

**Name:**


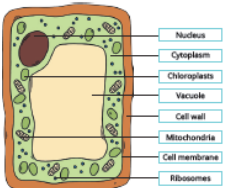
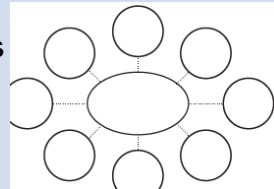






**Year 9 Knowledge Organiser - Autumn 2**

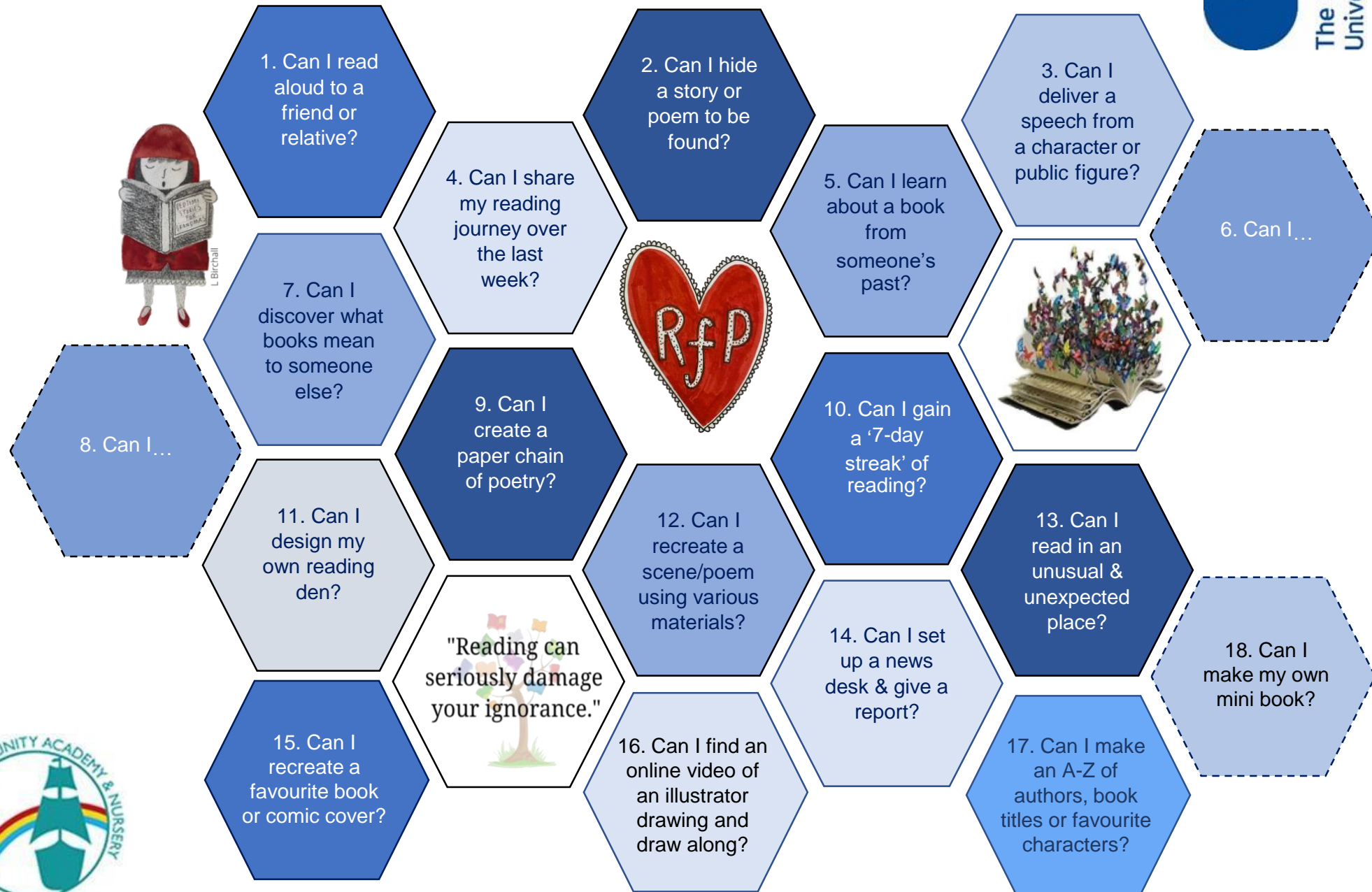
Just reading through your books or a knowledge organiser is not always an effective way to revise. Instead, you should do something with the information. Choose an example of the revision methods on the pages or see if you can come up with another method.

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
Multidisciplinary Lessons	3	Geography	27
Art	8	Spanish	28
DT	13	History	33
Food	14	English	36
Recipes	15	Maths	39
PE	20	RE	41
Science	22	Music	43
Computer Science	26	A range of bonus ideas to prevent boredom	46

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>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



## Questions, questions, questions...

Asking and answering questions (in our head and aloud) helps us to be better readers. We are constantly asking questions to encourage comprehension skills during reading and these can be broken into three clear sections; 'before', 'during' and 'after' reading.

Here are some examples you can try at home:

(You don't have to ask every question every time you read, try picking out 2-3 different questions each time you read.)

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### Before reading:

- Why did you select this book?
- What makes you think this book is going to be interesting?
- What do you think the book is going to be about (use the cover image, title and blurb for clues)?
- Does this book remind you of anything else you've already read or seen?

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### During reading:

- Who/What/Where/When/Why/How questions
- Will you catch me up on the story? What's happened so far?
- What do you think will happen next? Why do you think that?
- Why do you think the character did \_\_\_\_\_?
- If you were that character, what would you have done differently in that situation?
- How do you think the character is feeling right now?
- If the book was a TV show, which actors would you cast in it?
- Where is the book set?
- What does the place look like in your head as you read? Would you want to visit there?
- Did you learn any new words or facts so far?

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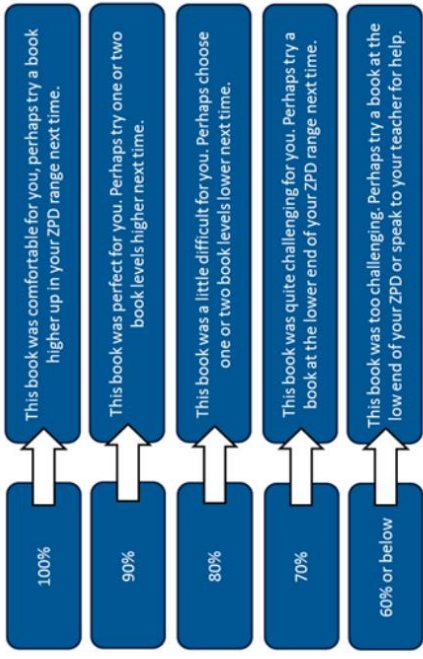
### After reading:

- What was your favourite part of the book? Why?
- Who was your favourite character? Why?
- What was the most interesting thing you learned from the book?
- Why do you think the author wrote this book?
- Would you have ended the book differently? Did it end the way you thought it would?
- If you could change one thing in the book, what would it be?
- Do you think the book had a good title? What different titles could it have had?
- Can you retell the story in your own words?
- Does this book remind you of anything else you have read? How so?



## To improve my Book Level:

- I will always quiz within my ZPD.
- According to my last quiz result, I should choose a book....



## To improve my Average Percent Correct:

I will use the 5 W's to review before I quiz

I will make notes when reading

I will take my time when quizzing

I will make sure my book within my ZPD range

I will quiz as soon as I finish my book

5 W's:  
What...  
Who...  
When...  
Where...  
Why....

## To meet my Points Target:



Aim for **100%** to earn all the points

I will stick with a book and finish it

I will fit in extra reading time:  
Before bed?  
On the bus?  
During lunch?

I will read **fewer long** books

I will read **several shorter** books

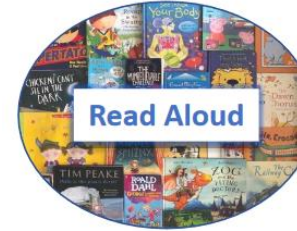
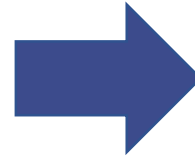
If you are able to understand a book as you read, but struggle to remember events when you quiz, ask Miss Ling for a reading reminder sheet.





**Open University** research suggests there are three important ways to support readers and a love of reading.

## Supporting Readers at Home



**Reading aloud** to your children shows them reading is a pleasure, not a chore. Older children can also read to younger ones.

\*Reading together doesn't have to be a story (recipes, news articles etc. all count too!)

\*If you are not confident in reading aloud, why not listen to an audiobook together.



**Children who read**, and are supported as readers, develop strong reading skills and do better at school. Research also shows that reading aids relaxation and has benefits for mental health.



**Book chats** encourage readers. Invite them to make connections and share their views. Join in with your views too! (Please see the next page for suggested questions you can ask about any book.)

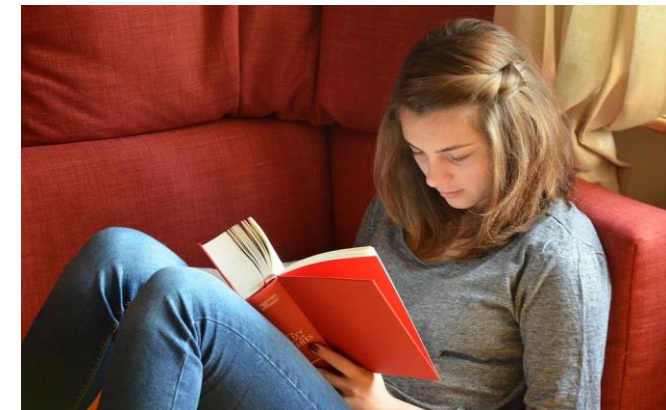


I wonder  
if...why...what...  
who...



**Making time to read** alongside one another helps develop children's reading stamina and interest, Let them chose what to read and relax together (you don't need to be reading the same thing.)

\* Where can you 'fit' reading in? It could be 10 minutes before tea, when they come home from school, waiting in the car, before bed etc. You may find it easier to set a regular time aside, or fit it in around your other commitments.



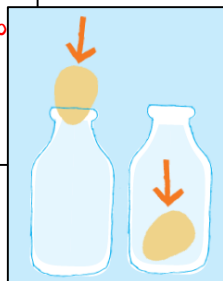
## CHANGES OF STATE

The brief: Make an egg fit into a bottle without breaking it.

### The method

1. Submerge the egg in a glass of vinegar for two days: the shell will become rubbery.
2. Heat the bottle in hot water – remember to use gloves or a tea towel when handling it.
3. Rest the egg on the neck of the bottle. 4. As the air inside the bottle cools down, it will contract and suck the egg down. Top tip: Try lubricating the egg with cooking oil or washing up liquid.

Now find out why this happens using your knowledge of solids, liquids and gases



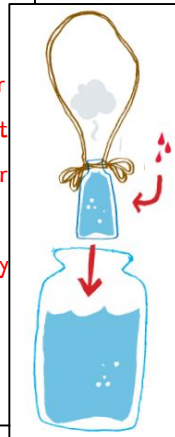
## HEAT TRANSFER

The brief: Create a colourful underwater volcano.

### The method

1. Cut a two foot length of string with a pair of scissors. Tie a knot around the neck of a salt shaker with one end of the string. Double-knot it to ensure the knot is secure. Repeat this process with the other end of the string, resulting in a handle to lower your shaker.
2. Empty and clean a large jar. Fill the clean jar about three quarters full with cold water.
3. Fill the salt shaker with hot water (with adult supervision) – as hot as you can get from your tap – to just below the neck. Add three to four drops of red food colouring.
4. Hold your salt shaker over the mouth of the jar by the string handle. Slowly lower the salt shaker into the jar until the shaker is completely submerged and resting upright on the bottom of the jar. Observe how the coloured water erupts from the shaker into the cold water.

Explain this using the idea of convection currents



## INVISIBLE INK

The brief: Write your own secret message in an invisible ink solution.

### The method

1. Squeeze lemon juice into the bowl and add a few drops of water. Stir with the spoon.
2. Dip the paint brush into the juice mixture and write a message on the paper.
3. Allow the paper to dry completely. Your message should become invisible.
4. Hold the paper very close to the light bulb to heat up the message area (adult supervision required). Watch your message appear.

Why does heat uncover the message? What is a reversible reaction?



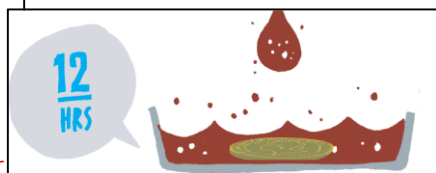
## ACIDS & ALKALIS

The brief: Clean a penny using cola.

