiply or divide** the corresponding side to find a missing length. If you are finding a missing length on the larger shape you will need to multiply by the scale factor. If you are finding a missing length on the smaller shape you will need to divide by the scale factor.	 Scale Factor = $3 \div 2 = 1.5$ $x = 4.5 \times 1.5 = 6.75cm$
4. Enlargement	The shape will get **bigger or smaller**. Multiply each side by the **scale factor**.	Scale Factor = 3 means '3 times larger = multiply by 3' Scale Factor = ½ means 'half the size = divide by 2'
5. Finding the Centre of Enlargement	Draw **straight lines** through **corresponding corners** of the two shapes. The centre of enlargement is the point **where all the lines cross over**. Be careful with negative enlargements as the corresponding corners will be the other way around.	
6. Scale (Map)	The **ratio** of a **distance on the map** to the actual **distance in real life**.	

Year 8: Visualising and Constructing

7. Bearings	1. Measure from **North** (draw a North line) 2. Measure **clockwise** 3. Your answer must have **3 digits** (eg. 047°) Look out for where the bearing is measured <u>from</u>.	
8. Compass Directions	You can use an acronym such as **'Never Eat Shredded Wheat'** to remember the order of the compass directions in a clockwise direction. Bearings: $NE = 045°, W = 270°\ etc.$	
9. Plans and Elevations	This takes 3D drawings and produces 2D drawings. **Plan View**: from **above** **Side Elevation**: from the **side** **Front Elevation**: from the **front**	

Stage 8: Algebraic Proficiency

Topic/Skill	Definition/Tips	Example
1. Expression	A mathematical statement written using **symbols**, **numbers** or **letters**,	3x + 2 or $5y^2$
2. Equation	A statement showing that **two expressions are equal**	2y – 17 = 15
3. Identity	An equation that is **true for all values** of the variables An identity uses the symbol: ≡	$2x \equiv x+x$
4. Formula	Shows the **relationship** between **two or more variables**	Area of a rectangle = length x width or A= LxW
5. Simplifying Expressions	**Collect 'like terms'.** Be careful with negatives. x^2 and x are not like terms.	$2x + 3y + 4x - 5y + 3$ $= 6x - 2y + 3$ $3x + 4 - x^2 + 2x - 1 = 5x - x^2 + 3$
6. x times x	The answer is x^2 not $2x$.	Squaring is multiplying by itself, not by 2.
7. $p \times p \times p$	The answer is p^3 not $3p$	If p=2, then p^3=2x2x2=8, not 2x3=6
8. $p + p + p$	The answer is 3p not p^3	If p=2, then 2+2+2=6, not $2^3 = 8$
9. Expand	To expand a bracket, **multiply** each term **in the bracket** by the expression **outside** the bracket.	$3(m + 7) = 3x + 21$
10. Factorise	The **reverse** of **expanding**. Factorising is writing an expression as a product of terms by '**taking out' a common factor**.	$6x - 15 = 3(2x - 5)$, where 3 is the common factor.
11. Inverse	**Opposite**	The inverse of addition is subtraction. The inverse of multiplication is division.
12. Rearranging Formulae	**Use inverse operations** on both sides of the formula (balancing method) until you find the expression for the letter.	Make x the subject of $y = \frac{2x-1}{z}$ Multiply both sides by z $yz = 2x - 1$ Add 1 to both sides $yz + 1 = 2x$ Divide by 2 on both sides $\frac{yz + 1}{2} = x$ We now have x as the subject.
13. Writing Formulae	**Substitute letters for words** in the question.	Bob charges £3 per window and a £5 call out charge.

		$C = 3N + 5$ Where N=number of windows and C=cost
14. Substitution	**Replace letters with numbers**. Be careful of $5x^2$. You need to square first, then multiply by 5.	$a = 3, b = 2\ and\ c = 5$. Find: 1. $2a = 2 \times 3 = 6$ 2. $3a - 2b = 3 \times 3 - 2 \times 2 = 5$ 3. $7b^2 - 5 = 7 \times 2^2 - 5 = 23$
15. Multiplication Index Law	When **multiplying** with the same base (number or letter), **add the powers**. $\boldsymbol{a^m \times a^n = a^{m+n}}$	$7^5 \times 7^3 = 7^8$ $a^{12} \times a = a^{13}$ $4x^5 \times 2x^8 = 8x^{13}$
16. Division Index Law	When **dividing** with the same base (number or letter), **subtract the powers**. $\boldsymbol{a^m \div a^n = a^{m-n}}$	$15^7 \div 15^4 = 15^3$ $x^9 \div x^2 = x^7$ $20a^{11} \div 5a^3 = 4a^8$
17. Brackets Index Laws	When raising a power to another power, multiply the powers together. $\boldsymbol{(a^m)^n = a^{mn}}$	$(y^2)^5 = y^{10}$ $(6^3)^4 = 6^{12}$ $(5x^6)^3 = 125x^{18}$
18. Notable Powers	$\boldsymbol{p = p^1}$ $\boldsymbol{p^0 = 1}$	$99999^0 = 1$
19. Negative Powers	A negative power performs the reciprocal. $\boldsymbol{a^{-m} = \frac{1}{a^m}}$	$3^{-2} = \frac{1}{3^2} = \frac{1}{9}$

