


Year 8 Knowledge Organiser

Term 2

This booklet contains some of the key content we want the students to learn this term. Knowledge Organisers are placed in the relevant Google Classroom.

How students and parents can use a Knowledge Organiser to maximise learning:

- 
- Pick a subject to recall and memorise
 - **Look** at the pages for that subject
 - **Read** the page information for that subject
 - **Cover** the page of information
 - **Write** the information for that subject from memory
 - **Check** what you have written. Correct mistakes and add anything you have missed
 - Your teacher will **quiz** you in class to see what you can recall
 - **Repeat** the process over time and focus on the information you keep missing or make mistakes on

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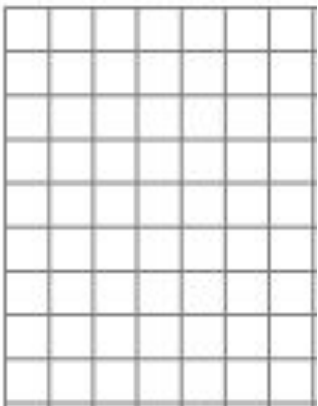
Year 8 - Facial Features

Assessment Objectives:

- A01 – Developing ideas through research
- A02 – Using resources, experimenting with different media and ideas
- A03 – Recording ideas (photos & drawings)
- A04 – Personal response

Step by step guides

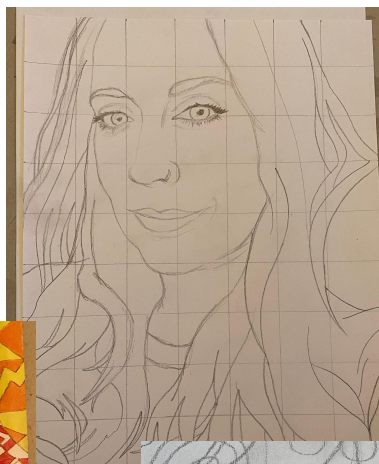
Step 1: Measure 3cm spaces across the top of the page making small dots to mark the spot. Repeat across the bottom then join these up using a ruler. Repeat this down the sides of your page



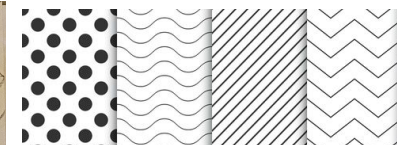
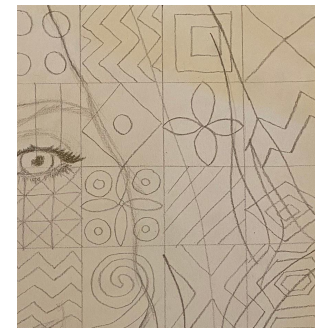
Step 2: Repeat this drawing a grid of 3 x 3 cm squares across your photo.



Step 3: Copy the outline of the hair, face and facial features square by square. Working top left down to bottom right.



Step 4: Add patterns and shapes to each square.



Step 5: Add colours using an Analogous colour scheme.

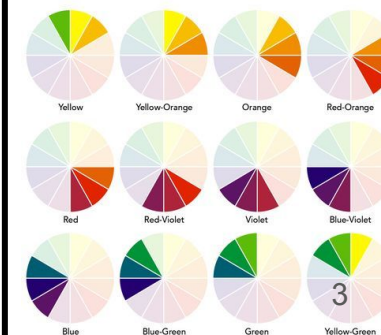


Sections:

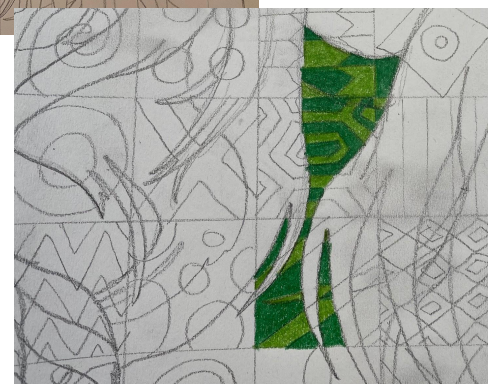
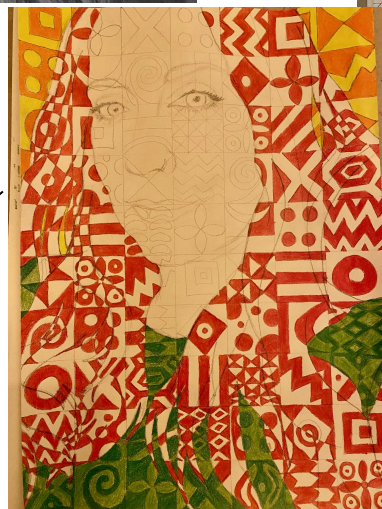
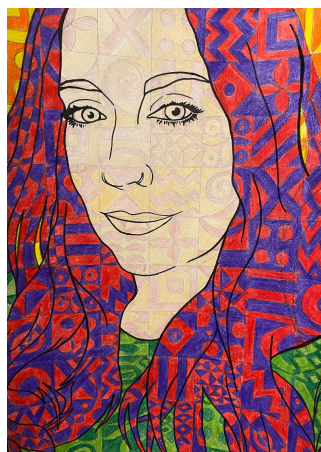
- Hair
- Face
- Clothes
- Background

You will need 2 different colours that are next to each other on the colour wheel.

ANALOGOUS COLORS



Step 6: Use a Fineliner to outline the face, hair and facial features (eyes, nose, mouth.)



Year 8 - Facial Features Grid Mapping

Assessment Objectives:

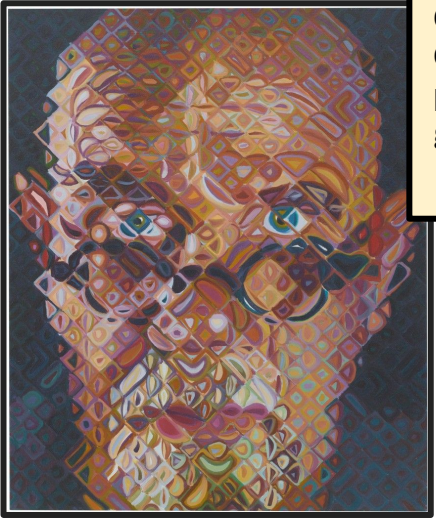
- A01 – Developing ideas through research
- A02 – Using resources, experimenting with different media and ideas
- A03 – Recording ideas (photos & drawings)
- A04 – Personal response

Chuck Close

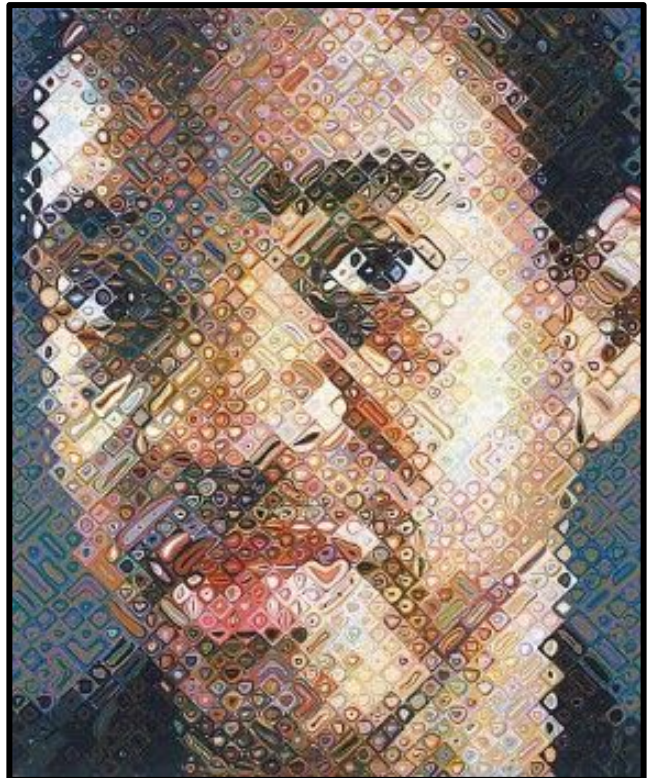
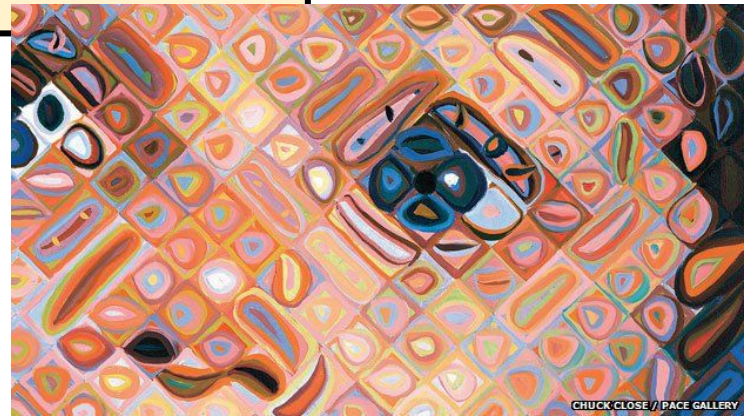
born 1940. Chuck Close is an American painter and photographer who works from photos to create large scale portraits. Some are as big as this wall of a classroom!

He often uses grids to create his hyper realistic portraits. By adding pattern into the grids squares he can create texture and tone.

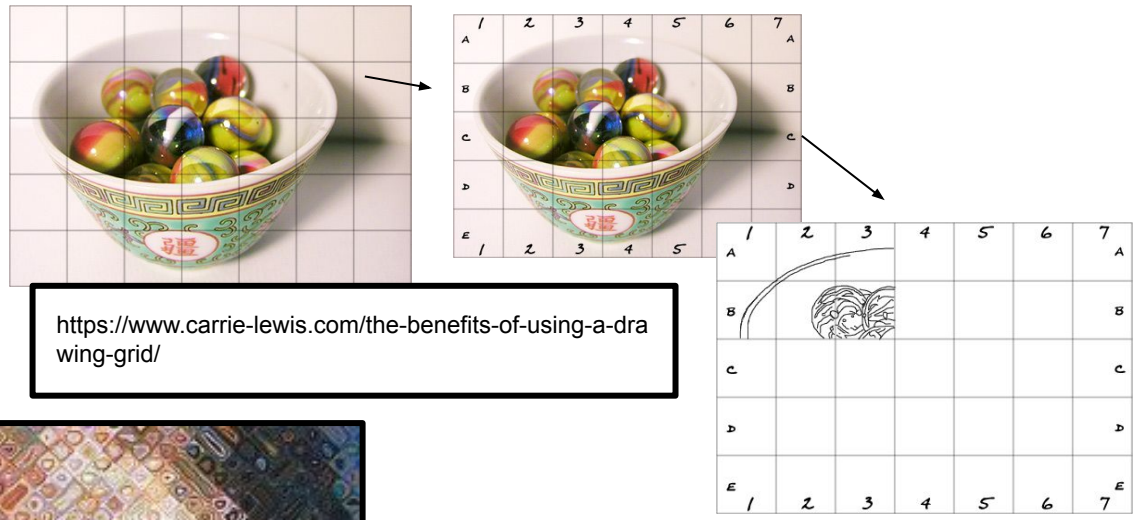
Close up of Chuck Close's patterned grid work.



Close up of Chuck Close's patterned grid work.




Grid Mapping:
Grid Mapping is a method of drawing to accurately copy shape and proportion. You can use this to copy an image exactly the same size or enlarge it by using ratios.



<https://www.carrie-lewis.com/the-benefits-of-using-a-drawing-grid/>

Art Technique Keywords

Portrait	a painting, drawing, photograph, or <u>engraving</u> of a person, especially one <u>depicting</u> only the face or head and shoulders.
Grid Mapping	A drawing method to accurately copy proportion and can be used to accurately enlarge images.
Proportion	The size relationship between two parts e.g. height compared to width.
Analogous	Analogous colors are groups of colors that are next to each other on the color wheel. Red, orange, and red-orange are examples.
Pattern	a repeated decorative design.