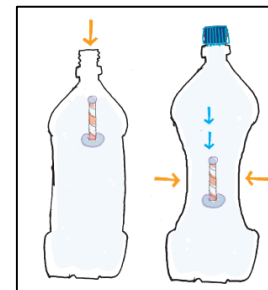
### The method

1. Place the penny in the container.
2. Add enough cola so the penny is covered.
3. Leave overnight.
4. In the morning, you should find that your penny is clean.

What makes something acidic? What chemical reaction is happening to the penny?



# Practical Science at Home



## THE DENSITY DIVER

The brief: Build a Cartesian diver.

### The method

1. Put a small ball of plasticine on the top of the straw to seal it.
2. Roll a sausage of plasticine and wrap it around the bottom of the straw, leaving the bottom open. This is your diver.
3. Now attempt to balance the diver so that it stays upright.
4. Place the diver vertically in the drinking glass. Add or remove weight from the base or top so that when you push it down, it just about bobs back up to the surface (and stays upright).
5. Once you are happy, place the completed diver in the two litre bottle filled to the top with water. Screw on the lid. Squeeze the bottle, and the diver will drop down to the bottom of the bottle. Release it and it floats back to the surface.

What is density? What makes something high or low density? Why might this be useful?

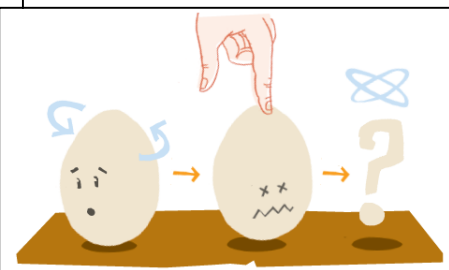
## MOMENTUM

The brief: Use eggs to find out about momentum and changing direction.

### The method

1. Spin each egg, one hard boiled and one fresh, on a table.
2. Leave it to spin for a few seconds then momentarily stop it by placing your finger on top.
3. Release the egg and observe what happens next.

What is happening to the inside of the egg? How do you calculate momentum?



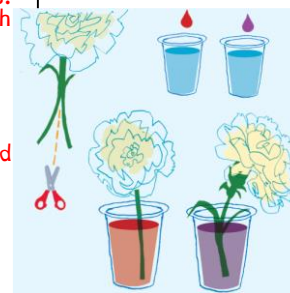
## COLOURED CARNATIONS

The brief: Create multi-coloured flowers.

### The method

1. Use the scissors to cut the stem of the carnation in half lengthways.
2. Take two cups and fill them with water. Add a different coloured food dye to each cup.
3. Put the split stems of the carnation into the cups and leave overnight.
4. The next morning you should find that your flower has changed colour.
5. What do you notice about the petals?

How does the food dye get to the petals? What is xylem and phloem?



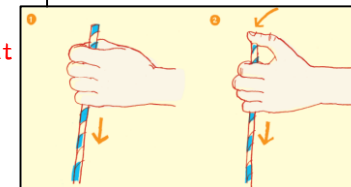
## STRONG AS A DRINKING STRAW

The brief: Use a drinking straw to pierce through a raw potato.

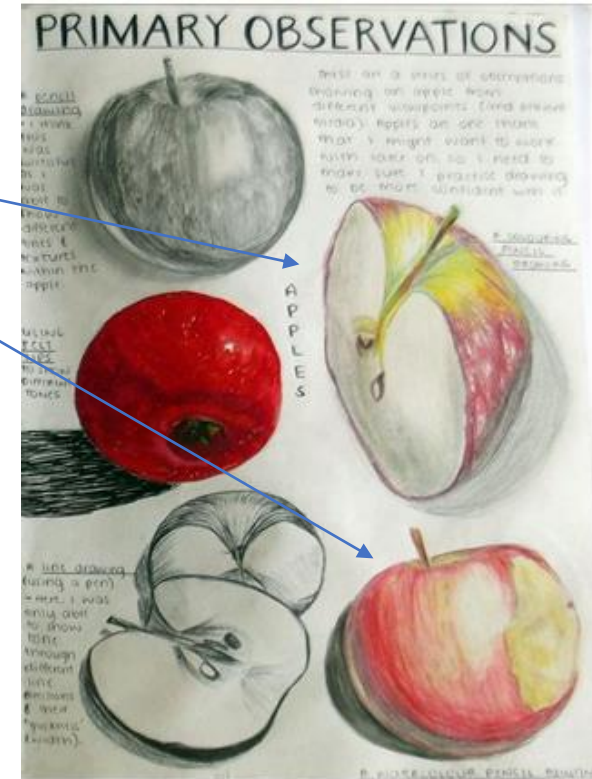
### The method

1. Hold the straw by its sides, without covering the hole at the top and try quickly stabbing the potato.
2. Repeat the experiment with a new straw but this time place your thumb over the top, covering the hole.

What forces are increasing or decreasing to allow this to happen?



- Bird eye angle - pencil
- Side view – colouring pencil
- Bottom angle – biro study
- In year 9 this term we will be looking at Food in Art.  
We will look at how artists have represented food in their art work.
- You will make drawings and paintings of food at different scales hopefully from life.
- An artist who did this was **Claus Oldenburg** who enlarged everyday food items to huge sizes and displayed them in galleries and outside. Find out some facts about him.

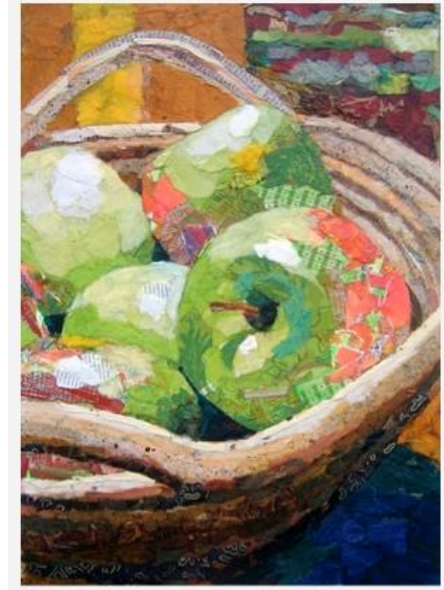
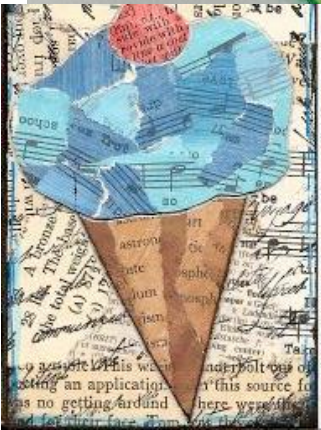
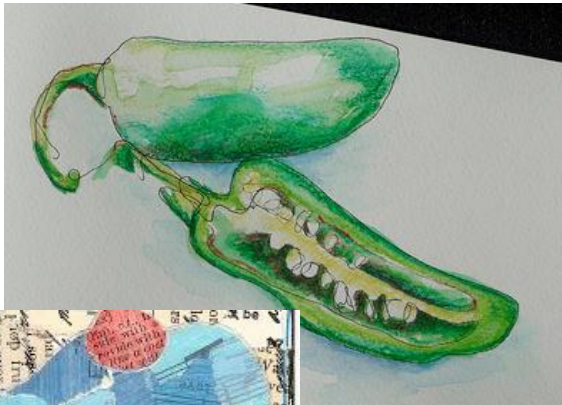


These are some you could try to draw: Tomato, Peppers, Chilli, Lemon, Mango, Passion fruit, Cucumber, Strawberry, Apple, Pear, Eggplant





- Try Drawing a piece of food on a large scale:
- 1: **Unhealthy Food called.....**
    - Draw this food item in pencil and colouring pencil
  - 2: **Healthy food called.....**
    - Draw this food item in pencil and create a tonal collage



1


## Methods of Recording

Observational drawing	Drawing from looking at images or objects
First hand observation	Drawing directly from looking at objects in front of you
Second hand observation	Drawing from looking at images of objects
Photographs	Using a camera or smartphone to record images will class as first hand observation
Sketches	Basic sketches and doodles can act as a starting point for development

### Stages of Drawing


Basic shapes → Accurate shapes → Detail → Shade

2




**Tonal shade**  
Produce a range of tones by varying the pressure and layering consider using softer pencils for darker shades


Alternative shade techniques




Cross hatching



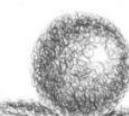
Hatching




Contour lines



Stippling



Scribble



Pattern

3

## Annotation

Describes writing notes, using images and explaining your thoughts to show the development of your work.

**Step 1 Describe**  
What is this an image of?  
What have you done here?  
What was this stage of the project for?

**Step 2 Explain**  
How was this work made?  
How did you produce particular effects? How did you decide on the composition?

**Step 3 Reflect**  
Why did you use these specific methods? Why do particular parts work better than others? Why might you do things differently next time?

- 1- Formal elements are taught e.g. how to sketch and use tone to create a 3D effect. You will explore the colour wheel and how to use the basic materials in Art.
- 2-“The Greenman” – This project introduces you to facial proportions and how to blend oil pastels effectively. We also learn about clay and create small 3D Greenman faces. Examples of world renowned pieces of art are discussed.
- 3-“Perspective Landscapes”- This project introduces students to the concept of perspective and distance in Art. You learn about the technique of one-point perspective to create a feeling of depth in a landscape.

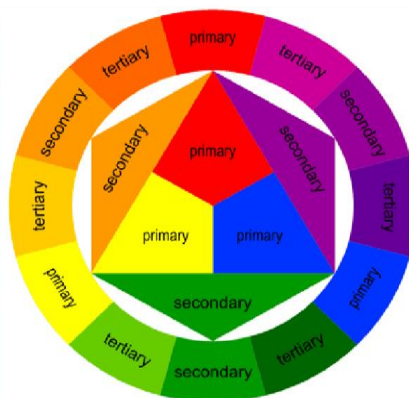


1

<b>Media</b>	The substance that an artist use to make art
<b>Materials</b>	The same as media but can also refer to the basis of the art work eg, canvas, paper, clay
<b>Techniques</b>	The method used to complete the art work, can be generic such as painting or more focus such as blending
<b>Processes</b>	The method used to create artwork that usually follows a range of steps rather than just one skill

3

Colour Theory	
Primary= RED, YELLOW, BLUE	Complimentary; Colours opposite on the colour wheel
Secondary= Primary+Primary	Harmonious; Colours next to each other on the wheel
Tertiary= Secondary+Primary	Monochromatic; shades, tones & tints of one colour
Shades – add black	Hue – the pigment
Tint – add white	Warm; RED, ORANGE YELLOW. Cold; BLUE, GREEN, PURPLE



2

<b>Pencil</b>		The basic tool for drawing, can be used for linear work or for shading
<b>Biro</b>		Drawings can be completed in biro and shaded using hatching or cross hatching
<b>Pastel (chalk/oil)</b>		Oil and chalk pastels can be used to blend colours smoothly, chalk pastels give a lighter effect
<b>Coloured pencil</b>		Coloured pencil can be layered to blend colours, some are water soluble
<b>Acrylic paint</b>		A thick heavy paint that can be used smoothly or to create texture
<b>Watercolour</b>		A solid or liquid paint that is to be used watered down and layered
<b>Gouache</b>		A pure pigment paint that can be used like watercolours or more thickly for an opaque effect
<b>Pressprint</b>		A polystyrene sheet that can be drawn into to print white lines – can be used as more than 1 layer
<b>Monoprint</b>		Where ink is transferred onto paper by drawing over a prepared surface
<b>Collograph</b>		A printing plate constructed of collaged materials
<b>Card construction</b>		Sculptures created by building up layers of card or fitting together
<b>Wire</b>		Thick or thin wire manipulated to create 2d or 3d forms
<b>Clay</b>		A soft substance used for sculpting, when fired can be glazed to create shiny colourful surfaces
<b>Batik</b>		A fabric technique using hot wax to resist coloured inks
<b>Silk painting</b>		Fabric inks painted onto silk, Gutta can be used as an outliner to prevent colours mixing

# 1 Formal Elements of Art

LINE	the path left by a moving point, e.g. a pencil or a brush dipped in paint. It can take many forms. e.g. horizontal, diagonal or curved.
TONE	means the lightness or darkness of something. This could be a <u>shade</u> or how <u>dark</u> or <u>light</u> a <u>colour</u> appears
TEXTURE	the surface quality of something, the way something feels or looks like it feels. There are two types : <u>Actual</u> and <u>Visual</u>
SHAPE	an area enclosed by a <u>line</u> . It could be just an outline or it could be <u>shaded</u> in.
PATTERN	a design that is created by repeating <u>lines</u> , <u>shapes</u> , <u>tones</u> or <u>colours</u> . can be <u>manmade</u> , like a <u>design</u> on fabric, or <u>natural</u> , such as the markings on animal fur.
COLOUR	There are 2 types including Primary and Secondary . By mixing any two <u>Primary</u> together we get a <u>Secondary</u>

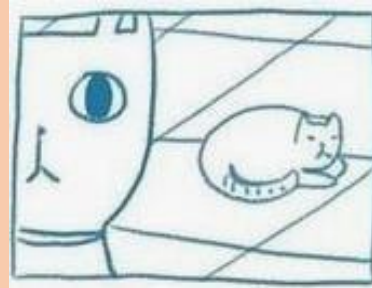
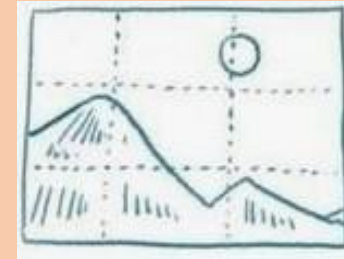
3

A Rough	A Visual/ Maquette	Final Piece
A basic sketch of a final idea	A small image or model created in selected materials	An image or sculpture pulling all preparatory work together

2

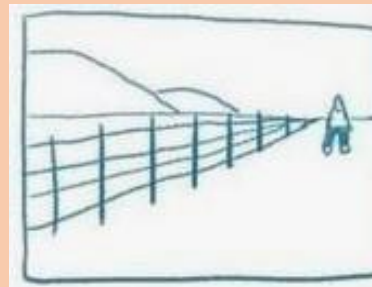
## Composition Layouts

Rule of thirds – Place focal objects at 1/3 or 2/3 of the image horizontally or vertically. Not in the middle



Balance elements. If there is an emphasis on one side balance it out with smaller objects on the other

Simplify and fill. Enlarge or crop the image to fill the space



Use lines. Lines will draw the viewer in, they don't have to be straight, consider S or C



## Design considerations

Every product ever designed and made has been carefully and extensively considered from who is it for to how it will be used and how it will be made. By looking at everyday objects we can learn so much about society, for example the technology and materials available to how it changed the lives of the users. Also by looking at these products we can understand how to develop them to be more sustainable and reflect the changing needs to improve our lifestyle.

