

# Knowledge



Name \_\_\_\_\_

Form \_\_\_\_\_





**“We owe almost all our knowledge not to those who have agreed, but to those who have differed.”**

*~ Charles Caleb Colton*

*(research 10 facts about Charles Caleb Colton)*

**Year 9 Knowledge Organiser: Term 3**

# Instructions for using your Knowledge Organiser

The timetable on the next page tells you which subjects you should be studying on which days (it doesn't matter if you have that subject on that day or not, you should follow the timetable).

You are to use your exercise book to show the work you have done. Each evening you should start a new page and put the date clearly at the top.

You need to bring your KO and exercise book with you EVERY DAY to school. Your KO and exercise book will be checked regularly in form time.

You will also be tested in your lessons on knowledge from the organisers.



You must use the revision strategy Look – Say – Cover – Write - Check to learn the knowledge. You can also use your KOs and book in a number of different ways but you **should not just copy** from the Knowledge Organiser into your book.

## Presentation

**You should take pride in how you present your work:**

- Each page should be clearly dated at the top right hand side with the **Subject** written in the middle.
- Half way down the page a line should divide it in two with **Next Subject** written above the dividing line.
- Each half of the page should be neatly filled with evidence of self-testing. There should be an appropriate amount of work.
- Failure to show pride in your presentation or wasting space on your page with large writing or starting a number of lines down will result in a **negative AtL**.



# Year 9 Knowledge Organiser Homework Timetable

You are expected to study the subjects shown on your timetable each day. You need to spend 20 minutes on each subject and you will need to evidence your work in your exercise book.

WEEK A	Subject 1	Subject 2	Subject 3
MONDAY	English	MFL	Geography
TUESDAY	Science	Maths	PD
WEDNESDAY	History	Music	Science
THURSDAY	RE	Maths	Food
FRIDAY	Computing	Technology	English

WEEK B	Subject 1	Subject 2	Subject 3
MONDAY	English	Drama	Geography
TUESDAY	Science	Maths	RE
WEDNESDAY	History	PE	Science
THURSDAY	RE	Maths	MFL
FRIDAY	Computing	Art	English



# Reading Log

*“The more that you read, the more things you will know. The more that you learn, the more places you’ll go”*

**Dr Seuss**

Use this reading log to record the books you read and how long you have spent reading.

Week	MON	TUE	WED	THURS	FRI	SAT	SUN	Book(s) read (title and author)	Time spent reading	Parent comment/signature
Week 1										
Week 2										
Week 3										
Week 4										
Week 5										
Week 6										
Half Term										
Week 7										
Week 8										
Week 9										
Week 10										
Week 11										
Week 12										

## Themes in Much Ado About Nothing

### **Social Grace:**

The characters' colourful language is representative of the ideals that Renaissance courtiers strove for in their social interactions - their witty use language would gain attention and approval in noble households. Although this seems effortless, the characters are locked in a constant struggle to maintain social positions, e.g. Claudio and Benedick must constantly stay in favour with Don Pedro.

### **Confusion and Misunderstandings:**

A great deal of the comic effect and dramatic tension in the play is created through the various characters' confusion and misunderstandings of events and one another. One example is Claudio's misunderstanding that Don Pedro is trying to win Hero for himself, whilst another is the confusion caused through Dogberry's poor communication skills.

### **Deception:**

Many of the confusions and misunderstandings throughout the play have their root in deliberate deceptions – some of which have sinister intentions, and others which are more benign. For example, Don John's duping of the other characters very nearly lead to the play becoming a tragedy, whilst the light-hearted deception used on Beatrice and Benedick enables them to fall in love.

### **Honour:**

At the climax of the play, Claudio jilts Hero at the altar due to his mistaken belief in her infidelity. In Leonato's eyes, this does not only dishonor Hero, but also the whole family as well. His shame in her is such that he states 'hence from her, let her die' (IV.I 153) He sees her loss of honour as a stain upon his family, from which he can never distance himself.

## Features of a Comedy

- **Dramatic Irony** The audience is aware of Don John's numerous deceptions, but the characters are not initially aware.
- **Playful Language** – Puns, quips and vibrant figurative language are written into the text to demonstrate wit.
- **Soliloquy**-They say the lady is fair – 'tis a truth, Benedick considers his love for Beatrice in Act II Scene III.
- **Misunderstandings/ Confusion/ Deception** – Humour is derived from characters' shrouded perceptions of reality.
- **Aside**-Adding to the themes of confusion and deception, there are asides throughout, as characters speak to a selected audience.
- **Underlying Critique** – Shakespeare ridicules some of the issues in society, e.g. systems of class, love and honour.
- **Rhyming Couplets:**

The god of love, That sits above,

Benedick sings of his love for Beatrice.

Happy Ending – Normally involving a marriage.

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## Problem Solving at St Cuthbert's

- K** Key Information - Highlight or pick out the important things that you will need
- L** List the Maths - What Maths topics will you need? Can you write down any rules?
- A** Attach Numbers -
  - Assign numbers to help
  - Relate the problem to one you can already do eg..  $3 \times 4 = 12$
- P** Picture -
  - Annotate the diagram given with any information
  - Draw a picture to help you visualise
- S** Sensible - Does your answer make sense?

### Don't forget

Always show your working out  
Never round half way through a question

## Key Words

Take care with your spellings of these key words

Enlargement

Scale Factor

Direct

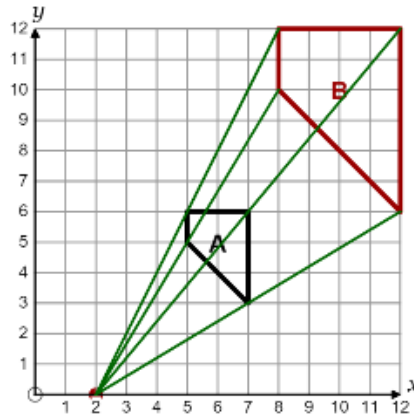
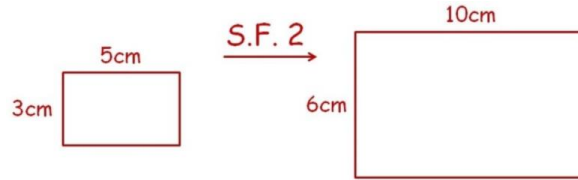
Inverse

Proportion

Value for Money

## Enlargement

In Maths we use the word enlargement to describe a change in size for a shape. Whether this means the shape gets bigger or smaller, it down to the Scale Factor



Describe the single transformation from shape A to shape B.

