


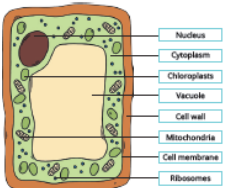
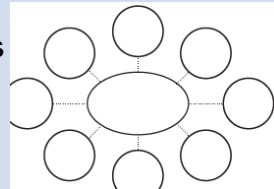






Summer 2 - Year 8 Name:

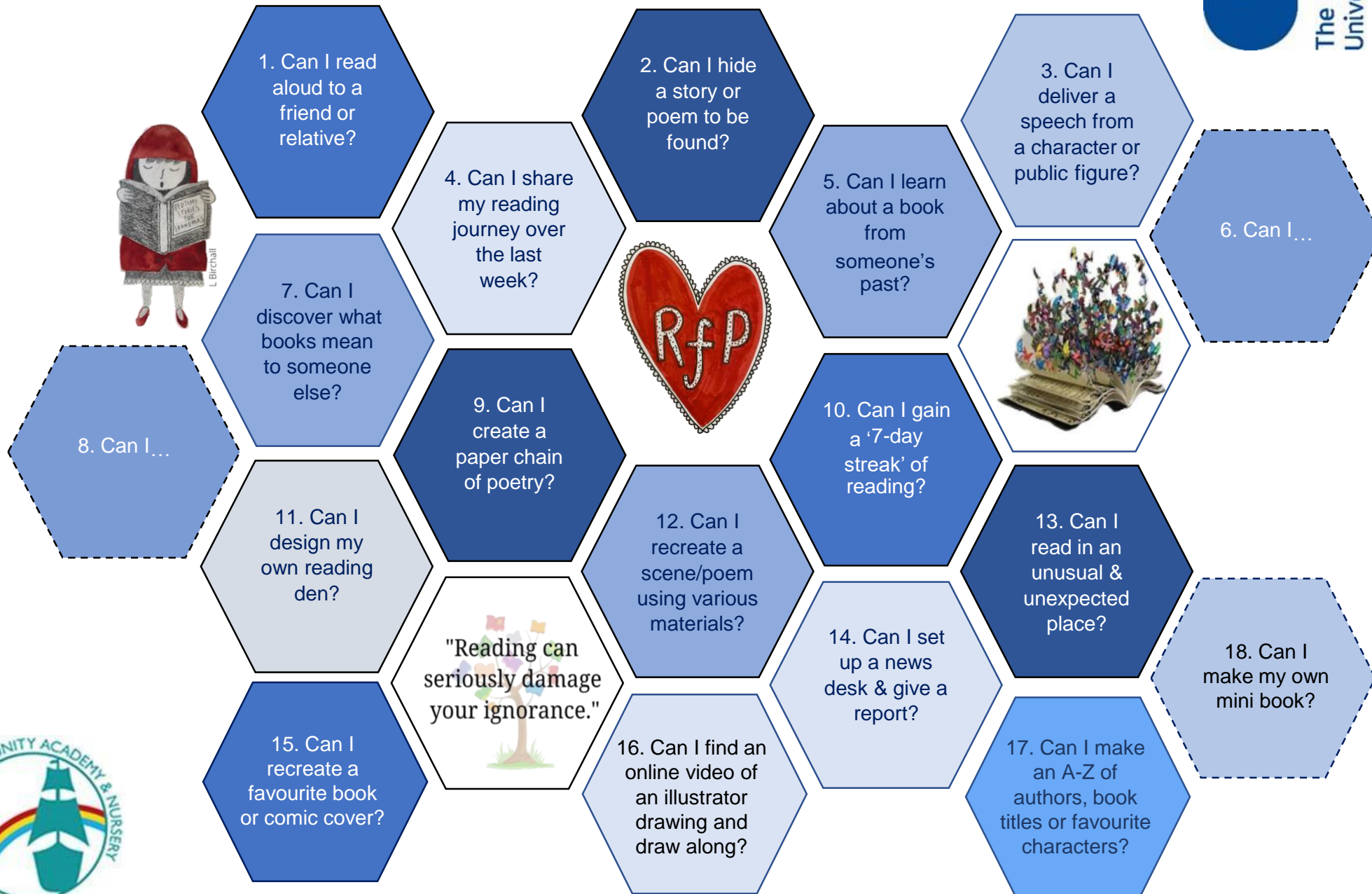
Just reading through your books or a knowledge organiser is not always an effective way to revise. Instead, you should do something with the information. Choose an example of the revision methods on the pages or see if you can come up with another method.

The knowledge is evolutionary not revolutionary. Approximately half the knowledge is new and half helps you revise. Many of the activities are changing. We hope you enjoy them.

Subject	Page Number	Subject	Page Number
Reading	3	Geography	21
Art	4	German	23
Drama	5	History	29
Food	6	English	31
DT	12	Maths	34
PE	13	RE	38
Science	16	Music	40
Computer Science	20		

Idea	Explanation
<p>Make some flash cards or PowerPoint slides. Make top trumps.</p> 	<p>Write down key words, quotation, questions or equations on one side of a card. On the other side, write the definition or answer. Use them to test yourself.</p>
<p>Plant Cell</p>  <p>Make a poster.</p>	<p>Turn your notes into posters with lots of colour and illustrations. Summarising the key information in a different way is an effective way of learning and your brain will remember the colours more easily. Do the title last!</p>
<p>Draw spider diagrams, or for the adventurous mind maps.</p> 	<p>Write the topic/keyword in the centre of your page. Add everything you know in subtopics. Then explore each subtopic in turn adding more ideas. Colour/pictures help you recall.</p>
<p>Write a song or a rap.</p> 	<p>Are there songs that stick your head. Change the lyrics to the information you want to learn. If you record and listen back it will be a more fun way of revising.</p>
 <p>Plan a lesson</p>	<p>If you teach something to someone else the chance of recalling it is really high. This has been found to be the most effective way of learning something for the long term.</p>
<p>Write a story or comic strip.</p> 	<p>Take the keywords or facts that you need to learn and turn them into a story or a cartoon. The sillier the story the more likely you are to remember it.</p>
<p>Write a quiz. Design a game.</p> 	<p>Playing is how we learn as young children and it is a very powerful way of learning throughout life. If we enjoy the game it helps us remember.</p>

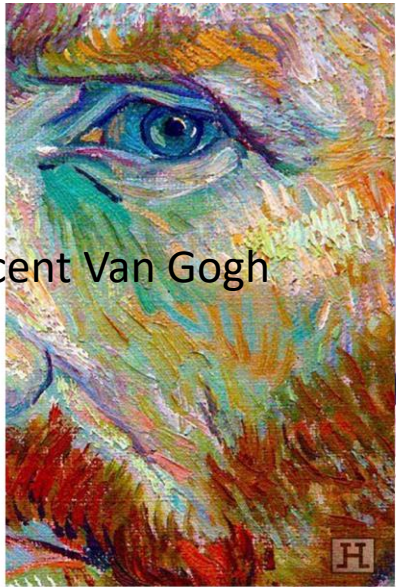
Sharing the Love of Reading: 11-16-year olds



Year 8- Summer 2

We have been looking at drawing and painting Eyes this term.

This sheet shows the Different stages of simple outline to detailed drawing. Try to practise this at home using your own eye or a parent. Remember the secret is “looking really hard!”



Agnes Cecile



Vincent Van Gogh

We have also studied these two artists and how they painted their own eyes.

Rub out your guideline and add tone to make the eye look more realistic

ALL: Draw the basic shape of an eye, looking at the shapes and starting to add tones.

MOST: Carefully draw the shapes in the eye, adding a variety of tones and details.

SOME: Draw the eye with accuracy, adding lots of details and tones. You will fill the space and draw what you can see, not what you imagine!



The iris should have a variety of tones and tends to get darker towards the outer ring.

Even the white part of the eye has tone towards the edges, giving the eye form.



Physical Theatre is a genre of theatre where physical movement is used to tell the story rather than dialogue.

Physical theatre shows that you don't have to use words to express ideas. It uses techniques such as **movement, mime, gesture** and **dance** and can be used to explore complex social and cultural issues.

Physical theatre is often **abstract** in style and uses movement in a **stylised** and **representational** way.

Abstract is the opposite of realistic, a character or concept may be symbolised rather than literal.

Stylised is an attempt to enhance a scene using unnatural methods.

Representational is to represent reality or an aspect of real life rather than show realistically.

YEAR 8 DRAMA – METAMORPHOSIS



The Metamorphosis adapted by Steven Berkoff and based on the 1915 novella by German writer Franz Kafka.

It tells the story of Gregor Samsa, a travelling salesman who has his whole life ahead of him, but awakes one morning as a massive insect. The Samsa family have to adjust to Gregor's new state but as time goes on, the family lose hope that Gregor will ever return to his normal state.

Steven Berkoff is a British actor, playwright and **theatre practitioner**. He is recognised for staging work with a heightened performance style. His work combines **physical theatre, total theatre** which combines all elements such as music, voice, movement and spectacle, together and **expressionism** which seeks to express the inner world of emotion rather than external reality.

Food Packaging

Food packaging

Food is packaged to protect the product during transport and whilst sitting on shelves.

Why is food labelling important?

Symbols on packaging show important information to customers.

Example exam questions:

Seasonal produce and air miles

What are the advantage of buying locally produced, seasonal produce? (6 marks)

Explain the disadvantages of buying imported foods. (10 marks)

Explain the term 'air miles' (3 marks)











Explain the term 'seasonal produce' (3 marks)

How might a restaurant use the fact they only use

Food packaging

Compare the two dishes and explain which dish is a healthier choice. Use the traffic light system to help you with your answer (6 marks).

Why is it important to include a vegetarian symbol on food packaging of vegetarian products? (2 marks)

				
Giving farmers a fair price for their products.	Forest Stewardship Council - helping effectively manage forests.	Suitable for home freezing.	Eggs have been produced to the highest standards of food safety.	Vegetarian approved - free from animal products.
				
This product can be recycled.	A British organisation that promotes and regulates food quality.	Tidy man - do not litter.	Food which abides by the Islamic law. The Islamic way of slaughtering is cutting the throat and draining the blood.	An ethical food label - helping farm animals have a good life.

Reference intake

You'll see reference intakes referred to on food labels. They show you the maximum amount of calories and nutrients you should eat in a day. Most packaging has a colour coded label on the front to help you make healthy choices.

Reference in take amounts:

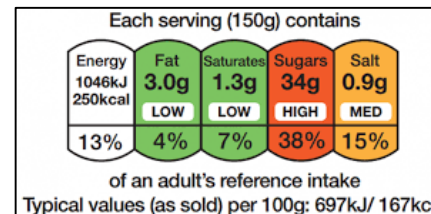
Kcal (calories) - 2000

Total Fat -70g

Saturated fat - 20g

Sugar - 90g

Salt - less that 6g



Red means HIGH in that nutrient
Amber means MEDIUM in that nutrient
Green means LOW in that nutrient

Reference intakes are not meant to be targets. They just give you a rough idea of how much energy you should be eating each day, and how much fat, sugar, salt and so on.

The percentages represent how much of your reference intake is in the product, e.g. the product has 3.0g of FAT in it, that is 4% of 70g of fat.