WHY are products designed and made? – Is market pull or technology a factor?

WHO are they for? – What are their requirements?

WHAT problem are they solving? – What materials, components, systems and processes could be used to make the product?

WHERE will the product be used? – Is it for indoor/outdoor use?

WHEN will the product be used? – Will it be used at night or day?

These and many more questions need to be asked and explored as products are designed and made. In year 9 you will be addressing these questions through analysing existing products, particularly the mobile phone.

## Ergonomics and Anthropometrics

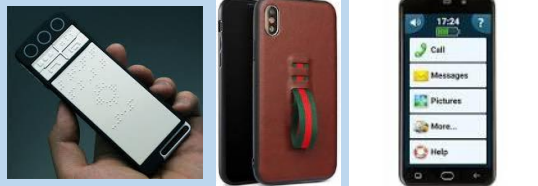
Ergonomics is about 'fit': the fit between people, the things they do, the objects they use and the environments they work, travel and play in. If good fit is achieved, the stresses on people are reduced. They become comfortable, they can do things more quickly and easily, and they make fewer mistakes.

Anthropometrics is the practice of taking measurements of the human body and provides categorised data that can be used by designers. Anthropometrics help designers collect useful data, e.g. head circumferences when designing a safety helmet. Designers need to consider how users will interact with the product or service.

Look at these 3 can openers - they do the same job. One is more ergonomic than the other 2. Which one and why? Does the material make a difference for the user? What impact will the more ergonomic one have on the users life? What materials and processes have been used to make these? What impact does that have on the environment?

## Inclusive Design

Inclusive design makes products usable by everyone, regardless of age, ability and circumstance. It is based on the simple principle that designing for the widest range of people creates better designs and benefits everyone. Can you decide **who** the phones on the right have been designed for?



## Aesthetics and Branding

Aesthetics is being interested in how something looks and feels

Branding is to simply and easily help your customers understand what you offer and how you're different to other products



These are all brands. What do you think of when you see these logos? Are they recognisable? Why? How important is having a strong logo when selling a product?

## Life Cycle Assessment



Life Cycle assessment is used for assessing environmental impacts associated with all the stages of the life-cycle of a commercial product, process, or service. Consideration of the environmental impact of any product, service or system during its life cycle should be started at the earliest stage of design and continue through to disposal. Designers should have a good understanding of their responsibility to reduce the ecological impact on the planet.



## Cultural, moral, social and economic issues

Designers should consider:

**social groups** - people who may share common interests or levels of education, e.g. liking the same sport or doing GCSEs, or who may be the same age or gender

**economic groups** - based on occupation, status and financial security; what different economic groups can afford will vary - with the cost of products affected by quality and brand

**ethnic groups** - people who may share a language, culture or belief(s)

## New and Emerging Technologies

These include

- Educational Technology – Innovative ways of using technology to improve teaching/learning.
- Information Technology – Using computers to gather, store, analyse & send information.
- Nanotechnology – At atomic/molecular levels materials have newly discovered characteristics.
- Biotechnology – Technology based on living organisms with medical & pharmaceutical uses.
- Robotics – The technology required to create 'machines' that work autonomously.
- Artificial Intelligence (AI) – Creating computers which can think for themselves.

Developments in technology impacts on our daily lives and also in our role and requirements as designers. This will lead the way to new jobs of the future and new ways of creating products.

What technology is used in modern phones?  
What functionality does it add to a phone?  
How does it enhance the product for the user?



## Nutrients

Macro nutrients - needed in large quantities in the diet. The three macro nutrients are: PROTEIN, CARBOHYDRATES, FAT

Micro nutrients - needed in small quantities in the diet. The two micro nutrients are: VITAMINS, MINERALS

### Protein

Proteins are made up of amino acids, often referred to as the 'building blocks' of the body. Non-essential amino acids can be made by the body, however, essential amino acids can't be made by the body and we must get from the food we eat.

High biological Value (HBV) proteins contain all the essential amino acids we need and generally come from animal sources. Low biological value (LBV) proteins are missing one or more essential amino acids and generally come from plant sources.

#### Food sources

HBV - beef, pork, lamb, poultry (chicken, turkey, duck), fish, cheese, butter milk

LBV - beans, chickpeas, lentils, peas, nuts, seeds, found in smaller amounts in some vegetables such as spinach and broccoli.

#### Function

Needed for growth from childhood to adulthood and the growth of nails, hair and muscle mass, repair of muscles, tissues and organs after illness or injury and to make enzymes for digestion and antibodies to stop us getting ill.

Types: High biological Value (HBV) and Low biological Value (LBV)

### Carbohydrates

There are two types of carbohydrates, complex and simple. They are also known as starchy (complex) and sugary (simple).

#### Food sources

Starchy - bread, rice, pasta, potatoes, bagels, oats, flour, cereal and some vegetables.

Simple - fruit, some vegetables, chocolate, sweets, biscuits, cakes

#### Function

Starchy/complex carbohydrates are digested slowly meaning blood sugar levels gradually increase providing a slow, steady release of energy. (long term energy).

Sugary/simple carbohydrates are digested slowly and provide short term energy

Types: Starchy, sugary and fibrous

#### Example exam questions:

What are the two types of fat? (2 marks)

Explain the difference between a HBV and LBV protein (6 marks)

What percentage of our daily energy should come from fats? (1 mark)

What are the main differences between saturated and unsaturated fats? (6 marks)

How can one make healthy choices when choosing complex carbohydrates? (2 marks)

### Fat

There are two types of fat, saturated and non saturated.

Saturated fats are classed as 'unhealthy fats', they are solid at room temperature and are generally animal based.

Unsaturated fats are classed as 'healthier fats' and are liquid or soft at room temperature and come from plant based sources.

#### Food sources

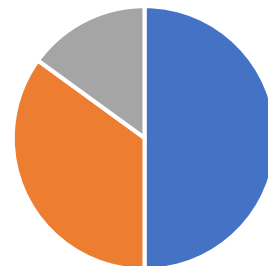
Animal -beef, chicken skin, processed meat (sausages, salami, pepperoni), bacon, butter, cheese, full fat milk

Plant - vegetable oils (sunflower, olive, rapeseed), avocado, nuts, seeds

#### Function

Keeps us warm (provides insulation), secondary source of energy, protects vital organs and bones.

Energy



■ Carbohydrates ■ Fat ■ Protein ■

#### Energy intake

50% - carbohydrates

35% - Fat

15% - Protein

# Pizzas

## Ingredients (makes 12)

200g strong white bread flour,  
plus extra for dusting

50g ground semolina (or extra  
flour)

1 tsp salt

1 tsp dried yeast

1 tbsp oil

100-125ml warm water

Toppings of your choice

Grated cheese

Tomato passata

Make your own  
tomato base: Fry  
garlic, add tomato  
passata, season with  
salt, pepper and  
herbs (dried or  
fresh basil) simmer  
for 10 minutes.

Can be frozen.



## Equipment

Knife, chopping board, wooden  
spoon, bowl, jug, grater, rolling  
pin, cookie cutter

**Skills:** Rich yeast dough,  
kneading, baking, grating,  
shaping,

1. Pre-heat the oven to 200°C Weigh flour and add to a bowl, add yeast and salt and oil
2. Create a well in the middle of the flour and add the oil, then gradually add the warm water and mix (**make sure not to add all at once or the dough will be too wet**)
3. When smooth, work the dough on the worktop until elastic and smooth, set aside to rise while preparing the filling (if you have plenty time, leave your dough in a warm place to prove for around an hour).
4. Wash, peel, slice your vegetables, grate the cheese.
5. If using any meat - prepare that too.
6. When all is prepared, roll out the dough thinly on a baking tray covered with baking paper.
7. Add the tomato sauce, toppings and cheese.
8. Bake until crispy (10-15min)

## Ingredients

### Pastry

100g butter

25g sugar

1 egg

175g flour

### Filling

2 apples

1 tsp cinnamon (optional)

70g sugar

1tbsp Blackberries (optional)

### Equipment

Bowl, weighing scales, wooden spoon, jug, whisk, chopping board, knife, peeler, teaspoon rolling pin,

### Skills

Rubbing in method, pastry making, rolling out, peeling, chopping

# Apple Pie

### Pastry:

1. Rub butter and flour together until it looks like breadcrumbs, then add sugar - mix
2. In a jug, whisk the egg and then add to the flour mix and stir with a wooden spoon
3. When combined, work the dough with your hands, you may have to add more flour if it is too sticky
4. When smooth, set aside to rest and start with your filling

### Filling:

1. Peel and core the apples then cut into wedges
2. Mix with the cinnamon and sugar

### Assembly of pie,

1. Cut your pastry in half and roll one half out to fit your pie dish. Line your pie dish.
2. Add the apples (and blackberries if using)
3. Roll out your other half of pastry and carefully lay it on top of the tin, seal bottom and top
4. Score the lid in 3 places to let steam out
5. If you have leftover pastry, you can design some pattern and lay on top



## How to construct a lattice pie top



1. Roll your pastry out into a circle the size of your dish.  
Cut into even strips.



2. Egg wash the pastry around the outside of the pie so the lattice top will stick. Gently lay your strips over the pie, leaving a 2cm gap between them.  
Fold every other strip back.



3. Put a strip of pastry down the centre of the pie, at a right angle to the current pieces.  
Unfold the folded strips.



4. Fold back the opposite strips, and lay another piece of pastry down.



5. Keep repeating the process of folding back the strips and laying down new strips of pastry.



6. Once all the strips are laid out, trim the edges around the pie.  
Lightly press down the edges so they are secure.

# Lasagne

## Ingredients

6 Lasagne sheets

Sprinkle of cheese for the top

1 tomato

## For the Filling

100-150g Mince Meat

1/2 onion

1 tin of tomatoes

Salt, pepper, herbs

## For the Sauce

30g butter

30g flour

300 ml Milk

60g Cheese

## Equipment

Chopping board, knife, jug,  
grater, whisk, wooden spoon,  
frying pan, sauce pan

## Skills

Frying

Making a white sauce

1. Chop onion and garlic
2. Start frying the onion and garlic add the meat.
3. When meat is cooked, add the tomatoes and simmer until thickened, add seasoning
4. Making the sauce: in the saucepan melt the butter and flour.
5. When melted switch off the heat and add the milk, little at a time then mixing in.
6. When ALL the milk is mixed in then switch the heat on and constantly whisk until its thickened (boiling point). Switch off and stir through the cheese.
7. **CONSTRUCTION -  $\frac{1}{2}$  mince, pasta,  $\frac{1}{2}$  cheese sauce. Repeat:  $\frac{1}{2}$  mince, pasta,  $\frac{1}{2}$  cheese sauce.**
8. Add your remaining grated cheese on top and a sliced tomato.
9. Bake for 40 minutes.