Key Terms	Data Types	Selection	
<p>Algorithm: A set of instructions or code used to solve a problem.</p> <p>Syntax: The rules of the programming language that need to be followed in order for it to work.</p> <p>Variables: Data that is stored in memory that is likely to change.</p> <p>Program: Code compiled together to perform a specific function.</p>	<p>String: A Variable data type that can store a combination of letters, characters and numbers.</p> <p>Integer: A Variable data type that can store whole numbers.</p> <p>Float: A Variable data type that can store decimal numbers.</p> <p>Boolean: A Variable data type that stores either TRUE or FALSE</p>	<p>Selection is used to allow the program to make a choice and take a different path. The keywords used in Python are:</p> <p>if - checks if the condition is true, if so the program runs the indented code below it.</p> <p>elif - if the first if fails then this elif condition is checked, there can be multiple of these.</p> <p>else - if all if and elif statements are not true then the code indented below else will run.</p>	
Inputs	Iteration	<p>Example:</p> <pre>colour = input("Enter your favourite colour"); if colour == "Red": print("Reminds me of tomatoes"); elif colour == "Blue": print("Reminds me of the sea!"); else: print("If it isn't Red or Blue then it doesn't matter!")</pre>	
<p>To allow your Python program to get information from the user you will need to use the input command. Make sure you use the correct command for what you are asking for.</p> <p>String inputs (such as a name) input("Enter your name")</p> <p>Integer Inputs (for whole number responses): int(input("What is your age?"))</p> <p>Float Inputs (for decimal number responses): float(input("What is your shoe size?"))</p> <p>To use these examples you need a variable at the start!</p>	<p>Iteration is used to repeat a set of instructions or commands in a program. It saves having to write them all out over and over again.</p> <p>There are two loops in Python programming:</p> <p>While - Checks if a condition is true and while it is true will keep repeating it.</p> <p>For - Runs for a specific amount of times and stops when it reaches the desired number.</p> <p>Examples:</p> <pre>while answer != "London": answer = input("What is the capital of London?"); Or for i in range(5): movie = input("What is one of your top 5 favourite movies?")</pre>	<th style="background-color: #f4a460;">Variables</th>	Variables
<p>To print out a statement or a variable we use the code below:</p> <p>Printing a new message: print("Hello World");</p> <p>Printing the value of a variable: print(x);</p> <p>Printing a message with variables included: print("Hello",name,"you are",age,"years old")</p>		<p>Variables are simply a place on the computer's memory that is given a name in order for it to remember it.</p> <p>In Python you create a variable by writing the name of the variable followed by an =.</p> <p>Examples:</p> <pre>name = "Spongebob" age = 14</pre>	

Year 8 Performance Skills

'For a dancer to remember the steps and master the natural look of the movements there is nothing more effective than repetition and rehearsal. When dancers repeat movement over and over, motor memory kicks in and forces muscles to perform tasks.'

Importance of warm up/cool down

The Physical benefits of a warm-up:

- Warming up muscles/preparing the body for physical activity
- Increased body temperature
- Increased heart rate
- Flexibility of muscles and joints
- Blood flow and oxygen to muscles

The physical benefits of a cool-down:

- Helps the body's transition back to a resting state
- Increases removal of waste products such as lactic acid
- Gradually lowers heart rate
- Gradually lowers temperature
- Circulates blood and oxygen
- Gradually reduces breathing rate
- Reduces the risk of muscle soreness and stiffness
- Aids recovery by stretching muscles

You will explore **Some Like It Hip Hop** for your performance appreciation. Use the QR code for resource pack



Endpoint

Over the next term you will learn and develop a range of performance skills. This will be completed through learning a set piece of repertoire, linked to a professional work. You will be expected to understand and apply the performance skills to the set movement, as well as evaluate your progress.

The movement taught will be performed in the **Gateway Academy Dance Show 2024**.

Reminder

Dance club for will take place on Monday's 3-4pm in the Dance Studio.

Health & Safety in dance

Exercise in safe spaces. Be mindful of others.

Keep your head up and know what is around you.

Warm up properly including stretching your muscle.

Bend your knees when you land from jumps.

Make sure that liquids are kept well away from the dance surface.

Remove jewellery and wear suitable clothing.

Be respectful and compassionate to others.

Year 8 Performance Skills

Physical Skills

Posture	The way the body is held.
Alignment	Correct placement of body parts in relation to each other.
Balance	A steady or held position achieved by an even distribution of weight.
Coordination	The efficient combination of body parts.
Control	The ability to start and stop movement, change direction and hold a shape efficiently.
Flexibility	The range of movement in the joints
Strength	Muscular power.
Stamina	Ability to maintain physical and mental energy over periods of time.
Extension	Lengthening one or more muscles or

Stylistic features:

Qualities or features that are specific to/ define a particular dance style or genre

Unison:

When two or more dancers perform the same movement at the same time

Canon:

this technique requires dancers to take it in turns to perform a movement that is then identically copied and performed by others

Expressive Skills

Projection	The energy the dancer uses to connect with and draw in the audience.
Focus	Use of the eyes to enhance performance or interpretative qualities.
Spatial Awareness	Consciousness of the surrounding space and its effective use.
Facial Expression	<i>Use of the face to show mood, feeling or character.</i>
Musicality	The ability to make the unique qualities of the accompaniment evident in performance.

Formations:

The shapes or patterns the dancers perform in, in the space

Technical Skills

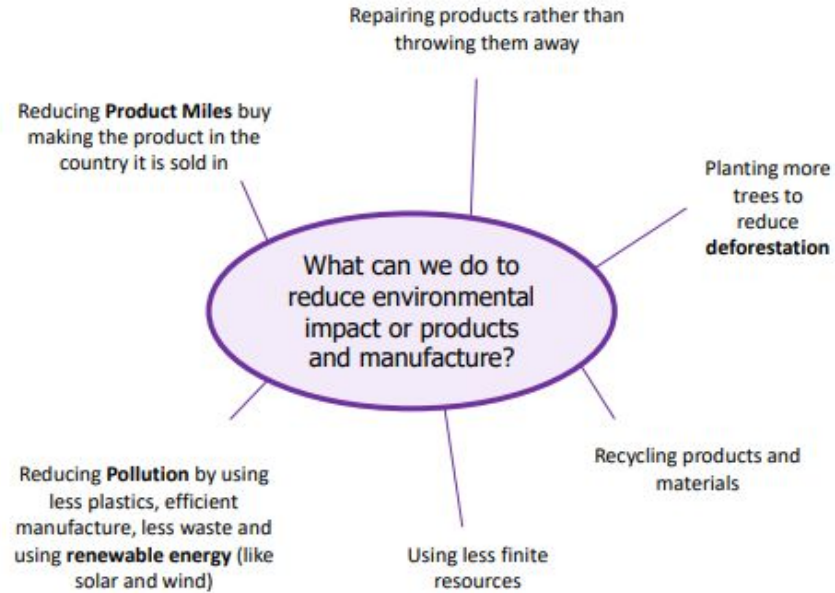
Action content	Accurately replicating the action content
Dynamic content	Accurately replicating the dynamic content
Spatial content	Accurately replicating the spatial content
Timing content	The use of time or counts when matching movements to sound and/or other dancers
Accurate movement	Demonstration of the characteristics of the style of the piece e.g. contemporary. 7

Mental skills

During a performance	During the process
Movement Memory, Commitment, Concentration, Confidence	Repetition, discipline, Planning, Response to feedback

Environment

The 6Rs	Meaning
Reuse	To use a product again either for the same purpose or a different one
Reduce	To have less of material/packaging/pollution when making products by making them more efficient
Recycle	Breaking down and forming the material into another product
Refuse	Customers not buying or supporting products that make an environmental impact
Rethink	Designers and customer rethinking their decisions when making and buying products.
Repair	Fixing a product rather than throwing it away. Extending its life rather than using more resources to make another Often products are Designed for Maintenance so can easily be repaired. E.g. Using screws so even non-specialists can take a product apart, or using components that can easily be replaced like fuses or batteries



Life Cycle Assessment

This is when a designer looks at the environmental impact a product makes over its life time and how it could be reduced. Including:

- Impact of materials
- Impact of processes
- Product Miles (how far a product has to travel to get from factory to consumer)
- Impact while in use
- Impact when disposed of (6Rs)

Sustainability is maintaining our planet and its resources and making a minimal negative impact

Finite Resources <i>Will run out of eventually</i>	Infinite Resources <i>Can be re-grown and re-bred. Will not run out of</i>
Plastics	Paper
Metals	Boards
Polymers (Textiles)	Natural Timbers
	Cotton
	Leather

Planned Obsolescence	This is where products "die" after a certain amount of time. E.g. Disposable cups, Phones, Lightbulbs, Printer Ink, etc This can have a big environmental impact as customers are throwing away lots of products, and resources are being used to create new ones.
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Design and Technology

Energy Generation and Storage

Non-Renewable Energy Sources	This is when certain sources of energy will run out eventually
Fossil Fuels	<ul style="list-style-type: none"> Coal, Oil and Gas Burned to create steam, turned in turbines to create electricity. Burning creates CO2 which adds to Global Warming
Nuclear Power	<ul style="list-style-type: none"> Nuclear Fission controls the reactor (that creates the electricity). This requires Uranium which is non-renewable Accidents and waste can severely damage the environment and cause radiation poisoning Radiation poisoning can be fatal and cause physical deformations Nuclear waste has to be disposed of properly and is hazardous for thousands of years.

Storing Energy

Pneumatics: This is the production of energy using compressed gas or air. E.g. Pistons in an engine

Hydraulics: Like a Pneumatic system, but uses water or oil under pressure. E.g. Wheelchair lifts

Kinetic: Energy that is generated by movement. This is stored by items like springs in a "clickable" pen or balloons,

Batteries: Electrical power can be stored in batteries. Rechargeable batteries are becoming increasingly popular.

Renewable Energy Sources	This is when certain sources of energy will not run out.
Solar	<ul style="list-style-type: none"> Solar panels are used to collect light and convert it into electricity There is no waste and a consistent supply However, the panels are not effective at night or in countries where there isn't a lot of sunlight
Wind	<ul style="list-style-type: none"> Turbines harness wind energy Not effective on non-windy days Some people don't like turbines as they are noisy, and not attractive to look at
Hydro-Electrical	<ul style="list-style-type: none"> This harnesses energy from water held behind a dam Has to be created by flooding land – damaging wildlife habitats Tidal energy comes from using energy from waves
Biomass	<ul style="list-style-type: none"> This is fuel from natural sources e.g. crops, scrap woods and animal waste Growing biomass crops produces oxygen and uses up CO2 However, is a very expensive method

Briefs, Specifications, Ideas and Development

Design Briefs

A Design Brief is the statement of how you will solve the Design Problem. It will often include:

- Constraints/ limitations
- What the product is
- Materials/processes
- Any key information you know

Design Specifications

A Design Specification is a list of requirements your product has to meet in order to be successful. It is also useful for evaluation. If your product hasn't met the Spec then it gives you a starting point for improvements.

Aesthetics	What the product looks like? Style? Colour Scheme? Design Movement?
Customer	Who would buy it? (Age, gender, socio-economic, personality) How does the design appeal to them?
Cost	How much will it cost? (min-max) Why?
Environment	Where will it be used? Why? How will you make it suitable?
Safety	How is it safe? How will it be checked? Why must it be safe?
Size	What is the maximum or minimum size? Why?
Function	What does the product do? What features make it do that function well? How is it unique from similar products?
Materials	What is it made from? Why?
Manufacture	How might it be made? Why? What scale of production? Why?

Technique	Description/ notes	Diagram
Orthographic Projection/ Working Drawings	<ul style="list-style-type: none"> Includes "Front", "Plan" and "End" 2D Views, and often an Isometric 3D View Standardised method for scale, dimensions and line types Great for manufacturing 	
Isometric	<ul style="list-style-type: none"> Common 3D sketching method Can be drawn free-hand or using isometric paper and ruler Angles are at 30 degrees Great for seeing most of the products 	
1-Point Perspective	<ul style="list-style-type: none"> A 3D drawing method Often used by interior designers and architects Gives drawings depth Only uses 1 vanishing point 	
2-Point Perspective	<ul style="list-style-type: none"> Used for 3D designs Exaggerates the 3D effect Objects can be drawn above of below the horizon line but must go to the 2 vanishing points 	
Annotated Drawings/ Free and Sketches	<ul style="list-style-type: none"> Quick and easy way of getting ideas down Range of ideas can be seen Annotation helps explain designs further 	
Exploded View	<ul style="list-style-type: none"> Helps see a final design of a product and all it's parts Can see where all the parts fit Great for manufacturers 	

Modelling and Development

Modelling and development are key to testing and improving products. This can be done physically using materials like; card, foam, clay, man-made boards or virtually in **CAD**. Modelling helps the designer get feedback from the customer, check aesthetics, function, sizes and even materials and production methods and change them if needed.

Totally Over You

Summary

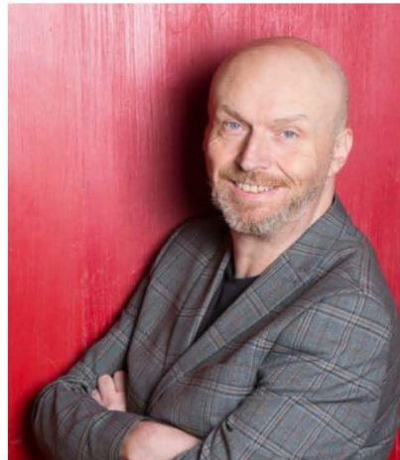
Totally Over You is a play about a group of teenage girls who are obsessed with celebrity. Led by Kitty, they decide to dump their boyfriends, convinced that they will be instant stars even though Jake tells Kitty, 'You can't sing, you can't act, you're OK-looking but you're not models.' The boys' revenge is swift and effective. They turn the tables when Victor organises the drama class and convinces the girls that the boys they have just abandoned are in fact the celebrated band, Awesome.

