



Year 7

Knowledge Organiser

Autumn Half Term 2

‘Practice of what is taught’

Name:

Tutor:

Work hard. Be kind. Belong.



How to use your Knowledge Organiser

This booklet contains **knowledge organisers** for all your subjects in alphabetical order. Each knowledge organiser has the key information to be learned and **memorised** over the term to help you master your subjects and be successful in lessons. Note that there are no knowledge organisers for French & Science this term.

Use this with your homework booklet.

Year 7 subjects Page/s number

Art	1-2
Design Technology	3
Drama	4-6
English	7-8
Food	9-10
Geography	11-12
History	13
Maths	14-18
Music	19
PE	20
Religion	21

Work hard. Be kind. Belong.



1. Sketching a line

[Sketching.mp4 \(sharepoint.com\)](#) – Plot out your shape lightly, use a feathery light line to get the accurate shape. Make the line darker when you are happy this is the best that you can produce.



2. Blind drawing

[Blind drawing.mp4 \(sharepoint.com\)](#)
When you are only looking at the object you are drawing and not looking at your drawing. The drawing will not look accurate but will show aspects of the object you will recognise.



3. Continuous line drawing

[Continuous line.mp4 \(sharepoint.com\)](#)
Draw an object in pen without taking your pen off the paper. This drawing should be an accurate representation of the object but it will have trail lines.



4. Checklist for a successful drawing

Choice of object – In drawing this object you will be able to demonstrate your skills
Sharp pencil – To help you add accurate detail
Size – work large so you can fit in more visual information
Shape – ensure the shape is accurate
Sketching you have used a sketched line rather than a heavy solid line
Detail - from observations you have included every aspect of the object.

6. How to paint with ready mix

Start with the background, paint the whole space
Build up the tones in the background
Sketch the outline.
Start with the main body of the picture.
Add brush marks to create layers
Add the detail last.

7. Colour pencil

[Colour pencil.mp4 \(sharepoint.com\)](#)
Sketch the outline lightly in pencil
Bold colours – Apply pressure when colouring.
Layering (Lightest colours first)
Blending
Directional shading
Use different tones of the same colour



8. Oil Pastel

Sketch lightly in pencil first.
Blend colours using the pastels not your finger.
Paint with PVA glue to varnish.

9. Collage (Coloured paper/newspaper/magazines)

Use torn or cut paper depending on the quality of the edge you want.
Build up layers, large areas of colour first to details last.

10. Content- what the work is about/of
Process- How the work is made/created
Form- How have the artists used the basic elements?
Connections- How does the artist's work connect to your project?

11. Organic forms objects like seed pods, shells, bugs and butterflies..... These objects have curved edges.....

12. Peter Randall- Page

<https://youtu.be/gtnDBXwQLD0>

Content-He uses nature as inspiration, things like shells, seed pods, flowers, camouflage and dividing cells are starting points for his work .His work is often based on maths.
Form-His work is solid with a little texture on the surface.The shape is organic with smooth edges.
Process- Materials used, limestone, granite and marble.Hammer and chisel with fine sanding tools.Cast in bronze.Clay
Connections- Natural forms, Greek and Roman art.
Randall-Page uses direction shading to create the illusion that the drawing is 3d.

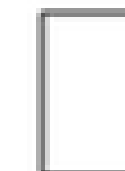


13. Composition

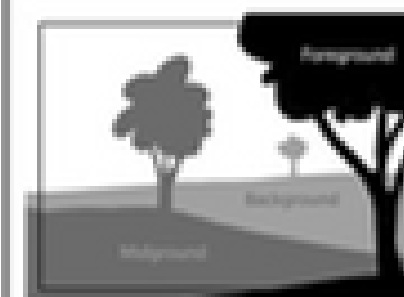
Landscape



Portrait



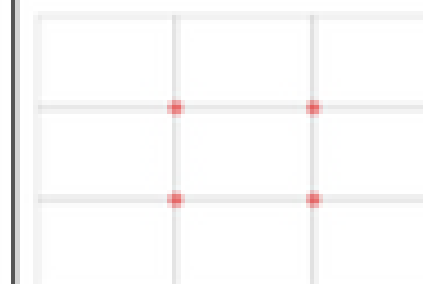
14. Foreground/Mid-ground/Background



How the space in an image or picture is divided up to give a sense of depth.

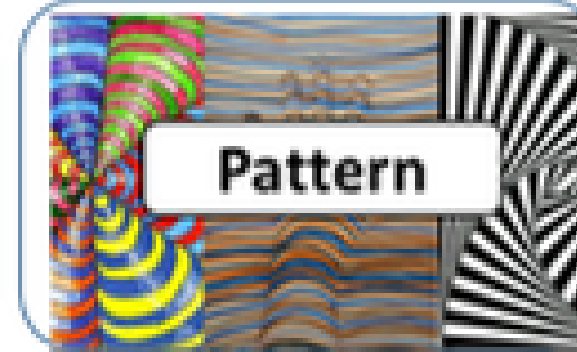
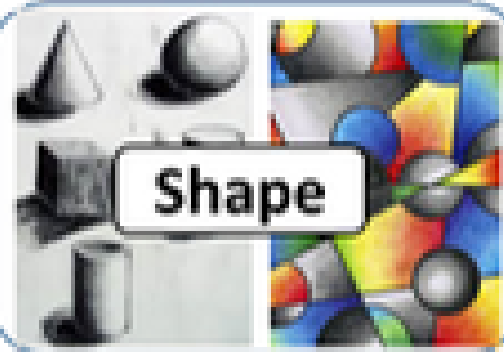
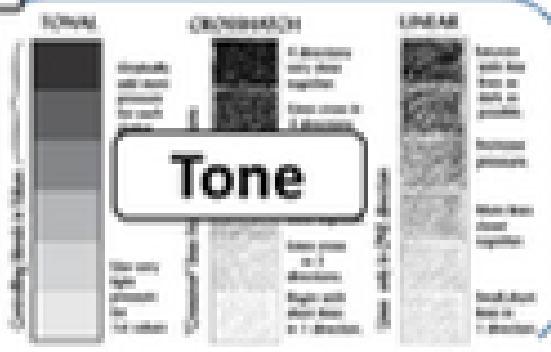
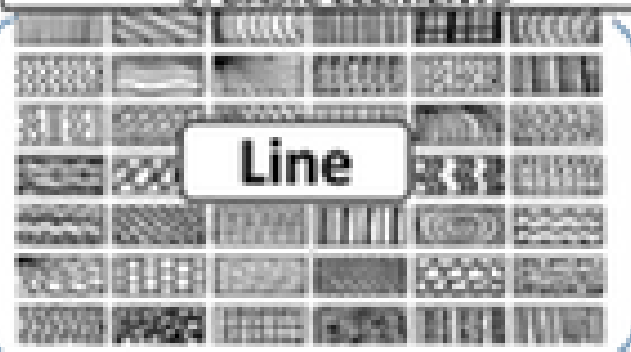
15.

Rule of thirds



How the space in an image/ picture is divided up to create points of interest that draw the viewer's attention to certain objects or subjects within the composition.

5. BASIC ELEMENTS



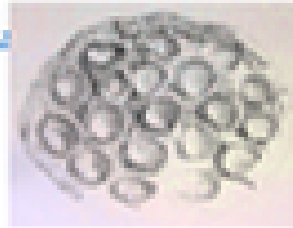
Skill – Drawing/shading

16. Tone is the lightness or darkness of something. You would use a variety of different tones when shading an object.



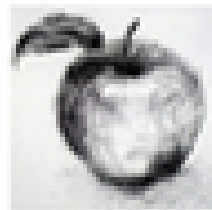
17. [Tone.mp4 \(sharepoint\)](#)

Shading is used to show where the light and dark areas are on an object. This shows the 3D form of the object.



18. Shade (Directional Shading)

[Directional line.mp4 \(sharepoint.com\)](#) is where you describe the object using line and tone. There are more lines to create the darker tones and less lines to create the illusion of light.



19. Key words:

Observation - Looking and noticing all the detail

Mark making - using a variety of lines to describe texture

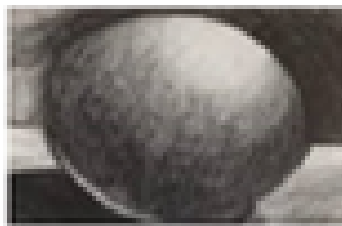
Shape - the outline of something

Form - 3-dimensional shape

Proportion - how the size of different parts of an object, thing or person relate to each other

Composition - how parts of a picture/image connect to each other

Perspective - how the height, width and depth of an image is shown.



20. How to paint with water colour

[Watercolour.mp4 \(sharepoint.com\)](#)

Start with the background, paint the whole space

Build up the tones in the background

Sketch the outline

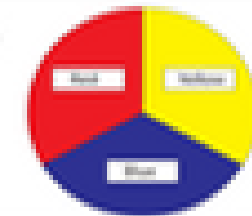
Start with the lightest tones

Add brush marks to create layers working from lightest through to darkest colours.

Add the detail last.

Colour

21.



Primary colours

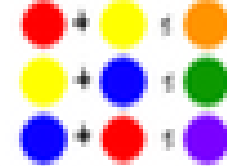
Complementary

Blue and orange

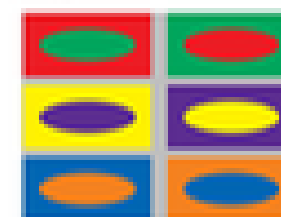
Red and green

Yellow and purple

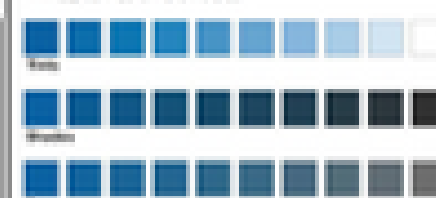
Secondary colours:



Secondary colours



Tints, tones and shades



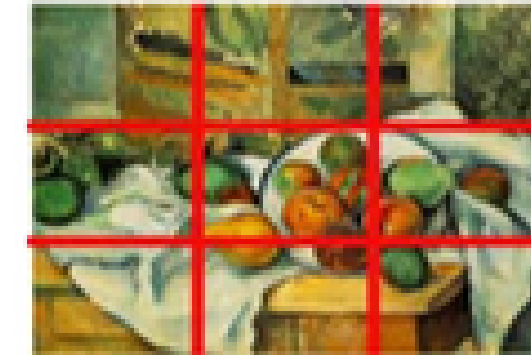
Harmonious colours are colours that go well together. Warm colours are reds, oranges and yellows. Cool colours are blue, green and purple.

22. Cezanne has used the rule of thirds to create an effective composition. By dividing up his painting as a wall, a table and a tablecloth.

The point of interest in this painting is the large bowl of fruit.

This is a still life painting by Cezanne.

The corner of the table is drawing your eye into the painting.



23. In the visual arts, composition is the placement or arrangement of visual elements or ingredients in a work of art. The term composition means 'putting together' and can apply to any work of art.



24. Using a camera to record.

- Put on the neck strap
- Turn it on
- Check the battery
- Check the mode (Auto or Auto without flash)
- Look through the viewfinder to decide your composition. Remember – Rule of thirds/Foreground/mid ground/background/landscape or portrait.
- Push the button down half way to focus
- Push the button fully down to take the picture.



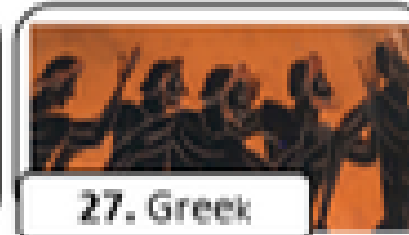
History of art movements



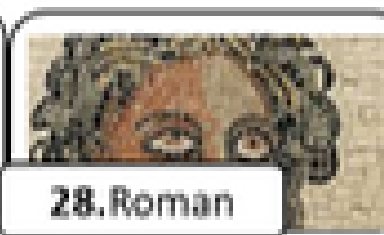
25. Prehistoric



26. Egyptian



27. Greek



28. Roman



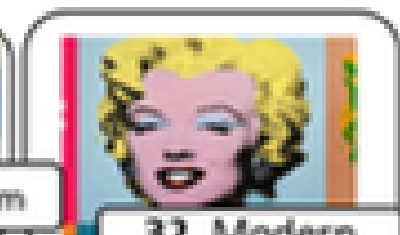
29. Medieval



30. Renaissance



31. Impressionism



32. Modern

Design and Technology – Year 7

0. In Design and Technology there are different areas of study.

These are covered under the Key Themes. They are:

- **Design**
- **Make**
- **Analyse and Evaluate**
- **Knowledge**

There is also the important overarching knowledge needed about the **Design and Technology Process**, **Tools**, impact on the environment, **Health & Safety** and Key Terms such as **ACCESSFAME** and the 6 R's – **Rethink, Recycle, Refuse, Repair, Reduce and Reuse**.

1. Health & Safety

A Hazard is – Something that can cause you or others harm

A Risk is – The likelihood or severity of the hazard occurring

A Control Measure is – Something that is put in place to stop or reduce the risk of the hazard occurring.

Visit: www.technologystudent.com and click on **Health and Safety** for more information.

2. Health and safety - 5 things do you need to consider when in the work shop to keep you and others safe?

1. Wear goggles
2. Wear an apron
3. Tie long hair back when using equipment
4. Ensure only 1 person uses the machinery at a time
5. Clamp work down when drilling

3. Tools and what they are used for? Visit: www.technologystudent.com and click on **Equipment and Processes** for more information.