# Vegetarian lasagne

## Ingredients

6 Lasagne sheets

Sprinkle of cheese for the top

1 tomato

## For the filling:

1 pepper

1 onion

1 courgette

1 can lentils

1 can chopped toms

## For the sauce:

30g butter

30g flour

300 ml Milk

60g Cheese

## Equipment

Chopping board, knife, jug

grater, whisk, wooden spoon, frying pan, sauce pan

## Skills

Frying, seasoning, Making a white sauce, layering, portioning, baking,

1. Finely dice the onion.
2. Slice the courgette and chop the pepper into large squares.
3. Gently fry the onion until translucent. Add the peppers and courgette and fry for another 5 minutes.
4. Add the lentils, chopped tomatoes and seasoning. Mix well and leave to simmer on a low temperature.
5. Making the sauce: in the saucepan melt the butter and flour.
6. When melted switch off the heat and add the milk, little at a time then mixing in.
7. When ALL the milk is mixed in then switch the heat on and constantly whisk until its thickened (boiling point). Switch off and stir through the cheese.
8. **CONSTRUCTION** -  $\frac{1}{2}$  filling, pasta,  $\frac{1}{2}$  cheese sauce. Repeat:  $\frac{1}{2}$  filling, pasta,  $\frac{1}{2}$  cheese sauce.
9. Add your remaining grated cheese on top and a sliced tomato.
10. Bake for 40 minutes.

# Principles of training

**F**

Frequency — How often you train

**I**

Intensity — How hard you train

**T**

Time — How long you train

**T**

Type — How specific your training is

Exercise intensity: The Borg scale

(RPE — Rating of Perceived Exertion)

This scale measures how hard performers think they are working.

It can also be used to measure Heart Rate and training zones.

(RPE x 10 = Heart Rate)

RPE	Intensity
6	No exertion
7	
8	
9	
10	
11	Light exertion
12	
13	Somewhat hard
14	
15	Hard (Heavy)
16	
17	Very Hard
18	
19	
20	Maximal Exertion

**S**

Specificity

**P**

Progressive Overload

**A**

Adaptability

**R**

Reversibility

**V**

Variation

**I**

Individual Needs

**R&R**

Rest and Recovery



### Methods of training

**Circuit training** — This involves a number of different activities that can be sport-specific or tailored to help improve certain levels of fitness.

**Continuous training** — This is training at a steady pace, moderate intensity to develop aerobic endurance. At least 30 minutes of steady running is an example of continuous training.

**Fartlek training** — This is a form of continuous training but the intensity is changed by running at different speeds over different terrains.

**Interval training** — This method requires periods of exercise followed by rest and recovery periods.

**Plyometric training** — This training develops sport-specific explosive power and strength.

**Flexibility training** — The method to develop flexibility at a joint. This is conducted using stretching. The three stretching categories are Static, Ballistic and Proprioceptive Neuromuscular Facilitation (PNF)

**Speed training** — Speed training can take many forms and can be sport specific. The three types of sprints are Acceleration, Interval and Hollow sprints.

**Weight training** — Weight training is a form of interval training and involves using reps and sets of reps.



10-12 Lunge Twists



15-20 Arm Circles



8-10 Burpees

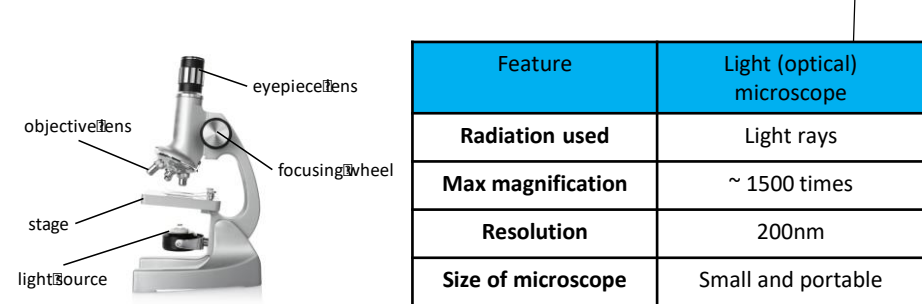
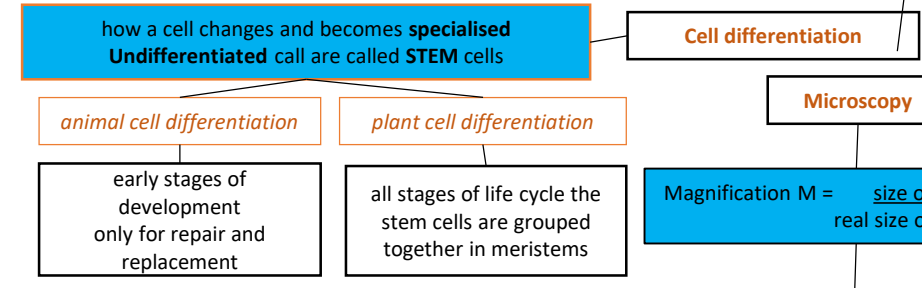
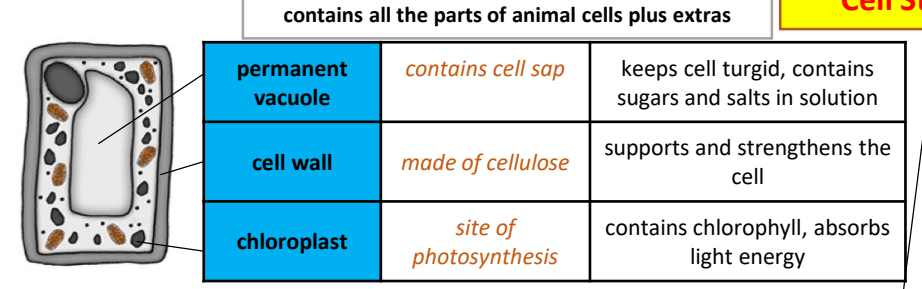
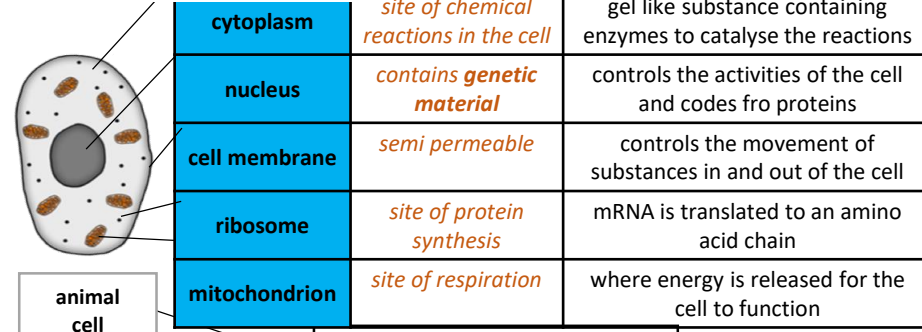


8-10 Tricep Dips

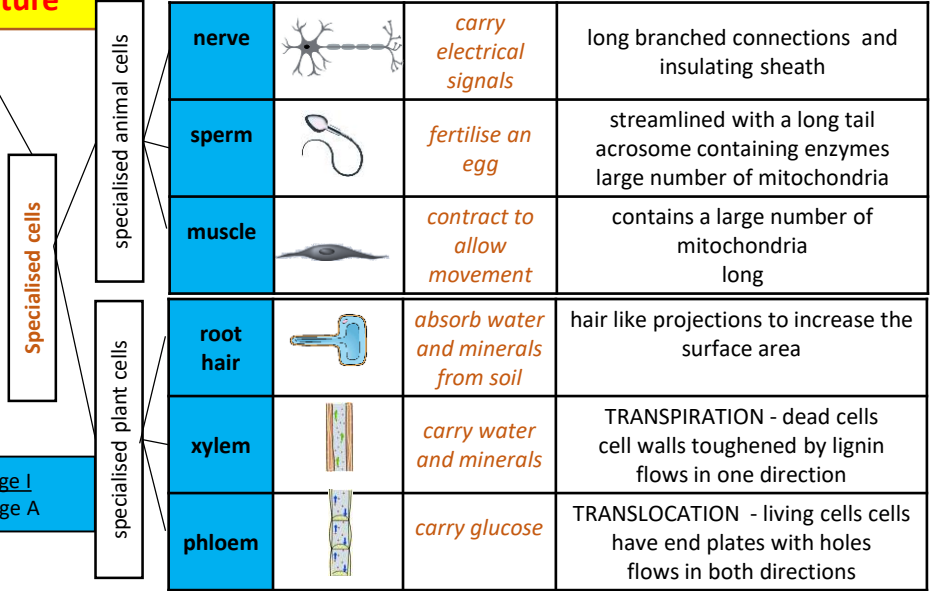
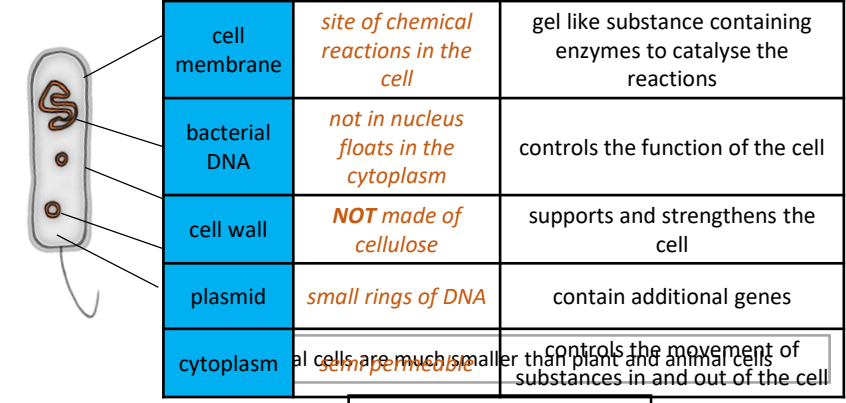


10-20 Squats

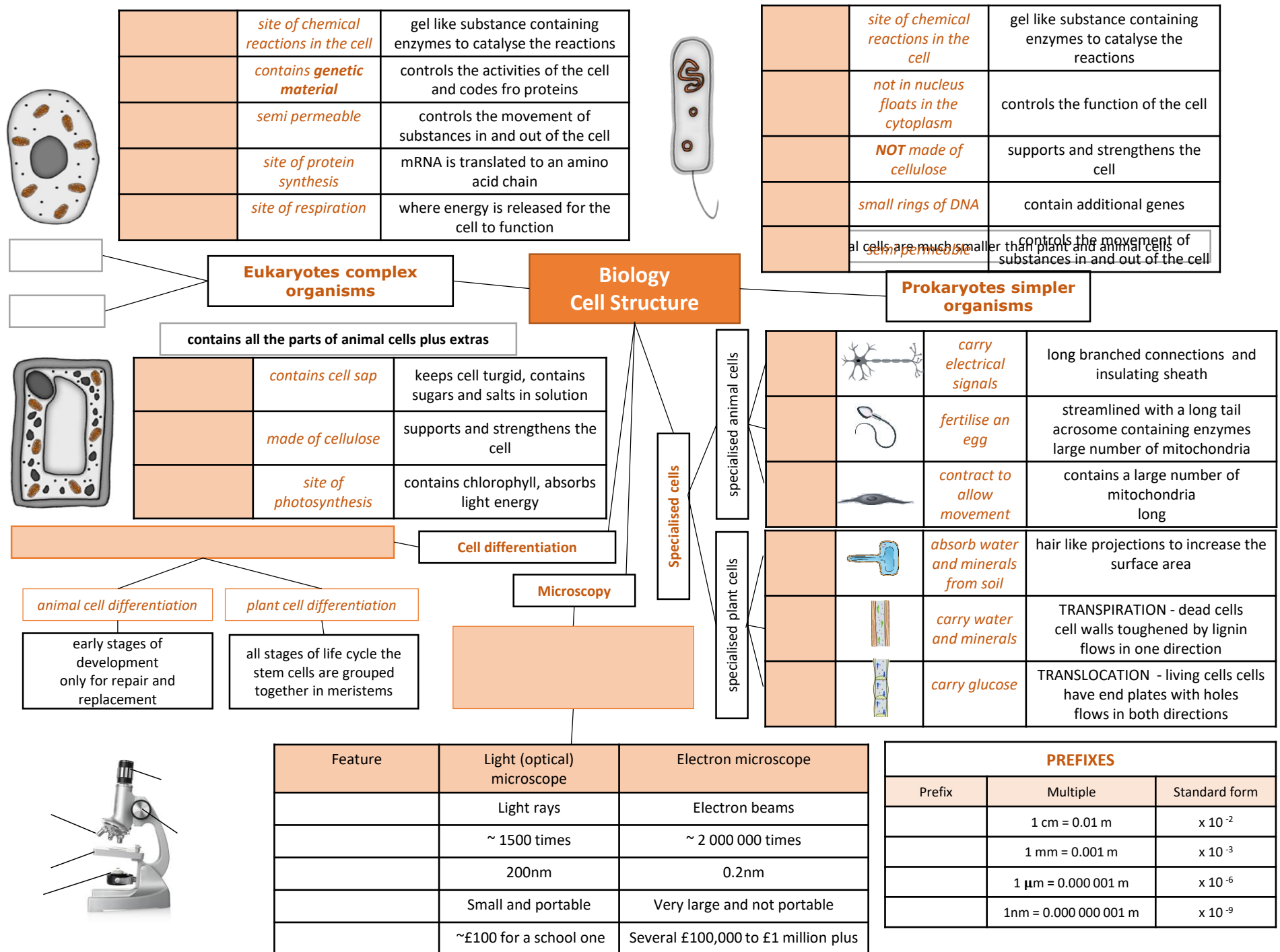
Can you try these exercises at home? They are easy, free and works wonders for your core!