Food Provenance

Manufactured foods

Manufactured foods are foods that have undergone any process that has changed them from their natural state. This includes products that have many ingredients and several processing steps such as a pre-prepared meal



Crisps



Sausage rolls



Sandwiches

Foraging and gathered Foods

Foraging or gathering food from the wild is a way of getting fresh, good quality, local ingredients. Food gathered from the forests, countryside and hedgerows can provide a huge range of ingredients (for free!).



Mushrooms



berries



apples

Grown Foods

Foods that are grown on giant farms, greenhouses, or giant poly-tunnels. Often the foods are sprayed with chemical pesticides and fertilisers to make identical shape and size foods. Many processes are done by machine to make these foods cheaper.



Poly tunnels



Fields



Green houses

Reared Foods

Animals raised for their use, often for food. Intensive farming produces cheap produce, but does not always provide the best welfare for the animals involved. Free Range is a kinder but more expensive method of farming animals. More space is needed for fewer animals



Dairy cows



Pigs for Pork



Chicken

Chocolate orange cookies

Ingredients

125g butter, softened
100g light brown soft sugar
125g caster sugar
1 egg, lightly beaten
225g self-raising flour
200g chocolate chips
1 orange

Equipment

Weighing scales

Bowl

Spoon

Baking tray

jug

Skills

Weighing

Whisking

Shaping

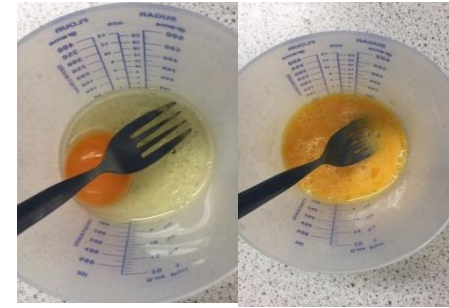
Baking



1. Pre-heat the oven to 190C. Weigh out the butter and the sugar.



2. Cream the butter and sugar together.



3. Mix the egg in a jug and add a little at a time to the butter mixture.



3. Add the flour and chocolate chips and orange zest. Mix well.



4. Split the mixture into 12 even balls, 6 per tray. Bake for 10 minutes until golden on the edges and soft in the middle.

You can change this recipe to make:
-Chocolate orange cookies
-Cranberry and white chocolate cookies
-Peanut butter cookies

Jambalaya

Ingredients

1 pepper
1 onion
1 garlic clove
 $\frac{1}{2}$ can chopped toms
125g rice
250ml boiling water
1 vegetable stock cube
1 chicken breast
Salt
Pepper
paprika

Equipment

Pan
Spoon
Knife
Chopping board
Jug
Kettle

Skills

Seasoning
Frying
Chopping



1. Chop the onion, pepper and garlic. Cut the chicken into cubes



2. Heat the oil, add the chicken, onion and garlic. Cook until the onions are soft and the chicken is white.



3. Add the paprika and mix so its all coated.



4. Cut the pepper into chunks.



5. Add the peppers and rice and stir.



6. Mix the stock cube with 250ml until it is dissolved.



7. Add all the stock and cook for around 10 minutes.



8. Add half the can of tomatoes and stir until the water has soaked into the rice.



9. Once the rice is cooked and the liquid has gone stir through the sweetcorn and cook for a couple of minute.

Practical Assessment 3:

Creamy chicken pie

Ingredients

1 onion

2 chicken breasts

Optional: 4 rashers of
bacon

90g cream cheese

Stock cube

4 large potatoes

Salt and pepper

Splash of milk

Tbsp butter

Optional vegetables
(choose at least 1)

Mushrooms

Leek

Sweetcorn

Equipment

Saucepan

Masher

Knife

Red chopping board

White chopping board

Frying pan

Wooden spoon

Pie dish

Method

1. Fill a saucepan just over half way with water and put onto boil. Pre-heat the oven to 180°C.
2. Prepare your vegetables: dice the onion, slice your vegetables and cut your potatoes into chunks. Dice the chicken.
3. When the water has boiled, add your potatoes and cook for around 20 minutes until soft.
4. Fry the onions and chicken for 10 minutes, until the onions are translucent and the chicken white.
5. Add the vegetables and cook for another 3-5 minutes. (Leeks will take 5 minutes longer than mushrooms or sweetcorn).
6. Stir through the cream cheese, half the stock cube and season with salt and pepper.

Making a textile product

Design brief

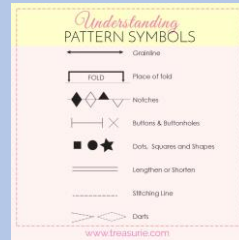
Design a fabric monster that will be added to a CAM toy to keep a child entertained.

This half term you will be making a textile product from the design brief above. What will you need to consider when designing and making for a child? How will you know if your product is suitable?

Designers need to think about who will use the product, when and how?



Pattern pieces



Pattern pieces are usually made from paper and they are like stencils. They allow us to cut out exactly the same shape every time. They are pinned onto fabric and fabric scissors are used to cut around the paper pattern. Sometimes tailors chalk is used to draw around the pattern piece first then it is cut out.

What is tailors chalk? When and why did you use it?

Pattern pieces have symbols on them to tell us to do certain things. Use this link to find out what the symbols mean: <https://www.createandcraft.com/gb/sewing-pattern-symbols>
<https://www.youtube.com/watch?v=ioLMA3N230U> – click on this link to see fabric being marked and cut using a paper pattern.



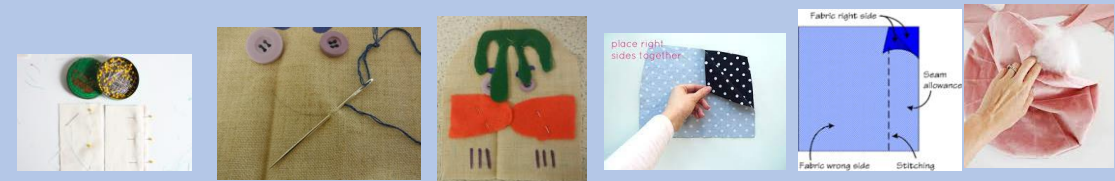
Sewing a seam



For this project you will learn how to make a simple fabric product to go onto the top of your frame. You will use a paper pattern to draw around, tailors chalk to mark the lines, fabric scissors to cut the fabric and a sewing machine to permanently join your fabric. Your fabric monster will be attached to your CAM frame to make a moving toy.

How to make your textile part (this is in your booklet too)

- Step 1 Cut out your fabric using your paper pattern x2, one for the front and one for the back
- Step 2 Decorate the front and back pieces according to your design using the decorative skills you have learnt this year
- Step 3 Cut out any additional pieces you need, for example for arms, legs, hair which will be added on, this may be made from felt.
- Step 4 Pin fabric together, good sides facing, add any felt pieces inside and pin them
- Step 5 Sew your pieces together on the sewing machine, checking you have selected the correct stitch and it is threaded properly. Leave a small hole.
- Step 6 Check your seams are strong then turn your fabric the right way through the hole you have left.
- Step 7 Stuff your textile product and attach to your follower by sewing and glue gun.



<https://www.instructables.com/how-to-sew-a-seam/> How to produce a seam on the sewing machine

<https://www.youtube.com/watch?v=27aXDI6z6eo> sewing 2 pieces of fabric together

Careers using this knowledge: Fashion designer, textile designer, tailor, pattern maker, upholsterer, material engineer.

Components of Physical Fitness

Aerobic Endurance

The ability of the heart and lungs to work hard to supply nutrients and oxygen to the muscles during exercise.

Muscular Endurance

The ability of the muscles to work efficiently for long periods of time

Speed

The ability to cover a distance quickly. There are 3 types of speed (Accelerative speed, Pure speed and Speed Endurance.

Muscular Strength

The maximum force, measured in kilograms (Kg) or newtons (N) that can be generated by a muscle or group of muscles.

Flexibility

The range of motion in all joints of the body and the ability to move a joint fluidly through its complete range of movement.

Body Composition

The amount of fat to fat-free muscle mass.

Can you now link each of the physical components to a sporting example? E.g. what sport would you usually see flexibility being used?

Watch
this!



Why should we exercise?



Sport England posted an infographic on Twitter to give reasons why walking for 30 minutes each day was important. Scan this QR code to see the benefits.



Components of Skill-related Fitness

Agility – The ability of a sports performer to quickly change direction without losing balance or time

Balance – The ability to maintain your centre of mass over a base of support. There are two forms of balance (static which is maintaining balance in a stationary position and Dynamic which is maintaining balance while in motion)

Co-ordination – The ability of the body to work together to move smoothly and accurately

Power – The ability to use strength and speed. It is the work done in a unit of time and is calculated in the following way

Power = Force (Kg) x Distance (m) / time (mins or seconds)

Reaction time – The time taken for a sports performer to respond to a stimulus, for example, the time taken for a sprinter to react to the starter gun.

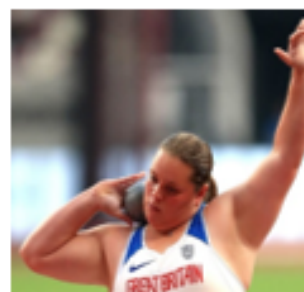


Athletics

Athletics events consist of three main areas. Running, Jumping and Throwing.

Skill	Description
Running	An action to move quickly with the correct technique using arms and legs as efficiently as possible. Activities include 100m, 200m, 400m, 800m and relay.
Jumping	The technique to propel the body into the air to either cover distance, height or both. The events are long jump, triple jump and high jump.
Throwing	The ability to propel an object through the air as far as possible. The events are Javelin, Discus and Shot Putt.

British athletes and achieving their goals



1. How would both Mo Farrah and Sophie McKinna (from Norfolk) use the F.I.T.T principle in their sports?

2. Why is rest and recovery important for an athlete?

3. What components of fitness would Mo Farrah need which is different to Sophie McKinna and why would these be important?

Diet and Nutrition for Sport

Nutrient	Function and Examples
Protein	 <p>Important for growth and development of muscle and tissue as well as making and repairing cells inside the body. Poultry, Fish, Nuts, Dairy and Soy are examples.</p>
Carbohydrates	 <p>Provide energy for the body over a longer period of time and helps fight disease. Potatoes, Pasta, Pulses and Fruit are sources.</p>
Fibre	 <p>Important for preventing constipation and also helps decrease the risk of Type 2 diabetes, heart disease and high cholesterol in later life. Fresh fruits (skin on) Dried fruit, Vegetables, Wholegrains such as brown rice and wheat bread are sources.</p>
Calcium	 <p>Important for strong bones and teeth. It also helps with muscle function, blood clotting and nerve transmission. Dairy products, leafy green vegetables, orange juice are sources.</p>
Vitamin A, C and D	<p>Vitamin A is important for eyesight, growth and the functioning of the immune system as well as healthy skin. Dark green vegetables e.g. spinach. Sweet potatoes, papayas, milk and eggs.</p> <p>Vitamin C is important for decreasing the amounts of colds you get, fight infections, wound healing, healthy gums and skin and also acts as an antioxidant. Citrus fruits, broccoli, strawberries, tomatoes, peppers and kale are the sources</p> <p>Vitamin D is important for strong bones and teeth as it absorbs calcium. It is also good for immune function. Milk, oily fish, egg yolk and even the sunlight are sources.</p>

Earth's resources and climate change

Fuels as Energy Resources

Fuels store chemical potential energy. Many fuels are used a great deal by humans, including fossil fuels:

- Oil – used to make petrol/diesel/aircraft fuel especially
- Coal – burned in power stations to generate electricity
- Natural gas – used as a fuel for heating homes and for cooking.