Tenon saw for cutting straight lines in wood and plastic



Hole Saw for cutting larger diameter holes than a standard drill bit.

Bench hook for helping to hold wood when sawing.



Steel rule for measuring accurately



Sewing needle for tacking and hand sewing.



Dressmaking or fabric shears for cutting fabric



Forstner bit is a drill bit for flat-bottomed holes in wood.



Jig is a tool for guiding workpieces to ensure consistency.



Coping saw for cutting unusual shapes & curves

4. To help us remember key bits of information for investigating, designing, analyzing & evaluating we use **ACCESS FAME** acronym.

It stands for:

- **Aesthetics**- what it looks like
- **Cost**- cost to make or buy
- **Client Customer Consumer**- who asks for it to be made, who buys it, who uses it?
- **Environment** – where is it made, is it sustainable, is it recyclable?
- **Size** – how big/small is it?
- **Safety** – what potential hazards are there?
- **Function** – what does it do?
- **Anthropometrics** – what human dimensions are needed so it can be used by the majority of people?
- **Materials/Manufacture** – what will it be made of? How will it be made?
- **Ergonomics** – how will it fit the person using it to make it easy to use?

5. Materials: Timber

- A **hardwood** is from a broad-leaved deciduous tree which has a close grain due to its slow growth. The annual growth rings are close together.

E.g. beech, oak (Pictured), walnut, Sycamore, birch, mahogany and teak

- A **soft wood** comes from a coniferous tree that has needles instead of leaves. It does not shed these in winter. It grows fast and the annual growth rings are further apart.

E.g., cedar, larch, pine (pictured) and redwood



Manufactured boards are industrial made from recycled or waste wood. They are available in large flat sheets and are can be a sustainable resource. They come in different sizes and thicknesses.

MDF: made from tiny fibers /sawdust that is mixed with a formaldehyde-based glue and compressed together. **The surface layer could be a hard wood to make it look better.** This does not have a grain.

Plywood: made from thin layers of wood that is arranged so that each layer is at 90° to each other making it stronger.

The surface layer could be a hard wood to make it look better.

Chipboard: made from small particles of wood that is recycled or waste wood mixed with a formaldehyde-based glue and compressed.

Visit: www.technologystudent.com and click on **Resistant Materials** for more information on wood.

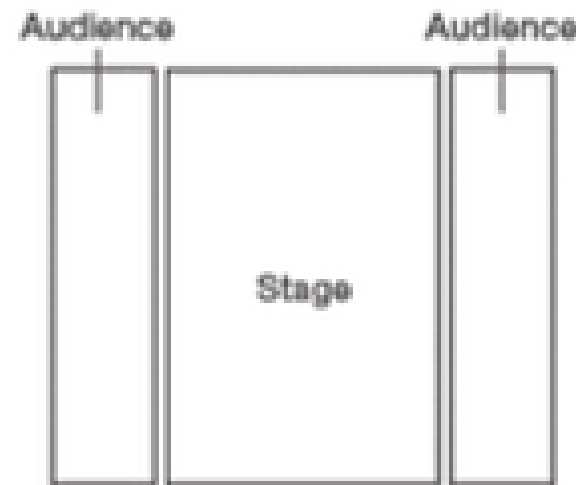


DRAMA Appreciating Theatre			Exploring Component Knowledge of Drama			
1. Theatrical Elements	1A. Vocal Skills		2. Structure	3. Analysis	Analysing an actor's performance:	
	1B. Physical Skills				1. Space:	
					2. Character:	
4. Evaluation						
1. Introduction: as an audience member what did the performance make you think about? Select one character and write in detail about them.			What did you learn about the characters and the story from their performance? What do you think the aim was? Was it funny / sad / compelling? Unpick the theatrical skills one performer used and think why they used them? What was the purpose? What affect did it have on you as an audience member?			
2. Do you think the performer was able to create a successful performance and why?			If they were <u>successful</u> why? If they weren't why not? What could they have done differently? What was good about their personal performance? What was good about the performance as a whole? How could they have improved? LINK BACK TO THEATRICAL SKILLS THROUGHOUT			
3. Link the actor's performance to the <u>performance as a whole</u> .			What worked well in the performance as a whole? What didn't work well? What ideas do you have about how they could alter/change the performance if they had more time?			

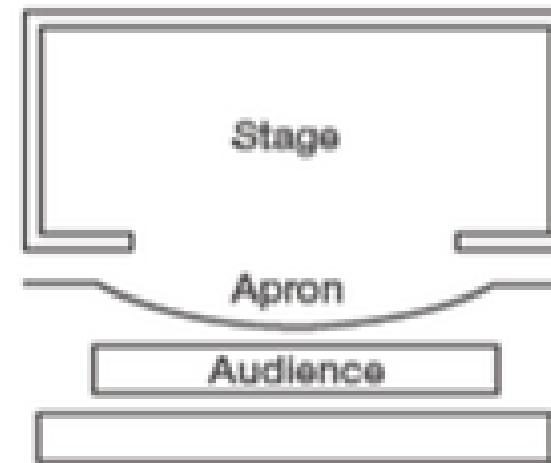
5. Stage Configurations

5. DRAMA Stage Configurations

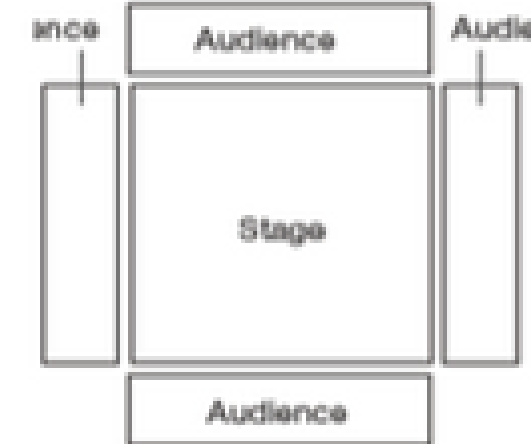
Traverse



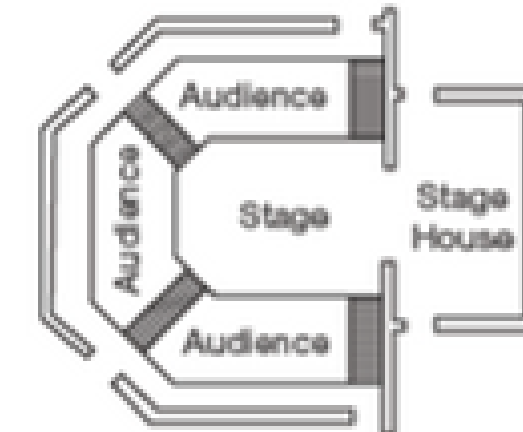
Proscenium arch



Theatre in the Round



Thrust stage



Promenade Theatre



Stage Positions:

Stage positions are always from the ACTORS perspective. This means when looking at the stage from the audience's point of view stage left is on the right and stage right is on the left.

Upstage = far away from the audience

Downstage = close to the audience

Upstage right	Upstage centre	Upstage left
Stage right	Centre stage	Stage left
Downstage right	Downstage centre	Downstage left

AUDIENCE

Stage configurations refer to the shape of the stage and where the audience sit. This information gives up insight into the time of performance that might be being performed, for example: large ensemble performances on a Proscenium arch stage vs a small intimate performance on a Theatre in the round. It also tells us what sort of set design can be used alongside a lot of other useful information.

6. Roles & Responsibilities



6. DRAMA - Roles & Responsibilities



1. Theatre Maker:

Understudy

What they do:

Learning a part, including lines and movements, so they are able to take over a role for someone if needed when there is a planned or unexpected absence.

4. Theatre Maker:

Costume Designer

What they do:

Designing what the actors wear on stage. Making sure that costumes are appropriate for the style and period of the piece. Ensuring the costumes fit the audience.

7. Theatre Maker:

Technician

What they do:

Operating the technical equipment, such as the lighting and sound boards, during the performance.

2. Theatre Maker:

Playwright

What they do:

Writing the script of the play, including the dialogue and stage direction

5. Theatre Maker:

Theatre Manager

What they do:

Running the theatre building, including overseeing the front of house staff (ushers) and the box office staff who sell tickets.

8. Theatre Maker:

Performer

What they do:

Appearing in a production, for example by acting, dancing or singing. Creating a performance or assuming a role on stage in front of the audience.

3. Theatre Maker:

Puppet Designer

What they do:

Designing the puppets for a production, taking into account the style of puppets and how they will be operated.

6. Theatre Maker:

Director

What they do:

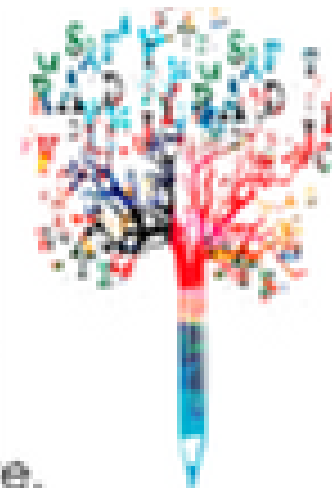
Overseeing the creative aspects of the production. Developing a 'concept' or central unifying idea for the production. Liaising with designers, rehearsing the actors and ensuring that all technical elements of the play are ready. Giving 'notes' to the actors to help improve their performances and agreeing the blocking (or movement) of the actors

9. Theatre Maker:

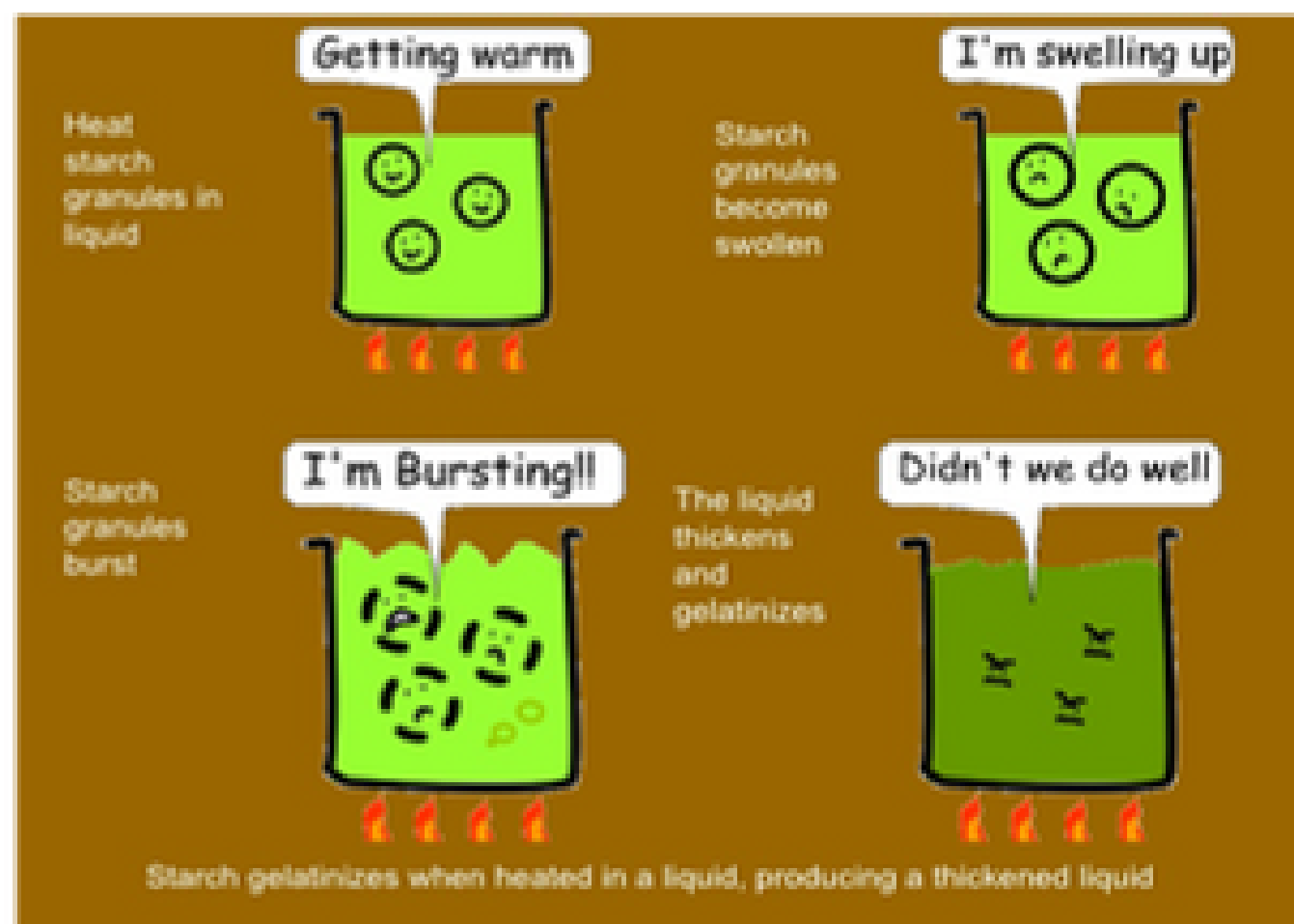
Sound Designer

What they do:

Designing the sound required for the performance, which may include music and sound effects. Considering if amplification, such as the use of microphones, is needed, and creating a sound plot.