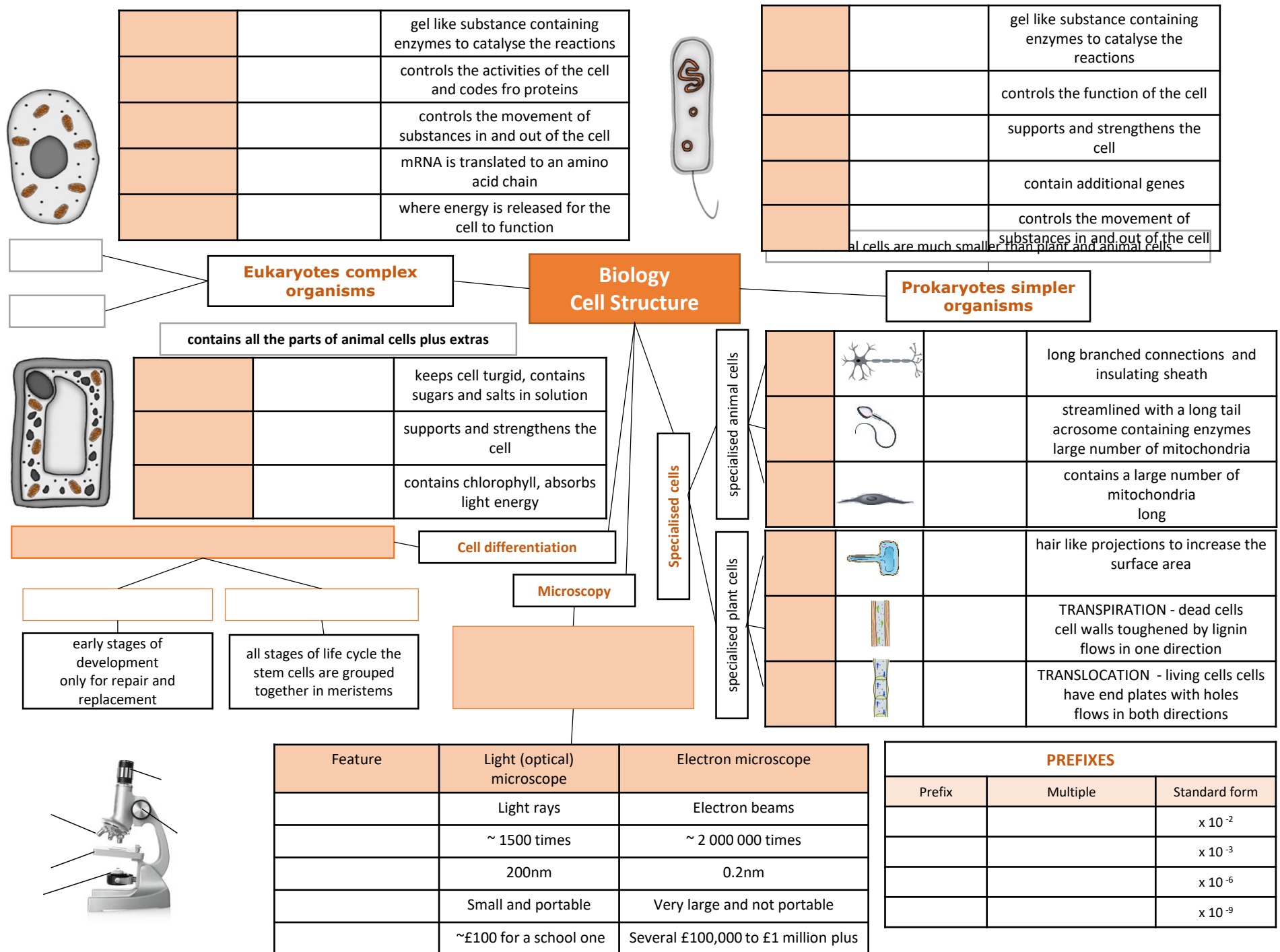


Feature	Light (optical) microscope	Electron microscope
<b>Radiation used</b>	Light rays	Electron beams
<b>Max magnification</b>	~ 1500 times	~ 2 000 000 times
<b>Resolution</b>	200nm	0.2nm
<b>Size of microscope</b>	Small and portable	Very large and not portable
<b>Cost</b>	~£100 for a school one	Several £100,000 to £1 million plus



PREFIXES		
Prefix	Multiple	Standard form
<b>centi (cm)</b>	1 cm = 0.01 m	$\times 10^{-2}$
<b>milli (mm)</b>	1 mm = 0.001 m	$\times 10^{-3}$
<b>micro (µm)</b>	1 µm = 0.000 001 m	$\times 10^{-6}$
<b>nano (nm)</b>	1nm = 0.000 000 001 m	$\times 10^{-9}$













Bacterial cells are much smaller than plant and animal cells

Eukaryotes complex organisms

## Biology Cell Structure

Prokaryotes simpler organisms

contains all the parts of animal cells plus extras




Cell differentiation

Microscopy

Specialised cells

specialised animal cells


specialised plant cells




Feature	Light (optical) microscope	Electron microscope

### PREFIXES

Prefix	Multiple	Standard form

## Summary

Computers use binary - the digits 0 and 1 - to store data. A binary digit, or bit, is the smallest unit of data in computing. ... Binary numbers are made up of binary digits (bits). The circuits in a computer's processor are made up of billions of transistors.

Boolean algebra and truth tables can be used to describe logical expressions. The most common Boolean operators are AND, OR and NOT (always in capitals). Each operator has a standard symbol that can be used when drawing logic gate circuits.

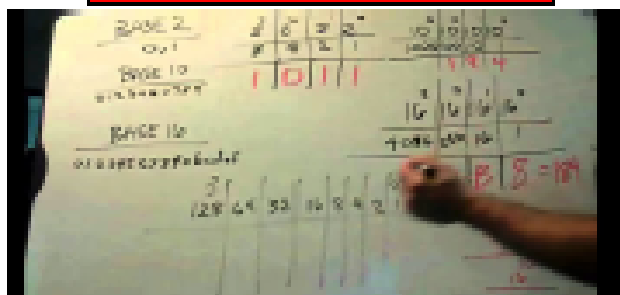
A bit pattern could represent different types of data including text, image, sound and integer.

Computers require input hardware, processing hardware and output hardware. The hardware that defines a computer is the CPU and memory. Without these a computer could not function. The CPU and memory work together to run programs.

CPU - executes programs using the fetch-decode-execute cycle.

Memory - stores program operations and data while a program is being executed. There are several types of memory, including: registers, cache, RAM and virtual memory.

## Decimal, binary and hexadecimal



## Boolean Algebra

NOT Gate

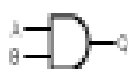


$$Q = \text{NOT}(A)$$

Truth Table

Input A	Output Q
0	1
1	0

AND Gate

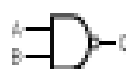


$$Q = A \text{ AND } B$$

Truth Table

Input A	Input B	Output Q
0	0	0
0	1	0
1	0	0
1	1	1

OR Gate



$$Q = A \text{ OR } B$$

Truth Table

Input A	Input B	Output Q
0	0	0
0	1	1
1	0	1
1	1	1

## Central Processing Unit

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.

It is responsible for all of a computer's processing.

## The Fetch - Decode - Execute cycle

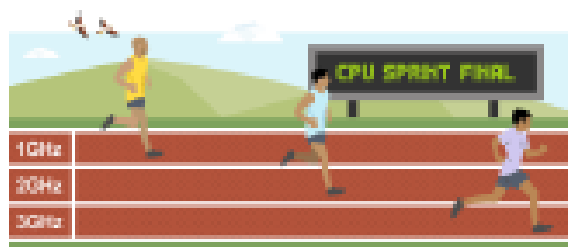
The CPU operates by repeating three operations:

**FETCH** - causes the next instruction and any data involved to be fetched from main memory

**DECODE** - decodes the instruction to make sure it can be carried out

**EXECUTE** - carries out the instruction

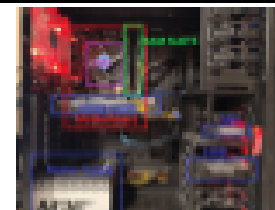
Repeat...



## Key Vocabulary

Clock speed	The speed of a computer CPU, measured in hertz.
Cache	A piece of temporary memory. It can refer to a part of the RAM, storage disk, CPU, or an area for storing web pages.
CPU	Central Processing Unit - the brains of the computer that processes program instructions. Also called a microprocessor.
Execute	To run a computer program.
GHz	Gigahertz. One billion hertz per second = one gigahertz. This is a measure of frequency and is used to describe bus speeds and CPU clock speeds.
Hardware	The physical parts of a computer system, e.g. a graphics card, hard disk drive and CD drive.
Mother-board	The circuit board inside a computer that houses the CPU, memory and connections to other devices.
RAM	Memory that is constantly being written to and read from. It does not retain its contents without a constant supply of power, i.e. when a computer is turned off, everything stored in its RAM is lost.
Registers	The section of high speed memory within the CPU that stores data to be processed.
Software	Software is the programs that run on a computer.
Virtual memory	A section of a computer storage drive which is temporarily used as RAM.

## PC Components



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





## Topics covered

- ✓ Population explosion
- ✓ Birth Rates, Death rates and Life expectancy
- ✓ Factors affecting population growth
- ✓ Population Density and Distribution
- ✓ Population Distribution Factors
- ✓ Population Pyramids
- ✓ Population Control
- ✓ Youthful Populations
- ✓ Ageing Populations
- ✓ Population Migration

# Year 9 Knowledge organiser: Population



## Key Ideas:

1. I can describe the growth in world population over time
2. I can describe the distribution (spread) of people on earth
3. I can explain what affects growth and distribution of people
4. I can assess how population is impacted by youth and ageing
5. I can evaluate the benefits and challenges of migration

## Skills

- ❑ To draw a line graph showing population growth/label key events ('living graph')
- ❑ To construct a 'choropleth' map, shading dense and sparse population density
- ❑ To construct population pyramid graphs
- ❑ To write a detailed piece of extended writing
- ❑ To interpret flow maps of people movement

## Places and Environments

- ❖ UK
- ❖ China
- ❖ Africa
- ❖ Australia
- ❖ Canada
- ❖ Russia
- ❖ Singapore
- ❖ Syria
- ❖ Germany

## Key Terms Used in this Unit

- ❑ Population growth
- ❑ Birth Rate/Death Rate
- ❑ Dense/Sparse
- ❑ Distribution
- ❑ Working Age Group
- ❑ Fertility Rate
- ❑ Infant Mortality Rate
- ❑ Rate of Natural Increase
- ❑ Sterilisation
- ❑ Birth Control
- ❑ Incentives
- ❑ Forced Abortion
- ❑ Infanticide
- ❑ Gender imbalance
- ❑ Retirement
- ❑ Push/pull factors
- ❑ Immigration
- ❑ Forced migration

# Year 9 Spanish Summer Term 1. En la ciudad (2.6) & Los medios de comunicación (3.1)

<b>En la ciudad</b>	<b>In the city</b>
¿Qué hay en Barcelona?	What is there in Barcelona?
En Barcelona hay muchas cosas: el acuario, el cine IMAX ...	In Barcelona there are many things: the aquarium, the IMAX cinema ...
¿Adónde vas?	Where are you going (to)?
Voy ...	I'm going ...
al acuario	to the aquarium
al Camp Nou	to the Camp Nou (football) stadium
al cine IMAX	to the IMAX cinema
al monumento a Colón	to the Columbus Monument
al museo Picasso	to the Picasso Museum
al Tibidabo	to the Tibidabo funfair
a la playa de la Barceloneta y el mar	to Barceloneta beach and the sea
a la plaza de Cataluña	to the Plaza Catalunya
a la Sagrada Familia	to the Sagrada Familia church

a la torre Agbar	to the Agbar Tower
a la Villa Olímpica	to the Olympic Village
a las Ramblas	to the Ramblas

Me gusta Barcelona porque ...	I like Barcelona because ...
me encanta ...	I love ...
me gusta mucho ...	I really like ...
ir de compras	going shopping
mirar pinturas	looking at paintings
montar en las atracciones del parque	going on the rides at the funfair
sacar fotos	taking photos
tomar el sol	sunbathing
ver partidos de fútbol	watching football matches
ver películas	watching films
ver tiburones	watching sharks

Le gusta (mucho) ...	He/She (really) likes ...
----------------------	---------------------------

<b>De compras</b>	<b>Shopping</b>
¿Dónde se puede comprar ...?	Where can you buy ...?
carne	meat
comida	food
ropa	clothes
¿Dónde se pueden comprar ...?	Where can you buy ...?
pasteles	cakes
joyas	jewellery
zapatos	shoes
libros	books
CDs	CDs
Se puede(n) comprar ...	You can buy ...
en ...	in ...
un supermercado	a supermarket
una cafetería	a café
una carnicería	a butcher's
una joyería	a jeweller's
una librería	a bookshop
una panadería	a baker's/bread shop
una pastelería	a cake shop
una tienda de música	a music shop
una tienda de ropa	a clothes shop
una zapatería	a shoe shop

## Year 9 Spanish Summer Term 1. En la ciudad (2.6) & Los medios de comunicación (3.1)

Las direcciones	
	Directions
Perdón ...	Excuse me ...
¿Dónde está el museo Picasso?	Where is the Picasso Museum?
¿Dónde están las Ramblas?	Where are the Ramblas?
A ver ...	Let's see ...
Bueno ...	Well ...
Pues ...	Well ...
Sigue todo recto.	Go straight on.
Dobla a la derecha.	Turn right.
Cruza la plaza.	Cross the square.
Toma la segunda calle a la derecha.	Take the second (street) on the right.
Toma la segunda calle a la izquierda.	Take the second (street) on the left.
Está a la derecha.	It's on the right.
Está a la izquierda.	It's on the left.
Está aquí.	It's here.