The girls are familiar with every nuance of celebrity: sleeping in the totally fantastic house next to the totally buff boyfriend, the breakfast conference calls to Japan, the lunches, the red carpet at the film launch and the stalker.

At the beginning of the play Kitty is the leader of the gang and has been used to that position for some time. She is humbled and matures during the play. When she threw Jake over it was a very significant act. They had been going out for six weeks and in adult terms it was the equivalence of a divorce. At the end, Sinita, Rochelle and Hannah have been embarrassed but are not unduly damaged. Kitty, however, has been profoundly changed, calling herself, 'Stupid freaking stupid freaking idiot bitch to believe. I just wanted to believe so much.' Jake finds the courage to express his feelings. 'I feel everything for you Kitty. I feel love. I feel like kissing and cuddling and all that kind of love. But also like sex kind of love. Like I want to see you naked... And I feel hate.'

Performance Skills

Body Language	Accent
Eye Contact	Diction
Facial Expression	Emphasis
Gesture	Pace
Levels	Pause
Movement	Projection
Posture	Tone
Proxemics	Volume



Characters	
Kitty	Jake
Rochelle	Dan
Hannah	Tyson
Sinita	Framji
Letitia	Victor
Donna	Michael
Rachel	Rubin
Indu	

Production Elements

Costume	The clothes the actor wears to help portray a specific character.
Lighting	Lighting can be used to create different atmospheres, as well as transitions between scenes.
Props	Any object that is handled by an actor. This can help create a more naturalistic performance.
Set	Furniture that can be used to help show the world and location of the production.
Sound Effects	Recorded sound that can add to the atmosphere of a play or film. This might also be created on stage by the performers.

Themes

Celebrity	Insecurity
Coming of Age	Love
Friendship	Romance

Mark Ravenhill, writer of *Totally Over You*, written in 2003

'Animal Farm': Knowledge Organiser		The seven commandments	Key words
Chapter breakdown		1 Whatever goes upon two legs is an enemy.	allegory – a story with two meanings. It has a literal meaning, which is what actually happens in the story. But it also has a deeper meaning. The deeper meaning is often a moral. It teaches you a lesson about life.
1	The animals gather to listen to old Major. He gives them a vision of a life without man.	2 Whatever goes upon four legs, or has wings, is a friend.	
2	The animals rebel and overthrow Jones. The commandments are written.	3 No animal shall wear clothes.	
3	The animals' first harvest is a success. The pigs keep the milk and apples to themselves.	4 No animal shall sleep in a bed.	
4	The Battle of the Cowshed: Jones attempts to reclaim the farm.	5 No animal shall drink alcohol.	
5	Snowball and Napoleon debate the windmill. Napoleon uses dogs to chase Snowball from the farm. Napoleon makes himself leader.	6 No animal shall kill any other animal.	
6	Work begins on the windmill. The pigs move into the farmhouse. Winds destroy the windmill.	7 All animals are equal.	
7	Work on the windmill starts again. Napoleon demands eggs from the hens. Napoleon slaughters animals at the show trials.	Characters	tyrant – someone who has total power and uses it in a cruel and unfair way. A tyranny is a situation in which a leader or government has too much power and uses that power in a cruel and unfair way.
8	Napoleon betrays Mr. Pilkington and sells timber to Mr. Frederick. Frederick pays with counterfeit money. Frederick attacks the farm. The animals suffer losses in the Battle of the Windmill. The windmill is destroyed.	Napoleon 'a large, rather fierce-looking Berkshire boar, the only Berkshire on the farm, not much of a talker, but with a reputation for getting his own way.'	rebellion – a rebellion is a situation in which people fight against those who are in charge of them.
9	Boxer is sold to the knacker's yard.	Snowball 'a more vivacious pig than Napoleon, quicker in speech and more inventive, but was not considered to have the same depth of character.'	harvest – the time when crops are cut and collected from fields.
10	The pigs are leaders on the farm. They start walking on two legs and carrying whips. There is no difference between the pigs and the humans they sought to overthrow at the start of the novel.	Squealer 'with very round cheeks, twinkling eyes, nimble movements, and a shrill voice. He was a brilliant talker, and when he was arguing some difficult point he had a way of skipping from side to side and whisking his tail which was somehow very persuasive. The others said of Squealer that he could turn black into white.'	corrupt – when people use their power in a dishonest way order to make life better for themselves.
		Boxer 'an enormous beast, nearly eighteen hands high, and as strong as any two ordinary horses put together... in fact he was not of first-rate intelligence, but he was universally respected for his steadiness of character and tremendous powers of work.'	propaganda – Information that is meant to make people think a certain way. The information may not be true.
			cult of personality – a cult of personality is where a leader convinces people to worship him or her, and treat them like a god.
			treacherous – If you betray someone who trusts you, you could be described as treacherous .
			Biographical information
			1 'Animal Farm' was written in 1945.
			2 It was written by George Orwell.
			3 Orwell was born in 1903.
			4 'Animal Farm' was influenced by the events of World War II.
			5 Orwell wanted to write about the cruel leaders of Europe during World War II.
			6 'Animal Farm' is an allegory for the events of the Russian Revolution.

Where food comes from

- Food is sourced, processed and sold in different ways.
- Geography, seasonality, weather and climate influence the availability of food and drink.

All food must be grown, reared or caught

In the past food was grown, prepared and cooked at home or sold by small-scale producers or merchants.

Some people still grow food at home or on allotments. Food can also be bought from a wide range of sources, including:

- cafes/coffee shops;
- convenience stores;
- farmers markets;
- farm shops;
- markets;
- on-line retailers;
- restaurants;
- supermarkets;
- takeaway outlets.

Food Processing

Food processing is any deliberate change to food that happens to a food before it is available to eat. Processing makes food safer to eat by killing existing bacteria and slowing bacterial growth.

Food is processed for a number of reasons:

- to extend shelf life;
- to add variety;
- for convenience;
- for consumer's health.

Innovations in food processing have led to the development of functional foods; these provide benefits over and above the basic nutritional value, e.g. dairy products containing probiotic bacteria.

Food provenance

Food provenance is about where food is grown, caught or reared, and how it was produced. Food certification and assurance schemes guarantee defined standards of food safety or animal welfare. There are many in the UK, including:



World food

A number of ingredients and foods that are now readily available have been introduced to the UK over a long period of time. Many are imported from other countries giving access to ingredients and foods that would not normally grow in the UK.

The availability of these ingredients and foods gives a wide choice throughout the year.

Food availability

Some ingredients or foods are available throughout the year because they have been imported from other countries where they are in season at different times of the year.

Climate and terrain are two key factors that affect food availability and where food is grown, reared and caught.

There is a great variety of food grown all over Europe. The type of farming is partly determined by the climate and the geography of the country or region. The terrain or landscape determines which crops are grown or animals reared. Cereal crops are grown in flat plains, whereas sheep can be reared in hilly terrain.

Seasonality

Fruit and vegetables naturally grow in cycles and ripen during a certain season each year. Some meat and fish can also be seasonal. Advantages of buying food in season include:

- it is fresh;
- best flavour, colour and texture;
- optimal nutritional value;
- supports local growers;
- lower cost;
- reduced energy needed to transport.

Climate change

There is worldwide concern about climate change and the increased number of extreme or unusual weather conditions. Changes in temperature can affect plant growing seasons and livestock conditions. It is very likely to affect food security at a global, regional and local level.



Food security

Food security exists when everyone has access to enough affordable, safe and nutritious food to keep them healthy, in ways the planet can sustain in the future.



To find out more, go to: <https://bit.ly/3rJJo8S>

Key terms

Food processing: Any deliberate change to food that happens to a food before it is available to eat.

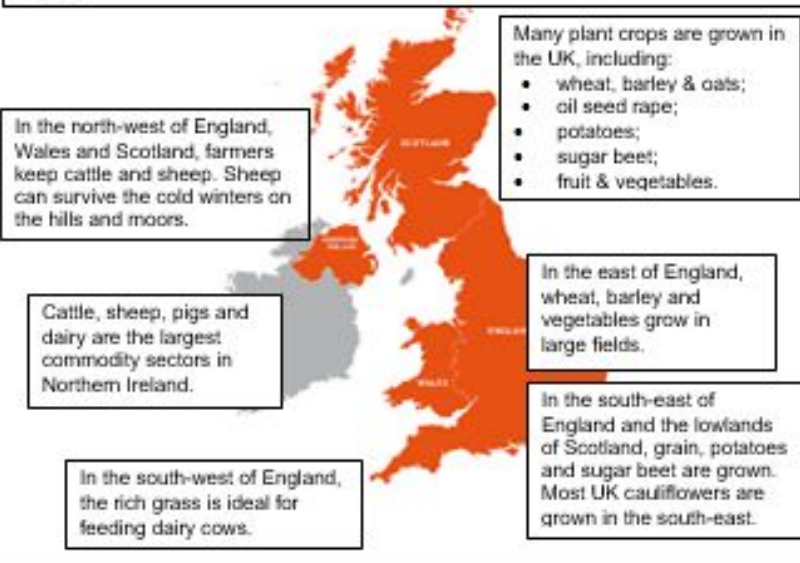
Seasonality: Food grown at a particular time of year.

Food certification and assurance schemes: Defined standards of food safety, quality or animal welfare.

Food security: Having access to sufficient quantity of affordable, nutritious food.

Food provenance: Knowing where food was grown, caught or raised and how it was produced.

Map showing key growing areas in the UK – some parts of the UK have excellent soil for crops, while others are used for cattle, sheep, pigs and poultry.



Tasks

- Choose a food commodity and research how it is produced and processed. Create farm to fork food chain cards to illustrate what you have found out.
- Research the following ingredients and state where in the world they are traditionally grown, reared or caught: avocado, lamb, nutmeg, oats, olive oil, spinach, squid, sugar beet.

Planning what to cook

Deciding on what to cook or eat, whether for yourself or someone else, requires making a number of decisions:

- beliefs and values;
- consumer information;
- food preferences;
- food provenance;
- health and wellbeing;
- social and economic considerations;
- who, what, when and where.



Beliefs and values

Personal beliefs and values include:

- culture, tradition and heritage;
- food ethics, e.g. environment, fair trading, organic, free-range, local and seasonal food;
- lifestyle choices, e.g. vegetarian, vegan;
- religion.

Religion	Pork	Beef	Lamb	Chicken	Fish
Islam	x	Halal only	Halal only	Halal only	✓
Hinduism	x	x	✓	✓	✓
Judaism	x	Kosher only	Kosher only	Kosher only	✓
Sikhism	x	x	✓	✓	✓
Buddhism (strict)	x	x	x	x	x
Seventh-day Adventist Church	x	x	x	✓	✓
Rastafari movement	x	x	x	x	x

Eating the seasons

Most foods are grown in a particular season of the year, e.g. strawberries are harvested in summer in the UK. These are called 'seasonal foods'. Buying foods when they are in season will often mean that the price is lower. Technology and the importation of food has allowed food to be available all year round. Frozen foods, such as vegetables, are a great alternative to fresh, if they are unavailable.

Consumer information

Information can help consumers make informed choices, including

- advertising and marketing;
- media;
- online blogs/forums;
- packaging, nutrition and health claims;
- point of purchase information;
- product placement;
- recipe ideas.

Food provenance

Food provenance is about where food is grown, caught or reared, and how it was produced. Food certification and assurance schemes guarantee defined standards of food safety or animal welfare. There are many in the UK, including:



Red Tractor



British Lion



RSPCA Assured



Marine Stewardship Council

Health and wellbeing

People may choose their food based on their own or their family's health and wellbeing:

- age and gender;
- allergy and intolerance;
- body image;
- health status;
- mental health;
- physical activity.

Who, what, when and where

The time of day, location and who is eating can impact food choice:

- eating alone, with family or friends;
- celebration;
- day of the week;
- location, e.g. at home, school or work, at a restaurant, on the go;
- meal or snack;
- occasion and time of day.

Personal preferences

A number of factors can influence personal preferences, including:

- colour, size and shape of crockery and cutlery used;
- portion size;
- serving style;
- taste, aroma, texture, appearance, shape and colour of food.

Social and economic considerations

The cost of food, money available and social aspects will influence people's food choices:

- cost of food;
- greater food availability;
- income;
- labour saving equipment;
- lack of cooking skills;
- long hours at work;
- wider range of convenience foods.