English Year 7 Writing		2. Useful Sentence Starters		3. Super Spellings	4. Bringing your writing to life	
1. Key Terms: can you use these in your writing?		1. Adverbials E.g. Frantically, the... 2. -ed words E.g. Ragged, alerted 3. -ing verbs E.g. Staggering, slithering 4. List of adjectives E.g. Stagnant, murky, brown water 5. Comparisons E.g. Unlike the larger African elephant, the... 6. A noun to start E.g. Wildebeest migrate every year 7. Simile starts E.g. Like a snake, the ... 8. Prepositions E.g. Next to the waterfall... 9. When... 10. As ... 11. Although ... 		1. stagnant 2. picturesque 3. stampede 4. cacophany 5. azure 6. serene 7. tumult 8. wildebeest 9. throng 10. bristled 11. undulating 12. disoriented 13. exhilarating 14. transfixed 15. equipment	1. Sensory description What would you be able to hear? See? Feel? Smell? Taste? 2. SHOW don't tell He was-bored slumped in his chair, endlessly tapping his pencil. 3. Vary your sentences for pace Short sentences slow the pace; long sentences increase the pace. 4. Try figurative language Metaphor, simile, personification 5. Use words with precise meaning Bad Ugly Confusing Evil Uninspiring Went Ran Slunk Ambled Crept	
1. Descriptive: a piece of writing which describes a setting or situation in vivid detail. 2. Genre: different types of writing which share similar features. 3. Atmosphere: the tone or mood of a place or situation. 4. Mood: a state or quality of feeling at a particular time. 5. Nuance: subtle or slight difference. 6. Perspective: a way of looking at something, a viewpoint. 7. Sensory: descriptions which relate to the five senses. 8. Figurative language: Using a word or phrase outside of its every day meaning – usually to describe or compare something (e.g. similes, metaphors, personification). 9. Metaphor: directly refers to one thing by describing something else. 10. Simile: describes something by comparing it to another. 11. Personification: gives human qualities to something non-human.				5. SPAG: can you write your own examples?		6. Structuring Your Writing
		1. <i>A full stop is used to mark the end of a complete idea, with clear tense. E.g. He was running.</i> 2. <i>A comma is used to join a dependent clause to an independent clause. It should never be used to join two independent clauses together.</i>		Non Fiction: 1. Introduction/hook 2. Connective 3. Topic sentence 4. Conclusion Creative Prose: 1. Extreme close up 2. Point-of-view shot – describe as if looking from a specific character's viewpoint. 3. Panning shot – describe as if moving across 4. Bird's-eye view – describe from a high viewpoint		<div><div colspan="2">7. Mood words. Can you write a paragraph to demonstrate each one?</div><div><div><div>1. Calm</div><div>2. Anticipatory</div><div>3. Nervous</div><div>4. Exhilarating</div><div>5. Gentle</div><div>6. Awe-inspiring</div><div>7. Chaotic</div><div>8. Sinister</div><div>9. Foreboding</div><div>10. Morose</div></div><div><div>11. Disorientating</div><div>12. Frenzied</div><div>13. Tense</div><div>14. Idyllic</div><div>15. Playful</div><div>16. Dignified</div><div>17. Sombre</div><div>18. Energetic</div><div>19. Frenetic</div><div>20. Aggressive.</div></div></div><div></div></div>

1. Key Terms	2. Super Spellings	English Year 7 Reading		4. Mood words	7. Further reading
Theme: main idea or repeated idea. Analysis: a detailed examination of a piece of writing Focus: clear and sustained interest in the central idea or topic. Structure: how a piece of writing or a story is organised Inference: logical understanding or deductions made based on evidence. Empathy: understanding how a character feels. Narrator: the person telling the story. Act: the main sections of a play. Scene: the smaller sections of a play – similar to chapters in a novel. Stage directions: notes to the actor and director about how to move or speak. Monologue: a longer speech by a character to another character. Soliloquy: a longer speech by a character to themselves or the audience. Metaphor: describing something by saying it IS something else...but not literally. Simile: describing something using 'like' or 'as' to make a comparison.	- Individual - Specific - Identified - Create - Revealed - Interpretation - Significant - Circumstances - Effect - Affect - Response - Definition - Relevant - Conventions - Constant - Decline	3. Big questions		- Sinister - Eerie - Furious - Frustrated - Frightening - Shocked - Alarmed - Joyful - Exciting - Cheerful - Hopeful - Surprising - Intriguing - Impressed - Relieved - Amusing	<i>His Dark Materials Trilogy</i> - Phillip Pullman <i>Wonder</i> - R J Palacio <i>Booked</i> - Kwame Alexander <i>Armistice Runner</i> - Tom Palmer <i>Kick</i> - Mitch Johnson <i>Boy 87</i> - Ele Fountain <i>The Bone Sparrow</i> - Zana Frallion <i>Long Way Down</i> - Jason Reynolds <i>Alone on a Wide Wide Sea</i> - Michael Morpurgo <i>Refugee Boy</i> - Benjamin Zephaniah <i>Diary of Anne Frank</i> - Anne Frank <i>Cogheart</i> - Peter Bunzl <i>Wildspark</i> - Vashti Hardy <i>Boy in the Tower</i> - Polly Ho Yen <i>Ghost</i> - Jason Reynolds <i>Holes</i> - Louis Sachar <i>All the things that could go wrong</i> - Stewart Foster <i>Malamander</i> - Thomas Taylor <i>Here Lies Arthur</i> - Phillip Reeve <i>Stormbreaker</i> - Anthony Horowitz <i>Boy at the back of the class</i> - Onjali Q'Rauf <i>Where the world ends</i> - Geraldine McCaughrean
		5. Personal response	6. Structuring your essay		
		The writer makes me feel... The writer makes me think... The writer makes me question... The writer helps me to picture... I predict that... When I first read __, I thought..., but then... It strikes me as... when... I cannot help but wonder why... What frustrates me is.... I find it really... when... ...because...	Introduction What is the novel/play about? '_____ 'by _____ is about... Analysing the text Choose what you think are the most important moments through the text that answer the question you have been asked. _____ creates presents _____ as _____ when '_____ 'which suggest _____ The word '_____ ' suggests _____ This makes me.... Conclusion What are your overall thoughts? Overall I feel/think....		



The science behind the sauce!

Gelatinisation

60oC – Starch swells

80oC – Starch bursts

100oC – Starch joins up thickening the liquid

This happens in the sauce used for making macaroni cheese, lasagne and the sauce for the croque monsieur! The Croque monsieur is made using a béchamel/roux sauce. This is made from flour, butter and fat.

4Cs

COOK - 75oC for 2mins
– temperature probe.

CHILL - fridge 0-5oC.

CROSS-CONTAMINATION

Red and green boards.
Raw meat and vegetables

CLEAN – remove bacteria.

THE OVEN

Hob
Grill
Oven



EQUIPMENT

Knives: chefs, vegetable
Chopping boards: red & green
Saucepan/ frying pan- handle not over the heat
Wooden Spoon
Rolling Pin
Baking tray/ Oven gloves
Food processor

WASHING UP hot water and washing up liquid to kill the bacteria
Dish Cloth
Tea Towel

BREAD, POTATOES, RICE AND PASTA- Sugar V Starch- These foods provide the nutrient carbohydrate is made up of starch, sugar and fibre. Starch provides slow-release energy.

they provide energy for the body however starch is better for us than sugar.

Starch is a slow releasing form of energy which can keep the body going for long periods of time. Sugar is a quick release energy where there is a short burst of energy .

This issue with sugar is that to keep your body energized, you keep needing to have sugar, this means your blood sugar levels rise and fall which can cause mood swings

Sugar does not carry any nutrients whereas starch contains iron good for blood , calcium, good for bones and vitamins B and C which is good for growth and repair.

The amount of carbohydrates we need in a balanced diet is around 40%.

The food which contains starch are rice, bread and pasta, however for this to even better for us it is better to have brown rice, brown pasta and bread as this contains fibre, the last of the third sections of carbohydrates.

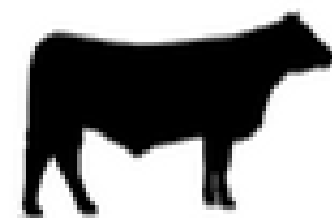
Finally, we want to avoid eating too much sugar such as chocolate, cakes and sweets due to this rotting teeth and sugar which is not burned off will turn to fat putting extra pressure on the body.

Reared- MEAT – FARM TO FORK

Meat comes from animals that are reared on farms. Chickens, cows, pigs, ducks, sheep.

Meat is slaughtered and processed.

We can buy meat in many different cuts.



Caught- FISH- This is caught in many different oceans around the world. It is then processed. It is also farmed.



Grown- Crops such as wheat, barley, potato's, carrots,(fruit, vegetables, cereals,)



VEGETARIAN Someone who doesn't eat meat.

VEGAN Someone who doesn't eat anything from an animal.

THE SOYA BEAN – HBV PROTEIN

OBESITY – Being largely overweight from consuming too much fat in the diet. BMI of over 30

OSTEOPOROSIS – Not enough calcium in the diet – weak bones, bending of the spine.

**Good Fridge organisation**

This chart represents the shelves and draws in a fridge



6

BEANS, PULSES, EGGS, FISH AND MEAT

These foods provide the nutrient protein. Protein is needed for growth and repair of all the cells in the body.

HBV: High Biological value: Good source of protein – Animal sources

LBV: Low Biological value Low source of protein – Vegetable sources

DAIRY AND ALTERNATIVES

These foods provide the mineral - calcium. Calcium is needed for strong teeth and bones. A lack of calcium can cause OSTEOPOROSIS. Dairy products can also be high in the nutrient fat.

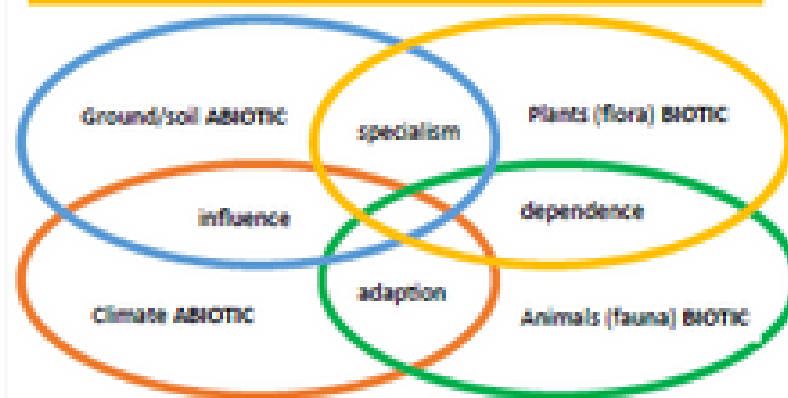
GEOGRAPHY 7.1. ECOSYSTEMS

1. and 2. Ecosystems and Biomes

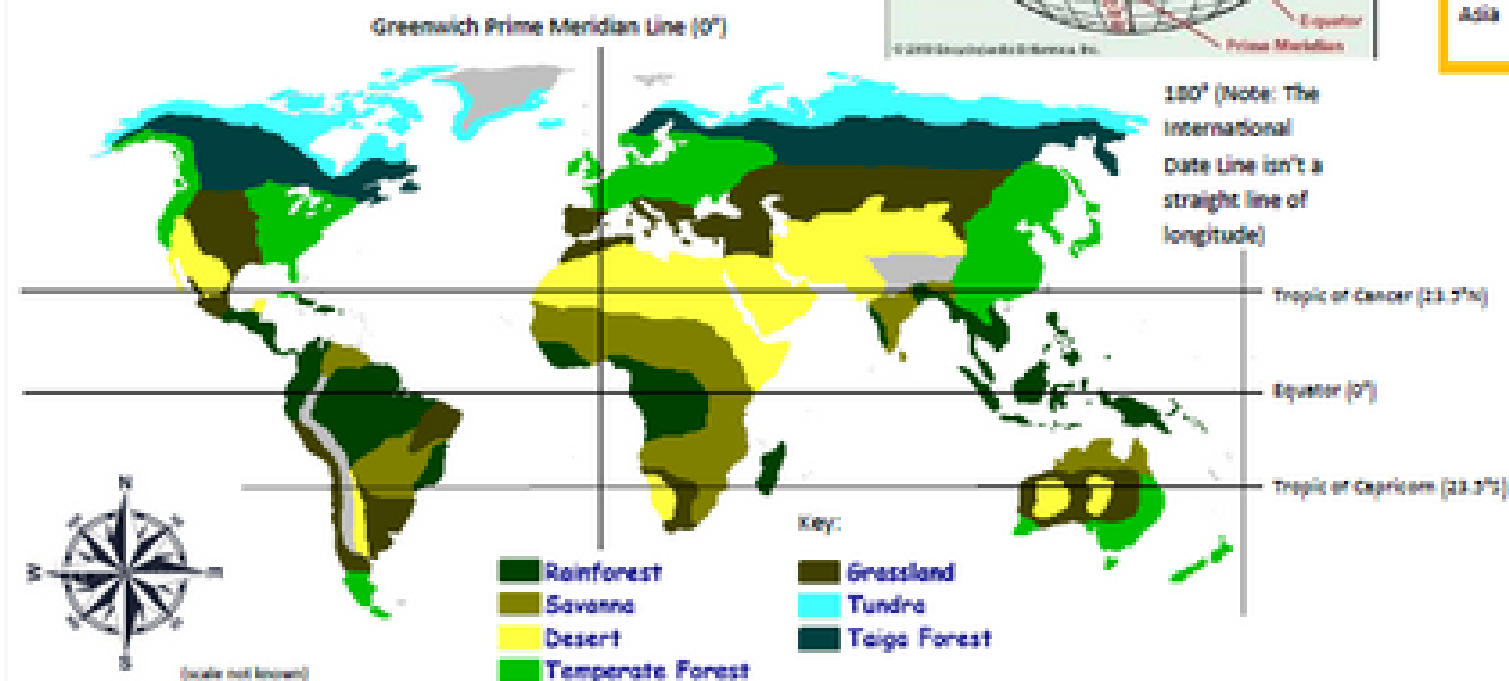
An ecosystem is an environment in which living (biotic) communities of plants (flora) and animals (fauna) exist suited to the conditions of the non-living (abiotic) ground and climate in that area.