Soy turista ...	I'm a tourist ...
Hoy ...	Today ...
Estoy en Barcelona.	I'm in Barcelona.
Es genial.	It's great.
descansé un poco	I had a little rest
Lo pasé fenomenal.	I had a wonderful time.
Me gustó.	I liked it.
No me gustó.	I didn't like it.

Mañana ...	Tomorrow ...
Pasado mañana ...	The day after tomorrow ...
voy a ir al Tibidabo	I'm going to go to the Tibidabo
voy a ir de compras	I'm going to go shopping
voy a comprar unas camisetas	I'm going to buy some T-shirts

Palabras muy útiles	Very useful words
a (al)	to (to the)
hay	there is/there are
¿dónde?	where?
¿adónde?	(to) where?
en	in, at
hoy	today
Ayer	yesterday

### Estrategia

#### The gender of nouns

You can often work out whether a noun is masculine or feminine by looking at the ending of the word:

- Most nouns ending in **-o**, **-or** and **-ón** are masculine.
- Most nouns ending in **-a**, **-dad** and **-ción** are feminine.

But be careful! There are exceptions, for example:

el problema      la foto

To check, use a dictionary: look for the abbreviations *nm* (masculine noun) and *nf* (feminine noun).

Can you work out the gender of these nouns from Module 6 without using a dictionary?

- ciudad
- supermercado
- pastelería
- pintor
- tiburón
- canción



## Year 9 Spanish Summer Term 1. En la ciudad (2.6) & Los medios de comunicación (3.1)

<b>Mi ordenador</b>	<i>The computer</i>
¿Qué haces con tu ordenador?	<i>What do you do with your computer?</i>
Leo y escribo correos.	<i>I read and write emails.</i>
Descargo música.	<i>I download music.</i>
Navego por internet.	<i>I surf the net.</i>
Juego.	<i>I play games.</i>
Chateo.	<i>I chat online.</i>
Hago mis deberes.	<i>I do my homework.</i>
Veo DVDs.	<i>I watch DVDs.</i>
Compro regalos.	<i>I buy presents.</i>
todos los días	<i>every day</i>
dos veces a la semana	<i>twice a week</i>
los fines de semana	<i>at weekends</i>
a veces	<i>sometimes</i>
nunca	<i>never</i>
<b>La televisión</b>	<i>Television</i>
¿Cuál es tu programa favorito?	<i>What's your favourite television programme?</i>
Mi programa favorito es ...	<i>My favourite programme is ...</i>
Es ...	<i>It's ...</i>
un concurso	<i>a game show</i>
un documental	<i>a documentary</i>

un programa de deporte	<i>a sports show</i>
un programa de música	<i>a music show</i>
un programa de tele-realidad	<i>a reality show</i>
el telediario	<i>the news</i>
el tiempo	<i>the weather</i>
una comedia	<i>a comedy</i>
una serie de policías	<i>a detective series</i>
una telenovela	<i>a soap opera</i>
<b>¿Por qué te gusta?</b>	<i>Why do you like it?</i>
Me gusta/Me gustan...	<i>I like...</i>
Me encanta/Me encantan ...	<i>I love ...</i>
No me gusta/No me gustan ...	<i>I don't like ...</i>
porque es ...	<i>because it is</i>
porque son ...	<i>because they are ...</i>
aburridos/as	<i>boring</i>
divertidos/as	<i>entertaining</i>
educativos/as	<i>educational</i>
emocionantes	<i>moving</i>
informativos/as	<i>informative</i>

interesantes	<i>interesting</i>
malos/as	<i>bad</i>
tontos/as	<i>stupid</i>
un rollo	<i>a drag</i>
<b>Las películas</b>	<i>Films</i>
¿Qué tipo de películas prefieres?	<i>What sort of films do you prefer?</i>
Prefiero...	<i>I prefer...</i>
las películas de ...	<i>... films</i>
acción	<i>action</i>
amor	<i>romantic</i>
artes marciales	<i>martial arts</i>
ciencia-ficción	<i>sci-fi</i>
guerra	<i>war</i>
terror	<i>horror</i>
las películas del Oeste	<i>Westerns</i>
las comedias	<i>comedies</i>
los dibujos animados	<i>cartoons/animations</i>
<b>Más o menos</b>	<i>More or less</i>
más ... que	<i>more ... than</i>
menos ... que	<i>less ... than</i>
Los dibujos animados son más divertidos que las películas de terror.	<i>Cartoons are funnier than horror films.</i>

### ¿Adónde fuiste?

el año pasado  
Fui a ...  
Alemania  
Argentina  
Cuba  
Escocia  
España  
Francia  
Gales  
Grecia  
India  
Inglaterra  
Irlanda  
Italia  
México  
Pakistán  
Portugal  
República Dominicana

### ¿Cómo fue?

Fue ...  
estupendo  
genial  
guay  
aburrido  
horrible  
un desastre

### ¿Con quién fuiste?

Fui ...  
con mi familia  
con mis padres  
con mis amigos

### Where did you go (to)?

last year  
I went to ...  
Germany  
Argentina  
Cuba  
Scotland  
Spain  
France  
Wales  
Greece  
India  
England  
Ireland  
Italy  
Mexico  
Pakistan  
Portugal  
the Dominican Republic

### What was it like?

It was ...  
fantastic  
brilliant  
great, cool  
boring  
awful  
a disaster

### Who did you go with?

I went ...  
with my family  
with my parents  
with my friends

# Spanish

## Module 3: Mis vacaciones (My Holidays)

In this Module you will learn how to:

- Talk about where you went on holiday
- Say how you travelled
- Say what you did on holiday
- Give a presentation on your holiday

Keep practising your Spanish vocabulary on [www.quizlet.com](http://www.quizlet.com)

Use [www.textivate.com](http://www.textivate.com) to practice longer texts

### ¡Buen viaje!

¿Adónde fuiste de vacaciones?  
Fui a Madrid.  
¿Cómo fuiste?  
Fui ...  
a pie  
en autocar  
en avión  
en barco  
en bicicleta  
en coche  
en monopatín  
en tren

El invierno pasado ...  
El verano pasado ...

### Have a good trip!

Where did you go (to) on holiday?  
I went to Madrid.  
How did you go?  
I went ...  
on foot  
by bus  
by plane  
by boat  
by bike  
by car  
by skateboard  
by train

Last winter ...  
Last summer ...



# Spanish

## ¿Qué hiciste?

Bailé.  
Descansé.  
Escuché música.  
Fui de excursión.  
Jugué al voleibol en la playa.  
Mandé mensajes.  
Monté en bicicleta.  
Saqué fotos.  
Tomé el sol.  
Visité monumentos.

## What did you do?

*I danced.  
I had a rest/break.  
I listened to music.  
I went on an outing.  
I played volleyball on the beach.  
I sent messages.  
I rode my bike.  
I took photos.  
I sunbathed.  
I visited monuments.*

¿Qué tal lo pasaste?

*What sort of time did you have?*

¡Lo pasé bomba!

*I had a fantastic time!*

¡Lo pasé fenomenal!

*I had a wonderful time!*

¡Lo pasé guay!

*I had a great time!*

¡Lo pasé bien!

*I had a good time!*

¡Lo pasé mal!

*I had a bad time!*

¿Cuánto tiempo pasaste allí?

*How much time did you spend there?*

Pasé ...

*I spent ...*

diez días

*ten days*

una semana

*a week*

dos semanas

*two weeks*

un mes

*a month*

## ¡Buen viaje!

¿Adónde fuiste de vacaciones?  
Fui a Madrid.  
¿Cómo fuiste?  
Fui ...  
a pie  
en autocar  
en avión  
en barco  
en bicicleta  
en coche  
en monopatín  
en tren

## Have a good trip!

*Where did you go (to) on holiday?  
I went to Madrid.  
How did you go?  
I went ...  
on foot  
by bus  
by plane  
by boat  
by bike  
by car  
by skateboard  
by train*

El invierno pasado ...

*Last winter ...*

El verano pasado ...

*Last summer ...*

## Palabras muy útiles

a  
con  
en  
¿cómo?  
¿adónde?  
¿quién?  
¿qué?

## Very useful words

to  
with  
in, by  
how?, what ... like?  
(to) where?  
who?, whom?  
what?

Read the Strategy Box for ideas on how to remember difficult spellings.

## Estrategia

### Mnemonics

A mnemonic helps you to remember a difficult word or expression. A common type of mnemonic is a made-up phrase consisting of words whose first letters spell the word you want to remember. For example, to remind you how to spell **Inglaterra**, you could try using this mnemonic:

**I**  
**N**ever  
**G**et  
**L**ong  
**A**t  
**T**eatime  
**E**ating  
**R**ipe  
**R**ed  
**A**pples

- Choose a word from Module 3 that you want to learn to spell and make up a mnemonic for it.

## Year 9 History: Democracy, dictatorships and the causes of the Second World War

Key words	
<b>Democracy</b>	A political system in which the public can vote in free elections and have freedom expression and religion
<b>Dictatorship</b>	A political system in which one Party or person rules the country, with no elections or freedom of expression
<b>Cause</b>	An event that leads to another event
<b>Consequence</b>	An event or an impact that happens as a result of a cause
<b>Diversity</b>	Differences between people, places or events
<b>Second World War</b>	A war that took place on several continents between 1939 and 1945
<b>Nazi Party</b>	Shortened name for the National Socialist German Workers Party, a far-right Party who ruled Germany between 1933 and 1945, led by Adolf Hitler
<b>Soviet Union</b>	Also known as the USSR, a collection of communist countries in eastern Europe, including Russia
<b>Communism</b>	A political system in which everything is shared equally among people and everyone has equal rights

Terms of the Treaty of Versailles	Detail
<b>Blame</b>	Germany had to accept full responsibility for starting the war, even though they hadn't!
<b>Reparations</b>	Germany had to pay £6.6 billion to repair the damage of the war
<b>Army</b>	The German army was reduced to 100,000 men, no submarines, no <u>airforce</u> and only 6 ships. The Rhineland was also de-militarised
<b>Territories</b>	Germany gave up many areas of land, such as Alsace-Lorraine, the Sudetenland and the Polish corridor



As a result of the Reparations payments, the German economy collapsed and led to **hyperinflation** in 1923. This meant that the value of money decreased rapidly.

Although Germany recovered after 1923, the **Wall Street Crash** in 1929 led to further economic collapse in Germany. Many people turned to extreme political Parties like the Nazis and the Communists.

After the First World War, the leaders of Britain, France and the USA forced Germany to sign the **Treaty of Versailles**. The terms of this Treaty can be remembered using the word **BRAT** (see above)

1919: Treaty  
of Versailles

1920: League of  
Nations formed

1923: Hyperinflation

1929: Wall Street Crash

1933: Adolf Hitler  
becomes Chancellor of  
Germany

1938: Germany marches  
into Austria; Munich  
Agreement signed

1939: Nazi-Soviet pact  
formed, Germany  
invades Czechoslovakia  
and Poland, WWII  
begins

### The actions of Adolf Hitler

When Hitler became dictator of Germany in 1933, he began on his plans to rebuild Germany as a military power. He rebuilt the German army and then used it to march into Austria, invade Czechoslovakia and eventually Poland in September 1939.