These are all very useful fuels, but the problem is that they are **non-renewable** and when they are burned, carbon dioxide is produced. Carbon dioxide contributes to climate change because it is a greenhouse gas.

Other Energy Resources

We don't have to use fossil fuels for the uses given above. There are many other energy resources on Earth, including many **renewable resources**. E.g.

- Sunlight, which we can use to generate electricity with solar cells
- Wind, which can be used to generate electricity using wind turbines
- The tides, which can be used to generate electricity
- Waves in the sea, which can be used to generate electricity.

Choosing energy resources

Many things should be considered to choose an energy resource:

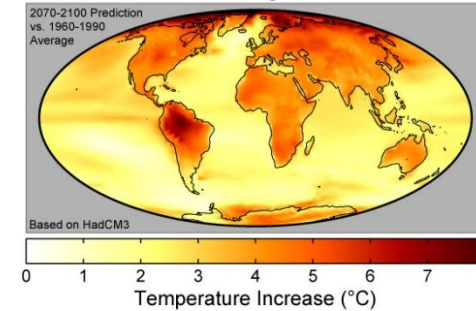
- The reliability of the energy resource
- The usefulness of the energy resource
- How long the resource lasts, and if it is renewable
- The environmental impact of the energy resource.

Carbon dioxide, water vapour and methane	<i>Examples of greenhouse gases that maintain temperatures on Earth in order to support life</i>
The greenhouse effect	<i>Radiation from the Sun enters the Earth's atmosphere and reflects off of the Earth. Some of this radiation is re-radiated back by the atmosphere to the Earth, warming up the global temperature.</i>

Global warming	<i>Levels of CO₂ and methane in the atmosphere are increasing.</i>	Decreased land availability from sea level rise, temperature rise damages delicate habitats, extreme weather events harm populations of plants and animals.
----------------	---	---

Effects of climate change
Rising sea levels
Extreme weather events such as severe storms
Change in amount and distribution of rainfall
Changes to distribution of wildlife species with some becoming extinct

Global Warming Predictions



Carbon dioxide	<i>Human activities that increase carbon dioxide levels include burning fossil fuels and deforestation.</i>
Methane	<i>Human activities that increase methane levels include raising livestock (for food) and using landfills (the decay of organic matter released methane).</i>
Climate change	<i>There is evidence to suggest that human activities will cause the Earth's atmospheric temperature to increase and cause climate change.</i>

The total amount of greenhouse gases emitted over the full life cycle of a product/event. This can be reduced by reducing emissions of carbon dioxide and methane.

There is a global consensus about global warming and climate change based on systematic reviews of thousands of peer reviewed publications.

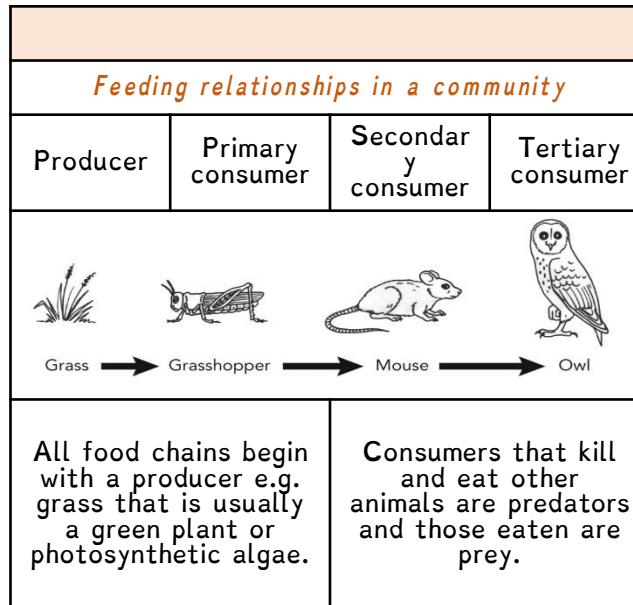
POND LIFE (COMMUNITIES AND DISTRIBUTION OF SPECIES)

<i>Environment</i>	The conditions surrounding an organism; abiotic and biotic.
<i>Habitat</i>	Place where organisms live e.g. woodland, lake.
<i>Population</i>	Individuals of a species living in a habitat.
<i>Community</i>	Populations of different species living in a habitat.

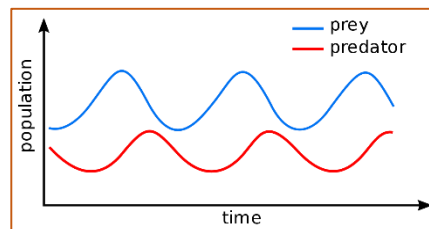
<i>Plants</i>	<i>Animals</i>	<i>Extremophiles</i>
Cactus in dry, hot desert	Polar bear in extreme cold artic	Deep sea vent bacteria
No leaves to reduce water loss, wide deep roots for absorbing water.	Hollow hairs to trap layer of heat. Thick layer of fat for insulation.	Populations form in thick layers to protect outer layers from extreme heat of vent.



Organisms adaptations enable them to survive in conditions where they normally live.



In a stable community the numbers of predators and prey rise and fall in cycles.



<i>Non-living (ABIOTIC) factors that affect a community</i>	<i>Living factors (BIOTIC) that affect a community</i>
Living intensity.	Availability of food.
Temperature.	
Moisture levels.	New predators arriving.
Soil pH, mineral content.	
Wind intensity and direction.	New pathogens.
Carbon dioxide levels for a plant.	
Oxygen levels for aquatic organisms.	One species outcompeting so numbers are no longer sufficient to breed

<i>Competition</i>	Plants in a community or habitat compete with each other for light, space, water and mineral ions.
	Animals compete with each other for food, mates and territory.
<i>Interdependence</i>	Species depend on each other for food, shelter, pollination, seed dispersal etc. Removing a species can affect the whole community

Pressure on surfaces

You may have been warned about swinging around on one leg of a chair. Apart from the risk that you will damage the chair or hurt yourself, the chair leg can damage the floor. This is because it puts too much pressure on the floor.

Calculating pressure

To calculate pressure, you need to know two things:

the force or weight exerted

the surface area over which the force or weight is spread

Pressure is calculated using this equation:

pressure = force \div area

Example

A force of 20 N acts over an area of 4 m². Calculate the pressure.

pressure = force \div area

= 20 N \div 4 m² = 5 N/m²

Using pressure

If you walk through snow, you usually sink into it. This is because your shoes have a small surface area. Your weight is only spread out over a small area, so the pressure on the snow is high. However, you will not sink so far into the snow if you are on skis. This is because your weight is spread out over a greater surface area, so the pressure on the snow is low.

Metal drawing pins.

Drawing pins make good use of different pressures for the same force

Drawing pins have a large round end for your thumb to push. The round end has a large area, so it exerts a low pressure to your thumb. The sharp end has a very small area. The same pushing force produces a high pressure there, so it pushes into the notice board.

If you swing round on one leg of a chair, you put four times as much pressure on one point of the floor as you do if you sit properly. This is because four chair legs spread the pressure over four times more area than one chair leg can.



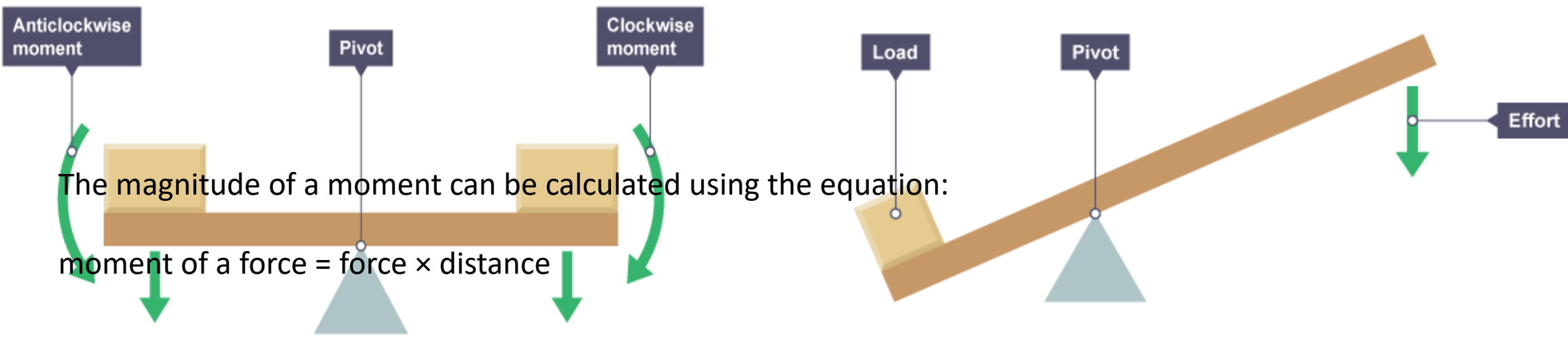
Simple levers and rotation

A simple lever could be a solid beam laid across a pivot. As effort is applied to rotate one end about the pivot. The opposite end is also rotated about the pivot in the same direction. This has the effect of rotating or lifting the load.

Levers, such as this one, make use of moments to act as a **force multiplier**. They allow a larger force to act upon the load than is supplied by the effort, so it is easier to move large or heavy objects.

The longer the lever, and the further the effort acts from the pivot, the greater the force on the load will be. It is easier to use a longer spanner when trying to turn a nut, and easiest to push furthest from the hinge when opening a door.

Example



The magnitude of a moment can be calculated using the equation:

moment of a force = force × distance

This is when:

- moment (M) is measured in newton-metres (Nm)
- force (F) is measured in newtons (N)
- distance (d) is measured in metres (m)

Summary

Computers require **input** hardware, **processing** hardware, **storage** hardware and **output** hardware.

CPU - The **Central Processing Unit** or **CPU** is arguably the most important component of a computer. You can think of the CPU as being like the brain in a human.

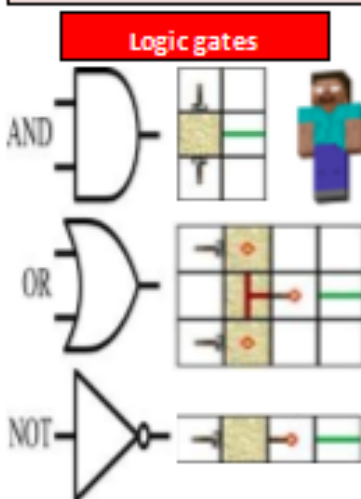
Storage - stores programs and files long term, even when they are not in use. Devices such as hard drives, USB memory sticks or SD cards are used to store files such as photos, music and software applications long term.

An **input device** is any piece of computer hardware used to provide data to a computer system. Examples include: keyboard, mouse, scanner, digital camera and webcam.

An **output device** is any piece of computer hardware used to communicate the results of data that has been processed. Examples include: monitor, printer, projector and speaker.