These four components (biotic and abiotic) all influence each other; this is called interdependence. See the Venn diagram set out below.

Ecosystems can be as small as a garden pond, or as massive as a desert. Large scale ecosystems are called biomes. Examples are rainforests, coniferous forest or coral reefs.



3. Global Biomes and key latitudes



4. Food Chains and Webs

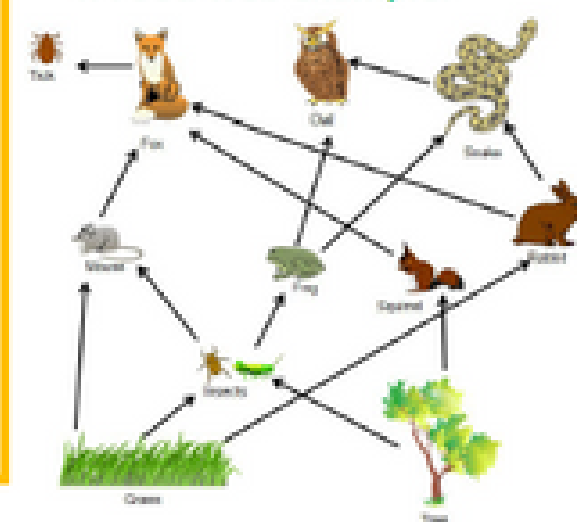
A food chain follows a path of energy flow in an ecosystem as animals consume food. Producers create food and consumers eat them. Some consumers are eaten by secondary consumers (predators).

A food web consists of many food chains as many animals eat a variety of different things—so the food chains become connected at different points. Nutrients are recycled by decomposers when a biotic component dies. See examples of chain and web to the right...

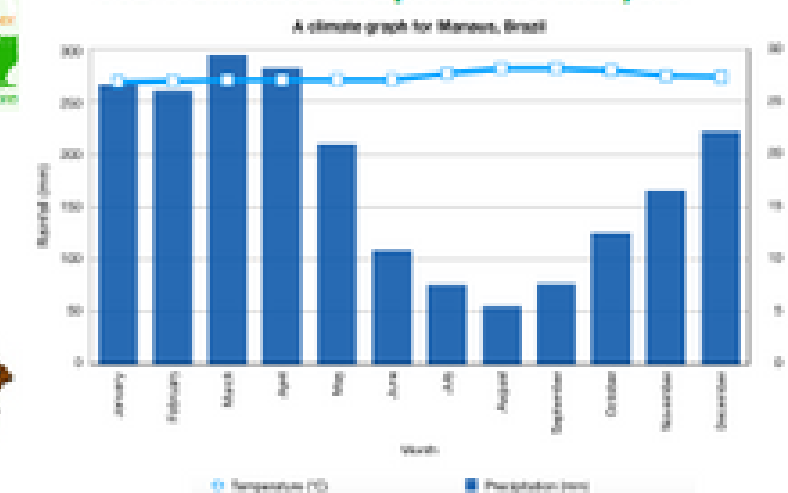
4. Food chain example:



4. Food web example:



AO4 Climate Graphs and Analysis



AO4—Statistical Analysis Core skills

Mode	The number which appears the most often in a set of numbers (data)
Bi-modal	if there are two modes
No mode	if one number does not appear more than any other in the set of numbers
Median	The number in the middle of the set when the numbers are put in ascending order
Range	Find the largest and smallest numbers in the set and subtract them
Mean	Add up the numbers and divide by how many there are in the set
Continuous data	Can be measured and take any value. Temperature is continuous over the year on climate graphs and therefore shown as a line.
Discrete data	Data that can only take particular values. Rainfall is discrete on climate graphs (by month) and therefore shown as non-touching bars.

Ecosystem Key terms

Ecosystem	biome	biotic	abiotic
interdependence		food web	food chain
nutrient cycle	habitat	producers	consumers
biomass	carnivore	omnivore	herbivore
predator	decomposers	longitude	latitude
Tropics	poles	Equator	continents
Africa	Europe	North America	South America
Asia	Oceania	Antarctica	

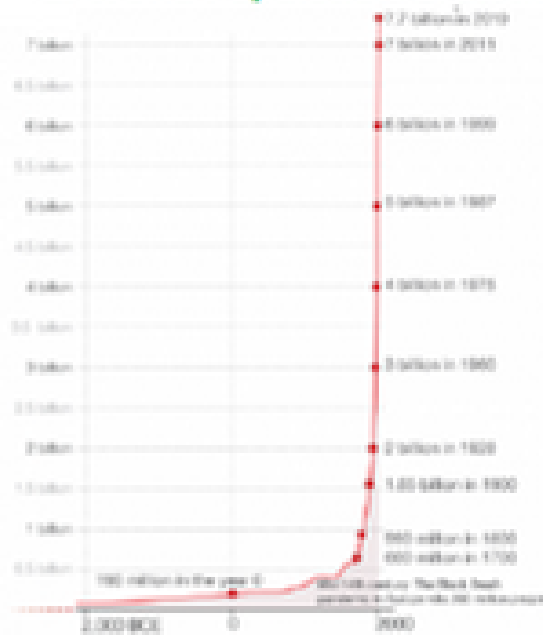
3. 5. 6. 7. Major global biomes overview:

Biome	Locations:	Climate:	Characteristics
Temperate Deciduous Forest	Between 40-60° N or S of the Equator	Mild all year - Cool winters and warm summers. Wet all year	Deciduous trees that lose leaves in winter time. Found in western Europe, eastern USA, eastern Asia and southern Oceania.
Tropical Desert	Generally between 20-35° N or S—along the tropics	Very hot summer and cool winters. Very dry all year.	Cacti and xerophytes survive here. Extreme climate. Found in North and South America and Africa, western Asia and Oceania.
Tropical Rainforest	Along the equator—between the tropics	Always hot, humid and wet with rain all year	Dense multi-layered forest with a permanent growing season. Found in Central and South America, central western Africa, South-east Asia and northern Oceania.

GEOGRAPHY 7.2. POPULATION

Population key terms

1. World Population Growth



2. Natural Change

$$B.R - D.R = N.C.$$

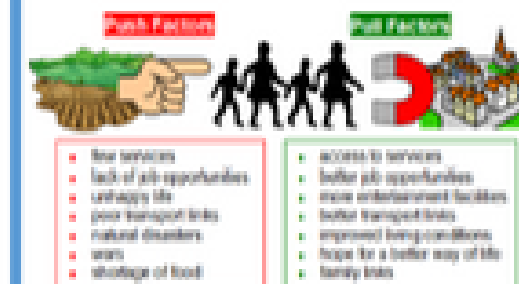
If you take the birth rate (B.R.) of a country and subtract the death rate (D.R.), you will have a number representing natural change; an increase or decrease in population.

Most countries in the world have naturally rising populations, although a small minority are seeing decreasing population size. The most developed countries tend to have very slow growth or slow decline, whilst the least developed countries tend to have rapidly rising populations.

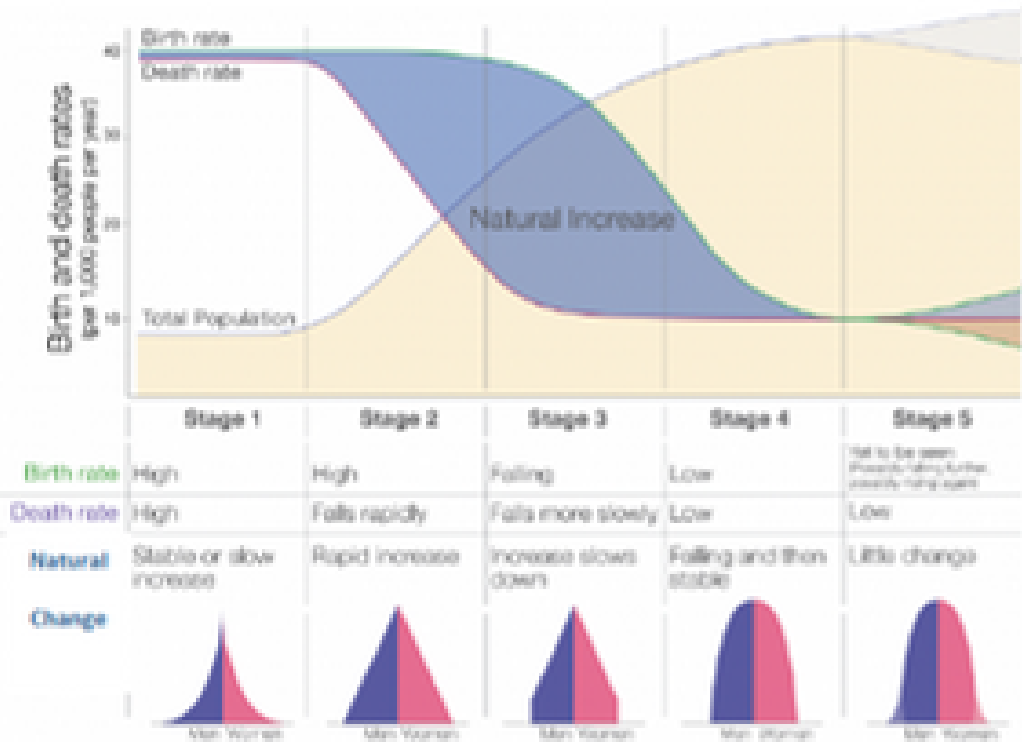
Population	distribution	density
natural increase	natural decrease	
natural change	birth rate	death rate
life expectancy	infant mortality	population
pyramid	demography	demographic
transition model	dense	sparse
push factor	pull factor	migration
migrant	immigrant	refugee
asylum seeker	displacement	

7. Migration

Many people across the world move to live in other places; sometimes it's within a country, sometimes to a different country all together. Some people migrate by choice, others by force or fear for example. Motivation to leave a place is called a 'push factor', the attraction of an alternate place is called a 'pull factor'.



3. The demographic transition model

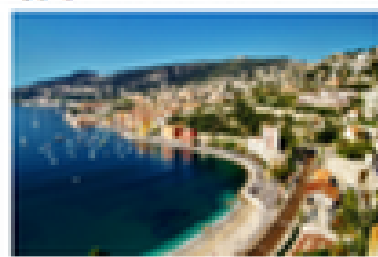


4. and 5. Population Pyramids

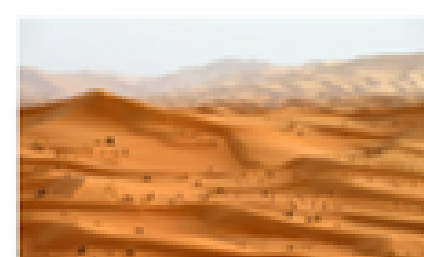
Key terms definitions

Birth rate	The number of live births per 1000 of population per year.
Death rate	The number of deaths per 1000 of population per year.
Natural Change	The outcome of difference between annual birth and death rate
Natural Increase	A growing population due to more births than deaths per year
Natural Decrease	A shrinking population due to more deaths than births per year
Ageing Population	A population structure within a country with a large proportion of senior and elderly citizens—typical in more developed countries
Youthful Population	A population structure within a country with a large amount of children and youths relative to the amount of adults and seniors—typical of less developed countries.
Overpopulation	A situation whereby there are simply too many people; this will stress natural resources, economic and social systems within countries and globally.
Dependency Ratio	The number of economically active citizens (tax payers) compared to the economically dependents (young and elderly)
Optimum Population	A stable population with an even distribution of age groups; this is the position all countries would like to achieve.