Year 8: Fractions, Decimals and Percentages

Topic/Skill	Definition/Tips	Example
1. Simplifying Fractions	**Divide the numerator and denominator by the highest common factor**.	$\frac{20}{45} = \frac{4}{9}$
2. Equivalent Fractions	Fractions which represent the **same value**.	$\frac{2}{5} = \frac{4}{10} = \frac{20}{50} = \frac{60}{150}\ etc.$
3. Fractions to Decimals	**Divide the numerator by the denominator** using the bus stop method.	$\frac{3}{8} = 3 \div 8 = 0.375$
4. Decimals to Fractions	**Write as a fraction** over 10, 100 or 1000 and simplify.	$0.36 = \frac{36}{100} = \frac{9}{25}$
5. Percentages to Decimals	**Divide by 100**	$8\% = 8 \div 100 = 0.08$
6. Decimals to Percentages	**Multiply by 100**	$0.4 = 0.4 \times 100\% = 40\%$
7. Fractions to Percentages	Percentage is just a fraction out of 100. **Make the denominator 100 using equivalent fractions**. When the denominator doesn't go in to 100, use a calculator and **multiply the fraction by 100**.	$\frac{3}{25} = \frac{12}{100} = 12\%$ $\frac{9}{17} \times 100 = 52.9\%$
8. Percentages to Fractions	Percentage is just a fraction out of 100. **Write the percentage over 100** and simplify.	$14\% = \frac{14}{100} = \frac{7}{50}$
9. Recurring Decimal	A decimal number that has **digits that repeat forever**. The part that repeats is usually shown by placing a dot above the digit that repeats, or dots over the first and last digit of the repeating pattern.	$\frac{1}{3} = 0.333 \ldots = 0.\dot{3}$ $\frac{1}{7} = 0.142857142857 \ldots = 0.\dot{1}4285\dot{7}$ $\frac{77}{600} = 0.128333 \ldots = 0.128\dot{3}$

10. Key Conversions:

$\frac{1}{2}$	0.5	50%	$\frac{1}{5}$	0.2	20%
$\frac{1}{4}$	0.25	25%	$\frac{2}{5}$	0.4	40%
$\frac{3}{4}$	0.75	75%	$\frac{3}{5}$	0.6	60%
$\frac{1}{3}$	$0.\dot{3}$ (0.33333 ...)	33.33333….%	$\frac{4}{5}$	0.8	80%
$\frac{2}{3}$	$0.\dot{6}$ (0.66666 ...)	66.66666…%	$\frac{1}{10}$	0.1	10%
$\frac{1}{8}$	0.125	12.5%	$\frac{2}{10} = \frac{1}{5}$	0.2	20%
$\frac{2}{8} = \frac{1}{4}$	0.25	25%	$\frac{3}{10}$	0.3	30%
$\frac{3}{8}$	0.375	37.5%	$\frac{4}{10} = \frac{2}{5}$	0.4	40%
$\frac{4}{8} = \frac{1}{2}$	0.5	50%	$\frac{5}{10} = \frac{1}{2}$	0.5	50%
$\frac{5}{8}$	0.625	62.5%	$\frac{6}{10} = \frac{3}{5}$	0.6	60%
$\frac{6}{8} = \frac{3}{4}$	0.75	75%	$\frac{7}{10}$	0.7	70%
$\frac{7}{8}$	0.875	87.5%	$\frac{8}{10} = \frac{4}{5}$	0.8	80%
			$\frac{9}{10}$	0.9	90%

Year 8 Spanish Knowledge Organiser : My town

¿Adónde vas?	Where are you going (to)?
Voy…	I'm going…
al centro comercial	to the shopping centre
al cine	to the cinema
al estadio	to the stadium
al parque	to the park
al salón recreativo	to the amusement arcade
a la bolera	to the bowling alley
a la discoteca	to the disco
a la playa	to the beach

¿Qué vas a hacer?	What are you going to do?
Voy a …	I'm going…
bailar	bailar
ir de compras	to go shopping
jugar al fútbol	to play football
jugar al futbolín	to play table football
jugar a los bolos	to go bowling
tomar el sol	to sunbathe
ver un partido de fútbol	to see a football match
ver una película	to see a film

Mi semana	My week
el lunes	Monday
el martes	Tuesday
el miércoles	Wednesday
el jueves	Thursday
el viernes	Friday
el sábado	Saturday
el domingo	Sunday

¿Qué vas a hacer hoy?	What are you going to do today?
esta mañana	This morning
esta tarde	This afternoon
esta noche	This evening
primero	first
luego	then
después	afterwards
más tarde	later
por último	finally

Este fin de semana	This weekend
(No) voy a …	I'm (not) going…
Vamos a …	We're going…
Escuchar música	to listen to music
ir al balneario	to go to the spa
ir al casino	to go to the casino
ir a la peluquería	to go the hairdressers
salir	to go out
ver la televisión	to watch television

¿Te gustaría salir?	Would you like to go out?
¿Te gustaría…	Would you like…
…ir al parque?	to go to the park?
…ir a la bolera?	to go bowling?
…ir de compras?	to go shopping?