Allergy and intolerance

There are 14 ingredients (allergens) that are the main reasons for adverse reactions to food. People who are allergic, or intolerant, to these ingredients should take care to avoid eating them. The 14 allergens are:

Celery (and celeriac)	Milk
Cereals containing gluten	Molluscs
Crustaceans	Mustard
Eggs	Nuts
Fish	Peanuts
Lupin	Sesame
	Soybeans
	Sulphur dioxide

Key words

Advertising: Advertising is a form of communication for marketing and used to encourage, persuade, or manipulate an audience to continue or take some new action.

Allergens: Substances that can cause an adverse reaction to food.
Ethical: Relating to personal beliefs about what is morally right and wrong.

Food certification and assurance schemes: Defined standards of food safety, quality or animal welfare.

Food provenance: Where food is grown, caught or reared, and how it was produced.

Marketing: Promoting and selling products or services, including market research and advertising.

Religion: A particular system of faith and worship.

Seasonal food: Food grown at a particular time of year.

Seasonality: The times of year when a given type of food is at its peak, either in terms of harvest or its flavour.

Task

Research one consideration when planning what to cook. Prepare a PPT presentation to share with the class next lesson.

To find out more, go to:
<https://bit.ly/3dNUMBf>

Year 8 - knowledge organiser

USA Tectonic Hazards

A) Plate Tectonic Theory

- The theory of plate tectonics is that the earth's crust is broken into smaller pieces called plates. These plates form part of the lithosphere. The outer most layer of the earth that is made of the crust and the upper layer of the mantle of that is solid.
- Plates sit on top of the mantle
- Plates move on average 2.5cm per year
- One theory suggests they move because of convection currents in the mantle.
- Magma warmed by the core rises towards the crust, here it cools sinking back towards the core. This creates a circular movement that drags the plates

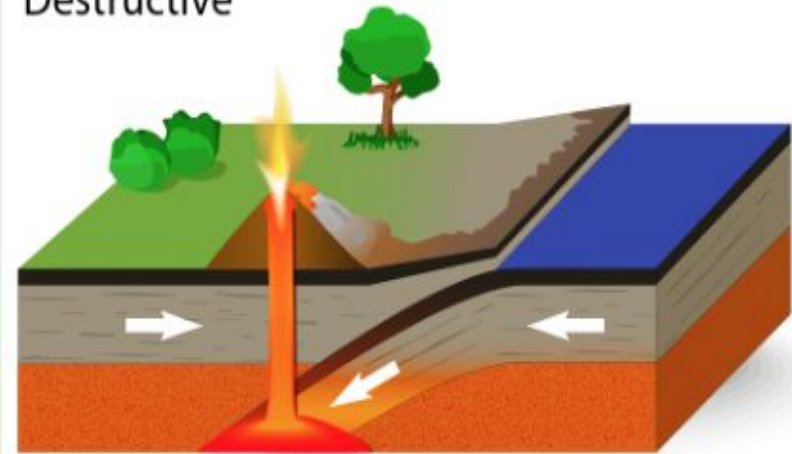
B) What are volcanoes?

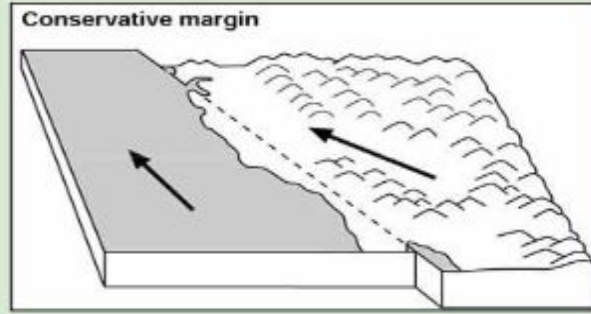
- Volcanoes are openings or vents in the earth's lithosphere (outer rocky surface or the earth, also called the crust)
- Volcanoes are hazardous for people, this means they put their lives, properties, and possessions in danger.
- Volcanoes can spew out ash, lava, volcanic bombs and pyroclastic flows.
- A pyroclastic flow is a fast-moving cloud of ash, dust, gas and rock.

C) How do volcanoes happen at destructive plate boundaries?

- At a destructive plate boundary an oceanic plate and a continental plate are moving towards each other.
- The oceanic plate is denser than the continental plate so when they meet the oceanic plate subducts (it's forced underneath).
- As the oceanic plate subducts, it rubs against the continental plate causing friction and heat
- The oceanic plate melts and turns into magma
- Eventually this magma can force its way back up to the surface
- When it reaches the surface and spills out this is a volcanic eruption.
- When the lava cools and hardens it forms the volcano itself.

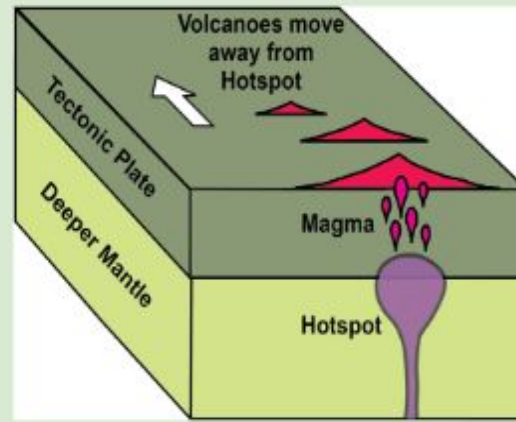
Destructive





D) How do earthquakes happen at conservative plate margins?

- An earthquake is a fast and sudden release of pressure in the earth's crust
- At a conservative plate margin two plates are moving next to each other, in similar directions but at different speeds.
- The plates can become stuck on each other as they try to move. Pressure will build up.
- Eventually this pressure is released resulting in a fast jolt which is the earthquake.











E) Hawaii isn't near a plate boundary, so why are there volcanoes here?

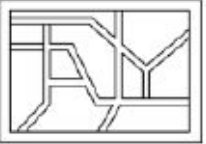
- Hawaii is known as hot spot volcano
- Hawaii is a state of America made up of volcanic islands
- A hot spot forms over a mantle plume
- A mantle plume is a build-up of magma just underneath the crust
- The magma is so hot that it weakens and melts the crust
- The magma can then rise to the surface and form a hot spot volcano

F) What were the effects of the 2018 eruption of Kilauea (name of the volcano) in Hawaii?

- Natural hazards like a volcanic eruption can have social, economic, and environmental effects.
- Social = effects people's wellbeing and the community
- Economic = impacts on jobs and the money that can be made
- Environmental = impacts on vegetation, soils, water, air.
- Schools had to close
- People were evacuated from their homes
- Many had to find shelter in community centres
- 26 homes were destroyed by the lava
- Nut farmers lost their crops for that year
- Vegetation was destroyed by the lava.

<p>Year 8 The Industrial Revolution 1750-1900</p>  <p>INEQUALITY</p>  <p>CONFLICT</p>  <p>MIGRATION</p> 	<p>What was England like in 1750?</p> <p>Only 5% of the population could vote in elections. Women could not vote, nor could the working class. Most people lived in the countryside. The population of the UK was 8 million. The majority of children did not go to school and life was hard for working-class people. There was very little leisure time and working-class people had a short life expectancy. There was a big gap between the rich and poor. The most important work was farming, producing food and wool. Industries were small scale and done in people's homes. This was known as the domestic system. The machines were powered by hands and feet or by horses. Some machines were powered by waterwheels.</p>	<p>What was the Industrial revolution?</p> <p>The Industrial revolution was a time of rapid change in Britain between 1750 and 1900. It saw a growth of industry (machines and factories), the way people worked and how they lived.</p>  <p>What was the Agricultural revolution? Due to the demand for food as a result of the rapid increase of the population, new tools, fertilisers and harvesting techniques were invented.</p>
	Key words	
	<p>Population: The number of people living in a particular area or country. Urban: characteristic of a town or city. Rural: characteristic of the countryside. Agriculture: The process of producing food by farming of certain plants and animals. Economy: The system of how money is made within a country.</p>	<p>Sanitation: Conditions relating to public health such as clean drinking water and sewage disposal. Poverty: The lack of basic human needs such as clean water, food, healthcare, education and shelter. Invention: Something new which is created, can be an idea or object.</p> 
	Key developments that drove the Industrial Revolution	
	<p>Growth of towns: People migrated from the countryside to the towns in search of work and lived in overcrowded and squalid conditions where disease was rife. Factories: Factories sprung up all over the country creating more efficient ways to produce goods such as wool, cotton and coal. The increase in factories brought thousands of new jobs. Factory conditions were tough and child labour was common. Factories took on pauper apprentices who lived and worked at the mills. Machinery: Steam power was discovered. This powered machinery in factories and led to the invention of the steam engine. Coal mining: Coal was used to power the new machinery. The coal industry created many jobs and was vital to the growth and success of the textiles industry. Individuals: Men like Stephenson, Brunel and Wedgwood invented new ideas such as trains, bridges and new pottery techniques. Transport and communications: Roads and canals were built in the 1700's and "Railway mania" made the transporting of goods and people much quicker! Technology: There were scientific discoveries and inventions that changed society and industry. The work of John Snow and Edward Jenner improved people's quality of life.</p>	
	Inventions of the Industrial revolution	Important Individuals of the Industrial revolution
	<p>The Steam engine 1717: Thomas Newcomen invents the first steam engine which is improved by James Watt. The steam engine replaced water and horsepower and allowed factories to be built. The Spinning Jenny 1770: James Hargreaves, a carpenter and weaver invents the jenny which could spin more than one ball of wool or yarn at a time. This made cloth quicker and cheaper to make in factories.</p>	<p>Isambard Kingdom Brunel: One of the most influential engineers of the industrial revolution. He built railways, bridges and ships, opening Britain up to a new transport network. John Snow: Snow was an English doctor who discovered that water in his local area was making every one ill. His work led to the discovery of Cholera and improved sanitation and fresh water for thousands of poor families.</p>
	Living and factory conditions of the Industrial revolution	
	<p>Long working hours: Normal shifts were 12-14 hours a day Low wages: a typical wage for a male worker was about 15 shillings (75p) a week, but less for women and children about 3 shillings (15p) a week. Cruel discipline: there was frequent "strapping" (hitting with a leather strap) of adults and children in factories. Overcrowding: Due to migration to cities for work there was not enough houses and houses were built close together with little light or ventilation. Pollution: Due to factories and coal, the air quality in UK cities and towns was poor and led to lung and breathing conditions for many. Waste disposal: human waste was discharged directly into sewers which flowed into rivers and streams. Disease: Typhus, typhoid and cholera all existed in cities and towns across the UK.</p>	
	How had Britain improved by 1900?	
<p>Improvements in public health and medicine, more people had the right to vote, working conditions improved, People could travel around the country easily, Education became compulsory, Sport and leisure time increased.</p>		

Ratio



What do I need to be able to do?

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

- Simplify any given ratio
- Share an amount in a given ratio
- Solve ratio problems given a part

Solutions should be modelled, explained and solved

Keywords

Ratio: a statement of how two numbers compare

Equal Parts: all parts in the same proportion, or a whole shared equally

Proportion: a statement that links two ratios

Order: to place a number in a determined sequence

Part: a section of a whole

Equivalent: of equal value

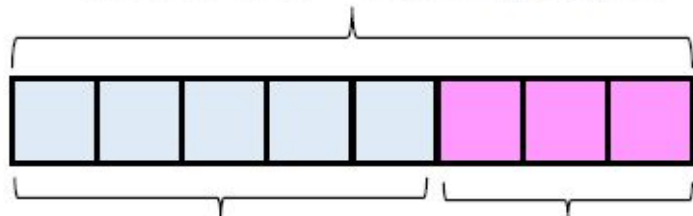
Factors: integers that multiply together to get the original value

Scale: the comparison of something drawn to its actual size.

Representing a ratio

"For every 5 boys there are 3 girls"

This is the "whole" – boys and girls together



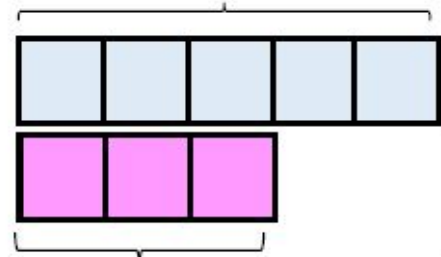
This represents the 5 boys

This represents the 3 girls

5:3

This represents the 5 boys

Double Number Line



This is the "whole" – boys and girls together

This represents the 3 girls

Ratio

Representing a ratio

"For every 5 boys there are 3 girls"

This is the "whole" – boys and girls together

This represents the 5 boys This represents the 3 girls

This represents the 5 boys This represents the 3 girls

This is the "whole" – boys and girls together

5:3

Order is Important

"For every dog there are 2 cats"



Dogs: Cats

1:2

The ratio has to be written in the same order as the information is given.

e.g 2:1 would represent 2 dogs for every 1 cat. ✗

Simplifying a ratio

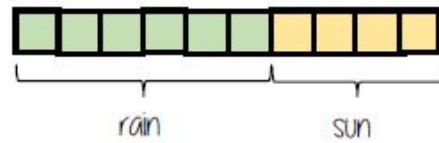
Cancel down the ratio to its lowest form

"For every 6 days of rain there are 4 days of sun"

6:4

÷ by 2 ↓

3:2



Find the biggest common factor that goes into all parts of the ratio

For 6 and 4 the biggest factor (number that multiplies into them is 2)

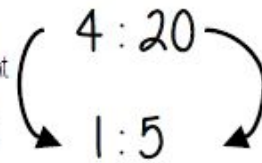
"For every 3 days of rain there are 2 days of sun" – when this happens twice the ratio becomes 6:4.