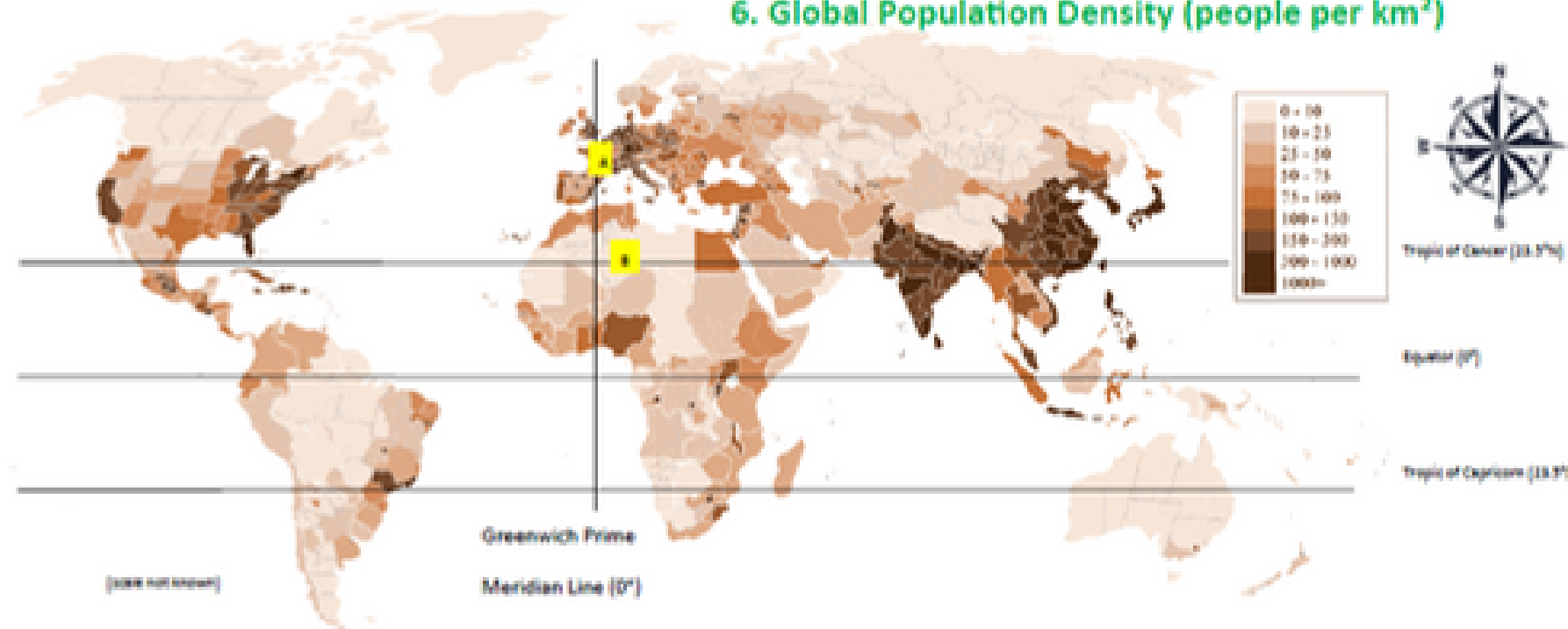
Densely populated area: Southern France



Sparsely populated area: Sahara Desert



6. Global Population Density (people per km²)



History

History is full of stories...

Here are some of the big Medieval ones

1. 1135-53: The Anarchy.

Henry I promised the throne to his daughter, Matilda, after his son died. Would this be the first time England had a female king? When Henry I died, Matilda's cousin Stephen took the throne resulting in a brutal civil war that plunged England into anarchy.

2. 1170: The Murder in the Cathedral.

Thomas Becket was the Archbishop of Canterbury during the reign of Henry II. Becket was murdered by some of Henry II's knights...at the altar of his own cathedral! It was a shocking moment in medieval history.

3. 1215: King John and Magna Carta

King John fell out with his barons (rich noblemen who expected to be involved in running the country) They forced him to sign the 'Great Charter' (Magna Carta) to share some of his power with them. But has King John been unfairly blamed for what went wrong in his reign? Have historians treated him unfairly?

4. 1348: The Black Death The 'most terrible of all terrors'. The Bubonic Plague swept across Europe, carried by fleas living on the black rats on trade ships from China. Nearly half of the population of Europe died! No one at the time understood why. What did they do?! They prayed to God to show they were sorry for their sins, tried various 'remedies', none of which worked, and locked infected people in their homes.

5. 1381: The Peasants Revolt

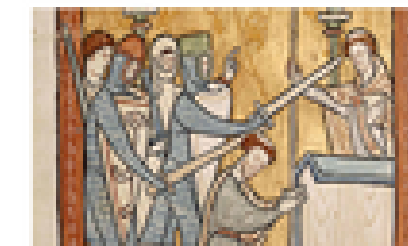
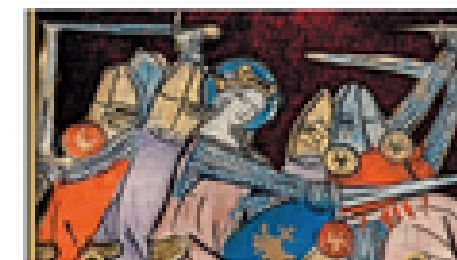
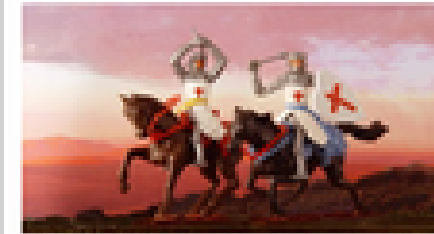
After the terrors of the Black Death, then years of wages being controlled, and having no rights, the peasants took their grievances to King Richard II (who was only 14!) in a huge rebellion which swept across England.

Year 7 Autumn Term 2

6. The Crusades, from 1095

The big, religious 'clash' of the Middle Ages. Knights from England, France and Germany walked thousands of miles to the 'Holy Land' (Jerusalem) to fight Muslim warriors to get control of the Holy Places...and to take over land and steal riches!

7.



Which picture illustrates which of the 6 stories?

YEAR 7 — ALGEBRAIC THINKING... Sequences

@mrhisto_maths

What do I need to be able to do?

- By the end of this unit you should be able to:
 - Describe and continue both linear and non-linear sequences
 - Explain term to term rules for linear sequence
 - Find missing terms in a linear sequence

Keywords

- Sequence: terms or numbers put in a pre-decided order
- Term: a single number or variable
- Position the place something is located
- Rule: instructions that relate two variables
- Linear: the difference between terms increases or decreases by the same value each time
- Non-linear: the difference between terms increases or decreases in different amounts
- Difference: the gap between two terms
- Arithmetic: a sequence where the difference between the terms is constant
- Geometric: a sequence where each term is found by multiplying the previous one by a fixed non zero number

O A O X
 A O X O
 O X O A
 X O A O

Describe and continue a sequence diagrammatically

Count the number of circles or lines in each image

1 3 5

$\xrightarrow{-2}$

What will the next number be? Can you draw this?

Sequence in a table and graphically

Position the place in the sequence

1 2 3

$\xrightarrow{-2}$

What will the next number be? Can you draw this?

Term the number or variable (the number of squares in each image)

3 5 7

$\xrightarrow{-2}$

Graphically

In a table

Position	1	2	3
Term	3	5	7

Because the terms increase by the same addition each time this is **linear** — as seen in the graph

Predict and check terms

3 5 7

$\xrightarrow{-2}$

Predictions

Look at your pattern and consider how it will increase.

e.g. How many lines in pattern 6?

Prediction - 13

If it is increasing by 2 each time - in 3 more patterns there will be 6 more lines

CHECK — draw the next terms

9 11 13

Linear and Non Linear Sequences

- Linear Sequences** — increase by addition or subtraction and the same amount each time
- Non-linear Sequences** — do not increase by a constant amount — quadratic, geometric and Fibonacci
- Do not plot as straight lines when modelled graphically
- The differences between terms can be found by addition, subtraction, multiplication or division

Fibonacci Sequence — look out for this type of sequence

0 1 1 2 3 5 8 ...

Each term is the sum of the previous two terms

Continue Linear Sequences

7, 11, 15, 19...

- How do I know this is a linear sequence? It increases by adding 4 to each term
- How many terms do I need to make this constant? At least 4 terms — two terms only shows one difference not if the difference is constant (a common difference)
- How do I continue the sequence? You continue to repeat the same difference through the next positions in the sequence

How you get from term to term

Try to explain this in full sentences not just with mathematical notation

Use key maths language — doubles, halves, multiply by two, add four to the previous term etc

To explain a whole sequence you need to include a term to begin at...

Continue non-linear Sequences

1, 2, 4, 8, 16 ...

- How do I know this is a non-linear sequence? It increases by multiplying the previous term by 2 — this is a geometric sequence because the constant is multiply by 2
- How many terms do I need to make this constant? At least 4 terms — two terms only shows one difference not if the difference is constant (a common difference)
- How do I continue the sequence? You continue to repeat the same difference through the next positions in the sequence

The next term is found by tripling the previous term. The sequence begins at 4

4, 12, 36, 108...

YEAR 7 — ALGEBRAIC THINKING... Algebraic notation

@whisto_maths

What do I need to be able to

do?

By the end of this unit you should be able to:

- Be able to use inverse operations and 'operation families'.
- Be able to substitute into single and two step function machines.
- Find functions from expressions.
- Form sequences from expressions.
- Represent functions graphically.

Keywords

Function: a relationship that instructs how to get from an input to an output.

Input: the number/ symbol put into a function.

Output: the number/ expression that comes out of a function.

Operation: a mathematical process.

Inverse: the operation that undoes what was done by the previous operation. (The opposite operation)

Commutative: the order of the operations do not matter.

Substitute: replace one variable with a number or new variable.

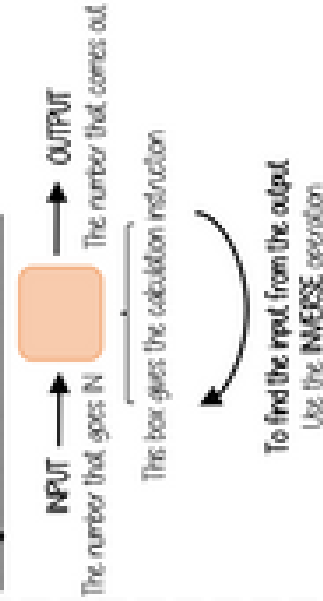
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)

Evaluate: work out

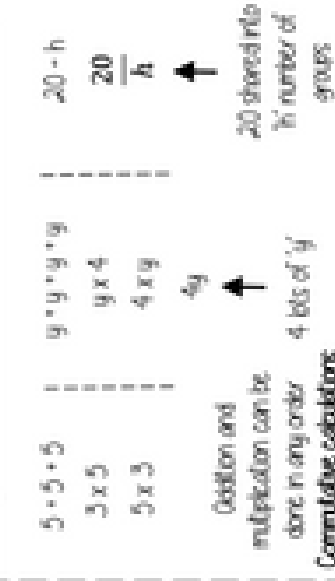
Linear: the difference between terms increases or decreases by the same value each time.

Sequence: items or numbers put in a pre-decided order.

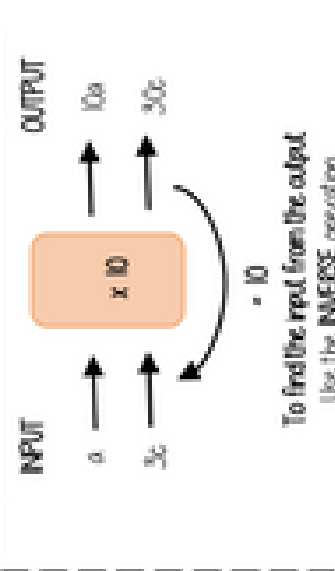
Single function machines



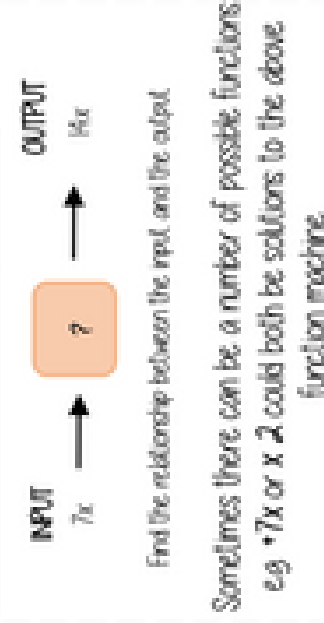
Using letters to represent numbers



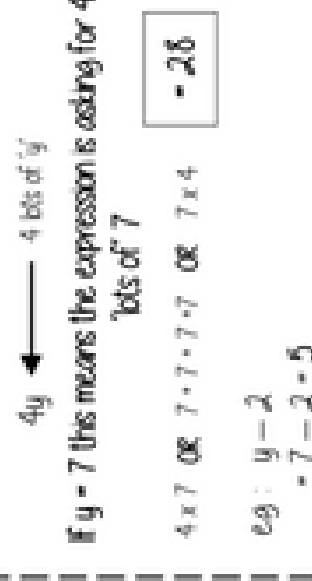
Single function machines (algebra)