¿A qué hora?	At what time?
a la una	at one o'clock
a las tres	at three o'clock
a las cinco y cuarto	at quarter past four
a las seis y media	at half past six
a las siete menos cuarto	at quarter to seven
a las ocho	at eight o'clock
a las nueve	at nine o'clock

¿Dónde quedamos?	Where shall we meet?
delante de la discoteca	in front of the disco
detrás del centro comercial	behind the shopping centre
en el parque	in the park
en la bolera	in the bowling alley
en la calle	in the street
en tu casa	at your house

De acuerdo	OK
Vale	OK
Muy bien	Fine
No tengo ganas	I don't feel like it
¡Ni hablar!	No way
¡Ni en tus sueños!	Not in your dreams
Bueno…	Well…
Pues…	Well…
A ver…	Let's see…
Hasta luego.	See you later
Adiós	Goodbye
Hasta pronto	See you soon

¿Quieres salir?	Do you want to go out?
¿Quieres…?	Do you want…?
chatear por internet	to chat on the internet
ir a la discoteca	to go to the disco
ir de compras	to go shopping
jugar a los bolos	to go bowling
jugar al fútbol	to play football
salir	to go out
ver un partido de fútbol	to watch a football match
ver una película	to watch a film

Lo siento, no puedo…	I'm sorry, I can't…
No puedo salir	I don't want to go out
¿Por qué?	Why?
Porque…	Because…
No quiero	I don't want to
No tengo dinero	I don't have money
No tengo tiempo	I don't have time
Tengo que…	I have to…
hacer mis deberes	do my homework
lavarme el pelo	wash my hair
ordenar mi dormitorio	tidy my bedroom
pasear al perro	walk the dog

Palabras muy útiles
Very useful words

primero	first
después	after
luego	then
a (al)	to (to the)
delante de	infront of
detrás de	behind
para	in order to/for
¿dónde?	where?
mi, tu, su (mis, tus, sus)	my,your, his her

Los problemas…	Problems…
Tengo un problema	I have a problem
¿Qué voy a hacer?	What am I going to do?
Mis padres dicen que…	My parents say that…
¡No es justo!	It's not fair!
Soy demasiado joven	I'm too young
¿Qué le puedo decir a mi madre?	What can I tell my mum?

… y las soluciones	…and solutions
Estoy de acuerdo con…	I agree with…
Tienes que…	You have to…
pensar en tu hermano	think about your brother
salir más	go out more
presentar el amigo a tu madre	introduce your friend to your mum

Eres demasiado joven para ir a la discoteca
You are too young to go to the disco

Year 8 French Knowledge Organiser HT1
Ma ville *My town*

Present tense key verbs

j'habite	I live
tu habites	you live
il/elle habite	he/she lives
nous habitons	we live
vous habitez	you (formal) live
ils/elles habitent	they live
je vais	I go
tu vas	you go
il/elle va	he /she goes
nous allons	we go
vous allez	you go
ils /elles vont	they go
on peut + infinitive	you can

Future (conditional) tense

j'aimerais	I would like
je voudrais	I would like
il/elle voudrait	he/she would like
il y aurait	there would be
ce serait	it would be

Connectives and sequencers

mais	but
cependant	however
aussi	also
puis	then
d'abord	firstly
ensuite	next
après	after

Giving an opinion

je pense que	I think that
à mon avis	in my opinion
je préfère	I prefer
j'adore	I love
j'aime	I like
je n'aime pas	I don't like
je déteste	I hate

Adjectives

ennuyeux	boring
rasant	boring
barbant	boring
passionnant	exciting
amusant	fun/funny
confortable	comfortable
douillet	cosy
beau/belle	beautiful
joli	pretty
nouveau/nouvelle	new
modern	modern

Comparisons

plus….que	more …than
moins ….que	less …than

Intensifiers

vraiment	really
très	very
assez	quite
trop	too
un peu	a bit

Useful phrases

il y a	there is/there are…
il n'y a pas de	there is/are no…..
on peut + infinitive	you can
on ne peut pas	you cannot

Places in town

un centre commercial	a shopping centre
un centre de loisirs	a leisure centre
un château	a castle
une église	a church
un marché	a market
un parc	a park
un stade	a stadium
une patinoire	an ice rink
une piscine	a swimming pool
des magasins	shops
des musées	museums

Countries

Je voudrais habiter	I would like to live…
en Angleterre	in England
en France	in France
en Espagne	in Spain
en Allemagne	in Germany
en Ecosse	in Scotland
en Australie	in Australia
au Portugal	in Portugal
au Pays de Galles	in Wales
aux Etats-unis	in the USA

Year 8 French
Knowledge Organiser HT2
La technologie

une maison	a house
un appartement	a flat
la rue	the street
à la campagne	in the country
dans un village	in a village
dans une ville	in a town

Rooms in a house

chez moi	in my home
la chambre	the bedroom
la cuisine	the kithcen
le jardin	the garden
la salle à manger	the dining room
la salle de bains	the bathroom
le salon	the living room

Prepositions

devant	in front of
derrière	behind
en face de	opposite
sur	on
sous	under

Intensifiers

vraiment	really
très	very
assez	quite
trop	too
un peu	a bit

Giving an opinion

je pense que	I think that
à mon avis	in my opinion
je préfère	I prefer
je trouve ça	I find it
je sui s fan de	I am a fan of
j'ai horreur de	I hate
ça me fait rire	it makes me laugh
ça me fait pleurer	it makes me cry

Present tense key verbs

Je regarde	I watch
Tu regardes	you watch
il/elle regarde	he/she watches
nous regardons	we watch
vous regardez	you (formal) watch
ils/elles regardent	they watch
je vais	I go
tu vas	you go
il/elle va	he /she goes
nous allons	we go
vous allez	you go
ils /elles vont	they go
je fais	I do
tu fais	you do
il/elle fait	he/she does
nous faisons	we do
vous faites	you do
ils/elles font	they do