Binary is still the language for computers. Binary's 0 and 1 method is quick to detect an electrical signal's off or on state.

Binary is the most efficient way to control logic gates



AND Gate will only turn on if both switches are in the on position.

OR Gate—When any switch is turned on, the power is turned on

NOT Gate—A light switch.



Binary to Decimal



The **Central Processing Unit** or **CPU** is arguably the most important component of a computer. You can think of the CPU as being like the brain in a human.

Key Vocabulary

Binary	Base 2. Symbols include up of 1 and 0
Decimal	Base 10 also known as denary. Symbols include up of 0 1 2 3 4 5 6 7 8 and 9.
CPU	Central Processing Unit - the brains of the computer that processes program instructions. Also called a microprocessor .
Logic gate	Compares the states with inputs to decide what the state at their output should be
Hardware	The physical parts of a computer system, e.g. a graphics card, hard disk drive and CD drive.
Input Device	Hardware that sends data to a computer, allowing you to interact with and control it.
Output Device	Hardware which converts information into human-readable form. It can be text , graphics , tactile , audio , and video .
Storage	Hardware on which information can be stored
Software	Software is the programs that run on a computer. Commonly called apps

Units of information

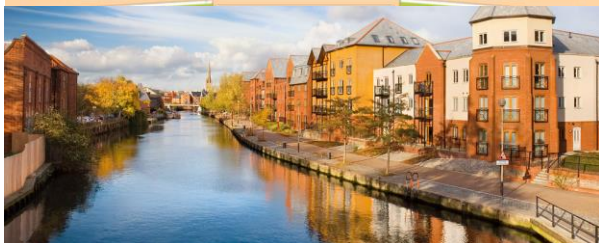
Bit	1 or 0
Byte	8 bits
Kilobyte	1,000 bytes
Megabyte	1,000 kilobytes
Giga byte	1,000 Mega bytes
Terabyte	1,000 Giga bytes.

<http://bit.ly/2Qxi9ab>





Year 8 Local Fieldwork Project – Norwich



Topics covered

- ✓ What is Norwich like?
- ✓ Natural/man-made features
- How is Norwich changing?
- ✓ Do geographical ideas and theories work in Norwich?
- ✓ What are data types?
- ✓ How can I collect data?
- ✓ How can I present data?
- ✓ What does my data tell me?

Key Ideas:

1. I can define my local area
2. I can describe different areas within Norwich
3. I can ask geographical questions about my local area
4. I can test ideas and theories about my local area
5. I can report on the findings of my local area investigation

Skills

- ❑ To use GIS (digital mapping) to describe/locate my local area
- ❑ To use mapping to investigate features
- ❑ To collect primary (my own) data on my local environment (could also be secondary data)
- ❑ To construct tables/graphs/sketches to record observations
- ❑ To write a detailed analysis of results

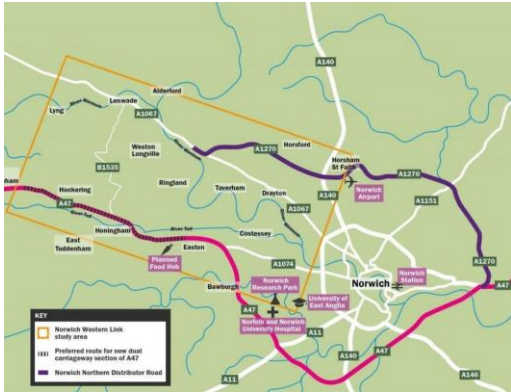
Places and Environments

- ❖ Open Academy
- ❖ Heartsease
- ❖ Norwich
- ❖ Trowse
- ❖ Riverside
- ❖ Anglia Square
- ❖ Gentlemans Walk
- ❖ Chapelfield

Key Terms Used in this Unit

- ❑ Primary data
- ❑ Secondary data
- ❑ Hypothesis
- ❑ Transect
- ❑ Sampling
- ❑ Bi-polar analysis
- ❑ Fieldsketch
- ❑ Pie chart
- ❑ Scattergraph
- ❑ Radar graph
- ❑ Correlation
- ❑ Proportional symbols
- ❑ Averages (mean/mode/median)
- ❑ Conclusion
- ❑ Judgement
- ❑ Reliability
- ❑ Limitations
- ❑ Evaluation

Norwich has seen many changes to its Land Use over time. Sometimes this was driven by transport changes, WW2, new housing demand and retail changes.



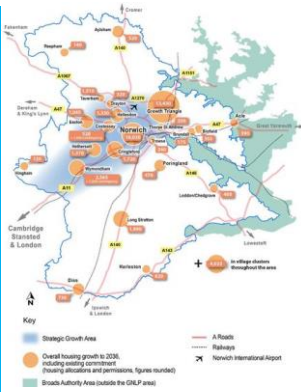
Norwich is continuing to grow outwards over time. This means that the surrounding countryside is being lost to 'urban' land use.

The demand for housing is the main cause of recent changes along with the building of new main roads.

The NDR is now built. Currently there is on-going debate about the need to link up the A47 and the NDR to enable a 'ring road' type scenario.

Environmental groups and members of the public have voiced concerns over the route.

Business leaders are in favour of moving ahead with the plans.



Does Norwich need a restricted housing development 'green belt' like Cambridge and London?

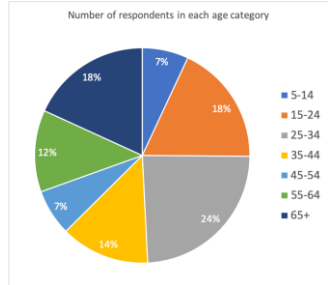
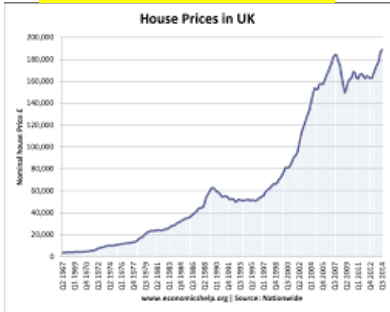
Do you think that the NDR – A47 link is a good idea?

A good fieldwork project always introduces the study area in detail.



How would you introduce the location of Norwich?

Why do house prices keep rising?



Pie graphs are good ways to show data but why are they so effective?

Arguably the most important part of an investigation is the Evaluation. Here you can weigh up the successes and failures. In Geography admitting you made mistakes is a good thing, its also a chance to say how you could improve the project if done again.



Line graphs enable us to compare types of data. If the data is linked it will show a Diagonal trend line.



Positive correlation
As one variable increases so does the other variable.



Negative correlation
As one variable increases the other variable decreases.



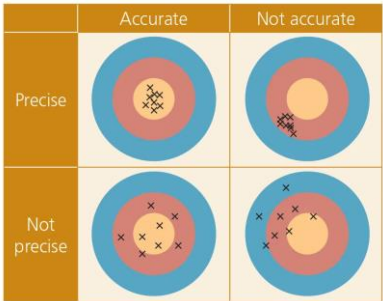
No correlation
There is no relationship between the two variables.

Can you think of 2 types of data that would be linked?

Once data has been analysed it is important to re-visit the original hypothesis. Ideally you will have different types of data as evidence. You must then make summary statements and observations about what this told you.



Why is it important that you have good data?



What have you learned about your project?

Module 3: Bleib gesund! (Keeping healthy!)

Here is the vocabulary you will need for Stimmt 2, Module 3.

Remember to listen to the German by clicking on the Soundfile links on the electronic version of this KO.

Das Frühstück • Breakfast

der/das Joghurt	yoghurt
der Käse	cheese
der Schinken	ham
der Speck	bacon
der Toast	toast
der Kaffee	coffee
der Tee	tea
der Orangensaft	orange juice
die Butter	butter
die Marmelade	jam
die Orangenmarmelade	marmalade
die Milch	milk
die heiße Schokolade	hot chocolate
das Brötchen	roll
das Obst	fruit
das Ei	egg
die Eier (pl)	eggs
die Frühstücksflocken (pl)	cereal

In this Module you will learn how to:

- talk about typical breakfasts
- discuss typical German food
- understand and use recipes
- talk about healthy lifestyles
- understand and respond to longer texts
- describe and compare dinner parties

www.textivate.com

Username: openacademy

Password: surname800

Go to 'my resources' to find your work.



[Soundfile](#)

Was isst du zum Frühstück?

• What do you eat for breakfast?

Ich esse einen Joghurt.	<i>I eat a yoghurt.</i>
ein Brötchen mit Butter und Marmelade	<i>a roll with butter and jam</i>
Ich esse kein Frühstück.	<i>I don't eat any breakfast.</i>
Max isst Toast mit Butter.	<i>Max eats toast with butter.</i>
Ellie und Sarah essen Eier.	<i>Ellie and Sarah eat eggs.</i>
Ich trinke einen Kaffee.	<i>I drink a coffee.</i>
eine Tasse Tee	<i>a cup of tea</i>
Das ist (un)gesund.	<i>That's (un)healthy.</i>
Das ist lecker/furchtbar.	<i>That's delicious/awful.</i>



[Soundfile](#)



[Soundfile](#)

Wie ist das? • What is it like?

süß	<i>sweet</i>
sauer	<i>sour</i>
salzig	<i>salty</i>
scharf	<i>spicy</i>
vegetarisch	<i>vegetarian</i>
lecker	<i>delicious</i>
ekelhaft	<i>disgusting</i>

Im Restaurant • In the restaurant

Was nimmst du?	<i>What are you having?</i>
Ich nehme ...	<i>I'll take/I'm having ...</i>
den Fisch	<i>the fish</i>
die Gemüsesuppe	<i>the vegetable soup</i>
das Hähnchen	<i>the chicken</i>
die Nudeln	<i>the pasta</i>



[Soundfile](#)

Die Speisekarte • Menu

(der) Fisch mit Reis und Erbsen	<i>fish with rice and peas</i>
(der) Flammkuchen mit Sauerkraut	<i>Flammkuchen with pickled cabbage</i>
(die) Bratwurst mit Eiern	<i>fried sausage with eggs</i>
(die) Gemüsesuppe mit Brötchen	<i>vegetable soup with a roll</i>
(das) Hähnchen mit Pommes frites und Karotten	<i>chicken with chips and carrots</i>
(das) Schnitzel mit Kartoffeln	<i>pork fillet in breadcrumbs with potatoes</i>
(das) Steak mit Rösti	<i>steak with rösti potatoes/hash browns</i>
(die) Käsespätzle mit Salat	<i>speciality cheesy pasta with salad</i>



[Soundfile](#)



[Soundfile](#)

Ein Rezept • A recipe

Nimm ...	<i>Take ...</i>
150 Milliliter Milch	<i>150 millilitres of milk</i>
50 Gramm Butter	<i>50 grams of butter</i>
eine Zwiebel	<i>an onion</i>
Schneide ...	<i>Cut ...</i>
Misch ...	<i>Mix ...</i>
Stell ...	<i>Put ...</i>
Erhitze ...	<i>Heat ...</i>
Rühre ...	<i>Stir ...</i>
Serviere ...	<i>Serve ...</i>