If we are asked to describe an enlargement, we need to include:

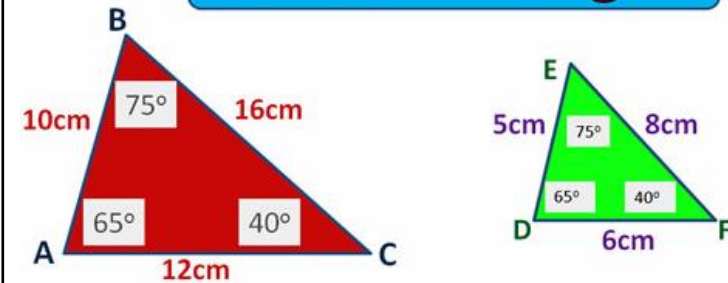
- The scale factor
- The centre of enlargement

## Similar Shapes

We would get Similar shapes if we enlarge a shape using a scale factor.

The angles in the original and the new shape will all be the same size. The lengths in the new shape will be calculated by multiplying the length by the scale factor. All the lengths on the new shape should be in the same ratio as the original

## Similar Triangles



**Similar Triangles are the exact Same Shape, but are Different Sizes.**

$\triangle ABC \sim \triangle DEF$  (~ means similar to)

We know for certain that they are the same shape, because they contain the same three angles. (This is the AAA rule for Similar Triangles).





## Direct Proportion

When quantities are in direct proportion with each other, when one is multiplied by 'n', so is the other

## The Unitary Method

3 packets of crisps weigh 84 g.  
How much do 7 packets weigh?



## Finding the Best Value for Money

To find out which deal offers the best value for money, we need to work out how much it is for the same quantity. In this example, it would be useful to find the price of 1 can in each of the pack sizes, so we can then compare



$$\text{Deal 1} = £4.00 \div 8 = £0.50$$

$$\text{Deal 2} = £2.70 \div 6 = £0.45$$

In this instance, Deal 2 offers the better value for money



# Year 9 Science – Term 3

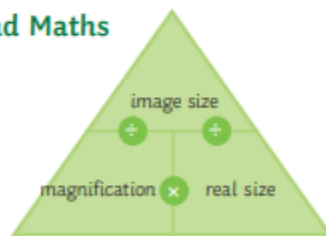
## Specialised Cells

When a cell changes to become a specialised cell, it is called differentiation.

Specialised Cell	Function	Adaptation
<b>sperm</b>	To get the male DNA to the female DNA.	Streamlined head, long tail, lots of mitochondria to provide energy.
<b>nerve</b>	To send electrical impulses around the body.	Long to cover more distance. Has branched connections to connect in a network.
<b>muscle</b>	To contract quickly.	Long and contain lots of mitochondria for energy.
<b>root hair</b>	To absorb water from the soil.	A large surface area to absorb more water.
<b>phloem</b>	Transports substances around the plant.	Pores to allow cell sap to flow. Cells are long and joined end-to-end.
<b>xylem</b>	Transports water through the plant.	Hollow in the centre. Tubes are joined end-to-end.

## Equations and Maths

### Equation



### Maths Skills

Conversions:  
Micrometres to millimetres: divide by 1000.

Standard Form:  
 $0.003 = 3 \times 10^{-3}$

$5.6 \times 10^{-5} = 0.0056$

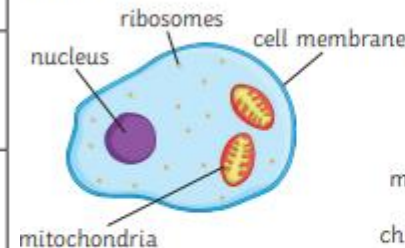
**Area** (to calculate the area of the inhibition zone around an antibacterial disk): **Area =  $\pi r^2$**

Use a ruler to measure the diameter and then half it to find the radius.

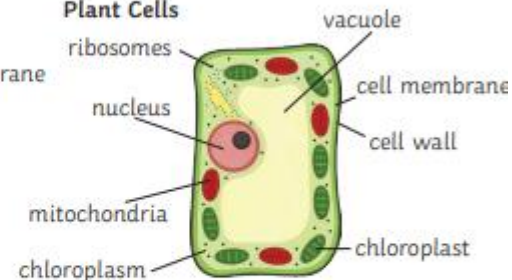
## Prokaryotic and Eukaryotic Cells

Eukaryotic cells have membrane-bound organelles, for example, plant cells, animal cells and fungus cells. Prokaryotic cells do not contain a nucleus, for example, a bacterial cell.

### Animal Cells



### Plant Cells



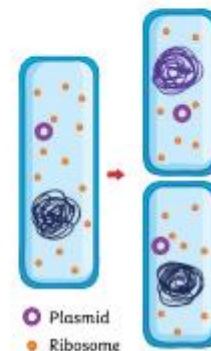
Plant and animal cells have similarities and differences:

	Animal	Plant
nucleus	e	e
cytoplasm	e	e
chloroplast	X	e
cell membrane	e	e
permanent vacuole	X	e
mitochondria	e	e
ribosomes	e	e
cell wall	X	e

### Bacterial Cells

Bacterial cells do not have a true nucleus, they just have a single strand of DNA that floats in the cytoplasm. They contain a plasmid.

Prokaryotic cells reproduce by **binary fission** - the cell splits in two.

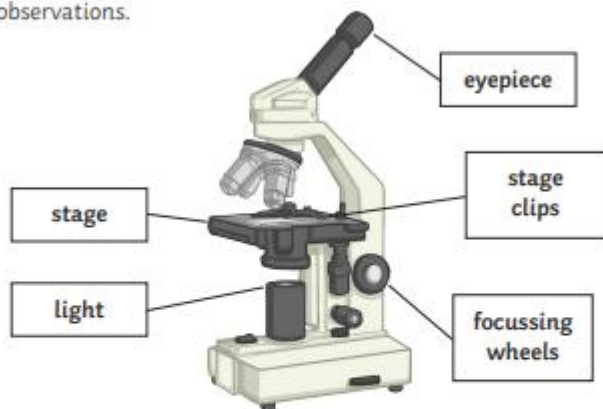


○ Plasmid  
● Ribosome

## Required Practical

### Microscopy Required Practical

- Includes preparing a slide, using a light microscope, drawing any observations – use a pencil and label important observations.



### Key Vocabulary

active transport  
alveoli  
chromosome  
diffusion  
eukaryotic  
gas exchange  
mitosis  
multicellular  
osmosis  
prokaryotic  
undifferentiated  
replicated  
specialised  
villi

### Osmosis and Potato Practical

- Independent variable – concentration.
- Dependent variable – change in mass.
- Control variable – volume of solution, temperature, time, surface area of the potato.

The potato in the sugar solution will lose water and so will have less mass at the end; the potato in the pure water solution will gain water.

In the nucleus of a human cell there are 23 pairs of **chromosomes**. Chromosomes contain a double helix of **DNA**. Chromosomes have a large number of genes.