Weather

Il fait beau	it is nice
Il pleut	it is raining
Il fait chaud	it is hot
Il fait froid	it is cold

On TV

les dessins animés	cartoons
les infos	the news
les jeux télévisés	game shows
la météo	the weather
les séries	series
les documentaires	
les émissions de sport	
les émissions de télé-réalité	

Internet

Je fais des achats en ligne — I do online shopping

Je fais des recherches — I do searches

J'envoie	I send
Je mets à jour	I update

Je joue à des jeux en ligne — I play games on line

Time phrases: When?

le weekend	at the weekend
le matin	in the morning
l'après midi	in the afternoon
le soir	in the evening/at night
samedi matin	on Saturday morning
dimanche après-midi	on Sunday afternoon

Past tense

J'ai discuté	I discussed
J'ai écouté	I listened
J'ai envoyé	I sent
J'ai joué	I played
J'ai posté	I posted
J'ai regardé	I watched
J'ai surfé	I surfed
J'ai tchatté	I chatted
J'ai téléchargé	I downloaded

Connectives and sequencers

cependant	however
aussi	also
puis	then
d'abord	firstly
ensuite	next
après	after
avant	before

Adjectives

ennuyeux	boring
rasant	boring
barbant	boring
passionnant	exciting
amusant	fun/funny
confortable	comfortable
douillet	cosy
assez bien	quite good
chouette	excellent
effrayant	frightening
émouvant	moving
passionnant	exciting
pratique	practical

Year 8 Spanish Knowledge Organiser: My free time

En mi tiempo libre…	**In my free time…**
¿Qué haces en tu tiempo libre?	
What do you do in your free time?	
Bailo	I dance
Chateo por internet	I chat on the internet
Escucho música	I listen to music
Hago deporte	I do sport
Juego con el ordenador	I play sport
Mando mensajes	I send messages
Salgo con mis amigos	I go out with my friends
Voy de compras	I go shopping
¿Qué te gusta?	What do you like?
Me gusta…	I like…
Me interesa…	I'm interested in…
Me encanta…	I love…
el fútbol	football
la música	music
la natación	swimming
Me gustan…	I like (**plural**)…
Me interesan…	…(**plural**) interests me
Me encantan…	I love (**plural**)…
los cómicos	comics
los videojuegos	videogames
las hamburguesas	hamburgers
¿Qué no te gusta?	What don't you like?
No me gusta la música	I don't like music
Odio el fútbol	I hate football
No me interesan los cómicos	I'm not interested in comics

Los amigos	**Friends**
tu mejor amigo/a	your best friend
¿Cómo es?	**What is he/she like?**
Es…	He/She is…
alto/a	tall
bajo/a	short
delgado/a	slim
guapo/a	good looking, attractive
¿Cómo es tu carácter?	What kind of person is he/she?
Es…	He/she is…
No es…	He/She isn't…
Nunca es…	He/She is never…
divertido/a	fun
generoso/a	generous
habloador(a)	talkative/chatty
inteligente	intelligent
perezoso/a	lazy
serio/a	serious

¿Cómo es su pelo?	
What's his/her hair like?	
Tiene el pelo…	He/She has…hair
castaño	brown
negro	black
pelirrojo	red
rubio	blonde
corto	short
largo	long
ondulado	wavy
rizado	curly

¿De qué color son sus ojos?	
What colour are his/her eyes?	
Tiene los ojos…	He/She has …eyes
azules	blue
grises	grey
marrones	brown
verdes	green

Mi rutina diaria	**My daily routine**
¿Qué haces por la mañana?	
What do you do in the morning?	
Por la mañana …	In the morning…
me despierto	I wake up
me levanto	I get up
me ducho	I shower
me peino	I brush my hair
me visto	I get dressed
desayuno	I have breakfast
voy al instituto	I go to school
¿Qué haces por la tarde?	
Por la tarde…	In the afternoon…
hago mis deberes	I do my homework
ceno	I have dinner
veo la televisión	I watch TV
me lavo los dientes	I brush my teeth
me acuesto	I go to bed

¿Cuándo?	**When?**
después	afterwards
luego	then
normalmente	normally
por la mañana	in the morning
por la tarde	in the evening
primero	first

Más o menos
More or less

¿Quién es más alto/a?
Who is taller?
¿Quién es menos alto/a?
Who is less tall/shortest?

…es más viejo/a que…
…is older tan…
…es más joven que…
…is younger than…

Palabras muy útiles
Very useful words

nunca	never
pero	but
también	also
y	and
o	or
más	more
menos	less

Nacionalidades

¿Cuál es tu nacionalidad? What is your nationality?
Soy… I am…

argentino/a	Argentinian
chileno/a	Chilean
colombiano/a	Columbian
escocés/escocesa	Scottish
español/a	Spanish
estadounidense	American
galés/galesa	Welsh
inglés/inglesa	English
irlandés/irlandesa	Irish
mexicano/a	Mexican

Music Year 8 Knowledge Organiser: Improvisation (Autumn Term)

Blue Notes in C Major

C D E F G A B C

Blue Notes

E*b* G*b* B*b*

Chord: 2 or more notes played at the same time. There are many types of chords – major, minor, diminshed, augmented. 7th chords are also very common.

Triad: A type of chord that has only 3 notes. You can work out the notes in a triad by playing the chord note, miss a note, play a note, miss a note and play a note.