Mein Lieblingssandwich

• My favourite sandwich

das Ketchup	<i>ketchup</i>
der Senf	<i>mustard</i>
der Thunfisch	<i>tuna fish</i>
die Erdnussbutter	<i>peanut butter</i>
die Gurke	<i>gherkin</i>
die Mayo	<i>mayonnaise</i>
die Olive	<i>olive</i>
die Sardelle	<i>sardine, anchovy</i>



[Soundfile](#)

Gesund bleiben • Staying healthy

Man muss ...	<i>One/You/People must ...</i>
acht Stunden schlafen	<i>sleep for eight hours</i>
wenig Fett und Zucker essen	<i>eat little fat and sugar</i>
viel Obst und Gemüse essen	<i>eat lots of fruit and vegetables</i>
mehr Wasser trinken	<i>drink more water</i>
früh ins Bett gehen	<i>go to bed early</i>
drei Stunden trainieren	<i>exercise for three hours</i>
zweimal pro Woche joggen	<i>jog twice a week</i>



[Soundfile](#)



Oft benutzte Wörter

• High-frequency words

normalerweise	<i>usually</i>
gestern	<i>yesterday</i>
bis	<i>until</i>
früh	<i>early</i>
spät	<i>late</i>
mehr	<i>more</i>
wenig	<i>little</i>
weniger	<i>less, fewer</i>
oft	<i>often</i>
besser	<i>better</i>
mein	<i>my</i>
dein	<i>your</i>
sein	<i>his</i>
ihr	<i>her</i>
mit	<i>with</i>
ohne	<i>without</i>
in	<i>in, into</i>
auf	<i>on, onto</i>

Strategie 3

Kognaten und falsche Freunde

Cognates and near-cognates are words that are spelled exactly the same or nearly the same as English words and have the same meaning in German. It is helpful to identify these as you can learn them quickly and easily. Look at the word lists on these pages and find all the cognates and near-cognates. You will find more than 20.

Watch out for **falsche Freunde** ('false friends'). These are tricky words that look like cognates but have a different meaning. What does **Marmelade** actually mean?

Read the Strategy Box for ideas about 'false friends'.



[Soundfile](#)



[Soundfile](#)

Die Mahlzeiten • Mealtimes

die Vorspeise	<i>the starter</i>
die Hauptspeise	<i>the main course</i>
die Nachspeise	<i>the dessert</i>

Module 4: Klassenreisen machen Spaß! (School

Here is the vocabulary you will need for Stimmt 2, Module 4. trips are fun!)

Remember, you can hear the German pronunciation by clicking on the **Soundfile** links on the electronic version of this KO.

In der Jugendherberge

• In the youth hostel

die Hausordnung	<i>rules of the house</i>
Man muss vor 22:00 Uhr ins Bett gehen.	<i>You have to go to bed before ten o'clock.</i>
Man muss das Bett machen.	<i>You have to make the bed.</i>
Man muss das Zimmer sauber halten.	<i>You have to keep the room clean.</i>
Man muss vor acht Uhr aufstehen.	<i>You have to get up before eight o'clock.</i>
Man muss abwaschen.	<i>You have to wash up.</i>
Man darf nicht rauchen.	<i>You must not smoke.</i>
Man darf nicht im Zimmer essen.	<i>You must not eat in the room.</i>
Man darf keine laute Musik hören.	<i>You are not allowed to listen to loud music.</i>

In this Module you will learn how to:

- talk about typical breakfasts
- discuss typical German food
- understand and use recipes
- talk about healthy lifestyles
- understand and respond to longer texts
- describe and compare dinner parties

www.textivate.com

Username: openacademy

Password: surname800

Go to 'my resources' to find your work.



[Soundfile](#)



[Soundfile](#)

Der Tagesablauf • Daily routine

Ich stehe auf.	<i>I get up.</i>
Ich wasche mich.	<i>I get washed.</i>
Ich dusche mich.	<i>I have a shower.</i>
Ich ziehe mich an.	<i>I get dressed.</i>
Ich frühstücke.	<i>I have breakfast.</i>
Ich gehe aus.	<i>I go out.</i>
Ich komme zurück.	<i>I come back.</i>
Ich esse zu Abend.	<i>I have dinner/the evening meal.</i>
Ich gehe ins Bett.	<i>I go to bed.</i>

Um wie viel Uhr? • At what time?

um ... Uhr	<i>at ... o'clock</i>
um fünf/zehn/zwanzig nach ...	<i>at five/ten/twenty past ...</i>
um fünfundzwanzig vor ...	<i>at twenty-five to ...</i>
um Viertel nach ...	<i>at quarter past ...</i>
um Viertel vor ...	<i>at quarter to ...</i>
um halb acht	<i>at half past seven</i>



[Soundfile](#)



[Soundfile](#)

Wie komme ich zum/zur ...?

• How do I get to the ...?

Geh/Geht/Gehen Sie ...!	<i>Go ...!</i>
(nach) links	<i>(to the) left</i>
(nach) rechts	<i>(to the) right</i>
geradeaus	<i>straight on</i>
Nimm/Nehmt/Nehmen Sie ...!	<i>Take ...!</i>
die erste Straße links	<i>the first street on the left</i>
die zweite Straße rechts	<i>the second street on the right</i>
Geh an der Ampel links!	<i>Go left at the lights.</i>
Geh an der Kreuzung rechts!	<i>Go right at the crossroads.</i>
der Bahnhof	<i>station</i>
der Park	<i>park</i>
die Bushaltestelle	<i>bus stop</i>
die Kirche	<i>church</i>
das Schwimmbad	<i>swimming pool</i>
das Hallenbad	<i>indoor swimming pool</i>
das Museum	<i>museum</i>
der Markt	<i>market(place)</i>
der Lehrer	<i>teacher (male)</i>
die Lehrerin	<i>teacher (female)</i>
das Souvenirgeschäft	<i>souvenir shop</i>
die Imbissstube	<i>snack bar</i>
das Eiscafé	<i>ice cream parlour</i>
vor dem/der ...	<i>in front of the ...</i>
Entschuldigung/Bitte, ...	<i>Excuse me, ...</i>
Danke (sehr/schön)./ Vielen Dank.	<i>Thank you very much.</i>
Bitte (sehr/schön).	<i>You're welcome./</i>
Nichts zu danken.	<i>Don't mention it.</i>

Auf einem Fest • At a festival

der Umzug(–e)	procession, parade
der Festwagen(–)	float (in a parade)
die Band(s)	band, group
das Kostüm(e)	costume, outfit
der Hut(–e)	hat
die Fahne(n)	flag
die Kirmes(sen)	funfair
das Fahrgeschäft(e)	ride (at funfair)
der Imbiss(e)	snack
bunt	colourful
traditionell	traditional
der Trick(s)	trick
das Handy(s)	mobile phone
die Haare (pl)	hair
die Schuhe (pl)	shoes

Read the Strategy Box to improve your accent.



[Soundfile](#)



[Soundfile](#)



Oft benutzte Wörter

• High-frequency words

zu (zum/zur)	to (to the)
vor	before, in front of
groß	big
lang	long
laut	loud
lecker	tasty
schön	nice, beautiful
toll	great
Das macht Spaß.	That's fun.
Das hat Spaß gemacht.	That was fun.

Strategie 4

Improving your pronunciation

By now, you should have a good idea of how German words are pronounced, but it is always good to practise. The vowels often cause problems, especially when there are two together. Link the words to the key phonics you learned in *Stimmt! 1* and say them out loud.

au – *sauber* as in *Haus*

ei – *Klassenreise* as in *Eis*

ie – *Viertel* as in *Biene*

eu – *Kreuzung* as in *Freund*

But note that **Museum** is a foreign word (from Latin) and the **e** and **u** are pronounced separately (like 'moo-zay-um').

Sometimes it's hard to recognise that a word is actually made up of two or more words joined together. Each part of the word is said separately. For example, by themselves **gerade** means 'straight' and **aus** means 'out'. Join them together and you have **gerade|aus** (straight on) – written as one word, but sounded as two. Similarly, there's a triple **s** in **Imbiss|stube** – the double **s** belongs to **Imbiss** and the other **s** belongs to **stube** – so it is said as two words.

You will recognise some parts of compound words, but with some new words you'll just have to listen carefully and imitate the pronunciation.

Year 8 History: Democracy and the Suffrage Movement

Britain prides itself in being a **DEMOCRACY**. This means people have an equal say in who runs the country and how. But in the 1800s it meant something very different to today...

The people were not equally represented through enough **CONSTITUENCIES**

To vote you had to be over 21, own property and **MALE** (only 3% of men could vote)

There were only two main parties: **WHIGS** and **TORIES**

Voting was not anonymous

GENERAL ELECTIONS were held every 7 **YEARS**

The **Chartists** are an example of a campaign group that tried to change this:

This was a **working-class** movement, which emerged in 1836 and was most active between 1838 and 1848. The aim of the **Chartists** was to gain political rights and influence for the working classes.



Chartists argued more men should be able to vote., MPs should be paid, secret ballot, annual elections, equal-sized electoral districts. They organised huge rallies and petitions to Parliament in the 1840s. Although there was a Chartist riot in Newport in 1839, Britain avoided the revolutions that swept Europe in 1848. Most of the Chartists demands eventually became law.

Timeline of Key Events

1897	NUWSS formed. Millicent Fawcett is leader.
1903	WSPU formed by Emmeline Pankhurst and daughters.
1905	Militant Campaign begins
1908	Mass rally in London – 300,000 to 500,000 activists attend. Window smashing using stones with written pleas on them.
1909	Hunger strike and force feeding starts – Marian Wallace Dunlop becomes the first hunger striker.
1913	Militant bomb and arson campaigns and increasing arrests which results in the passing of the “Cat and Mouse” Act : hunger strikers temporarily released then rearrested to prevent dying in police custody
1913	Emily Wilding Davison attempts to pin a Suffragette scarf onto the King’s Horse at the Derby. She is struck by the horse and dies 4 days later.
1914	WW1 starts – Suffragette leaders urge women to join the war effort. NUWSS continues to campaign for recognition for their work.
1918	The Representation of the People Act is passed, allowing men over 21 and women over 30 to vote.

Emmeline Pankhurst – WSPU

Led the WSPU from October 1903. Took more militant action such as windows smashing, **arson** and **hunger strikes**. Arrested numerous times, went on **hunger strike** and was force fed. Died in 1928.

Christabel Pankhurst – WSPU

Became a speaker for the WSPU in 1905. She trained as a lawyer but could not practice as woman. Arrested with her mother. Fled England in 1912 for fear of being arrested again. Unsuccessfully ran for Parliament in 1918.

Emily Wilding Davison – WSPU

Joined WSPU in 1906. Became a **suffragette** full time. Frequently arrested for number of crimes inc. setting fire to post box. By 1911, become increasingly militant.

Millicent Fawcett – NUWSS

Leading **suffragist** and led **NUWSS**. Played a key role in getting women the vote. Dedicated to using **constitutional** means, and argued that militancy was counter-productive.