Ratio In (or n:1)

This is asking you to cancel down until the part indicated represents 1

Show the ratio 4:20 in the ratio of In

The question states that this part has to be 1 unit. Therefore Divide by 4



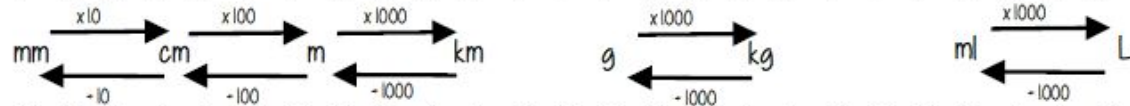
This side has to be divided by 4 too – to keep in proportion

H the n part does not have to be an integer for this type of question

Units are important:

When using a ratio – all parts should be in the same units

Useful Conversions



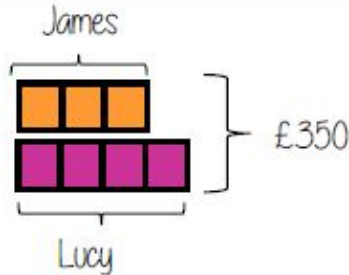
Ratio

Sharing a whole into a given ratio

James and Lucy share £350 in the ratio 3:4.
Work out how much each person earns

Model the Question

James: Lucy
3 : 4



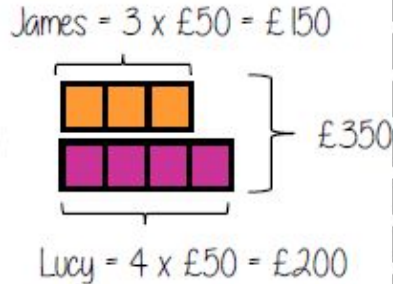
Find the value of one part

Whole: £350
7 parts to share between
(3 James, 4 Lucy)

$£350 \div 7 = £50$
□ = one part = £50

Put back into the question

James: Lucy
 $\begin{matrix} \times 50 & 3 : 4 & \times 50 \\ \hline \pounds 150 : \pounds 200 \end{matrix}$



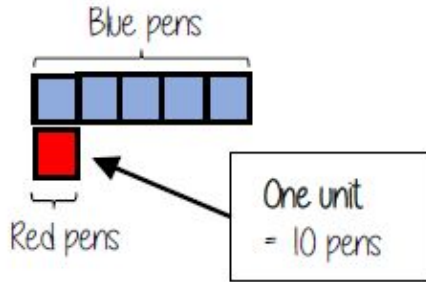
Finding a value given In (or n:1)

Inside a box are blue and red pens in the ratio 5:1
If there are 10 red pens how many blue pens are there?

Model the Question

Blue : Red
5 : 1

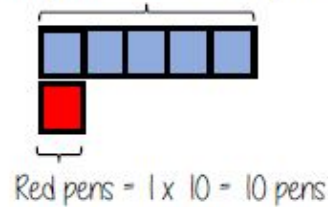
□ = one part = 10 pens



Put back into the question

Blue : Red
 $\begin{matrix} \times 10 & 5 : 1 & \times 10 \\ \hline 50 : 10 \end{matrix}$

Blue pens = $5 \times 10 = 50$ pens



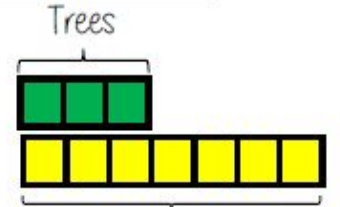
There are 50 Blue Pens

Ratio as a fraction



Trees: Flowers

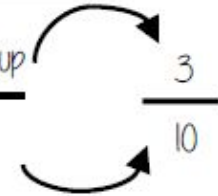
3 : 7



There are 3 parts for trees

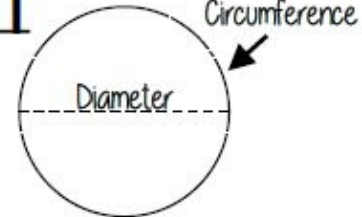
Flowers
Fraction of trees

$\frac{\text{Number of parts of in group}}{\text{Total number of parts}} = \frac{3}{10}$



Tree parts 3 + Flower parts 7 = 10

π



The ratio of a circles circumference to its diameter

Ratios and fractions

What do I need to be able to do?

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

- Compare quantities using ratio
- Link ratios and fractions and make comparisons
- Share in a given ratio
- Link Ratio and scales and graphs
- Solve problems with currency conversions
- Solve 'best buy' problems
- Combine ratios

Keywords

Ratio: a statement of how two numbers compare

Equivalent: of equal value

Proportion: a statement that links two ratios

Integer: whole number, can be positive, negative or zero.

Fraction: represents how many parts of a whole.

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

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

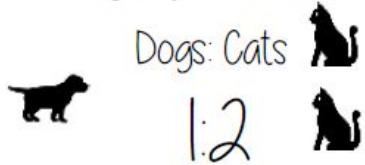
Origin: (0,0) on a graph. The point the two axes cross

Gradient: The steepness of a line

Ratios and fractions

Compare with ratio R

"For every dog there are 2 cats"



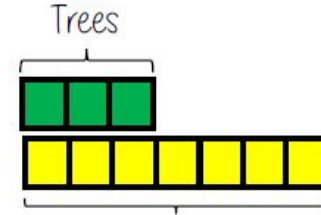
The ratio has to be written in the same order as the information is given.

e.g 2:1 would represent 2 dogs for every 1 cat.

Units have to be of the same value to compare ratios

Ratios and fraction R

Trees: Flowers
3 : 7



Fraction of trees

$$\frac{\text{Number of parts of in group}}{\text{Total number of parts}} = \frac{3}{10}$$

Ratio

Fraction

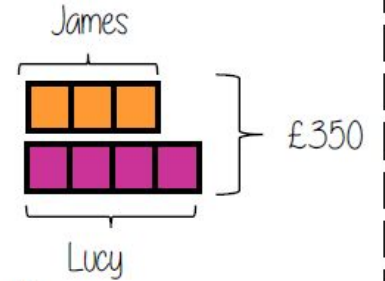
Sharing a whole into a given ratio R

ratio

James and Lucy share £350 in the ratio 3:4.
Work out how much each person earns

Model the Question

James: Lucy
3 : 4

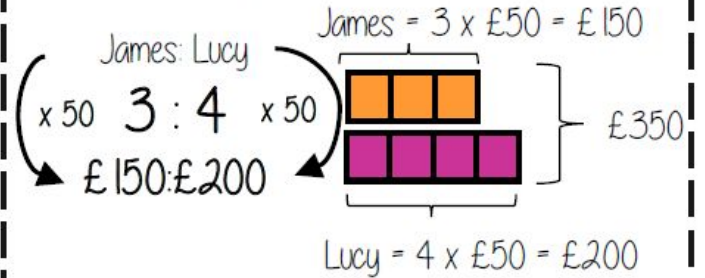


Find the value of one part

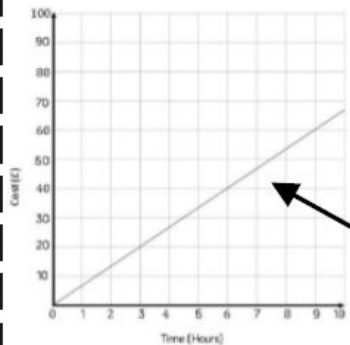
Whole: £350
7 parts to share between (3 James, 4 Lucy)

$$\begin{aligned} \text{£}350 \div 7 &= \text{£}50 \\ \square &= \text{one part} \\ &= \text{£}50 \end{aligned}$$

Put back into the question



Ratio and graphs R



Graphs with a constant ratio are directly proportional

- Form a straight line
- Pass through (0,0)

The gradient is the constant ratio

Ratio and scale R

A picture of a car is drawn with a scale of 1:30

The car image is 10cm



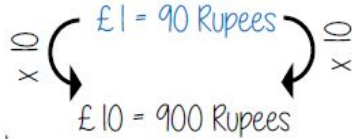
Ratios and fractions

Conversion between currencies

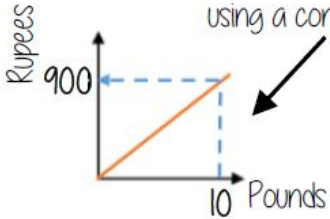


£1 = 90 Rupees ← Currency is directly proportional

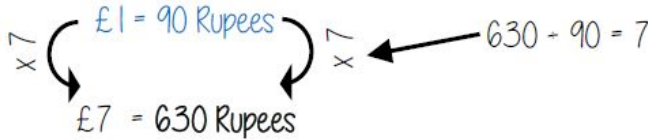
For every £1 I have 90 Rupees



Currency can be converted using a conversion graph



Convert 630 Rupees into Pounds



Best buys



4 pens costs £2.60

£2.60 ÷ 4 = £0.65

4 ÷ 2.60 = 1.54 pens



10 pens costs £6.00

£6.00 ÷ 10 = £0.60

10 ÷ 6 = 1.67 pens

You could work out how much 40 pens are and then compare

Compare the solution in the context of the question

The best value has the lowest cost "per pen"

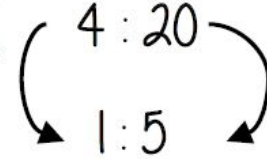
The best value means £1 buys you more pens

Ratios in 1:n and n:1

This is asking you to cancel down until the part indicated represents 1

Show the ratio 4:20 in the ratio of 1:n

The question states that this part has to be 1 unit. Therefore Divide by 4



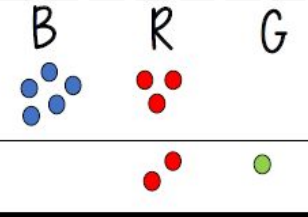
This side has to be divided by 4 too – to keep in proportion

the n part does not have to be an integer for this type of question

Combining ratios

The ratio of Blue counters to Red counters is 5:3

The ratio of Red counters to Green counters is 2:1



Ratio of Blue to Red to Green



10 : 6 : 3

Use equivalent ratios to allow comparison of the group that is common to both statements

Lowest common multiple of the ratio both statements share

Warm Up

- Pulse Raiser
- Stretches
- Sport specific skills/drills

Muscles

Gastrocnemius Hamstring

Quadricep Tricep

Deltoid

Definition of Health

Health is a state of physical, social and emotional wellbeing not me absence of disease or infirmity.

Physical Health

- Stronger bones/ Reduce risk of osteoporosis
- Reduced risk of Coronary Heart Disease
- Reduced risk of stroke
- Reduced chance of obesity

Social Health

- Make new friends
- Get together with friends
- Improve cooperation

Emotional Health

- Stress relief
- Aesthetic appreciation
- Reduced boredom
- Competition

Components of Fitness

Cardiovascular Fitness

Muscular Endurance

Flexibility

Reaction Time

Power

Speed

Agility

Balance

Coordination

Body Composition

Strength

Muscle	Location
Deltoid	Top of the shoulder
Triceps	Back of upper arm
Hamstrings	Back of upper leg
Gastrocnemius	Back of lower leg
Quadriceps	Front of leg

Basketball

Rules of The Game

Attacking Rules

- The player must bounce, or dribble, the ball with one hand while moving both feet. If, at any time, both hands touch the ball or the player stops dribbling, the player must only move one foot. The foot that is stationary is called the pivot foot.
- The basketball player can only take one turn at dribbling. In other words, once a player has stopped dribbling, they cannot start another dribble. A player who starts dribbling again is called for a double-dribbling violation and loses the basketball to the other team. A player can only start another dribble after another player from either team touches or gains control of the basketball, this is usually after a shot or pass.
- The ball must stay in bounds. If the offensive team loses the ball out of bounds the other team gets control of the basketball.
- The players hand must be on top of the ball while dribbling. If they touch the bottom of the basketball while dribbling and continue to dribble this is called carrying the ball and the player will lose the ball to the other team.
- Once the offensive team crosses half court, they may not go back into the backcourt. This is called a backcourt violation. If the defensive team knocks the ball into the backcourt, then the offensive team can recover the ball legally.