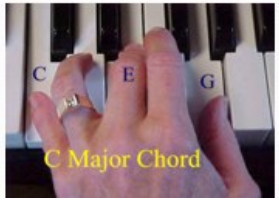
Raga – The melody. Melodic improvisations are based on rags and ragas

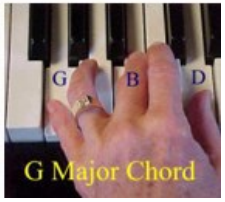
Tala – The rhythm. The number of beats are called tals or talas. Talas are cycles of 4 – 16 beats.

Drone– The harmony. In Indian music there are no chords – just drones. This will usually be played on the tambura

Learning to Play the 12-Bar Blues

C / / /	C / / /	C / / /	C / / /
F / / /	F / / /	C / / /	C / / /
G / / /	F / / /	C / / /	C / / /





Interval: the space between one note and another note.

Tone: When the interval between one note and another is 2 steps (that includes the black notes).

Semitone: When the interval between one note and another is 1 step (that includes the black notes).

C triad
(Chord I in C major)

C - E - G

F triad
(Chord IV in C major)

F - A - C

G triad
(Chord V in C major)

G - B - D

Unit 1: Drugs
Year 8

Skills

- Engage with and reflect on different ideas, opinions and beliefs to help develop personal opinion.
- Express and explain opinions through discussion and written assessments.
- Reflect on the knowledge and skills needed for setting realistic targets and personal goals.
- Work individually and with others to negotiate, plan and take action.
- Analyse and reflect upon action taken and progress made.

Knowledge

Develop awareness about the different families of drugs and their effects.

Develop knowledge about the legal categories of drugs.

Develop our awareness of the prevalence of drug use.

Understand the dangers of drug use and the reasons why people use them.

Understand the UK drug laws.

pshe

Personal Social Health Education

Y8: Unit 1 Judaism

Judaism is one of the oldest religious traditions with Abraham as the 'founding father'. It is a monotheistic religion (i.e. they believe in one God only). Judaism shares a lot of similarities with the religions of Christianity and Islam as will be explored. In this unit of work you will be examining various parts of Jewish history and how these events effect both Jewish traditions, lifestyle and practices today.

Knowledge Organiser

Religions

Lesson 1

What are the key features of Judaism?

What does "a monotheistic religion" mean?
Can you name 5 key features of Judaism?
Find out about 3 new facts not covered in this lesson.

Lesson 4

Judaism and slavery - what is Passover?

What was the Passover story?
Can you give three reasons why the Passover story would make Jewish people think Moses is important?
What are the 10 plagues and what order did they come?

Lesson 7

Bar/Bat Mitzvah- what happens at a coming-of age ceremony?

Why do Jewish children go through a bar/bat mitzvah?
What are key features of a bar mitzvah? What is done/worn? List at least 5
Do you think everyone should have an event where they take on more responsibility? One reason for and one against.

Ethics

Lesson 2

Kosher food laws – why bother?

Can you name two foods that aren't Kosher and why they aren't?
Create a flowchart that shows the process that meat goes through to become kosher.
Give two reasons why Jewish people follow Kosher laws.

Lesson 5

Modern day slavery – does it still happen?

What are three facts about modern slavery?
Explain the link between modern slavery and the history of the Jewish people
Modern slavery provides a better life for some. Give 2 reasons why it is and 2 reasons why it is not.

Lesson 8

What age are we responsible for our behaviour?

Jews follow the 10 commandments, which do you think are the three most important and why?
What new rule would you make that everyone should follow?
"Following the 10 commandments make you a better person" Give 2 reasons why it might and 2 reasons why it might not.

Philosophy

Lesson 3

Is it worth being religious?

Jews follow 613 rules but does this make them a better person? Give 3 ideas
What do people gain from having a faith?
Is religion a force for good. Give 2 reasons why it is and 2 reasons why it is not.

Lesson 6

The Holocaust: How has Jewish persecution challenged faith in God?

Why were the Jewish people persecuted in the Holocaust? Can you list at least 3 reasons?
What effect might the Holocaust have on Jewish people today?
How do Jewish people justify their belief in God after the holocaust?

Lesson 9

Are our actions ever truly free?

Can you give two examples of actions out of our control?
Can you give two examples of actions that we DO control?
Create a list of 5 things that you can do to make the lives of those around you better.

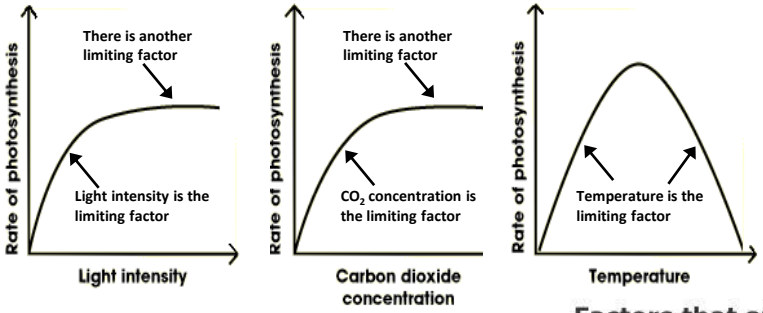
**Following these 9 lessons pupils will be assessed and feedback will be given in exercise books.*