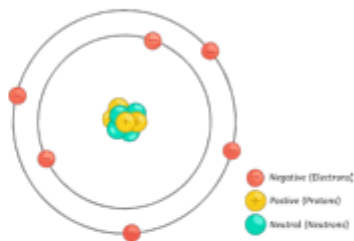
St Cuthbert's Catholic High School  
*Live life in all its fullness*

# Year 9 Science – Term 3

## Atoms

Contained in the nucleus are the **protons** and **neutrons**. Moving around the nucleus are the **electron shells**. They are negatively charged.

Particle	Relative Mass	Charge
proton	1	+1
neutron	1	0
electron	Very small	-1



Overall, atoms have no charge; they have the same number of protons as electrons. An ion is a charged particle - it does not have an equal number of protons to electrons.

## Atomic Number and Mass Number

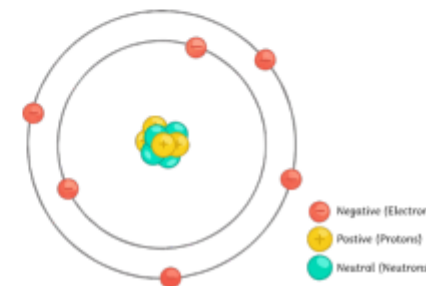


## History of the Atom

Scientist	Time	Discovery
John Dalton	start of 19 <sup>th</sup> century	Atoms were first described as solid spheres.
JJ Thomson	1897	Plum pudding model – the atom is a ball of charge with electrons scattered.
Ernest Rutherford	1909	Alpha scattering experiment – mass concentrated at the centre; the nucleus is charged. Most of the mass is in the nucleus. Most atoms are empty space.
Niels Bohr	around 1911	Electrons are in shells orbiting the nucleus.
James Chadwick	around 1940	Discovered that there are neutrons in the nucleus.

## Electronic Structure

Electrons are found in shells. A maximum of two in the most inner shell, then eight in the 2<sup>nd</sup> and 3<sup>rd</sup> shell. The inner shell is filled first, then the 2<sup>nd</sup> then the 3<sup>rd</sup> shell.



## The Modern Periodic Table

Elements are in order of **atomic mass/proton number**. It shows where the metals and non-metals are. **Metals** are on the **left** and **non-metals** on the **right**. The **columns** show the **groups**. The **group number** shows the number of **electrons** in the **outer shell**. The rows are **periods** – each period shows another full shell of electrons. The periodic table can be used to predict the reactivity of elements.

## Development of the Periodic Table

In the early 1800s, elements were arranged by atomic mass. The periodic table was not complete because some of the elements had not been found. Some elements were put in the wrong group.

Dimitri Mendeleev (1869) left gaps in the periodic table. He put them in order of **atomic mass**. The gaps show that he believed there was some undiscovered elements. He was right! Once found, they fitted in the pattern.

## Elements

Elements are made of atoms with the same atomic number. Atoms can be represented as symbols.

**N** = nitrogen    **F** = fluorine    **Zn** = zinc    **Ca** = calcium

**Isotopes** – an isotope is an element with the **same number of protons** but a **different number of neutrons**. They have the same atomic number, but different mass number.

**Mixtures** – in a mixture there are no chemical bonds, so the elements are easy to separate. Examples of mixtures are air and salt water.

**Compounds** – a compound is when two or more elements are chemically joined. Examples of compounds are carbon dioxide and magnesium oxide. Some examples of formulas are CO<sub>2</sub>, NaCl, HCl, H<sub>2</sub>O, Na<sub>2</sub>SO<sub>4</sub>. They are held together by chemical bonds and are difficult to separate.



# Year 9 Religious Education – Term 3: What is God calling me to do?

## Big Questions:

- What is vocation?
- How can I know what my vocation is?
- What is the purpose of marriage?
- Why might someone want to be ordained?
- What does the Catholic Church think about other religions?
- What if... a woman wants to be a priest?
- How can...you accept other religions and still be true to your own beliefs?



Key word	definition
Vocation	A call from God to lead the Christian life by using your life and talents as a member of God's family. From the Latin 'vocare' = 'to call'
Marriage	In the Catholic church marriage is more than a legal contract; it is a sacrament where a man and a woman are joined in the eyes of God
Contraception	Methods or devices used to prevent unwanted pregnancy.
Sacrament of Holy Orders	the sacrament by which men are ordained as priests or deacons. It is a sacrament carried out by a bishop, who must lay his hands on the candidate.
Evangelisation	Sharing the good news about Jesus - the gospel
Interfaith dialogue	Dialogue and co-operation between different religions, in order to build positive relationships and understanding

Complete the learning homework for each week; work in your yellow book		6 <sup>th</sup> May	Section 2 and SOWAA 4, 5, 6
22 <sup>nd</sup> April	Key words and definitions	13 <sup>th</sup> May	Section 3 and SOWAA 7, 8, 9, 10
29 <sup>th</sup> April	Section 1 and SOWAA 1, 2, 3	20 <sup>th</sup> May	Recap all

**SECTION 1;** Christians believe we are all called by God to lead a Christian life, using our skills and talents that God has given us. This is our vocation. We need to listen to God and try to understand what God is wanting us to do.

God calls us, just as Jesus called his first disciples. He asked them to leave what they had been doing and follow him.



**SECTION 2;** In the Catholic Church marriage is a sacrament. It is



more than a legal contract - it is the joining of a man and a woman in front of God. Marriage is a lifelong commitment, and the purpose of marriage is to build family and society.

Some people choose not to marry; they choose to commit their life in other ways. Some men choose to receive the sacrament of Holy Orders and become a deacon or priest.

**SECTION 3 -** Jesus' last instruction to his disciples before he ascended to heaven was to spread Jesus' message, and to 'baptise all nations'.

Evangelising, or spreading the message of Jesus is very important to Christians. However the Catholic Church knows and understands that people belong to different religions. The Catholic Church does not try to convert people or tell people they are wrong, but works to build good relationships within communities between people of different religions, through 'interfaith dialogue'.