Defending Rules

- The main rule for the defensive player is not to foul. A foul is described as gaining an unfair advantage through physical contact. There is some interpretation that has to be made by the referee, but, in general, the defensive player may not touch the offensive player in a way that causes the offensive player to lose the ball or miss a shot.
- Basketball players cannot kick the ball or hit it with their fist.

Positions

The Centre is usually the team's tallest and strongest player and is positioned under the basket. They are required to be physically domineering with more physical strength and athleticism.

Power Forward are usually the second tallest in the team and are the closest to the centre in terms of physical attributes and playing style but with more speed.

The Small Forward is usually the shorter of the two forwards on the team but plays the most versatile role out of the main five positions.

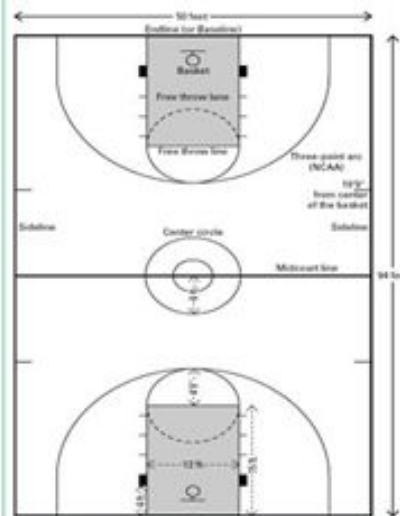
Shooting guard Potentially the shortest player on the team, the Shooting Guard is the team's best outside shooter. Besides being able to shoot well, they need to be good at dribbling fast, passing and having court vision.

The Point Guard is usually the shortest but the best ball handler on the team. Also known as the 'coach on the floor' or the 'floor general', a point guard is responsible for directing plays.



Pitch Markings

Along the length of the court, the borders are the side-lines. Along the ends, the borders are the end-lines, or baselines. Separating both halves of the court is a midcourt line. In the very centre of the midcourt line is the centre circle (12 feet in diameter), where the centre toss takes place to begin the game.



Basketball

Scoring

The winner of a basketball game is the team with the most points. You get points by throwing the basketball through the opponent's hoop or basket.

In regular play a basket made from within the three-point line is worth 2 points and a basket shot from outside the three point line is worth three points. When shooting a free throw, each free throw is worth 1 point.



When a player is shooting a foul shot, the remaining nine players on the court must stand in designated locations. They can stand in the blocks along the sides of the free-throw lane or back behind the free-throw shooter. The team whose player is not shooting free throws must be allowed to stand closest to the rim during the shot.

Key Terms

Alley-Oop: When one player jumps and catches a pass from another player and simultaneously dunks the ball or shoots it in before landing.

Box Out: When a shot goes up, players use this technique, which involves widening their stance and arms and using their body as a barrier to get in better rebounding position.

Carry: This penalty, which results in a turnover, occurs when a player holds the ball excessively at the apex while dribbling.

Charge: This penalty, which results in a turnover, occurs when an offensive player with the ball runs into a stationary defensive player and knocks him or her over.

Double Dribble: This penalty, which results in a turnover, occurs when a player dribbles the ball with both hands. It also occurs when a player dribbles, stops dribbling, and then begins to dribble again.

Fast Break: An offensive action where a team attempts to advance the ball and score as quickly as possible after a steal, blocked shot or rebound.

Free Throw: A free shot given to a player after a foul or a technical foul. The player shoots from the 15-foot free throw line while the rest of the players line up along the outside of the key.

Lay-Up: A shot taken close to the hoop, usually when a player is moving toward the basket.

Man-to-Man: A defensive strategy in which each player on the defensive team guards one person on the opposing team.

<u>Key Skills/Techniques</u>	<u>Rules/Tactics</u>	<u>Key words/Phrases</u>
<p>Dribbling Dribbling allows you to move the ball around the field without losing possession. Keep the ball close to your feet at all times, when running with it. Use the inside of your foot to control the ball when moving. Don't look down when running with the ball. Keep your head up.</p> <p>Passing Non-kicking foot is closest to the ball. Kicking foot needs to be at a right angle to the ball Body over the ball Eyes focused upon the ball and arms are to be used for balance</p> <p>Shooting Non kicking foot needs to be next to the ball and player needs to keep their body balanced with their head slightly over the top of the ball. Contact the ball either with the side of the foot (placement of ball) top of the foot (to generate power) Both legs need to be flexed but when striking the ball, kicking foot needs to be fully extended on the follow-through.</p>	<p>Rules Game is started by a kick off in the centre of the pitch, on the referee's whistle The main game has 11 players on the pitch(consisting of goal keeper, defenders, midfielders and strikers) A referee and 2 linesmen will officiate the game. If the ball is played outside of the pitch lines, then the possession is given to the opposing team either as a throw in, goal keepers kick (off the floor) or corner. If a foul is committed a free kick or a penalty is issued (depending on the incident) To score a goal, the ball must cross the opposition's goal line. The team with the most goals at the end of the game will win the game.</p> <p>Tactics Vary the passes that you make Play to your opponents weaknesses(if they are dominantly using their left foot, then play balls on their right) Move opponent around the pitch to tire them out Vary the pace and directions of strokes.</p>	<p>Dribbling Warm up Cool Down Side foot Attack Defend Foul Referee Volley Accuracy Reaction time</p>

Physical Education

A - Safety rules:

1. Always inform your teacher before the lesson of any injuries or medical conditions
2. Always wear PE kit with socks
3. Keep long hair tied back and finger nails short
4. Remove all jewellery, watches and objects from your pockets
5. No chewing gum
6. Use the trampoline only in the presence of the teacher and only when given permission
7. Never use the equipment unless adequate spotters are available
8. Always face the performer and pay attention when spotting
9. Do not step on to the trampoline whilst someone else is bouncing as it is dangerous
10. Do not go underneath the trampoline
11. Do not attempt new skills without permission

Trampolining

B - Stopping:

Land with your feet 'flat' onto the bed.

Begin bending your knees as you touch down on the trampoline.

Keep your back straight and ensure you do not lean forwards or backwards.

C - Straight jumping:

Stand in middle of trampoline on the red cross.

Eyes focus on the end frame/mat throughout the jump

Knees and hips bend and push straight

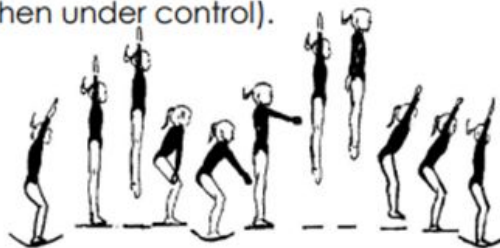
Toes and ankles push straight

Flex ankles on landing

Feet slightly apart but together in the air

Hips straight

Arms above head – (make circles – only when under control).



Beginner

D - Seat landing:

Press hips forward and upward during take-off to create rotation.

Focus on the end bed.

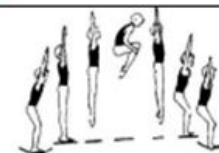
Legs straight hips to heels.

Hands are placed flat, slightly behind and to the side of the hips with the fingers pointing forwards.

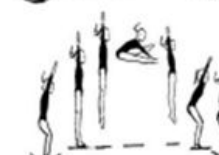
Start with arms up and finish with them up on return to feet.

**E - Shape Jumps:**

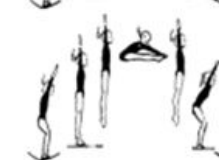
Tuck



Straddle



Pike



Christianity and the Bible

War and religion

Aquinas's conditions for a Just War – jus ad bellum

The war must have a just cause - eg against invasion, or for self-defence - and not to acquire wealth or power. The war must be declared and controlled by a proper authority, eg the state or ruler. The war must be fought to promote good or avoid evil, with the aim of restoring peace and justice after the war is over.

Later conditions developed by other Christians - jus in bello

The war must be a last resort when all peaceful solutions have been tried and failed, eg negotiation.

The war should be fought with 'proportionality', with just enough force to achieve victory and only against legitimate targets, ie civilians should be protected.

The good which is achieved by the war must be greater than the evil which led to the war.

The Just War theory, with some amendments, is still used by Catholics and others today as a guide to whether or not a war can be justified.

In the Catechism of the Catholic Church (2309) the Just War doctrine is laid out and gives four conditions that must be fulfilled for a war to be considered just: "the damage inflicted by the aggressor on the nation or community of nations must be lasting, grave, and certain; all other means of putting an end to it must have been shown to be impractical or ineffective; there must be serious prospects of success; the use of arms must not produce evils and disorders graver than the evil to be eliminated."

Just war

1. The war must be approved by a **recognised authority**, like the United Nations
2. There must be a **Just Cause**
3. It must be a **last resort**
4. It must aim to **make things better – the right (just) intentions**
5. Everything must be done to **restore peace and order**
6. It should use no more force than is needed to **achieve its aims – proportionality**

A **Just War** is a war which is declared for right and noble reasons and fought in a certain way. A Just War is not a war that is 'good' as such – it is a war that Catholics feel to be necessary or 'just' in the circumstances, when all other solutions have been tried and have failed. It is a necessary evil and a last resort.

Catholic Christianity is not a **pacifist** religion although there are pacifists in most Christian **denominations**.

It's possible that some Catholics would support a war if it were justified by Just War standards.

Why do some Catholics support the principle of the Just War theory?

Sometimes war may be necessary and right, even though it may not be good. In the case of a country that has been invaded by an occupying force, war may be the only way to restore justice. **Pope** Benedict XVI said defending oneself and others is a duty.

What does pacifism mean to Catholics?

Pacifists reject all violence. They do not think that conflict should be dealt with by resorting to war. They think that other peaceful methods should be used.

The early Christians interpreted Jesus' commandments to mean that they could not fight in wars or be violent. In the Gospel of Matthew, Jesus said: **Blessed are the peacemakers: for they shall be called the children of God.**

In countries where there may be mandatory conscription into the military, **conscientious objectors** may be assigned to a civilian role instead. The rights of conscientious objectors were upheld by the **United Nations Commission on Human Rights** (an international forum on human rights) in 1995.

Peace and Conflict

Key Terms	
Violence	Harm or damage, which obviously includes the direct violence of killing—in war, capital punishment, murder—but also covers the range of forms of systemic violence such as poverty, racism, and sexism
Lesser of two evils	the principle that when faced with selecting from two immoral options, the least immoral one should be chosen
Passive resistance	the non-violent opposition to authority, often involving a refusal to obey the law by non-violent means.
Just war	It is a war that Christians feel to be necessary or 'just' in the circumstances, when all other solutions have been tried and have failed. It is a necessary evil and a last resort.
Jihad	To struggle
Lesser Jihad	Also called a holy war. It must be approved by a religious leader, fought in self-defence and not used to either convert people to Islam or gain land. There are rules about how lesser jihad can be carried out: it must be in defence of Allah. no harm must be done.
Greater Jihad	The struggle against the lower self – the struggle to purify one's heart, do good, avoid evil and make oneself a better person.
Pacifist	Someone who believes in pacifism
Pacifism	A belief that all violence and war are wrong at all times
Conscientious objector	People who refuse to fight in wars based on their pacifist beliefs. A conscientious objector refers to an individual who refuses to participate in military service due to religious or moral beliefs.
Just Cause	a war should only be fought in self-defence or to defend the innocent.
Authority	The power or ability to do something given by, conferred upon, or derived from a higher authority.

What does Christianity teach about war and peace?

The **Bible** does not give Christians a clear answer about whether war is permitted or not, but it has a lot to say about **justice**, the **sanctity of life**, the importance of resolving conflict and working for peace.

Many Catholics believe that war should be avoided if possible, and should only be undertaken if all efforts to resolve an issue by peaceful means have failed. Many Christians see war as the result of a failure to live by God's standards. There are many promises in the **Old Testament** that war will come to an end in the perfect Kingdom of God.

In **Isaiah** it states: *They shall beat their swords into ploughshares, and their spears into pruning hooks; nation shall not lift up sword against nation, neither shall they learn war any more.*

Catholics are told by **St Paul** in **Romans** to support the state:

For the same reason you also pay taxes, for the authorities are ministers of God, attending to this very thing. Pay all of them their dues, taxes to whom taxes are due. Many Catholics think that fighting for your country is included among these 'dues'. However, some Catholics are **pacifists** and believe that war is never justified.

What do they say about justice?

Catholics believe that justice comes from God and they should work for justice in whatever situation they find themselves. They will often use **Psalms** 82 from the Old Testament to justify this position:

Defend the rights of the poor and orphans; be fair to the needy and helpless. Rescue them from the power of evil men. **Psalms 82**

Peace and conflict

War is an organised conflict usually consisting of intense violence carried out by one state or states against another state or states.

What are the causes of conflict?