### The Treaty of Versailles

Although it was meant to prevent war, the harsh terms of the Treaty of Versailles actually led to a lot of anger in Germany, which helped Parties like the Nazi Party gain support. Hitler promised to end the Treaty of Versailles and take back German territories. This is exactly what he did!

### The Nazi-Soviet Pact

Despite being enemies, Nazi Germany and the Soviet Union made an agreement in August 1939 that neither would attack each other, at least for now. They also agreed to divide up Poland between them.

## What were the causes of WWII?

### Appeasement and the Munich Agreement

In an attempt to avoid another war, British Prime Minister Neville Chamberlain made an agreement with Germany in September 1938 that Britain and Germany would not go to war with each other. The agreement also allowed Germany to take back territories in Czechoslovakia without Britain interfering.

### The failure of the League of Nations

The League of Nations, set up at the end of the First World War, was to keep the peace between nations by solving issues by negotiation rather than war. They also wanted disarmament to occur around the world. However, the League did not enforce its ideas.



The aim of a knowledge organiser is to do what it says on the tin – to help you organise and consolidate your knowledge! Of course, there are an infinite number of ways in which this can be done, and will depend very much on the choices of the individual. Below you will find some suggestions of possible tasks that could be completed with the use of your knowledge organiser.

Re-write this information for a primary school child. This is harder than it sounds! What key words will you need to define for them?

Re-write a page using 10 key facts or illustrations.

Produce a timeline of all the main events – either on one particular topic or, for a challenge, everything you have studied so far!

Design a museum; what artefacts would you include to represent the facts in the knowledge organiser?

Design a time capsule; what would you put in it to represent History learned so far in each knowledge organiser?

Write a 20 question quiz (with answers). You could send this to a friend in your year, a member of your family or test yourself in 2 weeks' time.

Write a creative story – pick one of the historical figures and do it from their point of view.

Write a role play from a moment in History using the knowledge organiser. Involve other people from your family!

Make a poster titled “Keep Calm and learn about History”. Use the knowledge organiser to illustrate.

Write a monologue from one of the historical figures. How would they feel about the events going on around them?

Teach a History lesson to someone else in your house using the knowledge organiser.

Pick an event in History and produce a cartoon strip or storyboard from it.

Pick an event in History and draw the scene.

Pick an event or person from the knowledge organiser and explain why they are the most important event or theme to learn about in History.

Pick an event and write a creative news article about it.

Imagine you can have a tea party with someone from History from the KO. Who would you invite and why? What would you talk about and what would you eat/drink?

## Vocabulary to learn

Pathetic fallacy  
Genre  
Gothic  
Gothicism  
Adaptation  
Protagonist  
Connotation  
Unnatural  
Imagery  
Suspense  
Tension  
Ominous  
Atmosphere  
Foreboding

## Structure analysis checklist:

- 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

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

## Methods

- **Linguistic devices** – *simile, metaphor, personification, repetition, rhetorical question etc.*
- **Word choices** – *nouns, adjectives, verbs, adverbs etc.*
- **Sentence forms** – *fragment, simple, compound, complex*

## Descriptor from GCSE assessment criteria

Level 4: simple vocabulary  
Bad Good Light Happy

Level 5: effective vocabulary  
Negative Positive Bright Jolly

Level 6: sophisticated vocabulary  
Awful Fantastic Brilliant Ecstatic

Levels 7-9: ambitious vocabulary  
Immoral Virtuous Dazzling Elated

## Suggested Reading



## 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

1. Write definitions for each of the vocabulary to learn.
2. Learn how to spell the above key words by the learn/cover/check method.
3. List down at least three words that are used to convey the horror of the death scene.  
Beside the words add meanings.
4. Explain how the words listed above create a sense of horror.
5. List the key events of this extract. Beside each point add a quotation.
6. Create a comic strip to retell this extract of the story.
7. Explain, in your own words, how Manfred reacts when he views the death scene.
8. Create your own horror story. Try to use at least three language devices.
9. Write your own commentary of your story explaining why you have chosen particular words or language devices for effect.
10. Describe Manfred. Then explain how language has been used to portray him.
11. Explain how language has been used to portray Matilda as a character that makes the reader feel sympathetic.
12. How have verbs been used to increase the horror in the story?
13. Draw the scene and, using quotations, label the picture.
14. Find examples of any literary devices and word classes.
15. Select 5 words and create a glossary – this is a list of words and meanings.
16. Explain three things that make this story a gothic novel. E.g. it is set in the past

(This novel published in 1765 is viewed as the first Gothic novel.) It is a story about a father who is determined to secure an heir for his cursed estate. He arranges a marriage for his son but he is killed by falling armour on the day of his wedding to Isabella.

The first thing that struck Manfred's eyes was a group of his servants endeavouring to raise something that appeared to him a mountain of sable plumes. He gazed without believing his sight.

"What are ye doing?" cried Manfred, wrathfully; "where is my son?"

A volley of voices replied, "Oh! my Lord! the Prince! the Prince! the helmet! the helmet!"

Shocked with these lamentable sounds, and dreading he knew not what, he advanced hastily,—but what a sight for a father's eyes!—he beheld his child dashed to pieces, and almost buried under an enormous helmet, an hundred times more large than any casque ever made for human being, and shaded with a proportionable quantity of black feathers.

The horror of the spectacle, the ignorance of all around how this misfortune had happened, and above all, the tremendous phenomenon before him, took away the Prince's speech. Yet his silence lasted longer than even grief could occasion. He fixed his eyes on what he wished in vain to believe a vision; and seemed less attentive to his loss, than buried in meditation on the stupendous object that had occasioned it. He touched, he examined the fatal casque; nor could even the bleeding mangled remains of the young Prince divert the eyes of Manfred from the portent before him.

All who had known his partial fondness for young Conrad, were as much surprised at their Prince's insensibility, as thunderstruck themselves at the miracle of the helmet. They conveyed the disfigured corpse into the hall, without receiving the least direction from Manfred. As little was he attentive to the ladies who remained in the chapel. On the contrary, without mentioning the unhappy princesses, his wife and daughter, the first sounds that dropped from Manfred's lips were, "Take care of the Lady Isabella."

The domestics, without observing the singularity of this direction, were guided by their affection to their mistress, to consider it as peculiarly addressed to her situation, and flew to her assistance. They conveyed her to her chamber more dead than alive, and indifferent to all the strange circumstances she heard, except the death of her son.

Matilda, who doted on her mother, smothered her own grief and amazement, and thought of nothing but assisting and comforting her afflicted parent. Isabella, who had been treated by Hippolita like a daughter, and who returned that tenderness with equal duty and affection, was scarce less assiduous about the Princess; at the same time endeavouring to partake and lessen the weight of sorrow which she saw Matilda strove to suppress, for whom she had conceived the warmest sympathy of friendship.



Topic/Skill	Definition/Tips	Example
1. Square	<ul style="list-style-type: none"> <li>• Four equal sides</li> <li>• Four right angles</li> <li>• Opposite sides parallel</li> <li>• Diagonals bisect each other at right angles</li> <li>• Four lines of symmetry</li> <li>• Rotational symmetry of order four</li> </ul>	
2. Rectangle	<ul style="list-style-type: none"> <li>• Two pairs of equal sides</li> <li>• Four right angles</li> <li>• Opposite sides parallel</li> <li>• Diagonals bisect each other, not at right angles</li> <li>• Two lines of symmetry</li> <li>• Rotational symmetry of order two</li> </ul>	
3. Rhombus	<ul style="list-style-type: none"> <li>• Four equal sides</li> <li>• Diagonally opposite angles are equal</li> <li>• Opposite sides parallel</li> <li>• Diagonals bisect each other at right angles</li> <li>• Two lines of symmetry</li> <li>• Rotational symmetry of order two</li> </ul>	
4. Parallelogram	<ul style="list-style-type: none"> <li>• Two pairs of equal sides</li> <li>• Diagonally opposite angles are equal</li> <li>• Opposite sides parallel</li> <li>• Diagonals bisect each other, not at right angles</li> <li>• No lines of symmetry</li> <li>• Rotational symmetry of order two</li> </ul>	

4. Parallelogram	<ul style="list-style-type: none"> <li>• Two pairs of equal sides</li> <li>• Diagonally opposite angles are equal</li> <li>• Opposite sides parallel</li> <li>• Diagonals bisect each other, not at right angles</li> <li>• No lines of symmetry</li> <li>• Rotational symmetry of order two</li> </ul>	
5. Kite	<ul style="list-style-type: none"> <li>• Two pairs of adjacent sides of equal length</li> <li>• One pair of diagonally opposite angles are equal (where different length sides meet)</li> <li>• Diagonals intersect at right angles, but do not bisect</li> <li>• One line of symmetry</li> <li>• No rotational symmetry</li> </ul>	
6. Trapezium	<ul style="list-style-type: none"> <li>• One pair of parallel sides</li> <li>• No lines of symmetry</li> <li>• No rotational symmetry</li> </ul> <p>Special Case: Isosceles Trapeziums have one line of symmetry.</p>	

### Angles in Polygons

To be able to find missing angles in polygons



<https://goo.gl/MGpqP2>

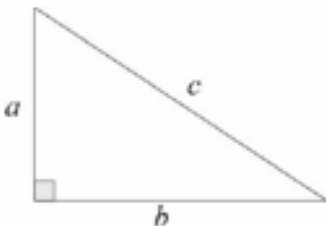
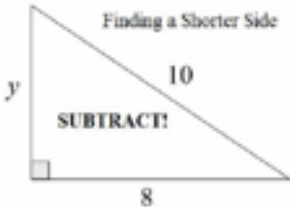


<https://goo.gl/WGrHTH>

### Exam Question

The diagram shows a regular decagon and pentagon. Find the size of angle  $x$ .



Topic/Skill	Definition/Tips	Example
1. Pythagoras' Theorem	<p>For any <b>right angled triangle</b>:</p> $a^2 + b^2 = c^2$  <p>Used to find <b>missing lengths</b>. a and b are the shorter sides, c is the <b>hypotenuse (longest side)</b>.</p>	<p>Finding a Shorter Side</p>  <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <math display="block">\begin{aligned} a &amp;= y, b = 8, c = 10 \\ a^2 &amp;= c^2 - b^2 \\ y^2 &amp;= 100 - 64 \\ y^2 &amp;= 36 \\ y &amp;= 6 \end{aligned}</math> </div>
2. 3D Pythagoras' Theorem	<p>Find missing lengths by <b>identifying right angled triangles</b>.</p> <p>You will often have to find a missing length you are not asked for before finding the missing length you are asked for.</p>	<p>Can a pencil that is 20cm long fit in a pencil tin with dimensions 12cm, 13cm and 9cm? The pencil tin is in the shape of a cuboid.</p> <p>Hypotenuse of the base = <math>\sqrt{12^2 + 13^2} = 17.7</math></p> <p>Diagonal of cuboid = <math>\sqrt{17.7^2 + 9^2} = 19.8\text{cm}</math></p> <p>No, the pencil cannot fit.</p>

**Pythagoras**  
To be able to find the length of a missing side.



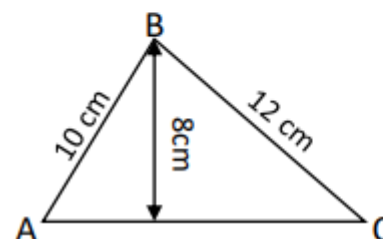
<http://goo.gl/RWkW7S>



<http://goo.gl/pp3eUN>

### Exam Question

Calculate the area of the triangle ABC.



# Pilgrimage: Walsingham

<https://www.bbc.co.uk/programmes/p0110b5n>

<https://www.youtube.com/watch?v=rmjdZFwvITY>

**Pilgrimage:** a journey by a believer to a holy site for religious reasons; pilgrimage is itself an act of worship and devotion.

**Shrine** - a place regarded as holy because of its associations with God, or a sacred person or relic. Marked by a building or other construction.

**Penance:** Voluntary act of punishment to show regret for a wrong doing.

**Rosary:** a string of beads used as a method of prayer or meditation.

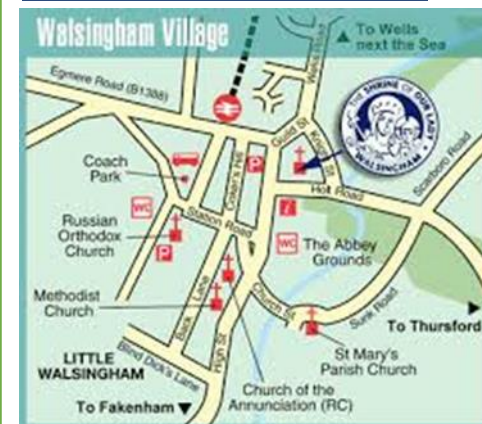
Create an advertising brochure to encourage tourists and pilgrims to Walsingham. Use the other resources to augment your brochure.