Timeline of Key Events

28 June 1914	Assassination of Arch-Duke Franz Ferdinand
4 August	Britain declares war on Germany
August to December 1914	Germany's Schlieffen Plan fails to defeat France and Britain quickly; system of trenches is dug from Switzerland to the English Channel: STALEMATE
April 1915	Second Battle of Ypres – poison gas used for the first time
31 May–1 June 1916	Battle of Jutland – the only major sea battle of the war proves inconclusive
1 July – Nov	Battle of the Somme
6 April 1917	USA declares war on Germany
March 1918	Russia signs the Treaty of Brest Litovsk with Germany after the Bolshevik Revolution
9 Nov 1918	Kaiser Wilhelm abdicates
11 Nov 1918	Germany signs armistice, ending the war

Why did British men join up in 1914?

Patriotism	British men were brought up to love their King and country
Social pressure	Fear of being called a coward or being given a white feather by a woman
Sense of adventure	Many British men had never travelled abroad – this was a chance to see the world!
Propaganda	British propaganda posters used very persuasive techniques
Belief in a quick victory	Many men thought that the war would be 'over by Christmas'

Long-Term Causes of World War One

Militarism – the arms race between Britain and Germany to build Dreadnaughts resulted in increasing tension and conflict between them

Alliances – the Triple Alliance (Germany, Austria-Hungary and Italy) and Triple Entente (Britain, France and Russia) had agreed to support each other in a war

Imperialism – Britain and France had large empires overseas. Germany wanted an empire too, but most of the available land had already been taken, resulting in tension between the 'great powers'

Short-Term Causes of World War One:

Assassination of Franz Ferdinand – Serbian nationalist Gavrilo Princip shot and killed the heir to the Austro-Hungarian throne, along with his wife, while was visiting Sarajevo. This caused Austria to declare war on Serbia, which led to Russia attacking Austria and a domino effect of other nations joining in...



Which new weapons helped Britain to win the war?

Tanks: First used in 1916, they broke through German defences and sheltered British troops in getting across **NO MANS LAND**

Poison gas: Although cruel and at the mercy of the weather, it instilled fear into soldiers on both sides

Airplanes: Very useful for reconnaissance and bombing / preventing bombing raids

Artillery: Forced Germans to remain in their shelters while the British advanced

Why did Germany surrender in November 1918? American entry into the war, Failed German/Ludendorff offensive, German civilians starving due to the Allied Blockade of German ports. This all put pressure on the Kaiser to surrender.

Vocabulary to learn

Conflict
Courage
Inspire
Relevant
Anxiety
Protagonist
Synonym
Emphasis
Omniscient narrator

Structure analysis - methods:

- Zoom in/out
- Repetition of an image/idea
- Links and connections between paragraphs
- Shifts:
 - inside to outside (and vice versa)
 - focus
 - time
 - topic
 - setting/place
 - mood/atmosphere
 - description to dialogue (and vice versa)

Language analysis Checklist:

- Link to task
- Relevant quote
- Meaning of quote
- Method named
- Effects explained
- Word zoomed in on
- Meaning of word
- Implied meanings
- Aim higher: layers of meaning

Evaluate

weigh up, form a judgement

This question asks you to **evaluate** the **extent** to which you agree with a given statement about a text.

how much

You will need to consider:

- The impressions (**opinions**) you have of the text in relation to the statement
- The methods the writer has used to create these impressions
- How the particular methods create these impressions

Words/phrases
Linguistic devices
Structural features
Sentence forms

Suggested Reading



Sentence Form	Definition	Example
Fragment sentence	An incomplete idea.	<i>Rolling thunder.</i>
Simple sentence	Contains one complete idea in an independent clause.	<i>The lightning flashed.</i>
Compound sentence	Contains two independent clauses linked by a conjunction or a semi-colon.	<i>The lightning flashed <u>and</u> the rain fell. The lightning flashed; the rain fell.</i>
Complex sentence	Contains an independent clause and at least one dependent clause.	<i>Despite the thunder and lightning, there was no rain.</i>

Literary devices and word class

- Metaphor – a literal comparison – *she was a monster*
- Personification – human qualities – *the grass danced in the wind*
- Simile – as/like/as if – *he was like a man possessed*
- Onomatopoeia – the sound words – *bang, pop, sizzle*
- Alliteration – same starting sounds – *really rather raucous*
- Lists – to emphasise many reasons
- Verbs – doing words
- Adjectives – describing words
- Nouns – objects or abstract things e.g. love
- Adverbs – describe doing words e.g. wrote neatly
- connotations of words – associations – night-time = mystery

Activities:

- Look up and define any of the key words in the purple box that you don't feel confident with.
- Look, cover and copy the key words in the purple box. Do this each day until you get the spelling of them correctly. You could complete your learning of these words by getting a parent or sibling to test you on all of them.
- Read the poem **The Bully Asleep** on the next page then explain the conflict that is shown in this poem.
- When one pupil read **The Bully Asleep** they said he deserves to be treated this way. Analysing structure and language explain if you agree or disagree with this statement.
- Either describe a day in the life of **Bill Craddock** or a story about him inspired by this poem. Use some of the language devices in the blue box.
- Draw a picture of the scene in the poem and label it with quotations from the text.
- If you could be one person in this poem explain who you would be and why?
- Write a short story (200–300 words) that involves a bully or instances of bullying. Use first or third person and past or present tense, but make sure that this is consistent throughout. Use as many of the literary devices in the blue box as you can and make sure you include nouns, adjectives, verbs and adverbs that are ambitious and effective. Plan your story before you begin.
- Read or listen to a book (from the link on the next page) that explores elements of conflict. Then, write a review of it (100–200 words), detailing what you found most enjoyable and perhaps, what you didn't like so much. Imagine you are writing it for a website that young readers will look at to decide what to read next.
- Read the article below and highlight the different types of sentence. Highlight any emotive language that has been used. Using PEE skills that you have learnt write a PEE paragraph explaining how language and sentence length has been used to make the reader feel sorry for **Ruby Sam**.
- Explain your view of bullying and why it happens.

The Bully Asleep by John Walsh

This afternoon, when grassy
Scents through the classroom
crept,
Bill Craddock laid his head
Down on his desk, and slept.

The children came round him:
Jimmy, Roger, and Jane;
They lifted his head timidly
And let it sink again.

‘Look, he’s gone sound asleep
Miss’,
Said Jimmy Adair;
‘He stays up all the night, you
see;
His mother doesn’t care.’

‘Stand away from him children.’
Miss Andrews stopped to see.
‘Yes, he’s asleep; go on
With your writing, and let him
be.’

‘Now’s a good chance!’ whispered
Jimmy,
And he snatched Bill’s pen and hid
it.
‘Kick him under the desk, hard;
He won’t know who did it.’

‘Fill all his pockets with rubbish –
Paper, apple-cores, chalk.’
So they plotted, while Jane
Sat wide-eyed at their talk.

Not caring, not hearing,
Bill Craddock he slept on;
Lips parted, eyes closed –
Their cruelty gone.

‘Stick him with pins!’ muttered
Roger.
‘Ink down his neck!’ said Jim.
But Jane, tearful and foolish,
Wanted to comfort him

When Ruby Sam Youngz was singled out by a bully at the age of 10 in her last year of primary school, she felt isolated and confused. She’d just moved with her family from England to Wales and the bully honed in on her accent. They then started mocking her appearance. “Nothing really made sense to me,” she says. “I’m in a new place, I don’t really know anyone, no one likes me, and I really do not know why.”

Youngz says the relentless bullying, which continued through secondary school, had a knock-on effect in all areas of her life, and she took up smoking and drinking in an attempt to cope. Now aged 46, it is only in the past year that she has come to terms with the effect that the bullying had on her.

“I felt like ‘no one else likes me, so I don’t like me’,” she says.

Her experience underlines a painful truth. Children, for all their innocence and inexperience of the world, can be some of the most vicious bullies. Their actions, perhaps less hindered by the social norms we learn in later life, can be merciless, violent and shocking. And they can have life-long implications for the victims.

You might also like:

- **Can this technology put an end to bullying**
- **The transformational power of how you talk about your life**
- **What is the best way to stop internet trolls**

<https://stories.audible.com/start-listen>.

YEAR 8 - REASONING WITH DATA... The data handling cycle

What do I need to be able to do?

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

- Set up a statistical enquiry
- Design and criticise questionnaires
- Draw and interpret multiple bar charts
- Draw and interpret line graphs
- Represent and interpret grouped quantitative data
- Find and interpret the range
- Compare distributions

Keywords

Hypothesis: an idea or question you want to test

Sampling: the group of things you want to use to check your hypothesis

Primary Data: data you collect yourself

Secondary Data: data you source from elsewhere e.g. the internet/ newspapers/ local statistics

Discrete Data: numerical data that can only take set values

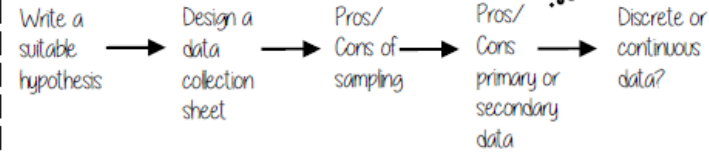
Continuous Data: numerical data that has an infinite number of values (often seen with height, distance, time)

Spread: the distance/ how spread out/ variation of data

Average: a measure of central tendency – or the typical value of all the data together

Proportion: numerical relationship that compares two things

Set up a statistical enquiry



Features of a data collection sheet

	Data Title	Tally	Frequency
Grouped or ungrouped categories			

Total number of that group observed

Design and criticise a questionnaire

The Question - be clear with the question - don't be too leading/ judgemental

e.g. How much pocket money do you get a week?

Responses - do you want closed or open responses? - do any options overlap? - Have you an option for all responses?