The causes of any war are complex. Wars are rarely about just one thing. They can be declared when a state or states act to:

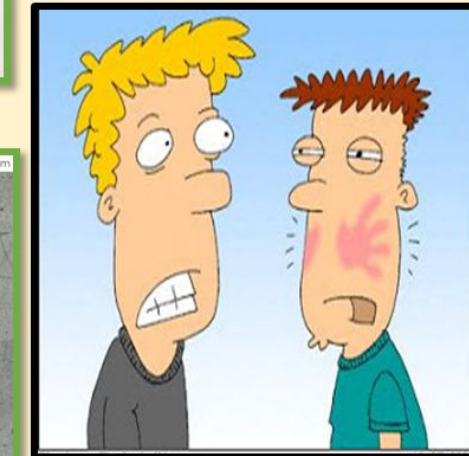
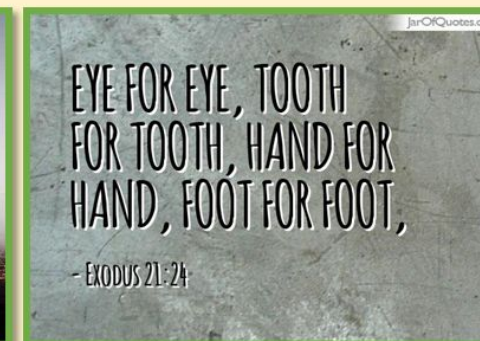
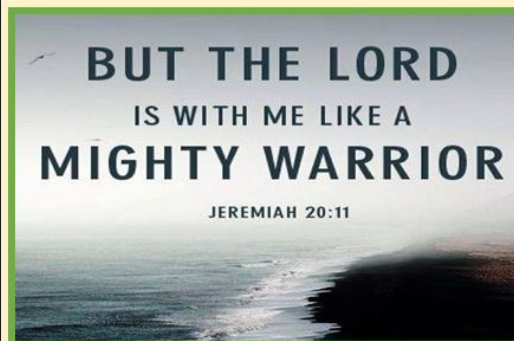
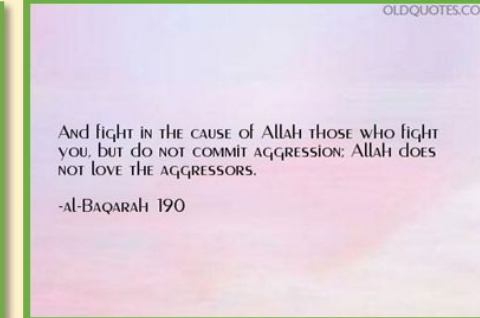
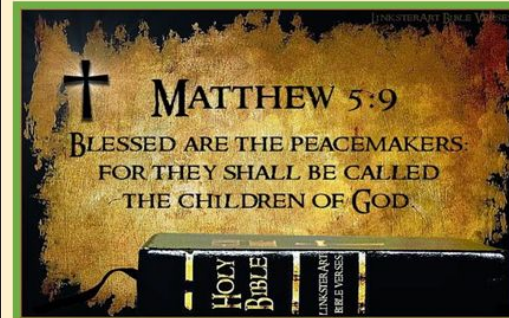
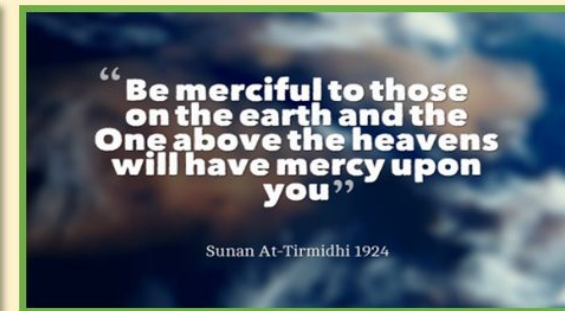
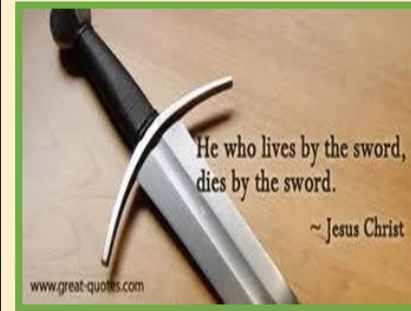
- attack or invade another state, to gain territory or resources
- resist such an attack or invasion by an aggressor
- protect another state from attack by an aggressor
- impose domination or political change on another state, or to resist such domination

challenge a threat to 'essential national interests' by another state
counter perceived threats from a different ideology, religion or ethnic group
defend the national honour when under threat

War can also occur internally within a state between organised groups. This is known as **civil war**.

Religion on war and peace

Quotes and teachings to argue for or against war and fighting:



Speed

1. Speed is how much distance is covered per unit time
2. Speed = Distance/Time
3. The SI unit for speed is m/s
4. If an object is stationary its speed is 0 m/s
5. Average speed is the overall distance divided by the overall time taken for a journey

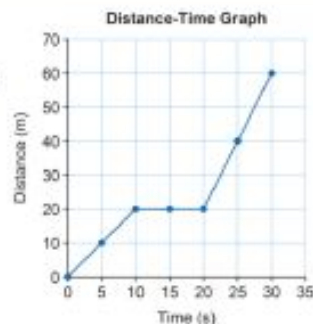
$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

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

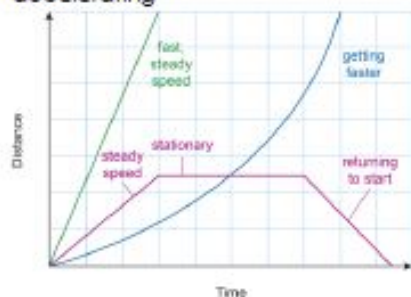
$$\text{Distance} = \text{Speed} \times \text{Time}$$

6. Relative motion describes how different observers judge speed differently if they are in motion too
7. If an observer is stationary, the relative motion of the moving object will be the same as its actual speed
8. If an observer is travelling in the same direction as the moving object, the relative motion is the difference in their speeds and the object will seem to be moving more slowly
9. If an observer is travelling in the opposite direction as the moving object, the relative motion is their speeds added together and the object will seem to be moving faster
10. Acceleration describes how quickly a speed is changing (either speeding up or slowing down)
11. An object speeding up has positive acceleration
12. An object slowing down has negative acceleration

13. A distance-time graph can be used to describe an object's motion



14. A horizontal line represents a stationary object (speed = 0m/s)
15. A straight line represents an object moving at constant speed
16. The gradient of a distance-time graph represents speed
17. The steeper the gradient the greater the speed
18. A line returning to the x-axis represents an object returning to its starting position
19. A curved line represents an object accelerating



Pressure

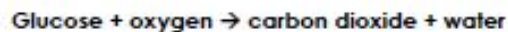
20. Pressure is the force applied per unit area.
21. Pressure (N/m²) = Force (N)/ area (m²)
22. Pressure is increased by a smaller area and decreased by larger area
23. Pressure is increased by a larger force and decreased by a smaller force

Moments

24. A moment is the turning effect of a force
25. Moment (Nm) = Force (N) x perpendicular distance from pivot (m)

Respiration

1. Respiration is a chemical reaction that gives out heat (**exothermic**)
2. All living things respire.
3. Respiration is carried out in all cells continuously.
4. The purpose of respiration is to release energy for organisms to use.
5. Living things need energy for movement, keeping warm and for other chemical reactions to build molecules
6. Aerobic means 'requiring oxygen'
7. The word equation for aerobic respiration is:



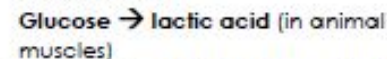
Respiration and exercise

8. During exercise, cells require a greater rate of respiration to provide more energy for movement
9. Heart rate, breathing rate and breathing volume all increase during exercise to meet the increase demand for the reactants during respiration.

Anaerobic respiration

10. Anaerobic means 'without oxygen'
11. Anaerobic respiration takes place without oxygen and releases less energy than aerobic respiration
12. During intense exercise, if there is not enough oxygen then anaerobic respiration takes place
13. Aerobic respiration uses oxygen and releases more energy than anaerobic respiration
14. Anaerobic respiration in muscle cells causes a build-up of lactic acid which results in an oxygen debt
15. After a long period of intense exercise, muscles become fatigued and cannot contract normally

16. The word equation for anaerobic respiration is:



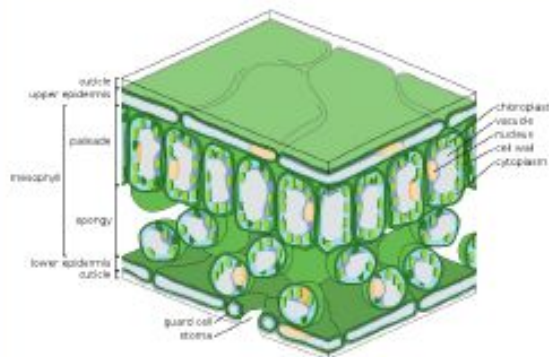
17. Anaerobic respiration in yeast cells is called fermentation and is used to make bread and alcoholic drinks
18. The word equation for fermentation is:
$$\text{Glucose} \rightarrow \text{ethanol} + \text{carbon dioxide} \text{ (in yeast)}$$

Photosynthesis

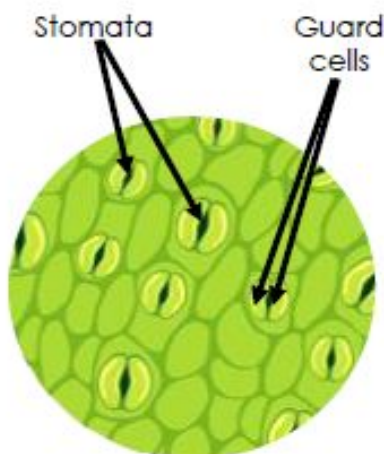
19. Plants and algae make their own food using a process called photosynthesis.
20. Almost all life on Earth depends on photosynthetic organisms
21. Light provides the energy needed for photosynthesis
22. Water and carbon dioxide are the reactants required for photosynthesis.
23. Plants make **carbohydrates** in their leaves by photosynthesis and gain mineral nutrients and water from the soil via their roots.
24. The products of photosynthesis are oxygen and glucose.
25. The word equation for photosynthesis is:



26. Plants use glucose for energy by the process of respiration.
27. Photosynthesis maintains levels of oxygen in the atmosphere.
28. Leaves are the primary site of photosynthesis in plants.
29. Chloroplasts in plant cells contain a green pigment called **chlorophyll** which uses the energy in light for photosynthesis.
30. Leaves have a number of adaptations which allow them to carry out photosynthesis effectively.



31. Plant roots are adapted in order to allow water to be absorbed for photosynthesis.
32. Water leaves the plant via the **stomata** on the underside of leaves.

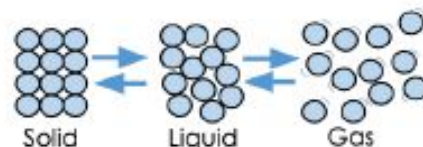


33. **Epidermis**– thin and transparent to allow more light to pass through leaf to get to chloroplasts
34. **Palisade mesophyll** - site of photosynthesis and contains lots of chloroplasts to absorb max sunlight
35. **Spongy mesophyll** – contains lots of air spaces to increase surface area and allow carbon dioxide and oxygen to diffuse easily

36. **Stomata** – holes in the leaf to allow carbon dioxide to diffuse in and oxygen to diffuse out
37. **Guard cells** – to open and close the stomata to let substances in and out and to close it in order to prevent water loss
38. Plants require light, carbon dioxide and water for photosynthesis.
39. The xylem and phloem are **transport vessels** that arrive into the leaf carrying useful substances.
40. **Xylem** transport **water** from roots to leaves and the wall is strengthened with **cellulose** and **lignin**
41. **Phloem** transport **water and glucose** in a **two way system**.
42. Some plants are **non-photosynthetic**, which means they cannot carry out photosynthesis
43. Non-photosynthetic plants tend to be **parasitic**, growing in/on/around other plants so they can obtain the food they need. For example, the Indian pipe plant eats mushrooms.

Chemical and Physical Changes

1. A chemical change produces a new substance whereas in a physical change no new substance is produced.
2. A chemical change is **irreversible** whereas a physical change is **reversible**.
3. Melting, evaporating, condensing, freezing and sublimation are examples of **physical changes** because they only change the **state** (solid, liquid or gas) of the substance.
4. These processes only change the energy that each particle has (how much it moves) and **not** its arrangement or properties (e.g. its boiling or melting point).

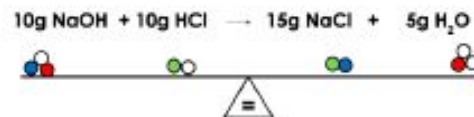


5. A chemical change can be identified if there is a change in colour or temperature, or if the reaction produces light.
6. In a chemical change, a new substance (or product) is always made.