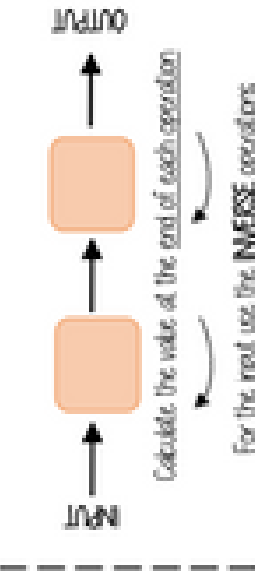
Find functions from expressions



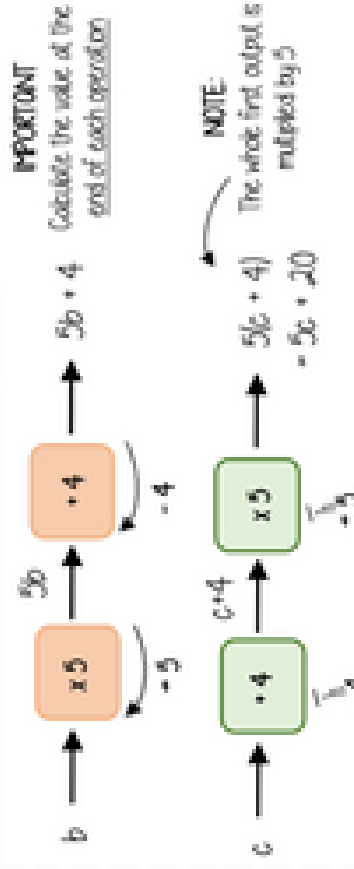
Substitution into expressions



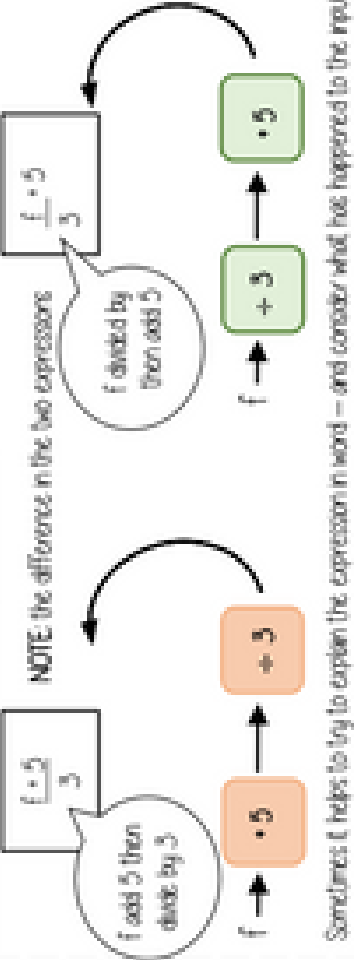
Two step function machines



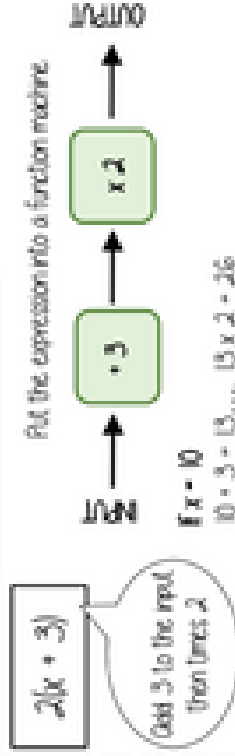
Two step function machines (algebra)



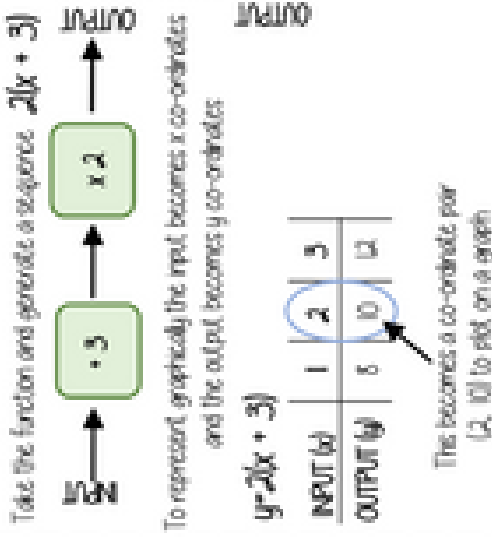
Find functions from expressions



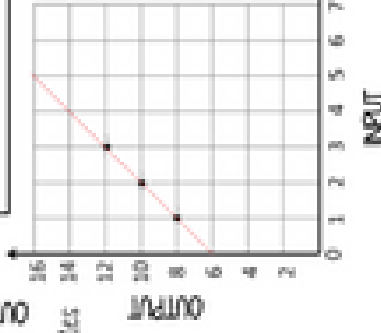
Substitution into an expression



Representing functions graphically



Not all graphs will be linear only those with an integer value for x. Powers and fractions generate differently shaped graphs.



Forming a sequence

INPUT	1	2	3
OUTPUT	8	10	12

The substitution is the 'input' value.
The OUTPUT becomes the sequence

YEAR 7 — ALGEBRAIC THINKING

Equality and Equivalence

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Form and solve linear equations
- Understand like and unlike terms
- Simplify algebraic expressions

Keywords

- Equally: two expressions that have the same value
- Equation: a mathematical statement that two things are equal
- Equals: represented by '=' symbol — means the same
- Solution: the set or value that satisfies the equation
- Solve: to find the solution
- Inverse: the operation that undoes what was done by the previous operation (The opposite operation)
- Term: a single number or variable
- Like: variables that are the same are 'like'
- Coefficient: a multiplicative factor in front of a variable e.g. $5x$ (5 is the coefficient, x is the variable)
- Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)

Equality

$$2 \times 14 = 5 \times 6$$

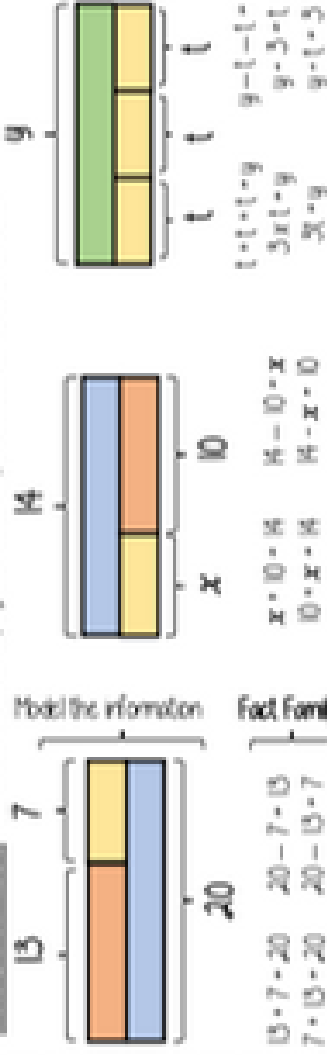
16 is equal to 16

Saying it out loud sometimes helps you to understand equality

The left is the same as the right
16 is the sum on the left
16 is the sum on the right

Fact Families

Use a bar model to display the relationships between terms and numbers



Solve one step equations (+/-)

There is more to this than just getting the answer

$$x + 4.2 = 59$$

$$x + 4.2 - 59$$

$$4.2 + x - 59$$

$$59 - x + 4.2$$

$$59 - 4.2 = x$$

Don't forget you know how to use function machines

$$x \rightarrow +4.2 \rightarrow 59$$

$$\leftarrow 4.2$$

$$\frac{f - 5}{4}$$

$$f - 4 = 5$$

$$f - 5 = 4$$

$$5 + 4 = f$$

$$4 \times 5 = f$$

Don't forget you know how to use function machines

$$5 \rightarrow x \times 4 \rightarrow f$$

$$\leftarrow 4$$

Like and unlike terms

Like terms are those whose variables are the same

♥ and 3♥ are like terms
The variable is the same

★ and 3♥ are unlike terms
The variables are NOT the same

Examples and non-examples

Like terms

$9, 7y, 2x^2, x^2, 4a, 10ba, 5, -2$

Unlike terms

$y, 7x, 2x^2, 2x^2, 4a, 10a, 5, -2$

Note: here ab and ba are commutative operations, so are all like terms

Equivalence

Check equivalence by substitution

e.g. $m = 10$

$$5m \quad 2 \times 2m \quad 7m - 3m$$

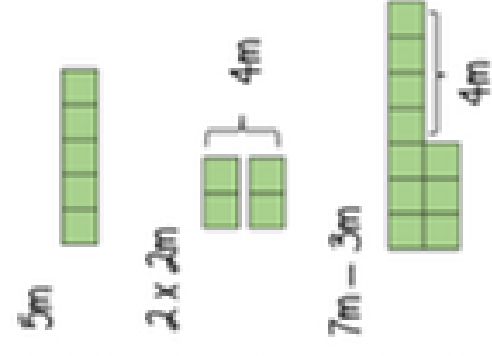
$$5 \times 10 \quad 2 \times (2 \times 10) \quad (7 \times 10) - (3 \times 10)$$

$$= 50 \quad = 40 \quad = 70 - 30$$

$$= 50 \quad = 40 \quad = 40$$

Equivalent expressions

Repeat this with various values for m to check



Collecting like terms = symbol

The $\equiv$ symbol means equivalent to
It is used to identify equivalent expressions

Collecting like terms

Only like terms can be combined

$$4x + 5b - 2x + 10b$$

$$(4x) + (-2x) + (5b) + (10b)$$

$$2x + 15b$$

Common misconceptions

$$2x + 3x^2 + 4x \equiv 6x + 3x^2$$

Although they both have the x variable, x^2 and x terms are unlike terms so cannot be collected

YEAR 7 — APPLICATION OF NUMBER

Solving problems with addition and subtraction

@whs10_maths

What do I need to be able to do?

- By the end of this unit, you should be able to
- Understand properties of addition/ subtraction
 - Use mental strategies for addition/subtraction
 - Use formal methods of addition/ subtraction for integers
 - Use formal methods of addition/ subtraction for decimals
 - Solve problems in context of perimeter
 - Solve problems with finance, tables and timetables
 - Solve problems with frequency trees
 - Solve problems with bar charts and line charts

Keywords

- Commutative:** changing the order of the operations does not change the result
- Associative:** when you add or multiply you can do so regardless of how the numbers are grouped
- Inverse:** the operation that undoes what was done by the previous operation (The opposite operation)
- Placeholder:** a number that occupies a position to give value
- Perimeter:** the distance/ length around a 2D object
- Polygon:** a 2D shape made with straight lines
- Balance:** in financial questions — the amount of money in a bank account
- Credit:** money that goes into a bank account
- Debit:** money that leaves a bank account

Addition/ Subtraction with integers



Modeling methods for addition/ subtraction

- Bar models
- Number lines
- Part/ whole diagrams

Addition is commutative



$$6 + 3 = 3 + 6 = 9$$

The order of addition does not change the result

Subtraction the order has to stay the same

$$360 - 147 = 360 - 100 - 40 - 7$$

- Number lines help for addition and subtraction
- Working in 10's first aids mental addition/ subtraction
- Show your relationships by writing fact families

Addition/ Subtraction with decimals

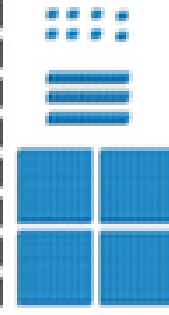
4	.	3	8
7	.	9	0
			+

0 can be used to fill empty places with value

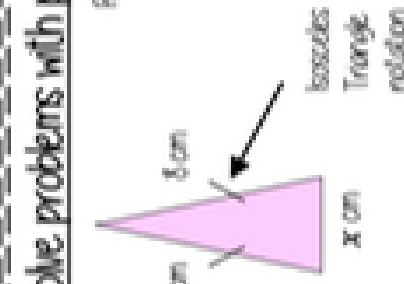
The decimal place acts as the placeholder and aligns the other values

$$5.43 + \frac{8}{10}$$

Revised Fraction — Decimal equivalence
 $5.43 = 0.8$



1 represents 1 instead of 100



Solve problems with perimeter

Perimeter is the length around the outside of a polygon

The triangle has a perimeter of 25cm
Find the length of x

$$8\text{cm} + 8\text{cm} + x\text{cm} = 25\text{cm}$$

$$16\text{cm} + x\text{cm} = 25\text{cm}$$

$$x\text{cm} = 9\text{cm}$$

Solve problems with finance

Profit = Income - Costs

Credit — Money coming into an account

Debit — Money leaving an account

Money uses a two decimal place system

14.2 on a calculator represents £14.20

Check the units of currency — work in the same unit

Tables and timetables

Distance tables

	London	Cardiff	Glasgow	Belfast
	271	493	518	592
		558	392	177

This shows the distance between Glasgow and London
It is where their row and column intersect

Bus/ Train timetables

	1006	1045	1130
Harrison			
Bridge	1024	1106	1147
Avilla	1051	1133	1206
Warr	1117	1202	1233

Each column represents a journey each row represents the time the 'bus' arrives at that location

TIME CALCULATIONS — use a number line

Two-way tables

	H	T
H	HH	HT
T	TH	TT

Where rows and columns intersect is the outcome of that action

Frequency trees

60 people visited the zoo one Saturday morning

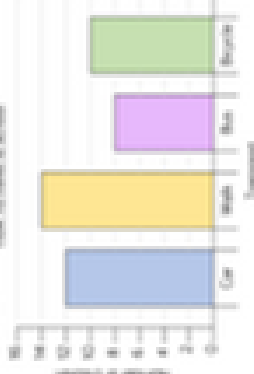
26 of them were adults 13 of the adult's favourite animal was an elephant 24 of the children's favourite animal was an elephant

The overall total "60 people"

A frequency tree is made up from part-whole models
One piece of information leads to another

Bar and line charts

Use addition/ subtraction methods to extract information from bar charts



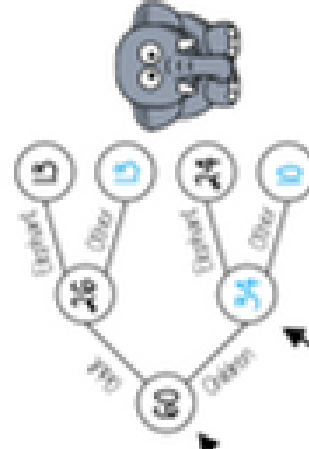
e.g. Difference between the number of students who walked and took the bus
Walk frequency — bus frequency

When describing changes or making predictions

- Extract information from your data source
- Make comparisons of difference or sum of values
- Put into the context of the scenario

Probabilities or statements can be taken from the completed trees

e.g. 34 children visited the zoo



YEAR 7 — APPLICATION OF NUMBER

Solving problems with multiplication and division

@xhisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Understand and use factors
- Understand and use multiples
- Multiply/Divide integers and decimals by powers of 10
- Use formal methods to multiply
- Use formal methods to divide
- Understand and use order of operations
- Solve area problems
- Solve problems using the mean