Zero option ☐ £0 ☐ £0.01 - £2 ☐ £2.01 - £4 ☐ more than £4 ☐ More option

NOTE: For responses about continuous data include inequalities $< x \leq$

Pictograms, bar and line charts

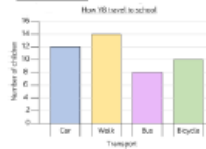
Pictogram

Language	
French	●●●●●
Spanish	●●●●●
German	●

● = 4 people

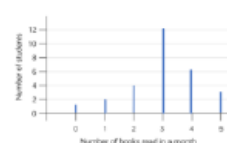
- Need to remember a key
- Visually able to identify mode

Bar Chart



- Gaps between the bars
- Clearly labeled axes
- Scale for the axes
- Title for the bar chart
- Discrete Data

Line Chart

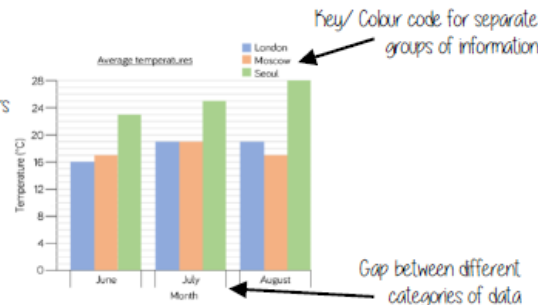


- Gaps between the lines
- Clearly labeled axes
- Scale for the axes
- Discrete Data

Multiple Bar chart

Compares multiple groups of data

- Clearly labelled axes
- Scale for axes
- Comparable data bars drawn next to each other



Bar Charts



Questionnaires



Pictograms



Draw and interpret Pie Charts



Remember a circle has 360°

Type of pet	Dog	Cat	Hamster
Frequency	32	25	3

There were 60 people asked in this survey
(Total frequency)

$$\frac{32}{60}$$

"32 out of 60 people had a dog"

This fraction of the 360 degrees represents dogs

$$\frac{32}{60} \times 360 = 192^\circ$$



Use a protractor to draw
This is 192°

Multiple method

As 60 goes into 360 — 6 times.
Each frequency can be multiplied by 6 to find the degrees (proportion of 360)

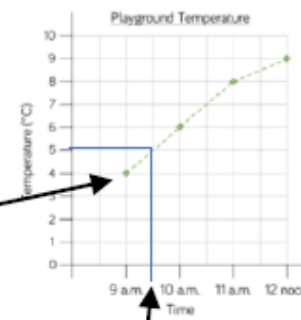
Represents quantitative,
discrete data

Draw and interpret line graphs

- Commonly used to show changing over time
- The points are the recorded information and the lines join the points

Line graphs do not need to start from 0

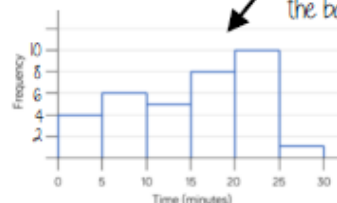
More than one piece of data can be plotted on the same graph to compare data



It is possible to make estimates from the line
e.g temperature at 9:30am is 5°C

Grouped quantitative data

Time (minutes)	Frequency
$0 \leq t < 5$	4
$5 \leq t < 10$	6
$10 \leq t < 15$	5
$15 \leq t < 20$	8
$20 \leq t < 25$	10
$25 \leq t < 30$	1



This is a frequency diagram
There are no gaps between the bars

Grouping the data is useful if there is a large spread of data to begin with

"More than or equal to 25 and less than 30 minutes"

The use of inequalities shows that this will be a frequency diagram

Find and interpret the range

The range is a measure of spread

A smaller range means there is less variation in the results — it is more consistent data

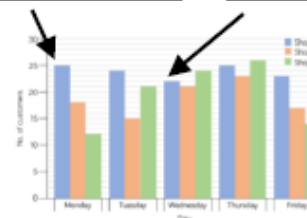
A range of 0 means all the data is the same value

Shop 1 has the smallest range — this indicates it has a more consistent flow of customers each week.

Difference between the biggest and smallest values

Shop 1 highest value

Shop 1 lowest value



Range of customers = $25 - 22 = 3$
(Shop 1)

Line Graphs



Pie Charts



The Range



Grouped Data



A job that relies on the Data Handling Cycle:

Statistician

A statistician gathers numerical data and then displays it, helping companies to make sense of quantitative data and to spot trends and make predictions.

They work in a range of sectors, including:

Education, The Environment, Finance, Forensics, Government, Market Research, Sport and Transportation.

Statisticians design and manage experiments and surveys and deal with the initial collection of data. They process and analyse the data in context, looking for patterns to help make decisions. They then advise on findings and recommend strategy.

Statisticians often work in teams, usually including professionals from other disciplines. Strong analytical and IT skills are essential, as are interpersonal and communication skills in order to share findings with your colleagues and clients.

YEAR 8 - REASONING WITH DATA...

Measures of location

What do I need to be able to do?

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

- Understand and use mean, median and mode
- Choose the most appropriate average
- Identify outliers
- Compare distributions using averages and range

Keywords

Spread: the distance/ how spread out/ variation of data

Average: a measure of central tendency – or the typical value of all the data together

Total: all the data added together

Frequency: the number of times the data values occur

Represent: something that shows the value of another

Outlier: a value that stands apart from the data set

Consistent: a set of data that is similar and doesn't change very much

Identify outliers

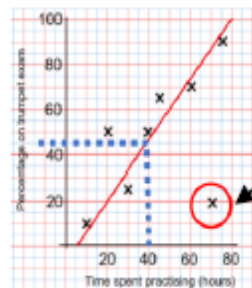
Outliers are values that stand well apart from the rest of the data

Outliers can have a big impact on range and mean
They have less impact on the median and the mode

Sometimes it is best to not use an outlier in calculations

Height in cm
152 150 142 158 182 151 153 149 156 160 151 144

Where an outlier is identified try to give it some context.
This is likely to be a taller member of the group.
Could this be an older student or a teacher?



Outliers can also be identified graphically
e.g. on scatter graphs

Comparing distributions

Comparisons should include a statement of average and central tendency, as well as a statement about spread and consistency.

Here are the number of runs scored last month by Lucy and James in cricket matches

Lucy: 45, 32, 37, 41, 48, 35

James: 60, 90, 41, 23, 14, 23

Lucy

Mean: 39.6 (1dp), Median: 38, Mode: no mode, Range: 16

James

Mean: 41.8 (1dp), Median: 32, Mode: 23, Range: 76

James has two extreme values that have a big impact on the range

"James is less consistent than Lucy because his scores have a greater range.
Lucy performed better on average because her scores have a similar mean and a higher median"

The Mode



The Mean



The Median



Mean, Median, Mode

The Mean

A measure of average to find the central tendency... a typical value that represents the data

24, 8, 4, 11, 8

Find the sum of the data (add the values) 55

Divide the overall total by how many pieces of data you have $55 \div 5$

Mean = 11

The Median

The value in the center (in the middle) of the data

24, 8, 4, 11, 8

Put the data in order

4, 8, 8, 11, 24

Find the value in the middle 4, 8, 8, 11, 24

Median = 8

NOTE: If there is no single middle value find the mean of the two numbers left

The Mode (The modal value)

This is the number OR the item that occurs the most (it does not have to be numerical)

24, 8, 4, 11, 8

This can still be easier if the data is ordered first

4, 8, 8, 11, 24

Mode = 8

Choosing the appropriate average

The average should be a representative of the data set – so it should be compared to the set as a whole – to check if it is an appropriate average

Here are the weekly wages of a small firm

£240	£240	£240	£240	£240
£260	£260	£300	£350	£700

Which average best represents the weekly wage?

The Mean = £307

The Median = £250

The Mode = £240

Put the data back into context

Mean/Median – too high (most of this company earn £240)
Mode is the best average that represents this wage

It is likely that the salaries above £240 are more senior staff members – their salary doesn't represent the average weekly wage of the majority of employers

A job that relies on geometry: **Retail Management**

Management in shops need to analyse different pieces of data so they can optimise profits. Averages they analyse include:

- Stock Sales (How much of each item is sold)
- Employee Performance
- Patterns in peak times and seasons
- Averages profit per item



Year 8 RS: How do Christians interact with culture and society?

Key words	
Worship	Act of religious honour or devotion
Liturgical worship	service which follows a set pattern
Non-liturgical worship	service which does not follow a text or set pattern
Informal Worship	a type of non-liturgical worship which is spontaneous
Private Worship	Someone praises or honours God on their own
Prayer	Communicating with God.

The Church

Church means a gathering of people and originally the church didn't have special buildings but met at people's homes. The church therefore is about people who meet to worship Christ. *"And God placed all things under his (Jesus') feet and appointed him to be head over everything for the church, which is his body"*. The church as a building provides a place where Christians in the local community can meet, socialise, worship and gain spiritual guidance. Christians meet at church on a Sunday, but many churches have events happening throughout the week. Traditionally the role of the church helped with schooling, medical needs and other services. In modern times the church has projects in the community to help others following the teachings of Jesus.

Worship

It is a way for Christians to show love and respect for God. It shows Christians how important God is to them. They worship in different ways but the public worship takes place at church on Sunday. Christians pray to ask for forgiveness, to say thanks, to ask for help or for comfort and strength. There are different types. Liturgical, non-liturgical, informal and private

Prayer

Prayer is all about communication with God. Christians ask God for help for themselves or others, ask for forgiveness, to be provided with strength or comfort or to say sorry, confess sin and ask for forgiveness or to praise God. People pray in different ways, which might include standing, kneeling or using rosary beads – for Catholics and Orthodox Christians use Icons. Christians do believe God answers prayers, but because he is transcendent (beyond our understanding) we cannot understand when or how he does it and perhaps not in the way we would want or expect. For example when Jesus is praying in the Garden of Gethsemane he asks God to *"remove this cup from me"*. He is asking God to help him not have to go through the crucifixion. God doesn't stop this as there is a purpose to Jesus' suffering.

The Lord's Prayer

This is the prayer which Jesus taught his disciples to pray. *"Our father who art in heaven...."*. This is an example of set prayer and is important as it sets out how to live, for example to show forgiveness to others. It also reminds how God is part of the whole community and is said out loud together.

Pilgrimage

A pilgrimage is a special religious journey and can be seen as an act of worship in itself.

For Christians the Holy Land, where Jesus lived and died is particularly important. Pilgrimage is important as it allows people to get closer to God, strengthen faith, ask for forgiveness, pray, ask for a cure, help others and meet others who share your faith. Two important places are Lourdes and Iona.

Lourdes — In France dedicated to Mary as Bernadette believed to have seen visions of Mary in the 19th Century. A spring of water was discovered which had healing powers. Now millions of people have been to drink from the spring of water in the hope of being healed. Many sick or disabled people go to Lourdes.

Iona — An Island off the west coast of Scotland. In the 6th Century St. Columba, an Irish missionary brought Christianity to Scotland and set up a small monastic community there. Pilgrimages happen there in dedication to the virgin Mary. The community in Iona hold daily services in the Church leading a seven-mile hike to holy spots.

Festivals

Festivals remember important events in a religions calendar, for Christians this is Christmas and Easter. They are centered around Jesus who is the most important person in their religion.