Chemical Reactions

7. A chemical change can also be called a chemical reaction.
8. The number and type of atoms do not change in a chemical change and are only rearranged.
9. The total overall mass is conserved in a chemical change (the mass of the reactant is equal to the mass of the products).
10. Every reactant atom will become a product atom.

11. Extra atoms cannot be made, and atoms cannot disappear.



Reactions of Metals with Oxygen

12. Metals react with oxygen to produce metal oxides.
13. The general equation is: Metal + oxygen \rightarrow Metal oxide
14. Example 1: Copper + oxygen \rightarrow copper oxide
15. Example 2: Lithium + oxygen \rightarrow lithium oxide
16. These reactions are oxidation reactions because the metals gain oxygen
17. **Reduction** is the loss of oxygen
18. **Oxidation** is the gain of oxygen
19. **Exothermic** reactions transfer energy to the surroundings
20. **Endothermic** reactions take in energy from the surroundings

Reactions of Metals with Acid

21. Acids react with some metals to produce salts and hydrogen
22. Metal + acid \rightarrow salt + hydrogen
23. This can be remembered by **MASH**: Metal + Acid \rightarrow Salt + Hydrogen
24. Example 1: Copper + Hydrochloric acid \rightarrow copper chloride + hydrogen
25. Example 2: Sodium + Nitric Acid \rightarrow sodium nitrate + hydrogen

Reactions of Acids with Alkalis, Bases and Metal Carbonates

26. Acids are neutralised by alkalis (e.g. soluble metal hydroxides) and bases (e.g. insoluble metal hydroxides and metal oxides) to produce salts and water.
27. Acid + alkali → salt + water
28. Acid + base → salt + water
29. Acids are neutralised by metal carbonates to produce salts, water and carbon dioxide.
30. Acid + metal carbonate → salt + water + carbon dioxide
31. The particular salt produced in any reaction between an acid and a base or alkali depends on the acid and metal in the base, alkali or carbonate
32. Hydrochloric acid produces chloride salts, nitric acid produces nitrate salts, and sulfuric acid produces sulfate salts

Acid	Salt produced
Hydrochloric Acid	Chloride
Sulfuric Acid	Sulfate
Nitric Acid	Nitrate

33. Example 1:
Hydrochloric Acid + sodium hydroxide → sodium chloride + water
34. Example 2:

- Sulfuric Acid** + sodium chloride → sodium sulfate + water
35. Example 3:
Nitric Acid + sodium hydroxide → sodium nitrate + water
36. Example 4:
Hydrochloric Acid + sodium carbonate → sodium chloride + water + carbon dioxide
37. Example 5:
Nitric Acid + sodium carbonate → sodium nitrate + water + carbon dioxide
38. Example 6:
Sulfuric Acid + sodium carbonate → sodium sulfate + water + carbon dioxide

Tests for Gases

39. The test for hydrogen uses a burning splint held at the open end of a test tube of the gas. Hydrogen burns rapidly with a squeaky pop sound.
40. The test for carbon dioxide uses a solution of calcium hydroxide (limewater).
41. When carbon dioxide is shaken with or bubbled through limewater the limewater turns milky (cloudy)



Food and drink

<i>el agua (fem.)</i>	water	<i>el bocadillo</i>	sandwich	<i>el pollo</i>	chicken
<i>el agua mineral (fem.)</i>	mineral water	<i>los entremeses</i>	hors d'oeuvres/ starters	<i>el queso</i>	cheese
<i>el chicle</i>	chewing gum	<i>el café</i>	coffee	<i>la receta</i>	recipe
<i>el chocolate</i>	chocolate	<i>el caramelo</i>	sweet	<i>la sal</i>	salt
<i>el chorizo</i>	Spanish sausage	<i>la carne</i>	meat	<i>la salchicha</i>	sausage
<i>la chuleta</i>	chop, cutlet	<i>la cerveza</i>	beer	<i>la salsa</i>	sauce
<i>la ensalada</i>	salad; lettuce	<i>la fruta</i>	fruit	<i>la sopa</i>	soup
<i>la botella</i>	bottle	<i>la galleta</i>	biscuit	<i>las tapas</i>	snacks
<i>los mariscos</i>	shellfish/seafood	<i>las gambas</i>	prawns	<i>la tarta</i>	flan/tart
<i>la mermelada</i>	jam	<i>el helado</i>	ice cream	<i>el tocino</i>	bacon
<i>la mantquilla</i>	butter	<i>la leche</i>	milk	<i>la tortilla española</i>	Spanish omelette
<i>las legumbres</i>	vegetables	<i>la lechuga</i>	lettuce	<i>la tortilla francesa</i>	omelette
<i>las albóndigas</i>	meatballs	<i>la mostaza</i>	mustard	<i>el azúcar</i>	sugar
<i>los calamares</i>	squid	<i>la nata</i>	cream	<i>el vino</i>	wine
<i>el asado</i>	roast; joint	<i>el pan</i>	bread	<i>el zumo/el jugo</i>	juice
<i>las patatas fritas</i>	chips/crisps	<i>el huevo</i>	egg	<i>el pescado</i>	fish
<i>las verduras</i>	green vegetables	<i>el pastel</i>	cake	<i>la bebida</i>	drink

¿Qué tipo de comida prefieres?	Prefiero la comida ... porque es ...
¿Cuál es tu plato preferido?	Mi plato preferido es ... porque me gusta ...
¿Te gusta cocinar?	No tengo tiempo para cocinar, pero me gustaría aprender ...
¿Qué piensas de los platos tradicionales?	Creo que es muy importante probar la comida regional ya que ...
Describe la última vez que fuiste a un restaurante.	El fin de semana pasado fui a ... comimos ... bebimos ...
¿Cómo sería tu cena ideal?	Sería ... comería ... bebería ...
¿Qué comida española te gustaría probar?	Me gustaría probar ... porque ...

La carta /el menú del día

<i>Entrada</i>	<i>De primero</i>
<i>De Segundo</i>	<i>De postre</i>
<i>De beber</i>	<i>Pescado/ Carne/ Verduras</i>



Ordering food in a restaurant

Quiero/Quisiera ...	¿Qué vas a tomar?	Y después ...	De postre...	De beber...
Voy a tomar...	De primero...	De Segundo...	¿y para ti?	Para mí...

Useful adjectives

<i>asqueroso</i>	disgusting	<i>sano/saludable</i>	healthy
<i>bueno</i>	good	<i>salado</i>	salty
<i>cremoso</i>	creamy	<i>sabroso</i>	tasty
<i>delicioso</i>	delicious	<i>rico</i>	delicious
<i>dulce</i>	sweet	<i>refrescante</i>	refreshing
<i>fresco</i>	fresh	<i>picante</i>	spicy
<i>grasiento</i>	greasy	<i>malsano</i>	unhealthy
<i>maló</i>	bad		

To add extra emphasis to an adjective, add the ending **-ísimo** or **-ísima** after removing the final vowel, e.g. **bueno** → **buenísimo**.

la comida rápida – fast food

la comida basura – junk food

la comida italiana/india/china/ mexicana – Italian/Indian/Chinese/ Mexican food

Cualquier is an adjective that means 'any' or 'any one' e.g. **me gusta cualquier tipo de comida** – I like any type of food.

Useful verbs

<i>asar</i>	to roast	<i>freir</i>	to fry
<i>asar a la parrilla</i>	to grill	<i>merendar</i>	to have a snack
<i>almorzar</i>	to have lunch	<i>preparar</i>	to prepare
<i>beber</i>	to drink	<i>probar</i>	to taste/try
<i>cenar</i>	to have dinner	<i>saber (a)</i>	to taste (of)
<i>cocinar</i>	to cook	<i>servir</i>	to serve
<i>comer</i>	to eat	<i>tener hambre/sed</i>	to be hungry/ thirsty
<i>desayunar</i>	to have breakfast	<i>tomar</i>	to take/have

Useful vocabulary

<i>la vajilla</i>	crockery	<i>la lata</i>	can	<i>la botella</i>	bottle
<i>el vaso</i>	glass; jar	<i>la olla</i>	pot	<i>la cocina</i>	kitchen
<i>la cuchara</i>	spoon	<i>la taza</i>	cup	<i>los comestibles</i>	groceries
<i>el cuchillo</i>	knife	<i>el horno</i>	oven	<i>los cubiertos</i>	cutlery
<i>la ración</i>	portion	<i>el tenedor</i>	fork	<i>el microondas</i>	microwave
<i>el paquete</i>	packet				

Useful verbs to talk about health

<i>aconsejar</i>	to advise	<i>emborracharse</i>	to get drunk
<i>acostarse</i>	to go to bed	<i>estar en forma</i>	to be fit
<i>beber</i>	to drink	<i>fumar</i>	to smoke
<i>comer</i>	to eat	<i>hacer daño</i>	to injure, harm
<i>dormir</i>	to sleep	<i>hacerse socio de</i>	to become a member of, to join
<i>drogarse</i>	to take drugs	<i>mantenerse en forma</i>	to keep fit

¿Llevas una vida sana?	Llevo una vida bastante sana porque ...
¿Qué haces para mantenerte en forma?	Hoy en día intento hacer ejercicio regularmente, por ejemplo ...
¿Cuáles son los beneficios de practicar el deporte?	Para mí, lo bueno es que... la actividad física es muy importante para la salud porque ...
¿Prefieres el deporte de equipo o individual?	Hay muchos beneficios de los deportes en equipo, por ejemplo ...
¿Hay un deporte que te gustaría probar?	No he probado ... me gustaría aprender a ...
¿Qué hiciste ayer para mantenerte en forma?	Ayer, jugué ... hice ... fui ...
¿Qué comida sana vas a comer mañana?	Mañana, voy a comer/comeré ... voy a beber/beberé ...
¿Cómo podrías mejorar tu estilo de vida?	Debería beber más agua y necesito acostarme más temprano. Además, me gustaría ...

En el pasado no era una persona muy activa	In the past, I wasn't a very active person.
La actividad física es muy importante para la salud	Physical activity is very important for your health.
Es importante tener una dieta equilibrada	It's important to have a balanced diet.
Comer sano ayuda a reducir el riesgo de enfermedades	Eating healthily helps to reduce the risk of illnesses.

Talking about health and fitness in the past, present and future

Past	Present	Future
Ayer/la semana pasada/el año pasado/ en el pasado	Ahora/hoy/ todos los días/ normalmente	Mañana/la semana que viene/ el año próximo/en el futuro
fui ... jugué ... hice ... practiqué ... comí ... bebí ...	voy ... juego ... hago ... practico ... como ... bebo ...	Voy a ir/jugar/hacer/ practicar/ comer/beber iré ... jugaré ... haré ... practicaré ... comeré ... beberé ...

Useful verbs to talk about sport

<i>andar/caminar</i>	to walk
<i>bailar</i>	to dance
<i>correr</i>	to run
<i>escalar</i>	to climb
<i>esquiar</i>	to ski
<i>ganar</i>	to win
<i>hacer</i>	to do
<i>ir al gimnasio</i>	to go to the gym
<i>jugar</i>	to play
<i>marcar (un gol)</i>	to score (a goal)
<i>montar a caballo/en bici</i>	to go horse riding/ cycling
<i>nadar</i>	to swim
<i>participar</i>	to participate
<i>patinar</i>	to skate
<i>practicar</i>	to practise/do/ take part in a sport
<i>perder</i>	to lose

Health vocabulary

<i>los consejos</i>	advice
<i>una dieta equilibrada</i>	a balanced diet
<i>las drogas blandas/duras</i>	soft/hard drugs
<i>el ejercicio físico</i>	physical exercise
<i>el fumador</i>	smoker
<i>la salud</i>	health
<i>el ejercicio</i>	exercise
<i>el abuso del alcohol</i>	alcohol abuse
<i>una dieta malsana</i>	an unhealthy diet
<i>la drogadicción</i>	drug addiction
<i>el estrés</i>	stress
<i>la falta de ejercicio</i>	lack of exercise
<i>la obesidad</i>	obesity
<i>el riesgo</i>	the risk
<i>el sobrepeso</i>	being overweight/obesity
<i>el tabaquismo</i>	addiction to tobacco
<i>el dolor de cabeza/garganta</i>	headache/ sore throat
<i>la fiebre</i>	fever, temperature
<i>la enfermedad</i>	illness

Saying how often you do something

<i>a menudo</i>	often
<i>a veces</i>	sometimes
<i>diariamente</i>	daily
<i>nunca</i>	never
<i>siempre</i>	always
<i>regularmente</i>	regularly
<i>de vez en cuando</i>	from time to time/once in a while
<i>todos los días/cada día</i>	every day
<i>raramente</i>	rarely
<i>dos veces a la semana</i>	twice a week
<i>cada semana</i>	every week