## Sources of Wisdom and Authority (SOWAA)

(1) "As Christians, we do not only receive a vocation individually; we are also called together. We are like the tiles of a mosaic," Pope Francis

(2) 'you shall love the Lord, your God, with your whole heart, and with your whole being, and with your whole strength' Deuteronomy 6:5

(3). "Come, follow me," Jesus said, "and I will send you out to fish for people." At once they left their nets and followed him. Matthew 4:19

(4) 'God blessed them, and God said to them, Be fruitful and multiply...' Genesis 1

(5) Marriage and conjugal love are by their nature ordained toward the procreation and education of children. Children are really the supreme gift of marriage' Pope Paul VI, Humanae Vitae (1968)

(6) Marriage is "twofold end...: the good of the spouses themselves and the transmission of life" Catechism

(7) 'Very truly I tell you, whoever accepts anyone I send accepts me; and whoever accepts me accepts the one who sent me. John 13:20

(8) "Therefore go and make disciples of all nations, baptizing them in the name of the Father and of the Son and of the Holy Spirit," Matthew 28:19

(9) God Himself, in His wise plan, has inspired, in religious leaders and in many others, the desire to encounter and come to know one another in a way respectful of religious differences." Pope Francis

(10) 'I am the way the truth and the life..no one comes to the Father except through me' John 14:6

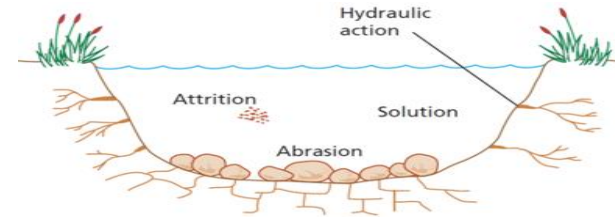
# Year 9 Geography – Term 3: Power of Water

## Key Vocabulary...

<b>River</b>	A river is a natural flowing watercourse, usually freshwater, flowing towards an ocean, sea, lake or another river.
<b>Long Profile</b>	The shape of the river and its gradient from the source to the mouth.
<b>Erosion</b>	Erosion is the process that breaks things down.
<b>Transportation</b>	The process of carrying or moving sediment downstream.
<b>Deposition</b>	Dropping or settling of sediment.
<b>Flood</b>	Flooding occurs when the river bursts its banks overflowing onto the area surrounding the channel.
<b>Flood Defenses</b>	Management strategies used to protect people and land from flooding.

## 4 Processes of Erosion

<b>Hydraulic action</b>	This is when the force of water erodes softer rock.
<b>Abrasion</b>	This is when large pieces of bedload material wear away the river banks and bed.
<b>Attrition</b>	This is when the bed load itself is eroded when sediment particles knock against the bed or each other and break, becoming more rounded and smaller.
<b>Solution</b>	This is when finer sediment is dissolved and eroded by the minerals in the water.



## Flood Defences...

### Hard engineering

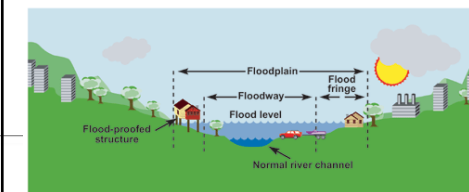
Using man-made structures to change the course of the river in order to prevent it flooding. For example: **Dams, Levees, Channel Straightening**



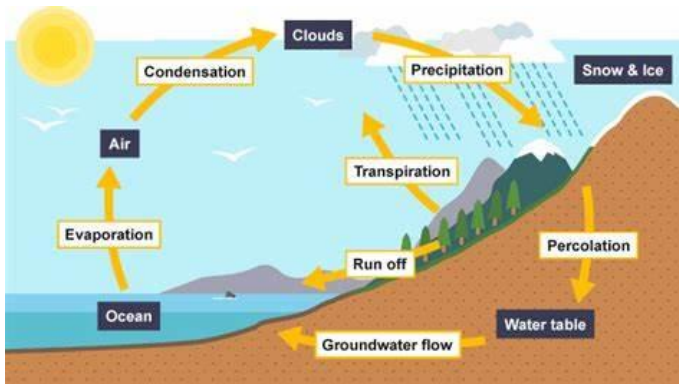
### Soft engineering

Returning a river to its natural form in order to protect places from flooding. For example: **Flood Plain zoning, river restoration**

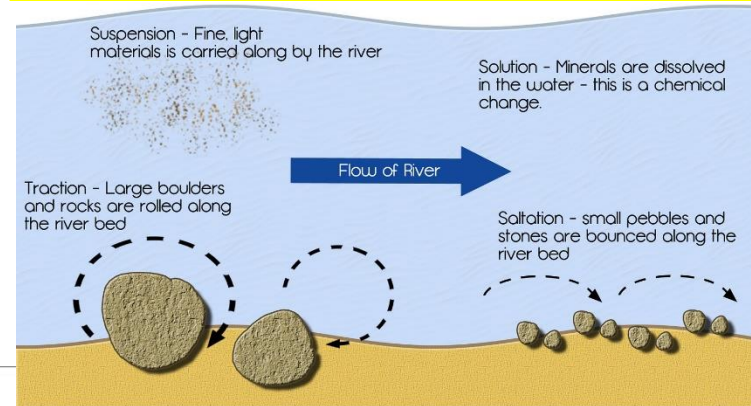
The floodplain



## Water Cycle



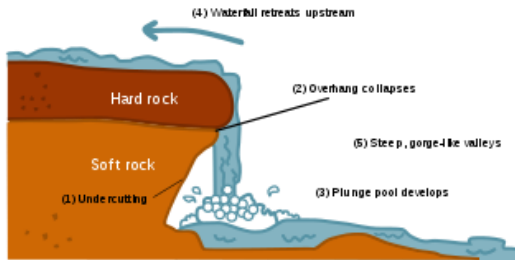
## 4 Processes of Transportation



**Activity:** Preparing for a flood is vital to protect people. Create an information leaflet describing the best way for people to prepare for a flood. Why is it more important than ever for people to have this knowledge?

# Landforms

## Waterfall



Formation of a waterfall:

- The soft rock erodes more quickly, **undercutting** the hard rock.
- The hard rock is left **overhanging** and because it isn't supported, it eventually collapses.
- The fallen rocks crash into the **plunge pool**. They swirl around, causing more erosion.
- Over time, this process is **repeated**, and the waterfall moves upstream.
- A steep-sided **gorge** is formed as the waterfall retreats.

## Meander and oxbow lake



A meander is a bend in the river. Meanders usually occur in the middle or lower course and are formed by **erosion** and **deposition**. As the river flows around a meander, the fastest flow is around the outside of the bend. This creates erosion on the outside and deposition on the inside of the bend, which means that the meander slowly moves. If the meander moves so much that the bend becomes very large, the course of the river may change. The meander may be cut off and deposition fills the section that no longer flows. This forms an **ox-bow lake**.

Task...

Define the water cycle.

Name the 4 types of precipitation.

Explain the changes in a river as it moved downstream.

What effect will impermeable surface have on the risk of flooding?

Task...

1. Using the diagram of floodplain zoning. Discuss the advantages and disadvantages of this type of soft engineering.
2. Using the diagram below identify and state the advantages and disadvantages of this type of hard engineering.



**Question:** "Hard engineering flood management strategies are the most effective" Evaluate this statement

1. BUG the question by boxing the command word and underlining the content you need to write about.
2. List the key vocabulary you will use.
3. Create a plan of what you would write in each paragraph.
4. Practice writing your answer from memory.