Christmas — Remembers the birth of Jesus — his incarnation. It is celebrated on the 25th December. Trees and homes are decorated with nativity scenes. Lights remember Jesus is the light of the world. Carol services happen in Churches with readings from the bible. Children act out nativity plays and midnight mass takes place on Christmas Eve. *“I bring you glad tidings that today a king is born”*

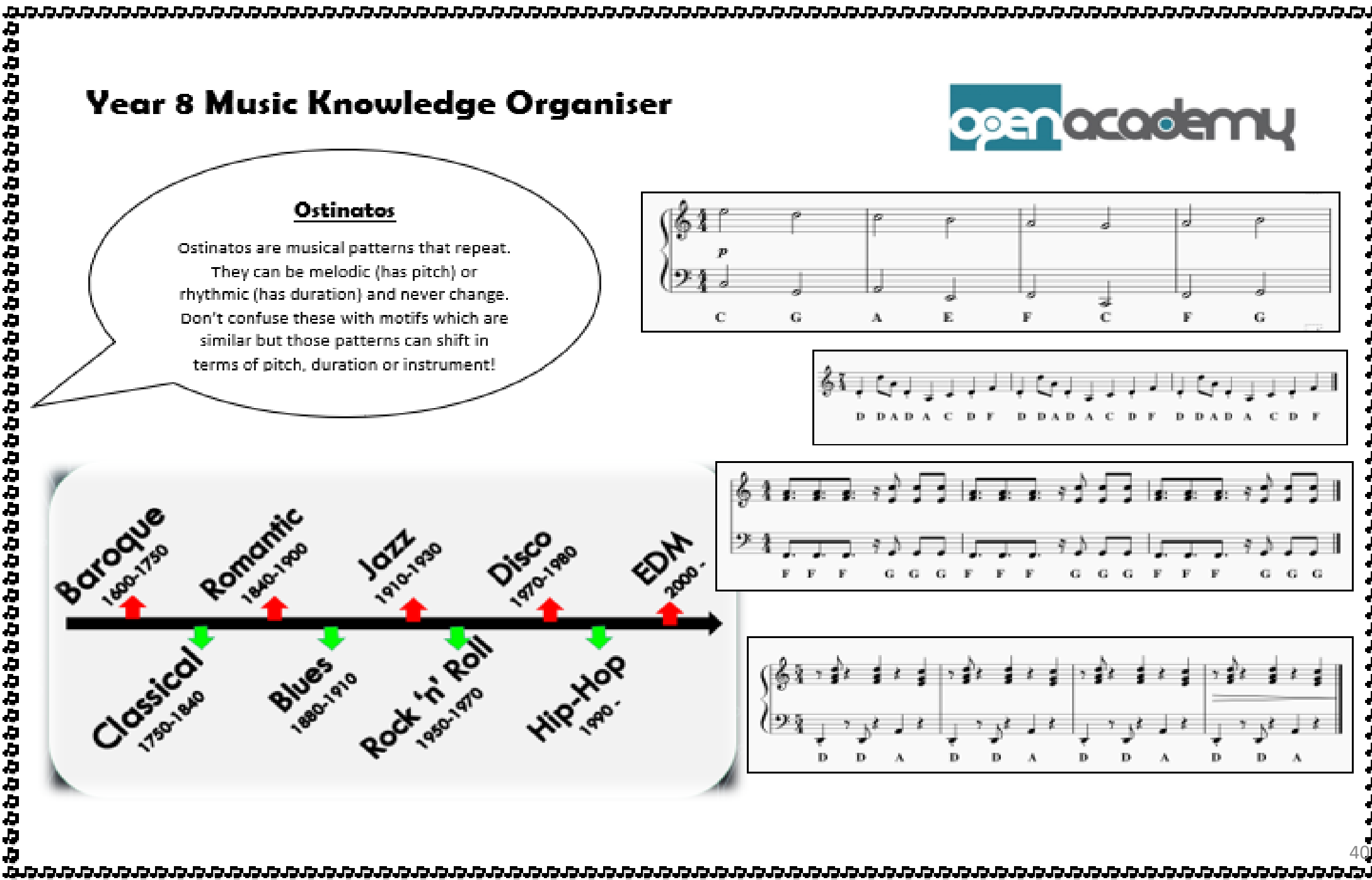
Easter — It is the most important festival which celebrates Jesus’ resurrection from the dead leading up from holy week. Jesus was crucified on Good Friday and rose on Easter Sunday. Special services take place and processions led by someone carrying a cross. On Easter Sunday special services take place with hymns which celebrate the resurrection. Eggs are used as a reminder of new life. *“Christ is risen from the dead”*.

The Sacrament of Baptism

This is important as it is the initiation ceremony to become a Christian and part of the church and therefore receives the grace of God. Sins are forgiven and they start a new life in Christ. Jesus was baptized by John in the river Jordan, here is received the Holy Spirt and sets an example for Christians to do the same. “Therefore go and make disciples of many nations, baptising them in the name of the father, son and Holy Spirit.

Infant Baptism — Catholic, Orthodox, Anglican Methodist practice this. Everyone is a descendent of Adam and Eve and therefore carries Original Sin and so baptism washes this away. It also welcomes them to the church community.

Believer’s Baptism — Baptist and Pentecostal’s think children are too young to understand the meaning and therefore don’t baptise infants. They have believers baptisms when a person is old enough to understand the meaning behind what they are doing. This includes a full immersion in a pool to wash away sin and start a new life in Jesus.

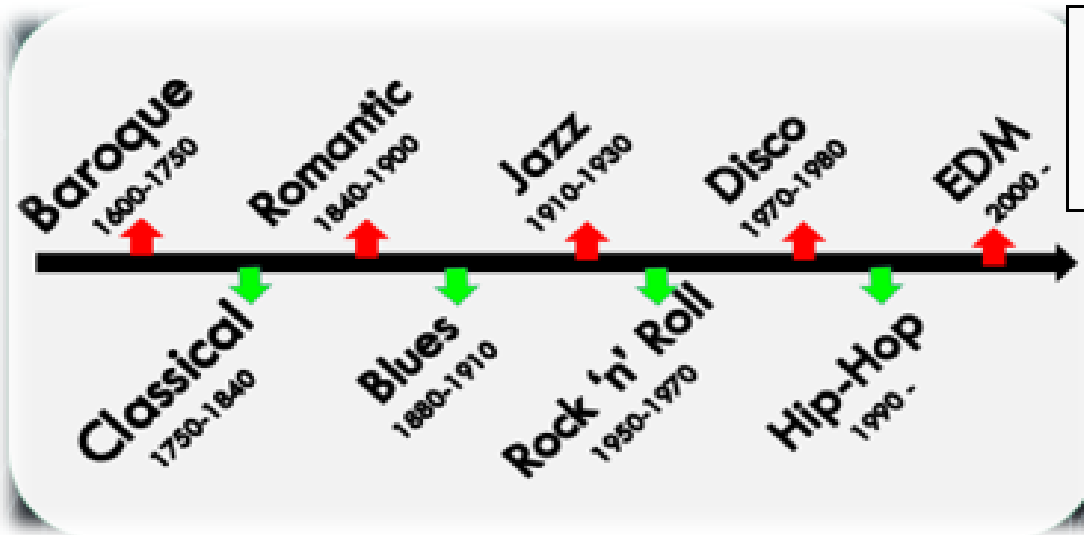
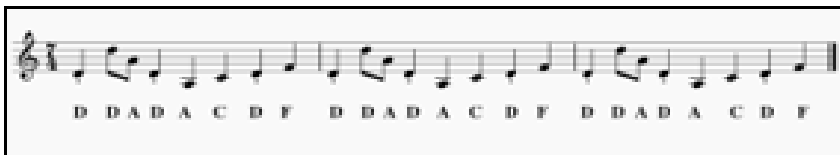
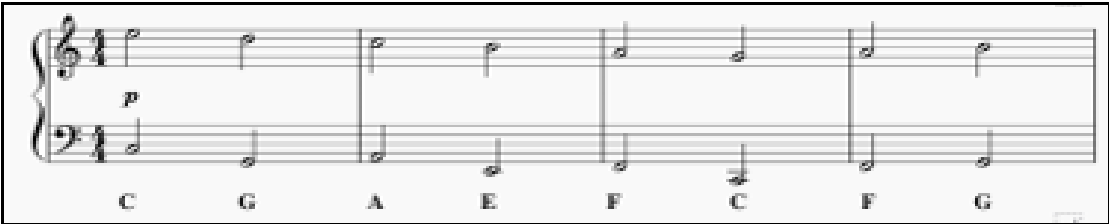


Ostinatos

Ostinatos are musical patterns that repeat.
They can be melodic (has pitch) or rhythmic (has duration) and never change.
Don't confuse these with motifs which are similar but those patterns can shift in terms of pitch, duration or instrument!

Ostinatos

Ostinatos are musical patterns that repeat.
They can be melodic (has pitch) or rhythmic (has duration) and never change.
Don't confuse these with motifs which are similar but those patterns can shift in terms of pitch, duration or instrument!



The Baroque era in music history occurred between 1600 to 1750. Baroque music has strong melodies and is very organized. The music is very dramatic because it contains lots of sudden contrasts in dynamics and composers began to experiment with different instruments like the trumpet and the clarinet.

Famous composers include J.S. Bach, Vivaldi (who wrote the Four Seasons), Purcell and Handel.



- The classical era lasted from 1750 – 1825. During this time, the orchestra, the piano and opera were developed!
- The music was more lyrical and less organised than the Baroque era. Symphonies, sonatas and concertos were invented.
- The famous composers were Mozart, Beethoven and Haydn.



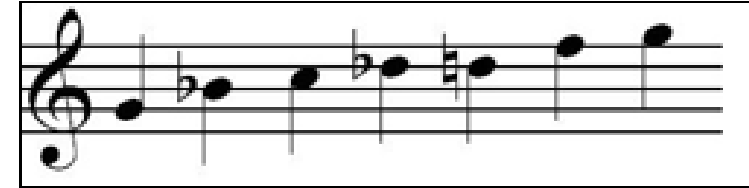
Romantic Era – 1840 - 1900

Key features

- Bigger range of dynamics
- Larger range of pitch
- Music that expressed emotion
- Music that represented nationalism or nature

Famous composers

Debussy, Prokofiev, Mendelssohn and Tchaikovsky!



C	C	C	C
F	F	C	C
G	F	C	C

Blues and Jazz – 1880 - 1930

- Blues and Jazz music share a lot of similarities but jazz uses more extreme improvisation whereas Blues usually sticks to key notes based on the blues scale (see above!)
- Improvisation means making something up on the spot, with no preparation!
- It originated in America and came from the slave trade, where slaves sang about their woes and struggles and used those songs as they did their labour, hence why the blues has its name.
- The Blues produced a very popular chord progression called the 12 bar blues which became the basis for a lot of songs and was used in a lot of early rock 'n' roll (see above – read from left to right, top to bottom)
- Jazz popularised instruments such as the trumpet, saxophone, clarinet, flute and trombone!
- The genre developed 7th chords (chords are 2 or more notes played at the same time) and swing rhythms.

Rock 'n' Roll – 1950 -

- ✓ The Beatles
- ✓ The Rolling Stones
- ✓ Led Zeppelin
- ✓ Pink Floyd
- ✓ AC/DC
- ✓ Fleetwood Mac
- ✓ Queen
- ✓ Elvis Presley

Key features

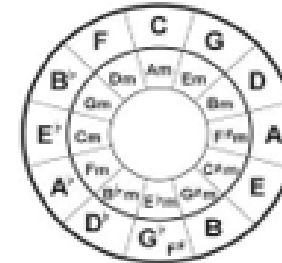
Rock 'n' roll music invented the band formula still being used to this day, using guitars, drums and vocals. Songs usually contained some sort of instrumental solo section and the lyrics centred around more adult content. Rock music has developed into many branches since the 1950's including metal, punk, soft and heavy.

Disco – 1970 – 1980

Disco is a genre of dance music and a subculture that emerged in the 1970s from the United States' urban nightlife scene.

The disco sound usually has a "four-on-the-floor" beats, syncopated basslines, and string sections, horns, electric piano, synthesizers, and electric rhythm guitars.

The most famous artists from Disco are ABBA, the Bee Gees (with Saturday Night Fever) and Gloria Gaynor – I Will Survive which uses the circle of 5ths chord progression!



Hip-Hop/Rap

- In the 1990's, hip-hop and rap became very popular, often talking about social or political issues
- Recognisable drum beats or samples from others songs were often used as a bedding track for lyrics
- Beat-boxing and body percussion also became popular meaning this music was accessible to anyone
- Rap lyrics often have a mix of perfect and imperfect rhymes and are set to a 4/4 time signature to allow for an easy rhythmic flow