Keywords

- Array: an arrangement of items to represent concepts in rows or columns
- Multiples: found by multiplying any number by positive integers
- Factor: integers that multiply together to get another number
- Milli: prefix meaning one thousandth
- Centi: prefix meaning one hundredth
- Kilo: prefix meaning multiply by 1000
- Quotient: the result of a division
- Dividend: the number being divided
- Divisor: the number we divide by

Factors

- Arrays can help represent factors
- Factors of 10: 1, 2, 5, 10
- Factors of 20: 1, 2, 4, 5, 10, 20

The number itself is always a factor

Square numbers have an odd number of factors

- Factors of 4: 1, 2, 4
- Factors of 9: 1, 3, 9
- Factors of 16: 1, 2, 4, 8, 16
- Factors of 25: 1, 5, 25
- Factors of 36: 1, 2, 3, 4, 6, 9, 12, 18, 36

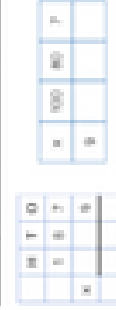
Be strategic:
- Lay factors out in pairs can help you not to miss any

Metric conversions

Useful Conversions

$$\begin{aligned} \text{mm} &\xrightarrow{+10} \text{cm} \xrightarrow{+100} \text{m} \xrightarrow{+1000} \text{km} \\ &\xleftarrow{\times 10} \text{cm} \xleftarrow{\times 100} \text{m} \xleftarrow{\times 1000} \text{km} \end{aligned}$$

Multiplication methods



Long multiplication (column)

Grid method

Less effective method especially for bigger multiplication

Multiplication with decimals

Perform multiplications as integers

$$\text{e.g. } 0.2 \times 0.3 \rightarrow 2 \times 3$$

Make adjustments to your answer to match the question

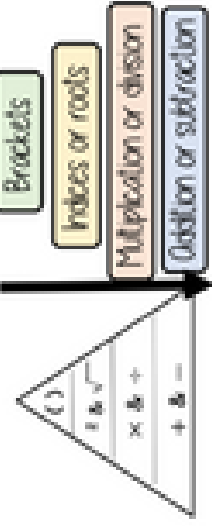
$$0.2 \times 10 = 2$$

$$0.3 \times 10 = 3$$

$$\text{Therefore } 6 \div 100 = 0.06$$

Estimates: Using estimates allows a 'check' if your answer is reasonable

Order of operations



If you have multiple operations from the same tier work from left to right

$$\text{e.g. } 10 - 3 + 5 \rightarrow 10 - 3 \rightarrow 7 + 5$$

$$6 \times 4 + 8 \times 2$$

$$24 + 16 = 40$$

Multiples



Bar models can represent anything is a multiple. E.g. 20 is a multiple of 4

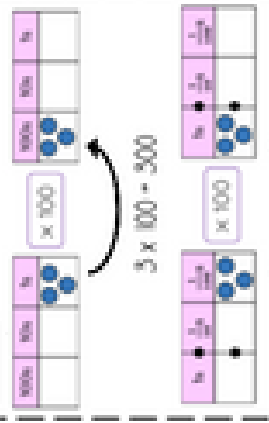
Lowest Common Multiples

- 9: 9, 18, 27, 36, 45, 54
- 12: 12, 24, 36, 48, 60

The first line their multiples match

$$\text{LCM} = 36$$

Multiply/Divide by powers of 10



Repeated multiplication and division by powers of 10 is commutative

$$3 \times 100 = 300$$

$$300 \div 100 = 3$$

Division methods

$$35184 \div 7 = 512$$

Short division

$$24 \div 6 = 4$$

Break up the divisor using factors

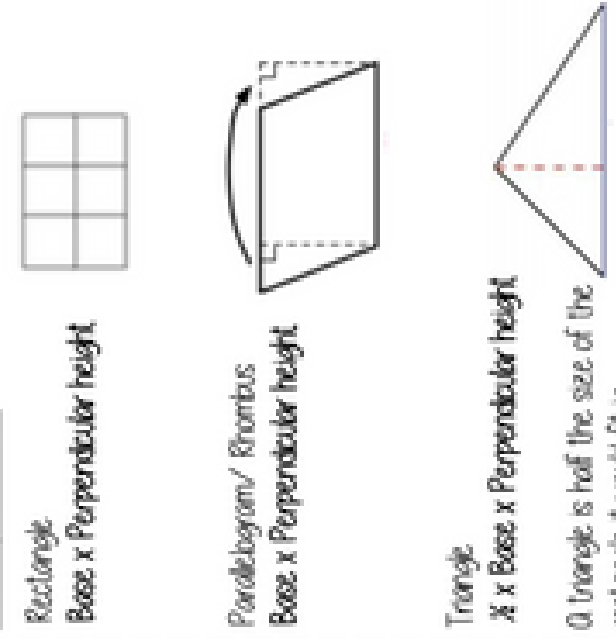
Division with decimals

The placeholder in division methods is essential — the decimal lines up on the dividend and the quotient

$$2.4 \div 0.02 \rightarrow 24 \div 0.2 \rightarrow 240 \div 2$$

Give the same value as represent the same proportion
Multiply the values in proportion until the divisor becomes an integer

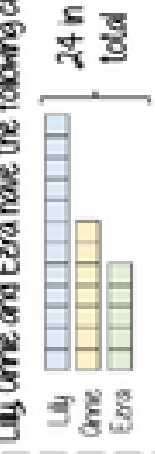
Area problems



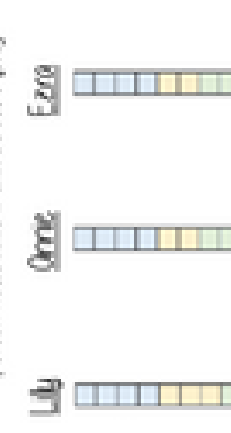
Mean problems

Mean — a measure of average
It gives an idea of the central value

Lily, Annie and Ezra have the following cubes



Finding the mean amount is the average amount each person would have if shared out equally



The mean number of blocks would be 8 each

YEAR 7 - DEVELOPING NUMBER... Number Sense

What do I need to be able to do?

By the end of this unit you should be able to:

- Round numbers to powers of 10 and 1 sf
- Round numbers to any dp
- Estimate solutions
- Calculate using order of operations
- Calculate with money, units of measurement and time

Keywords

Significant: Place value of importance

Round: Making a number simpler but keeping its value close to what it was

Decimal: Place holders after the decimal point

Overestimate: Rounding up – gives a solution higher than the actual value

Underestimate: Rounding down – gives a solution lower than the actual value

Metre: A system of measurement

Balance: The amount of money in a bank account

Deposit: Putting money into a bank account

Round to powers of 10 and 1 sig figure **R** if the number is halfway between we 'round up'

5475 to the nearest 1000

5000 ↑ 6000

5475 to the nearest 100

5400 ↑ 5500

370 to 1 significant figure is 400

37 to 1 significant figure is 40

37 to 1 significant figure is 4

0.37 to 1 significant figure is 0.4

0.00037 to 1 significant figure is 0.0004

Round to the first non-zero number

Round to decimal places

Focus on the numbers after the decimal point

2.46192
"To 1dp" – to one number after the decimal
"To 2dp" – to two numbers after the decimal

2.46192 (to 1dp) – is this closer to 2.4 or 2.5

24 ↑ 25

2.46192
This shows the number is closer to 2.5

2.46192 (to 2dp) – is this closer to 2.46 or 2.47

246 ↑ 247

2.46192
This shows the number is closer to 2.46

Estimate the calculation

Round to 1 significant figure to estimate

$$4.2 \times 6.7 \approx 4 \times 7 \approx 11$$

↙ The equal sign changes to show it is an estimation

$$214 \times 3.1 \approx 20 \times 3 \approx 60$$

↘ This is an underestimate because both values were rounded down

It is good to check all calculations with an estimate in all aspects of maths – it helps you identify calculation errors

Order of operations **R**

Brackets Operations in brackets are calculated first

Other operations eg powers, roots,

Multiplication/ Division

They are carried out in the order from left to right in the question

Addition/ Subtraction

They are carried out in the order from left to right in the question

Calculations with money

Debit – You have £0 or more in an account

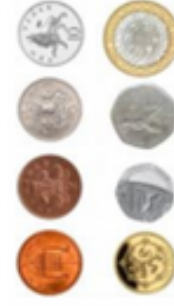
Credit – You have less than £0 in an account



Using a calculator – ensure you are working in the correct units

$$\begin{aligned} \text{£ } 130 + 50\text{p} &= 130 + 50 \text{ (in pence)} \\ &= 130 + 0.50 \text{ (in pounds)} \end{aligned}$$

$$\text{£ } 1 = 100\text{p}$$



Units are important: Useful Conversions

Metric measures of length

$$\text{Kilo} = 1000 \times \text{meter} \quad \text{Centi} = \frac{1}{100} \times \text{meter}$$

$$\text{Mili} = \frac{1}{1000} \times \text{meter}$$

Units of weight/ capacity

$$\text{Weight} = \text{g, kg, t}$$

$$\text{Capacity (volume of liquid)} = \text{ml, L}$$

$$\begin{aligned} \text{mm} &\xrightarrow{+10} \text{cm} \xrightarrow{+100} \text{m} \xrightarrow{+1000} \text{km} \\ &\xleftarrow{\times 10} \xleftarrow{\times 100} \xleftarrow{\times 1000} \end{aligned}$$

$$\begin{aligned} \text{g} &\xrightarrow{+1000} \text{kg} \\ &\xleftarrow{\times 1000} \end{aligned}$$

$$\begin{aligned} \text{ml} &\xrightarrow{+1000} \text{L} \\ &\xleftarrow{\times 1000} \end{aligned}$$

Time and the calendar



1 Year – the amount of time it takes Earth to go around the sun

365 (and a quarter) days

Leap Year – 366 days (every 4 years)

One Day



12-hour clock

Use am (morning) and pm (afternoon)

Only use hour times up to 12

24-hour clock

0-11 (morning hours)

12-23 (afternoon hours)

Use a number line for time calculations!

12 Months – one year = 52 weeks

31 days – Jan, March, May, July, Aug, Oct, Dec

30 days – April, June, Sept, Nov

28 days – Feb (29 leap year)

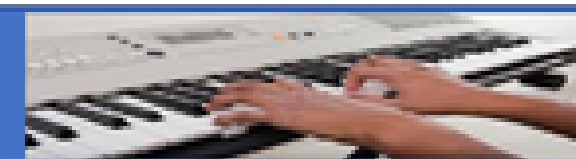
1 week – 7 days

Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

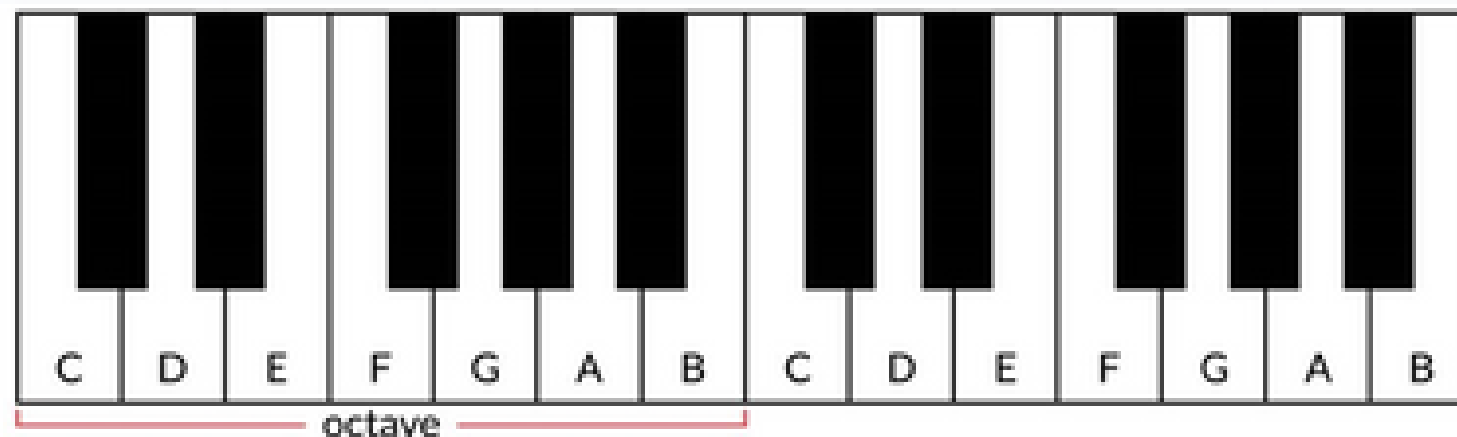
MUSIC

KEYBOARD SKILLS

Exploring Treble Clef Reading and Notation



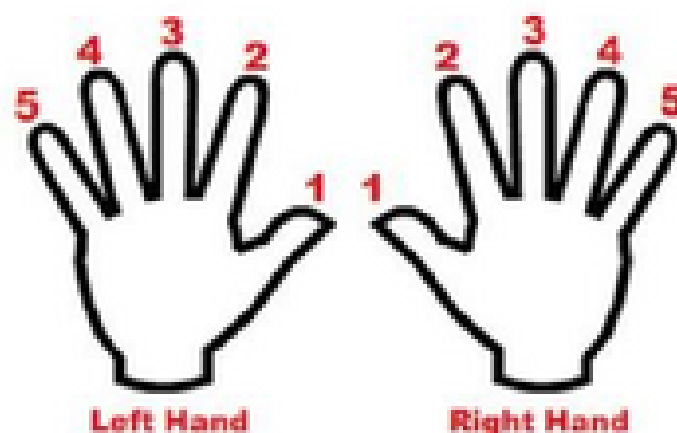
A. Layout of a Keyboard/Piano



D. Keyboard Functions



E. Left Hand/Right Hand (1-5)

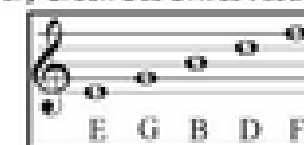


B. Treble Clef & Treble Clef Notation

A **STAVE** or **STAFF** is the name given to the five lines where musical notes are written. The position of notes on the stave or staff shows their **PITCH** (how high or low a note is). The **TREBLE CLEF** is a symbol used to show high-pitched notes on the stave and is usually used for the right hand on a piano or keyboard to play the **MELODY** and also used by high pitched instruments such as the flute and violin.