# Year 9 History- Term 3: 9/11 & Terrorism

Key word	Definition
Terrorism	Terrorists are people who use violent methods, or violent threats, to achieve their demands.
Invasion	An instance of invading a country or region with an armed force.
Imperialism	A relationship in which people, groups, or countries agree to work together.
Recruitment	The process of finding people to work for a company or become a new member of an organisation such as an army.
Extremism	The holding of extreme political or religious views.
Communism	Communism is a type of government as well as an economic system. In a Communist system, individual people do not own land, factories, or machinery. Instead, the government or the whole community owns these things.
Democracy	The word democracy describes a form of government. The word comes from two Greek words that mean "rule by the people." In a democracy the people have a say in how the government is ran.
Civil Rights	The rights of citizens to political and social freedom and equality.
Ideologies	An ideology is a collection of ideas or beliefs shared by a group of people.
Tyranny	An act or the pattern of harsh, cruel, and unfair control over other people.

1 Al-Qaeda, Arabic al-Qā'idah ("the Base"), is a militant Islamist organization founded by Osama bin Laden in the late 1980s. Al-Qaeda began as a logistical network to support Muslims fighting against the Soviet Union during the Afghan War; members were recruited throughout the Islamic world. When the Soviets withdrew from Afghanistan in 1989, the organization dispersed but continued to oppose what its leaders considered corrupt Islamic regimes and foreign (i.e., U.S.) presence in Islamic lands. Based in Sudan for a period in the early 1990s, the group eventually re-established its headquarters in Afghanistan (c. 1996) under the support of the Taliban militia.

2 On the morning of 11 September 2001, 19 Al Qaeda terrorists hijacked four commercial passenger planes in the United States. Two planes were flown into the Twin Towers of the World Trade Center in New York City, causing both towers to collapse. A third plane was crashed into the Pentagon, just outside Washington, DC. The fourth plane crashed in rural Pennsylvania after the crew and passengers attacked the terrorists on board, preventing it from hitting another target thought to be the White House.

The attacks claimed nearly 3,000 lives and impacted many more globally. On 20 September, US President George W Bush declared a 'War on Terror' and stated that defeating terrorism was now the world's fight. The US had experienced terrorist attacks previously, but none had been on the same scale or significance. 9/11 shook the world and shaped the generation to come. An invasion of Afghanistan was launched barely one month later, on 7 October 2001. American, British and Afghan United Front (Northern Alliance) forces were deployed to destroy al-Qaeda and remove the Taliban regime that had harboured the terrorist group in Afghanistan.

4 Iraq 2003- The British Government stated that the main objectives of the invasion were:

- 1) First, end the regime of Saddam Hussein.
- 2) Second, to identify, isolate and eliminate Iraq's weapons of mass destruction.
- 3) Third, to search for, to capture and to drive out terrorists from that country.

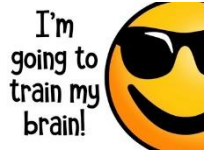
The Iraq War was fought between Iraq and a group of countries led by the United States and the United Kingdom. It began on March 20, 2003 and ended on December 18, 2011. The war resulted in the toppling of the Iraqi government led by Saddam Hussein.

5 The Islamic State - also known as ISIS, ISIL, or Daesh - emerged from the leftovers of al Qaeda in Iraq, Their goal was to solidify and expand its control of territory once ruled by early Muslim caliphs (the ruler of the Muslim community) and to govern through implementation of its strict interpretation of sharia.

6 Sharia stands for Islamic or sacred law. It is an Arabic word meaning "the way" or "the path to water." For centuries, Muslim scholars have given a broad definition of Sharia reflecting the diversity of interpretations on how Muslims have attempted to best understand and practice their faith.



# Year 9 Personal Development – Term 3: Growth Mindset



**G**ive it your all  
**R**edouble if necessary  
**I**gnore giving up  
**T**ake time to do it right



## Event + Response = Outcome

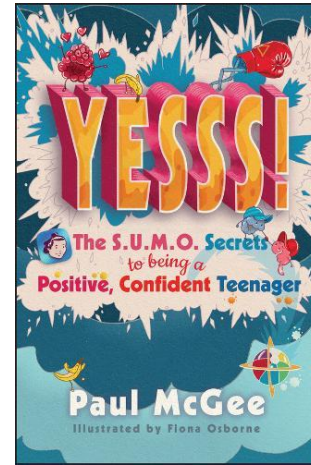
Events happen in our lives and we can choose how we respond to them which then decides the outcome.

For example; **Event: You get the worst mark in your class and your mates laugh at you.**

Possible responses:

- Be upset and tell yourself you're stupid and not good at this subject.
- Blame the teacher.
- Pretend you're not bothered and laugh about it.
- Talk to the teacher or another adult and ask for help.
- Plan how you could do better next time by working harder or revising more often.

Write down the outcomes of each of these responses and choose the one you think is best.



JK Rowling's Harry Potter book was rejected 12 times before someone accepted it. Imagine how different her life would have been if she had given up!

**BSE Card (Blame Someone Else)**  
How many times have you used this?  
It's so easy to BSE!

Think of a time when a teacher may have told you off for something and you have said "It wasn't me it was them"

If this happens again, think about how you respond. Then think about the outcome from that response.



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**Inspirational quotes:** "I really think a champion is defined not by their wins but by how they recover when they fall" Serena Williams (Tennis Player)





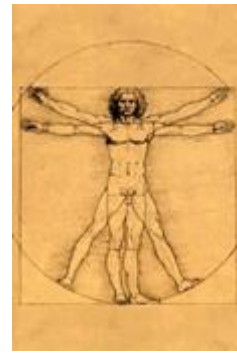
# Year 9 Art – Term 3:

## Artist Focus – Life Drawing and Portraits

**Portraits:** A Portrait is a **painting, drawing or photograph** of a **person or animal**. Portraits have been recorded by artists since records began. They were once the only way for the **Aristocracy and Clergy** to have a record of how they looked, but with the advent of the **camera (1816)** how we record ourselves and the art created from these images also changed. **Portraiture** is a way that artists also learn and develop their skills. You only need a mirror and you have a model from whom to record. **Life Drawing:** Is the artistic study of the **human form**. There is no better way to learn how to draw the figure than to study it. Usually the model is naked, as this allows the artist to see the way that muscle attaches to bones, how the joints move, how light and shadow play upon the human form.



Pictured above are examples of **life drawing**. The first and most famous for his drawing of the human form by **Michaelangelo (1475-1564)**. His life drawings are incredibly detailed and clearly show the **musculature** of the human body. His drive to understand the human form even led him to cut up **cadavers** in order to better understand what went on under the skin, for his Art.