Year 8 Knowledge Organiser : 8B1: Plant Transport

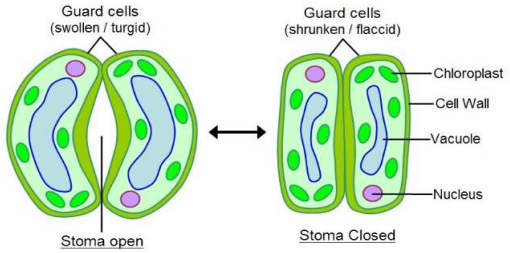
Word equation for photosynthesis

$$\text{carbon dioxide + water} \xrightarrow[\text{chlorophyll}]{\text{sunlight}} \text{glucose + oxygen}$$

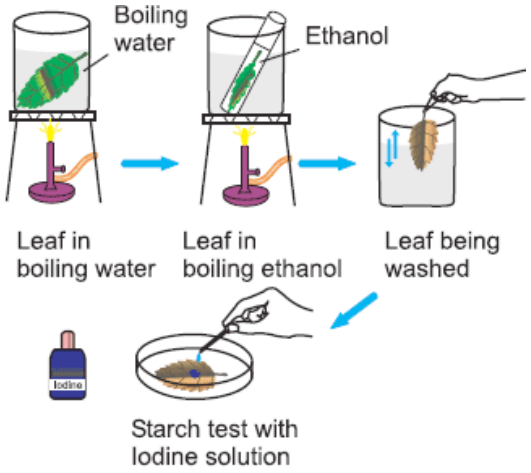
Limiting factors affect the rate of photosynthesis



Stomata (pores) control the rate of gas exchange and water loss in leaves

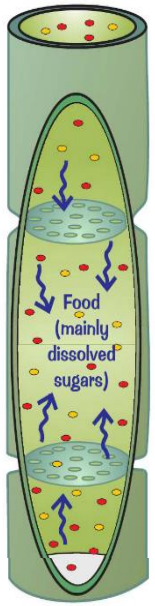


Starch test to identify the products of photosynthesis



Factors that affect transpiration rate

Factor	Description	Explanation
Light	Transpiration increases in bright light	The *stomata* open wider to allow more carbon dioxide into the leaf for photosynthesis. More water is therefore able to *evaporate*.
Temperature	Transpiration is faster in higher temperatures	Evaporation and *diffusion* are faster at higher temperatures.
Wind	Transpiration is faster in windy conditions	Water vapour is removed quickly by air movement, speeding up diffusion of more water vapour out of the leaf.
Humidity	Transpiration is slower in humid conditions	Diffusion of water vapour out of the leaf slows down if the leaf is already surrounded by moist air.



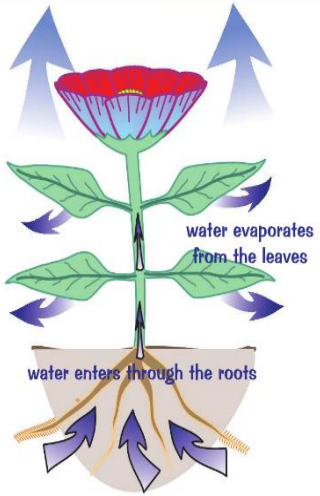
Phloem Tubes Transport Food:

1) Made of columns of living cells with small holes in the ends to allow stuff to flow through.
2) They transport food substances (mainly dissolved sugars) made in the leaves to growing regions (e.g. new shoots) and storage organs (e.g. root tubers) of the plant.
3) The transport goes in both directions.

Xylem Tubes Take Water UP:

1) Made of dead cells joined end to end with no end walls between them and a hole down the middle.
2) They carry water and minerals from the roots to the stem and leaves in the transpiration stream (see below).

Transpiration is the Loss of Water from the Plant



1) Transpiration is caused by the evaporation and diffusion (see page 11) of water from inside the leaves.
2) This creates a slight shortage of water in the leaf, and so more water is drawn up from the rest of the plant through the xylem vessels to replace it.
3) This in turn means more water is drawn up from the roots, and so there's a constant transpiration stream of water through the plant.
4) Transpiration is just a side-effect of the way leaves are adapted for photosynthesis. They have to have stomata in them so that gases can be exchanged easily. Because there's more water inside the plant than in the air outside, the water escapes from the leaves through the stomata.

8C3 Acids- Part 1

Acid	**A substance that dissolves and produces acid particles, H^+ ions and has a pH value below 7**
Alkali	**A substance that dissolves and produces alkali particles, OH^- ions and has a pH value above 7**
Neutral	**A solution that contains equal number of acid and alkali particles and a pH of 7**
Indicator	**A substance that changes colour and is used to identify solutions as acids, neutral or alkaline**
Base	**Any substance that reacts with an acid to neutralise it- can be solid or a solution**
Neutralisation reaction	**A reaction between an acid and alkali or an acid and base.** **Salt and water are produced in this reaction and the solution finishes with pH of 7**

Common acids	Formula
hydrochloric acid	HCl
sulfuric acid	H_2SO_4
nitric acid	HNO_3
Common alkalis	**Formula**
sodium hydroxide	$NaOH$
potassium hydroxide	KOH
calcium hydroxide	$Ca(OH)_2$