Walsingham is a village in Norfolk, England. Some Christians believe it is the site of an important vision of the Virgin Mary, also known as Our Lady.

In 1061, a Saxon noblewoman, Richeldis de Faverches, is said to have had a vision of Mary. She claimed that Mary took her to her house in Nazareth, where Mary received the annunciation. Mary asked Richeldis to build an exact copy of this house in Walsingham.

The copy, which can be found inside St Mary's Church in Walsingham, is called the Holy House. Above the church's altar is a statue of Mary, called Our Lady of Walsingham. For this reason, the site is also known as the Nazareth of England, and pilgrims have visited it for centuries. Every year there is a national pilgrimage to Walsingham, which attracts Christians from all over the world.

At Walsingham, some Roman Catholic Christians walk barefoot over the last mile from the Slipper Chapel to the Holy House as an act of sorrow for their sins. Pilgrims pray, celebrate the Eucharist, receive blessings and go on a procession from the ruined priory through to the shrine. There is a daily service called the Sprinkling of the Well, as some pilgrims believe that the water of the church well can bring special blessings.



# Pilgrimage: The River Ganges

A **pilgrimage** is a sacred journey taken for a spiritual purpose - to worship, to seek the truth and to visit a site where a significant religious event happened.

- The River Ganges is important in its own right. Some Hindus believe that it flowed from **heaven** to **purify** humans. Sometimes the river is represented in female form because many Hindus refer to it as 'mother Gangaa' or 'she'.
- There are various locations along the River Ganges which can attract millions of pilgrims. Many Hindus believe water (known as 'Gangaa jal') from anywhere on the River Ganges is purifying and holy.
- People enter the Ganges in order to purify themselves. Many pilgrims also take home small containers of water from there to give to friends and family who are not able to attend.
- Some Hindus visit the **Gangotri Temple** in the Himalayas. It is situated near the source of the River Ganges, where the water is believed to be purest.

Hindus have many different important sites of pilgrimage associated with stories of gods and goddesses. Most of them are in India. The river Ganges, and especially the city of Varanasi, is an important site where pilgrims can be found all year round. Kumbh Mela, probably the biggest pilgrimage on Earth of any religion, takes place once every 12 years.

**The River Ganges:** a journey by a believer to a holy site for religious reasons; pilgrimage is itself an act of worship and devotion.

**Moksha:** release from the cycle of rebirth according to the law of karma.

**Karma:** Actions and consequences of your actions.

**Ahimsa:** The Hindu principle of non-violence in all your actions, words and deeds.

**Sewa:** Selfless service to the community without expecting anything in return

Find out about Varanasi and Rishikesh. Where are they and why are they significant?

<https://www.bbc.co.uk/teach/class-clips-video/religious-studies-ks2-my-life-my-religion-hinduism-pilgrimage-hinduism/z4ghf4j>

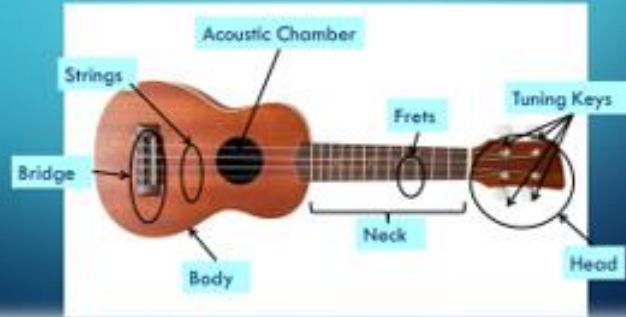


# Year 9 Autumn Term Knowledge Organiser

## 'Ukulele Sizes



## THE UKULELE



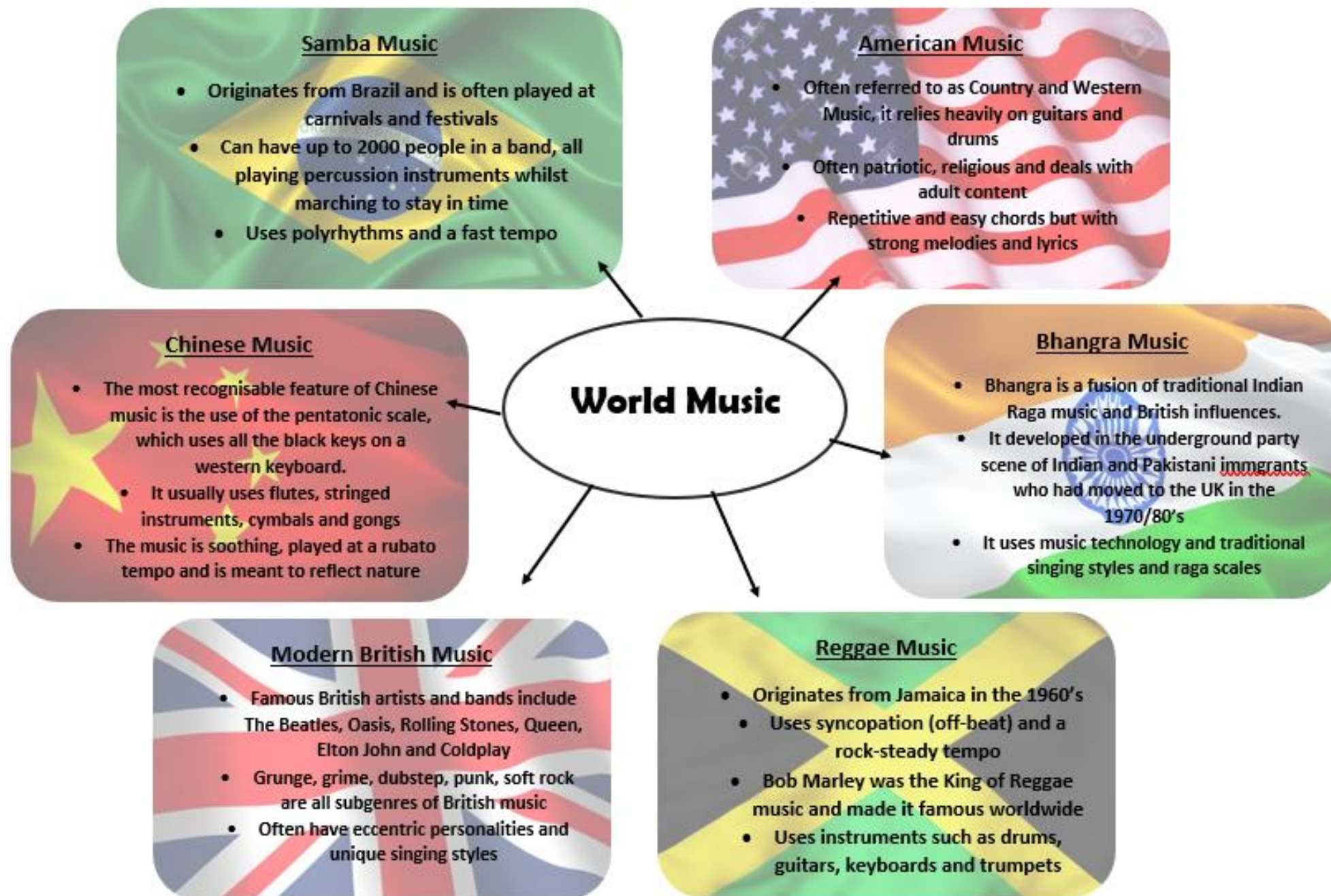
## UKULELE TUNING

- What does tuning mean?
  - Adjusting the pitch of each string to the correct notes to ensure that each instrument sounds the same.
- The tuning for a Ukulele is...



## MAJOR AND MINOR CHORDS







# Songwriting

- 1) Decide on the structure on your song using introductions, verses, choruses and bridges
- 2) Choose your chord progression for each section
- 3) Add a single melody line to each section using improvisation before settling on a repeating pattern that can be altered slightly in pitch or reversed to add contrast and interest
- 4) Add harmony using appropriate intervals
- 5) Add lyrics
- 6) Finally, choose which instruments to use in your arrangement

## Common Chord Progressions

Major Keys: C, D, F, G & A

### I IV V

C F G  
D G A  
F Bb C  
G C D  
A D E

### I vi IV V

C Am F G  
D Bm G A  
F Dm Bb C  
G Em C D  
A F#m D E

### ii V I

Dm7 G7 Cmaj7  
Em7 A7 Dmaj7  
Gm7 C7 Fmaj7  
Am7 D7 Gmaj7  
Bm7 E7 Amaj7

### I vi ii V

C Am Dm G  
D Bm Em A  
F Dm Gm C  
G Em Am D  
A F#m Bm E

### I V vi IV

C G Am F  
D A Bm G  
F C Dm Bb  
G D Em C  
A E F#m D

### I IV vi V

C F Am G  
D G Bm A  
F Bb Dm C  
G C Em D  
A D F#m E

### I iii IV V

C Em F G  
D F#m G A  
F Am Bb C  
G Bm C D  
A C#m D E

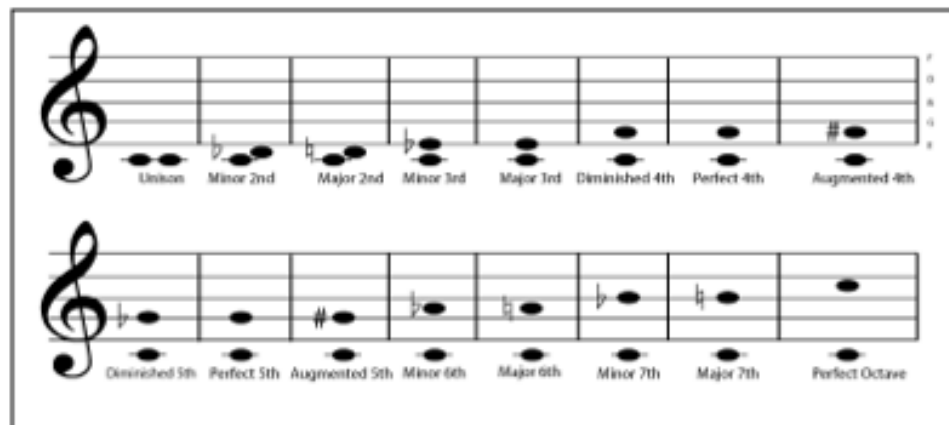
### I IV I V

C F C G  
D G D A  
F Bb F C  
G C G D  
A D A E

### I IV ii V

C F Dm G  
D G Em A  
F Bb Gm C  
G C Am D  
A D Bm E

www.piano-keyboard-guide.com



**Going the extra mile activities.**  
**Here are some great ideas to do with family to avoid boredom that go above and beyond during the next half term.**

The Arts	IT	DT	English and Drama	Humanities	PE
Create a Christmas play for you and your friends to work on over the internet. Make it hilarious.	Can you create a piece of spreadsheet art?	Research what different kinds of materials plumbers use. Why is copper used for some pipes and plastic for others? What sort of plastic is used?	Watch one of the briefings by the government. What makes a good information giving speech? How is it being delivered? Make your own.	Create a detailed plan to make the world more economically equal when we are all back to normal. Share it with anyone you can get to listen.	Create a new lockdown Olympic Sport. With the cancellation of Tokyo, your sport needs a name, at least 3 rules and a list of equipment needed.
Develop an observational humour stand up show. Watch how comedians tell a story. Think about their delivery and how they make it look like they have just had that thought. Try it.	Advise your family members on how to keep safe on line. Explain to them how scammers try to steal their money.	Design a meme.  One that is informative but also can make someone laugh.	Devise a political protest speech outlining your objection to something political e.g. children's suffrage or the tyranny of schooling.	In 1917 Russia had a great revolution. What would a great revolution look like in 2027? What would be the similarities and differences if Year 9 were in charge?	Get family members to play even by TEAMS or Zoom! Send it to the organisers of the Quarantine Olympics to include it in the next games!
Watch a performance by an artist you love – many are on Instagram or YouTube. Evaluate the difference between a live performance and a studio edit.	Write out all the instructions required by a human to get up and ready for home school each day. Be as specific as you would be with a computer.	Make an interesting paper model. Do some origami research to find something fascinating to attempt.	Think about the points that agree and disagree with the following statement:  There should be no democracy. We should have an overlord who makes all the decisions.	Why are we fascinated by crime? What makes Jack the Ripper such an interesting topic? Find out why if you can!	Create a diary of your physical activity each week. This could be a simple grid or list of activities.
Make a playlist that means something to you. Share it with friends and explain why it matters to you.	Think about how we can avoid mental health problems and remain connected online. Explain it to your family and make a plan.	Invent a new recipe and test it. Evaluate it compared to commercial products.	Think about a film you have watched recently. Imagine you had control of the story from half way through. How would you develop it?	How can we be greener as a society using technology? Create an infomercial advertising a product.	Think about what exercise or activity you completed, how long did you exercise for and how you felt during and after the activity.