### Key Words and Specialist Vocabulary:

**Proportion:** is the principle of **art** refers to relative size and scale. This is important in all drawing but especially in both life drawing and portraiture.

**Tortillon:** A drawing tool used by artists to enable them to add a smooth shading tone.

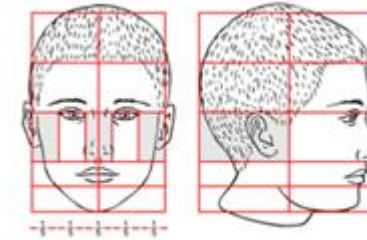
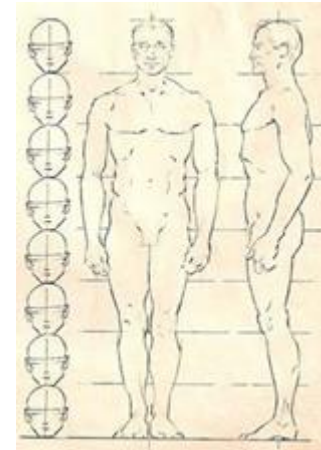
**Cadavers:** a dead body.

### John Paul Thurlow (1960)

John Paul Thurlow is a British born Illustrator and Creative Director living and working in New York. He works in an Advertising agency which specialises in Beauty brands. He is best known for a series of **illustrations of magazine covers**. See below. Most of his illustrations are finely rendered portraits of well-known people. Pictured below are some of his works, from a series called 'Covers' (2012) **Thurlow says of his work:** "To see the handmade mark – the old-fashioned craft technique still has power because not everyone can do it. Right now I'm somewhat obsessed with the drawings of **Hans Holbein the Younger and Ingres.**"



### Proportions for drawing the human figure and head.



These illustrations show the **basic guidelines** which artists must follow if they are to create realistic figures and faces.

Each human is a one off and of course these are only **guidelines**, but these **rules of proportion** are the **starting point** for every life drawing or portrait and it is important to learn them. Once you know these rules, you can then experiment and develop your own way of drawing realistically.

## Key Knowledge

Desktop Publishing is when we create documents using page layout software. We can use desktop publishing to make things like:

- newsletters
- Brochures
- Magazines

Some examples of software we can use for desktop publishing are:

- Microsoft Word
- Microsoft Publisher
- Book Creator

## Key Vocabulary

Spelling	Definition/Sentence
Text	Text is the words you can see on screen
Format	The ways images, text and objects are arranged on a screen
Textbox	A box that you can input into a document and add words to
Outline	A line you can add to a shape or text box
Object	An object in publishing software can be a file, a chart or a spreadsheet for example
Layout	The plan or design or arrangement of something laid out.

## Programs and Apps



## Examples of Databases

**Layout of A Page**

When desktop publishing, we consider how we can lay out a page in the most interesting, eye-catching, and appropriate ways, to suit our purpose and audience.

The title should be large, bold and clear. It is normally the largest text on the page.

Consider which font you will use – different fonts create different ideas and feelings.

What is the main story of the magazine? How can you sum the story up in a few words?

Think about how different colours make us think and feel.

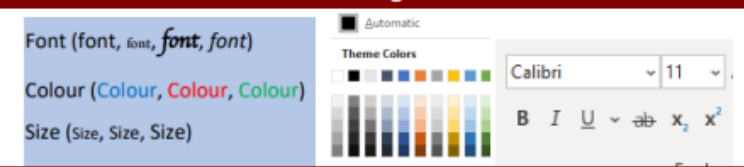
Think about where you will put the date and price of the magazine – this is important information!

Magazines are normally in portrait orientation. Think about how you lay out text and images.

## Microsoft Word

Microsoft Word is a word-processing program used for creating documents such as letters, brochures, learning activities, job applications and students' homework assignments.

## Editing Text



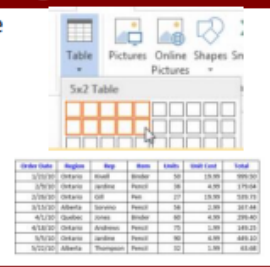
## Keyboard Shortcuts

A keyboard shortcut is a combination of keys that allows the user quick access to a particular function.



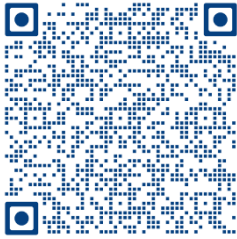
## Inserting Tables

Tables can be inserted to present text information and/or numerical data.



# Year 9 Design and Technology – Term 3: Cam Toy

Scan the QR codes to go to the Automata Museum Website



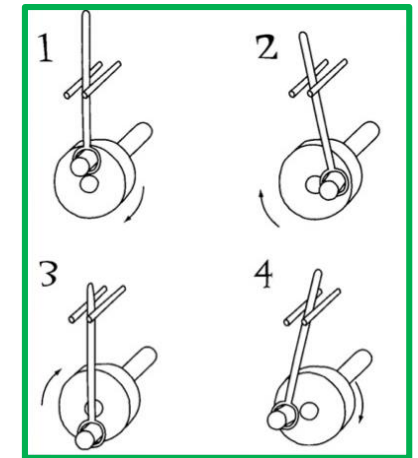
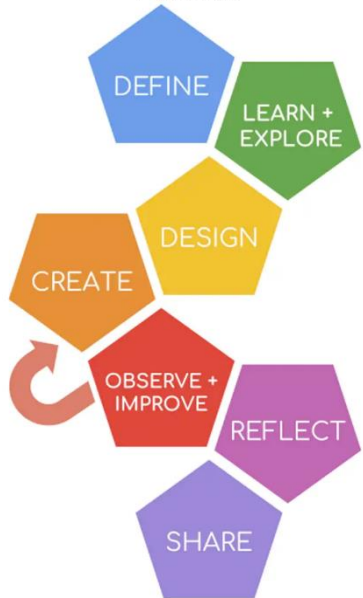
Key vocabulary	Definition
Follower	Follower gear means the gear after the idler gear.
Automata	A mechanical figure or contrivance constructed to act as if by its own motive power.
Specification	As a list of criteria a product needs to address.
Moodboard	A mood board is essentially an arrangement of images that inspire designers.
Cam Shaft	Is a shaft that contains a row of pointed cams, in order to convert rotational motion to reciprocating motion.
Prototype	Is an early sample, model, or release of a product built to test a concept or process.
<b>Fulcrum</b>	Pivot point on which a lever turns.
Flat Follower	Flat followers have a flat bottom that sits on the cam. These cope well under load but aren't very accurate and have a lot of friction.
Gear Tooth	A gear tooth is a single protruding section on the outer edge of a gear wheel.
<b>Kinetic</b>	Refers to motion or movement.

## Automata Toys.



Scan the QR code to watch a video about Designer Amedeo Capelli Automatas.