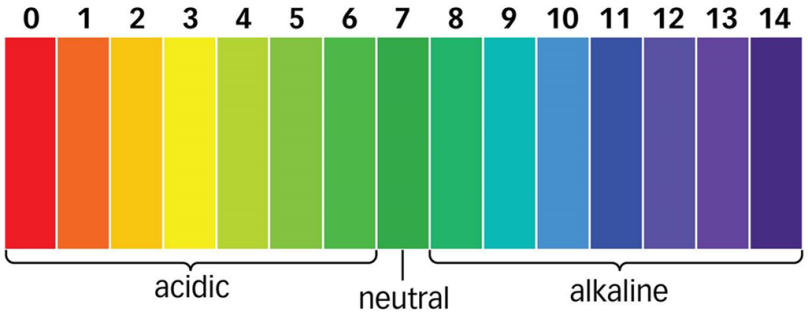
D common laboratory acids and alkalis

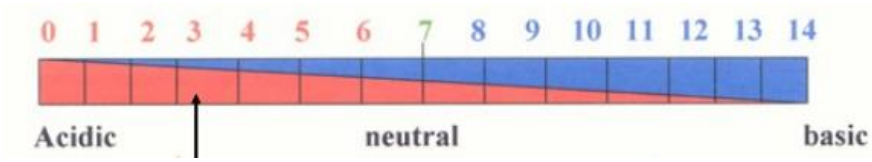
indicator	litmus	phenolphthalein
colour in alkaline solutions	blue	pink
colour in acidic solutions	red	colourless

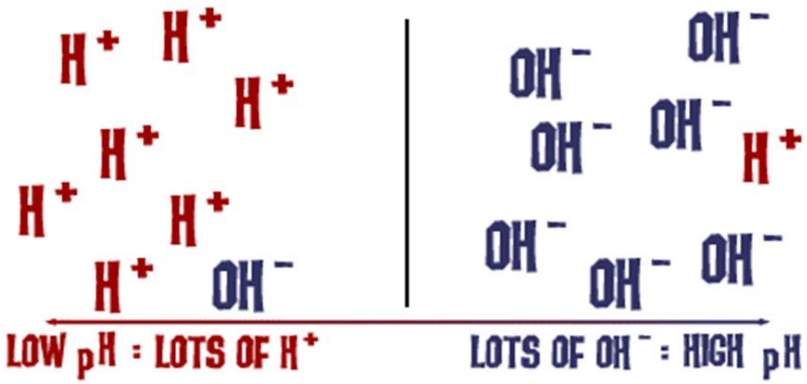
8C3 Acids- Part 2

The pH scale

It measures the acidity or alkalinity of a solution







Neutralisation – what happens.

When a base and an acid react together, this equation is followed:

Base + Acid ➔ Salt + Water

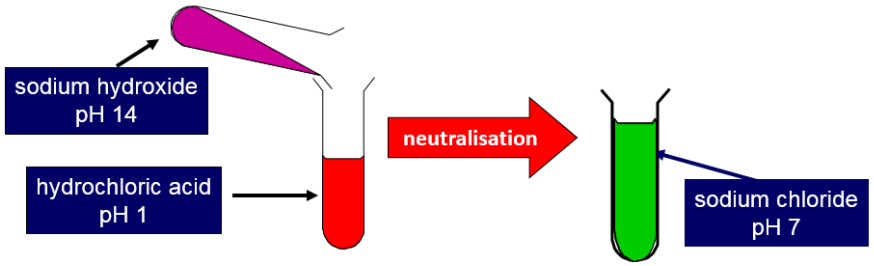
An example reaction

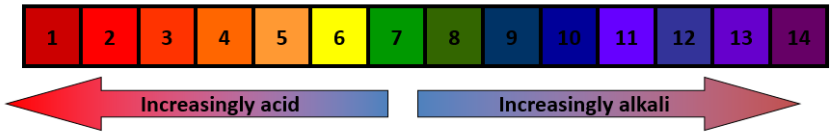
sodium hydroxide + hydrochloric acid ➔ sodium chloride + water

(A SALT)

Each acid will make its own family of salts.

Acid	Salt formed
hydrochloric acid	chloride
sulfuric acid	sulfate
nitric acid	nitrate





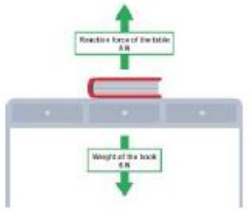
8P1 Knowledge organiser: Forces and Motion

Force Diagrams

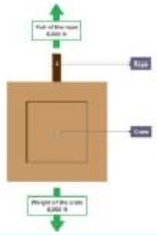
To show the forces acting on a body we use a free body force diagram. A **free body force diagram** shows all of the forces that are acting on the body. It has arrows that show the direction the force acts, the larger the arrow, the larger the force. A free body fore diagram should always have labelled arrows.

A boat floating

A book on a desk



A crate held up by a rope



Unbalanced Forces

If the forces are unbalanced on an object there are two things that could happen:

1. If the object is stationary then it will move in the direction of the resultant force
2. If the object is moving, then the object will speed up or slow down in the direction of the resultant force.

For example, what is the resultant force on the lorry below?

100N-60N= 40N (to the right)

Remember the resultant force does not tell you what direction the lorry is moving in.

- If the resultant force is in the same direction as the movement of the lorry then the lorry will speed up
- If it is in the opposite direction the lorry will slow down

The larger the resultant force the larger the change in movement.

When a force is applied to an object it can lead to a change in the objects

- **Speed**
- **Direction of movement**
- **Shape (think about a rubber band)**

Forces can also be divided into 2 types, contact forces and non contact forces.

1. Contact forces for example friction, are caused when two objects are in contact.
2. Other forces for example gravity, are non contact forces. The two objects do not need to be in contact for the force to occur.

Balanced Forces

When we talk about the total force acting on object we call this the **resultant force**. When the forces acting in opposite directions are the same size we say the forces are **balanced**. This means one of two things:

1. The object is stationary (not moving)
2. The object is moving at a constant speed

This is known as Newton's first law.