Every Green Bus Drives Fast. Notes in the **SPACES** spell "FACE"

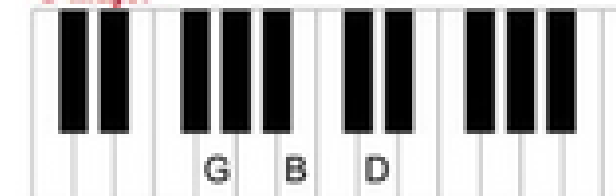


Notes from **MIDDLE C** going up in pitch (all of the white notes) are called a **SCALE**.

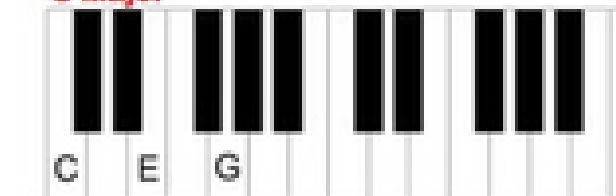


C. Keyboard Chords

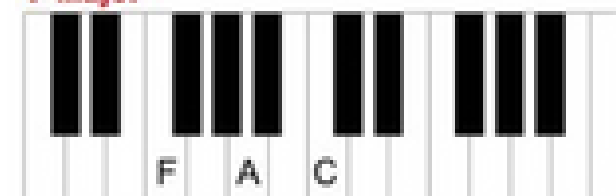
G Major



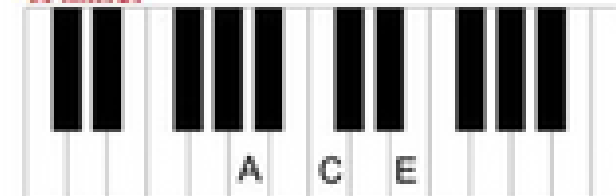
C Major



F Major



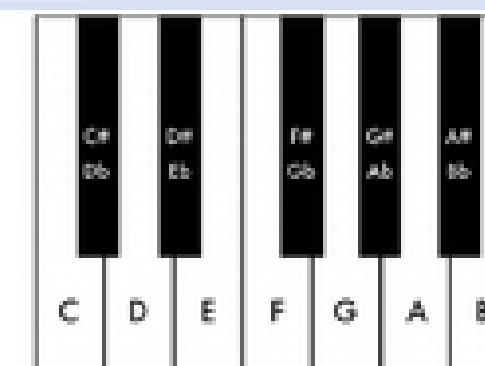
A Minor



Play one - Miss one - play one - miss one - play one

F. Black Keys and Sharps and Flats

There are five different black notes or keys on a piano or keyboard. They occur in groups of two and three right up the keyboard in different pitches. Each one can be a **SHARP** or a **FLAT**. The # symbol means a **SHARP** which raises the pitch by a semitone (e.g. C# is higher in pitch (to the right) than C). The b symbol means a **FLAT** which lowers the pitch by a semitone (e.g. Bb is lower in pitch (to the left) than B). Each black key has 2 names - C# is the same as Db - there's just two different ways of looking at it! Remember, black notes or keys that are to the **RIGHT** of a white note are called **SHARPS** and black notes to the **LEFT** of a white note are called **FLATS**.



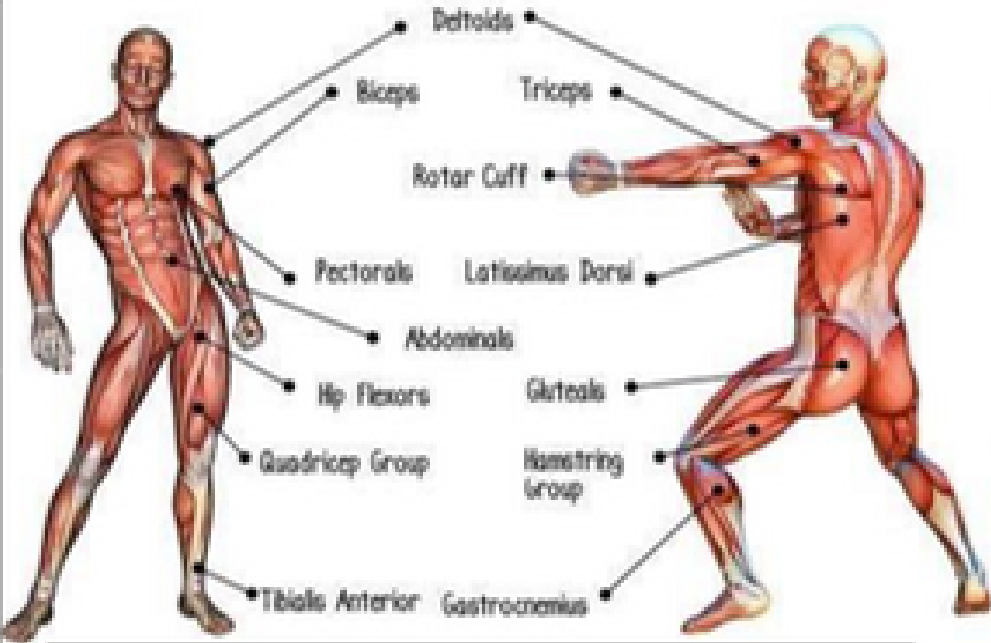
Year 7 PHYSICAL EDUCATION

1. Four Stages of a Warm up. AUTUMN 1

1. Gradual pulse raising	- Gradually raising the heart rate to increase blood flow around the body and speed up oxygen delivery to the working muscles. This helps to produce more energy. - Increases the temperature of muscles to limit the risks of sprains and strains e.g. jogging around the pitch, cycling, swimming, star jumps, burpees, aerobics
2. Stretching	- Increases the range of movement at joints and muscles, which limits the risks of injuries such as sprains and strains e.g. Dynamic stretches- stretching whilst moving e.g. high knees, heel flicks, high kicks, lunges. Static stretches- holding stretches for 10-15 seconds
3. Skill-based practices	- Gradually increasing the intensity required for the game, by practising the skills and techniques to improve your performance, as your body is prepared for these movements e.g. footballer passing the ball around, cricketer bowling the ball
4. Mental Preparation	- Prepares your mind and body for performance, as you are focused on the performance and can control arousal levels. For example deep breathing and mentally rehearsing what you will be doing in the match e.g. scoring a conversion kick, scoring a jump shot



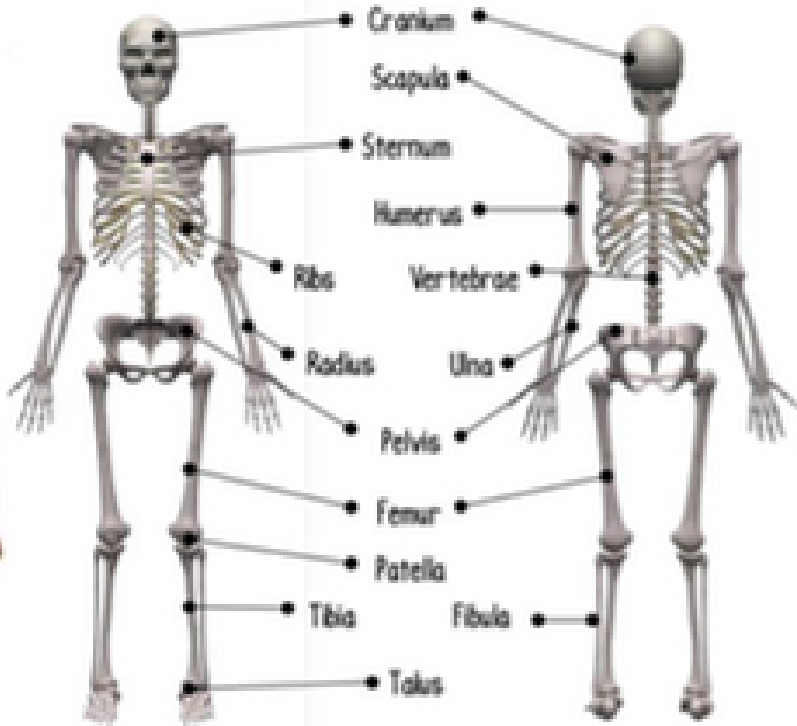
3. Major Muscles of the Body. SPRING 1



2 Stages of a Cool Down. AUTUMN 2

3 stages of a cool down	Reasons and examples
1. Maintaining elevated breathing and heart rate	- For example jogging to help with the removal of lactic acid (to reduce soreness after exercise), carbon dioxide and waste products.
2. Gradual reduction in intensity	- For example, reducing the speed of the jog and into a walk to prevent the delayed onset of muscles soreness (DOMS)
3. Stretching	- To allow the muscles to recover after exercising

4. Major Bones of the Skeleton. SPRING 2



5. Functions of the Skeleton. SUMMER 1



Religions and Worldviews – Half-term 2 – Knowledge Organiser

Week 1 – Religious and non-religious worldviews

➤ Theists believe there is a God; usually they believe this due to having a religious experience; growing up in a religious household; seeing the world as something that has been purposefully created.

➤ Atheists believe there is no God; usually they believe this due to a lack of empirical (scientific) evidence; because of the amount of suffering in the world; not seeing theism as logical.

➤ Agnostics are undecided whether there is a God or not; they usually believe this because they have not seen enough evidence for either side; they had faith but lost it due to suffering or crisis; they have not experienced God for themselves.

➤ Monotheists are people who believe there is only one God for example: Christians, Muslims, Jews and Sikhs

➤ Polytheists are people who believe in multiple Gods or Goddesses for example: Hindus, Ancient Greeks, Norse, Pagan

Some people believe in God because...

They have been raised in a household of believers/theists

They may have had their prayers answered in the past

They believe there is evidence of God’s existence in holy scriptures and some scientific study

Believing in God provides comfort and meaning to a person’s life

Some people don’t believe in God because...

They have been raised in a household on non-believers/atheists/agnostics

They may not have had their prayers answered in the past

They believe there is no scientific evidence of God’s existence and most scientific study rejects God

People should focus on making their life better instead of believing in God

Week 3 – Humanism

Humanists stand for:

Universalism, not tribalism

Freedom, not conformity

Generosity, not selfishness

Diversity, not uniformity

Equality, not hierarchy

Empathy, not pity

Rational doubt, never certainty

Courage over fear

And truth, love, and kindness above all else

• Humanists are a group of mostly atheists or agnostics who believe that the power to change the world lies with humanity and humans alone are in control of their lives and environment.

• The first recorded humanist thinking can be traced back approximately 2500years to ancient China, India, Greece and Rome.

• Some of the most well-known Humanists include:

Albert Einstein: A Nobel Prize winner who co-authored a manifesto for peace and disarmament.

Marie Curie: The Nobel Prize winner who was twice named Humanist of the Year.

Philip Pullman: Author of the His Dark Materials series.

Terry Pratchett: A fantasy author and satirist, according to Humanists UK.

Sir Stephen Fry: Actor, writer, comedian and presenter.

• World Humanist Day is celebrated each year on June 21st.

Week 5 – Religion in Britain

• The diversity of the British people is highlighted in the census (household questionnaire) which is performed every 10 years. The last census data is shown in the image opposite →

• British Values and the laws, such as the Equality Act 2010, reflect a commitment to freedom of religious belief and expression, meaning people are encouraged to show and celebrate their individual beliefs.

• Religion (particularly Christianity) has impacted Britain in many ways, including:

- Laws – many of Britain’s laws are based in Christianity (do not murder/steal/lie etc)

- Festivals & celebrations - national holidays for Christian saints, Christmas/easter/advent are all part of traditional British culture. More people celebrating Diwali (Hinduism), Eid (Islam), Rosh Hashanah (Jewish).

- Traditions – Sundays = day of rest, in court we swear on the Bible, The Lord’s Prayer still said in many primary schools, Christmas cards/hymns and songs, King/Queen is head of Church of England, marriages & funerals still taken place mainly in churches, Britain uses a Christian calendar created by Christian monks in the 1700’s

RELIGION AND BELIEF DIVERSITY IN ENGLAND AND WALES

Christian: 46.2%

No answer: 6%

Other religion: 0.6%

Jewish: 0.5%

Buddhist: 0.5%

Sikh: 0.9%

Hindu: 1.7%

Muslim: 6.5%

No religion: 37.2%

SOURCE: 2021 Census for England and Wales