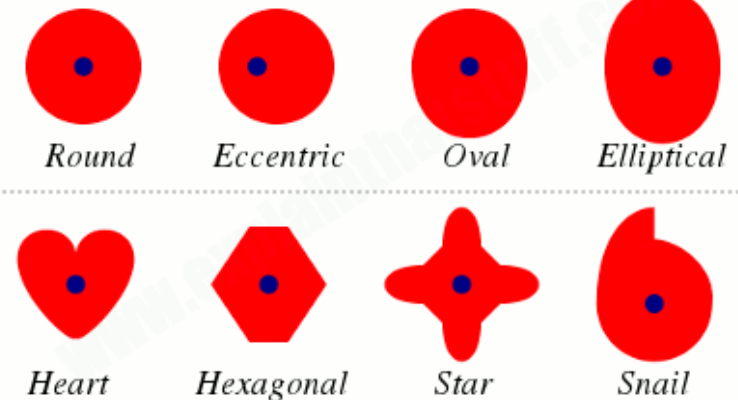
ENGINEERING DESIGN PROCESS



## 5 Habits

1. Look at other designers' work.
2. Do not be afraid to experiment.
3. Think about what they want to be known for.
4. Listen to what clients have to say.
5. Explain your work.

## Some common types of cams



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# Year 9 Drama – Term 3: Live Theatre Responses

Key terminology	Definition
<b>Describe</b>	means to give a detailed account of something.
<b>Analyse</b>	means to examine something in detail to explain and interpret it.
<b>Evaluate</b>	Using the evidence to make a judgement on how effective or successful something was
<b>Use of space</b>	How an actor uses the stage space, moves and interacts with other actors or the set.
<b>Use of sound</b>	How sound was added in and the effect of this.
<b>Use of lighting</b>	How the lighting changed and what effects this created.
<b>Use of set design</b>	How the set design communicated meaning.
<b>Ensemble</b>	is when a group works together for a collective goal, such as a group of actors or musicians.
<b>Interpretation</b>	is a representation of something in a new or unique way.
<b>Context</b>	is the setting or background to a play which helps us understand it.
<b>Physical theatre</b>	is when actors use their bodies to convey something, instead of using props.
<b>Choral movement</b>	is when a group of actors move together in unison, as a chorus.
<b>Non-naturalistic theatre</b>	is theatre which does not mirror real life, instead elements are suggested or represented.



## The effect of heat on protein

Functional and chemical properties of food

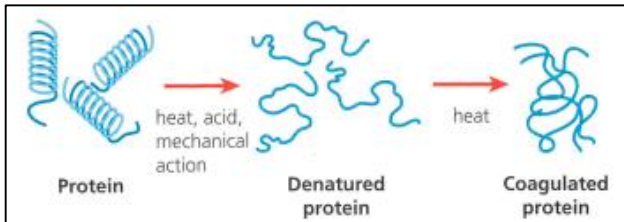
### Denaturation

Denaturation happens when the long chains of amino acids that make up proteins unfold. This happens in recipes when protein foods are either heated, beaten or exposed to acidic foods. Examples are below:

- **heat** from a pan when frying an egg
- **acid** (lemon juice) in a meat marinade
- **mechanical action** when whisking egg whites for a meringue.

### Coagulation

Coagulation happens when the protein in food sets during the cooking process. We cook protein foods to make them nicer to eat. A cooked egg is nicer than a raw egg.



The diagram shows proteins denaturing (change shape) and then coagulating (set).

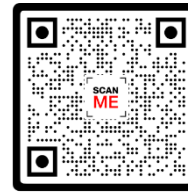
Scan the QR code to watch a video about the protein section of the Eatwell guide. Scan to complete the quiz on fish processing/fish in the diet.

Key vocabulary	Definition
Binding	To bring ingredients in a mixture together using a binding ingredient (egg).
Coagulation	When protein sets during the cooking process.
Coating	To add another ingredient to create an attractive finish or protective layer.
Conduction	Heat transfers from a cooking pan/tray to the food, e.g., cookies on a tray.
Convection	Heat travels through air and water, e.g., boiling eggs, baking in the oven.
Denaturation	When long chains of amino acids in proteins unfold and change shape.
Denature	Heat, acid and mechanical action cause proteins to denature.
DRVs - Dietary reference value	These are estimated amounts of nutrients that are needed by different groups of healthy people. They relate to a person's age, gender and activity.
Fibre	Fibre makes us feel full. It is essential for a healthy digestive system.
Polysaccharide	Starch is a complex carbohydrate which takes the body longer to digest.

## Protein foods including fish



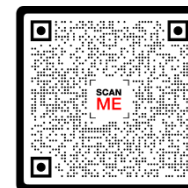
SCAN TO WATCH



SCAN FOR QUIZ

This section of the Eatwell guide supplies us with the macronutrient protein. It includes food from animal and plant sources. Most animal sources have all the amino acids our body needs to make new proteins so they are called **High Biological Value (HBV)**. Most plant sources have some amino acids missing so are called **Low Biological Value (LBV)** so have to be combined with others to get protein complementation.

## Processing of fish

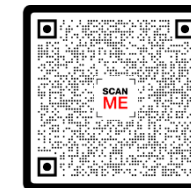


SCAN TO WATCH

Scan the QR code to watch a video about processing fish.

## Carbohydrates

One of the three macronutrients; primary function is energy. Complex carbohydrates supply slow release energy that our body has to break down so will last longer.



SCAN TO WATCH

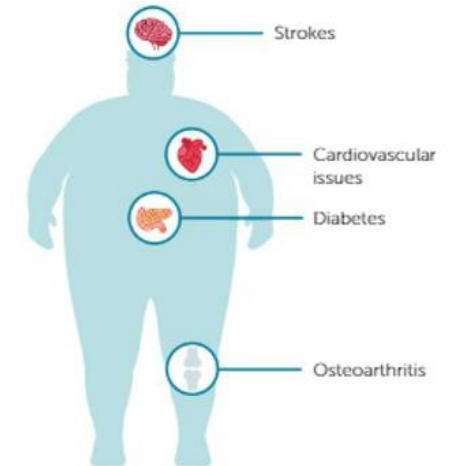
Scan the QR codes to watch a video about carbohydrates and complete your homework quiz.



SCAN FOR QUIZ

## Takeaways

A restaurant or shop selling cooked food to be eaten elsewhere. There are many different types of takeaways - pizza, Chinese, Indian, fish and chips are just a few. Takeaways can be high in fat and salt, for these reasons they should be eaten infrequently as they can cause people to put weight on. Some health effects of being overweight are in the diagram below.