For example, the resultant force acting on this object is 5N-5N=0N

$$Speed = \frac{Distance}{Time}$$

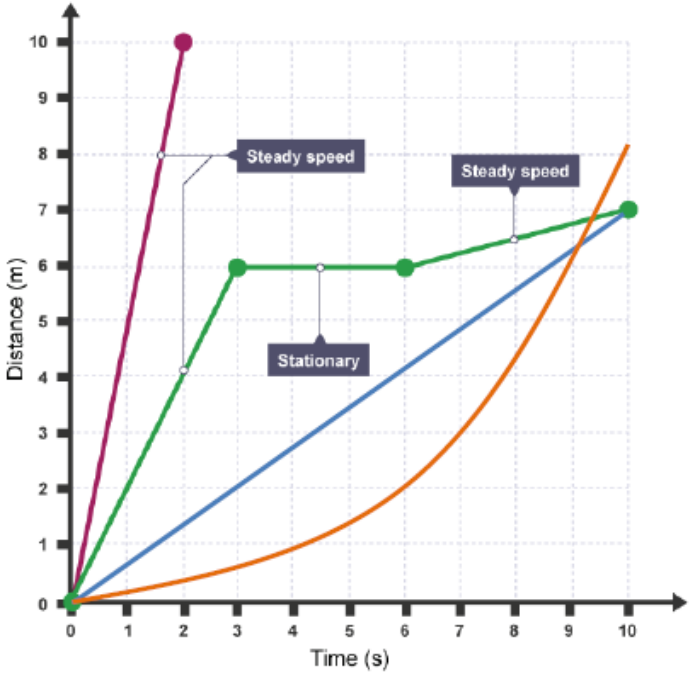
$$Weight = Mass \times GFS$$

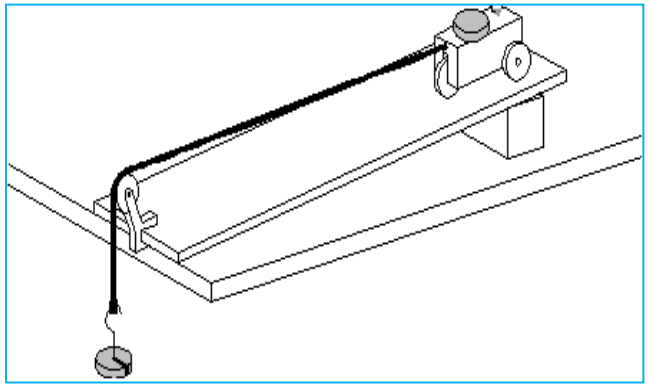
$$F = m \times a$$

Gravity	The force of attraction between two objects with mass
Electrostatic	The force between two charged objects
Magnetic	The force that enables a compass to work
Air resistance/ Drag	The force when a material travels through a fluid
Friction	The force when two materials rub together
Upthrust	The upwards force felt by an object in a fluid
Normal contact force	The force that acts at the point of contact between two objects
Tension	The force that is transmitted through a string, rope, cable or wire when it is pulled tight by forces acting from opposite ends.
Elastic	Force exerted by a compressed or stretched spring upon any object that is attached to it

Interpreting Distance-time graphs

- A straight diagonal line of a distance-time graph shows that the object is travelling at a steady/constant speed.
- A straight horizontal line on a distance-time graph shows that the object is not moving (stationary)
- If a curved line were to appear on a distance-time graph (orange line) this shows the object is accelerating.

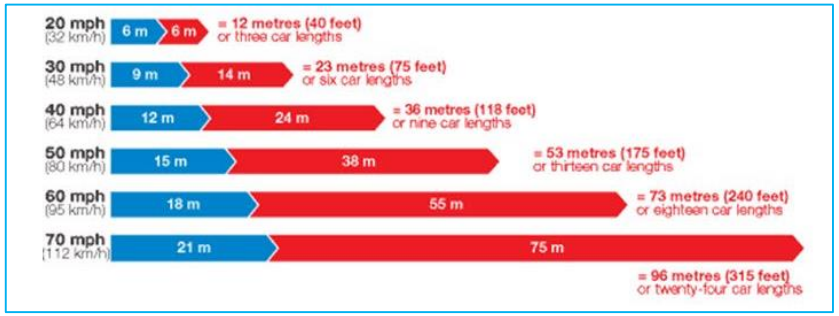




F=ma practical

Independent variable: Mass of trolley
Dependant variable: Acceleration of trolley
Control variable: Height of ramp, surface of ramp, force on pulley, trolley.

Results: As the mass of the car increases the acceleration of the trolley decreases.



Thinking distance
Distance travelled from seeing the hazard to the moment you react to it
Braking distance
Distance travelled from when the brakes are applied to when the car comes to a stop.

Factors that increase stopping distance:

- Alcohol/Drugs
- Mobile phones
- Distractions
- **High mass car**
- **High starting speed**
- **Worn brakes and tyres**
- **Icy/wet roads**

Mass	Weight
The amount of **matter** in an object	The **force** acting on an object, due to gravity
Never changes	Changes depending on the **strength of gravity**
Measured in **kg**	Measured in **N**

Newton's 1st Law: Motion will not change unless there is a balanced force acting on an object.
Newton's 2nd Law: The bigger the size of the resultant force on an object, the more the object will accelerate.
Newton's 3rd Law: If object A pushes on object B, then object B pushes on A with the same force but in the opposite direction.