## 1. Key concepts and ideas

<b>2. Purpose</b>	Music in a film is there to <b>set the scene, enhance the mood, tell the audience things</b> that the visuals cannot, or <b>manipulate</b> their feelings. <b>Sound effects are not music!</b>
<b>3. Specially composed music</b>	Some music is <b>composed specially</b> for a film. Much of this is broadly classical in style.
<b>4. Borrowed music</b>	Some music used in film soundtracks was composed for other (non-film) purposes, but is <b>adopted</b> for use in a film because it fits the film-maker's intentions.
<b>5. Theme song</b>	Sometimes a song, usually a pop song, is used as a <b>theme song</b> for a film. This helps with marketing and <b>publicity</b> .

## 8. Keywords

<b>7. Click Track</b>	A <b>click metronome</b> heard by musicians through headphones as they record.
<b>8. Cues</b>	The <b>parts of the film that require music</b> . This is agreed between the director and the composer.
<b>9. Diagetic</b>	<b>Music that is part of the action:</b> the characters in the film can hear it.
<b>10. Leitmotif</b>	A <b>short melody</b> that is <b>associated with a character</b> or idea in a film.
<b>11. Mickey Mousing</b>	When the <b>music fits precisely</b> with a specific part of the action in a film.
<b>12. Non-diagetic</b>	<b>Music that is not part of the action:</b> the characters in the film <b>cannot hear it</b> . It is just for the audience.
<b>13. Syncing / sync point</b>	A precise moment where the timing of the music needs to fit with the action.
<b>14. Underscore</b>	Where <b>music is played at the same time</b> as the action or dialogue.

## Key composers

- Bernard Herrmann
- John Williams
- John Barry
- Jerry Goldsmith
- Hans Zimmer
- James Horner
- Danny Elfman
- Alan Silvestri
- Howard Shore



A goal in sport may be to improve your cardiovascular fitness, or increase your muscular strength, or improve your co-ordination.

A goal can help you to:

- Focus on what's important
- Increase your motivation to progress
- Develop new strategies to meet the goal

Goal setting is incredibly effective with dramatic and positive effects on performance. It's important to select the right goal for you.

Specific	Measurable	Achievable	Realistic	Time-Bound
<p>Having a specific goal means knowing exactly what the goal is. Specific goals can act as clear steps towards the overall goal. Before you decide what your specific goal is you should test your current fitness level.</p> <p>E.g. 'I want to run 100m further on the cooper test' is a specific goal.</p>	<p>Measurable goals means that you know when you have achieved them. This can be seen when comparing fitness test results that you have gone further or faster from the use of data.</p> <p>E.g. 'you have ran 150m further on the cooper test the second time when comparing with the first time'</p>	<p>It is important that your goals stretch you, but are possible to achieve. Setting unachievable goals can make you feel demotivated and you are less likely to achieve your target.</p> <p>E.g. 'Training so you can run 100m further in the cooper run in 6 weeks is achievable but being able to run a marathon in 4 weeks of training is not achievable.'</p>	<p>A goal may well be achievable in theory, but if it is to be achievable in practice you need to have the time and resources to complete it.</p> <p>E.g. 'If you want to go to swimming after work and the swimming pool is closed after work then this is unrealistic.'</p>	<p>When your goals doesn't have a time limit it can be harder to achieve it. All goals need to have a time limit or deadline for when you want to achieve it. It will also give you more motivation to achieve it.</p> <p>E.g. '6-8 weeks to improve upon your cardiovascular fitness to play netball for a full 30 mins'</p>



# Year 9 Spanish – Term 3

1

I wear	Llevo	I put on / I wear	Me pongo
a bomber jacket	chaqueta de cuero	(a pair of) jeans	unos vaqueros
(a pair of) trousers	un pantalón	(a pair of) pyjamas	unos pijamas
a jumper	un pulóver	(a pair of) shorts	unos pantalones cortos
a sweatshirt	un suéter	a t-shirt	una camiseta
a cap	un gorro	a shirt	una camisa
a tie	una corbata	a skirt	una falda
a dress	un vestido	a jacket	una chaqueta
trainers	unas deportivas	boots	unas botas
shoes	unos zapatos	socks	unos calcetines
gloves	unos guantes	sandals	unas sandalias

3

Can I help you?	¿Puedo ayudarles ?	I would like...	Me gustaría...
Do you have.. ?	¿Tienes.. ?	How much is it?	¿Cuánto cuesta ?
What size do you want?	¿Que talla quieres?	What colour?	¿De qué color ?
large	grande	medium	median@
small	pequeñ@	please	por favor
Here you are	aquí está	It suits me	me queda bien
It suits you	te queda bien	It doesn't suit me	no me queda bien
it's too big	es demasiado grande	it's too small	es demasiad@ pe- queñ@
it's too short	es demasiad@ corto@	it's too long	es demasiad@ larg@
it's too baggy	es demasiad@ larg@	it's too expensive	es demasiad@ car@

# De compras

2

money	dinero
pounds (£)	libras
shopping	las compras
presents	los regalos

pocket money	la paga
euros (€)	euros
souvenirs	los recuerdos





# Year 9 Spanish – Term 3

4

All these adjectives go <u>after</u> the item of clothing they are describing				
	Masculine	Feminine	Masc. plural	Fem. plural
blue	azul	azul	azules	azules
white	blanco	blanca	blancos	blancas
pink	rosa	rosa	rosas	rosas
green	verde	verde	verdes	verdes
black	negro	negra	negros	negras
yellow	amarillo	amarilla	amarillos	amarillas
grey	gris	gris	grises	grises
orange	naranja	naranja	naranjas	naranjas
brown	marrón	marrón	marrones	marrones
purple	morado	morada	morados	moradas
red	rojo	roja	rojos	rojas
spotty	de lunares			
stripey	de rayas			
checked	de cuadros			

5

I went	Fui	I wore	Llevé
it was	Fue	I put on / I wore	Me puse
I was (I used to be)	Era	When I was young...	Cuando era joven...
When I was 8 years old...	Cuando tenía ocho años...	When I used to go...	Cuando iba...
I used to wear	Llevaba	I used to put on / wear	Me ponía

# De compras

6

I like	me gusta	I don't like	no me gusta
I love	me encanta	I hate	odio/detesta
the smart look	el estilo elegante	the sporty look	el estilo deportista
the casual look	el estilo informal	my uniform	mi uniforme
because	porque	it's cool	es guay
it's elegant	es elegante	it's practical	es práctic@
it's comfortable	es cómod@	it's nice	es bonit@
it's ridiculous	es ridícul@	it's ugly	es fe@
it's unfashionable	es antigu@/ pasado de moda	it's fashionable	a la moda



# Notes

A series of horizontal dotted lines for writing notes.



# Notes

A series of horizontal dotted lines for writing notes.





# **St Cuthbert's Catholic High School**

*Live life in all its fullness*