

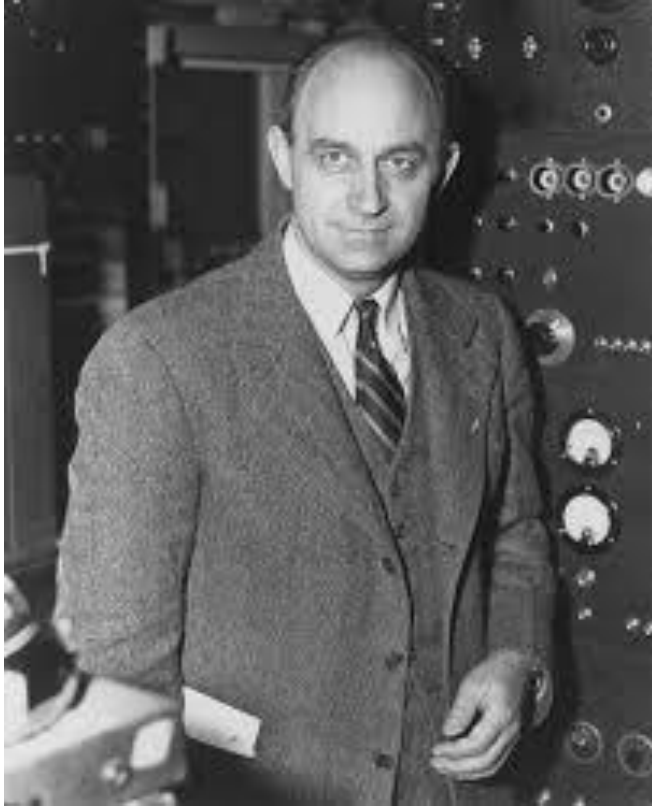
Knowledge



Name _____

Form _____





“Ignorance is never better than knowledge.” – *Enrico Fermi*

(research 10 facts about Enrico Fermi)

Year 7 Knowledge Organiser: Term 2B

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 7 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										



Year 7 Religious Education – Term 2B: Desert to Garden



We know that sometimes it is hard to explain things; the answer or explanation is complicated, or even impossible to understand. We know that it is difficult to talk about what we mean by 'God', and it is difficult to understand the Trinity - they are mysteries. This term we are going to investigate the **Paschal Mystery**; this is the mystery of how Jesus' death and resurrection was able to bring salvation to the world

Section 1:
Through the Church Catholics can receive sacraments, which give them the spiritual strength they need to live a good and selfless life, like Jesus did. At the heart of catholic life is the most important sacrament - the Eucharist.

There are different names for this sacrament and each name tells us something about its importance; we will investigate some of these different names. The Eucharist is a re-enactment of the Last Supper which was itself a Passover meal - we will explore the importance of both of these events for Catholics today.

Section 2:
Catholics believe that through the Eucharist we can experience the real presence of Jesus, and share in Jesus' sacrifice on the cross. We will find out about Blessed Carlo Acutis (one of our year saints) and how Eucharist impacted his life. The Catholic Church teaches that the Eucharist is the greatest gift of all, allowing people to have a close connection with God, and also with each other. United by this sacrament Catholics believe they will be saved from death and will have eternal life with God. The dismissal at the end of mass is an instruction to carry Jesus out into the world, and live in the way Jesus taught.


Sources of Wisdom and Authority (SOWAA)

	Eucharist is 'the source and summit of the Christian life'
	The Paschal mystery of Christ's cross and resurrection stands at the centre of the good news that the apostles and the Church following them, are to proclaim to the world'


(3) 'The seven sacraments touch all of the stages and all of the important moments of Christian life'

(4) 'There takes place a change of the whole substance of the bread.....and of the wine.....'

(5) 'this is my body which is given for you. Do this in remembrance of me'
Luke's Gospel



(6) 'Take the blood and put it on the doorposts.... It is the Lord's Passover. I will pass through the land of Egypt that night and I will strike all the firstborn.... When I see the blood (on the houses) I will Passover.....this day shall be for you a memorial day, and you shall keep it as a feast to the Lord' **Exodus 12**



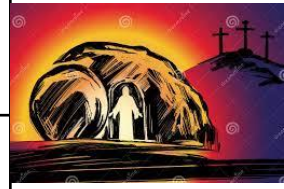


(7) "The Eucharist is my highway to heaven."
Blessed Carlo Acutis




Go!

Big Questions:

- What is the Paschal Mystery?
- What are the sacraments and why are they important to Christians?
- How can Jesus be present in the world today?
- How are we supposed to understand things that are a mystery?

Key words		Definition	
Paschal Mystery		The belief that Jesus' death and resurrection brings salvation to every human being	
Resurrection		After his death Jesus rose again to life - this is the resurrection	
salvation		Being saved from sin, so we can have eternal life with God	
Sacrament		Visible Signs of Gods grace (his love for us, that he gives us even if we don't deserve it!) - through the sacraments we can begin to understand God's love for us	
Passover		A Jewish festival that celebrates God saving the Jewish people from slavery in Egypt	
Eucharist		The sacrament in which Catholics receive the body and blood of Christ, through bread and wine; literally means 'thanksgiving'	
Holy Communion / Lord's Supper / Mass / Breaking of Bread		Different names for the Eucharist; each name teaches us something different about the Eucharist	
Transubstantiation		Catholics believe that the bread and wine become the body and blood of Jesus when it is consecrated or blessed	
Blessed sacrament		The body and blood of Christ, in the Eucharist	

Complete the learning homework for each week; work in your yellow book		March 10th	Section 2
w/b Feb 24th	Key words and definitions	March 17th	SOWAA 1 - 4 (all from Catechism)
w/b March 3rd	Section 1	March 24th	SOWAA 5 - 7

Year 7 English Term 2B: Legends of the Past

Subject Specific vocabulary



Task 1: What is a legend? A traditional story sometimes popularly regarded as historical but not authenticated (not shown to be true).

Task 2:	
Appositive	Noun or noun phrase that provides extra information or further identifies another noun/noun phrase.
Epithet	An adjective or phrase describing a characteristic of the person/thing described e.g. the wine-dark sea.
Juxtaposition	The fact of two things being seen or placed close together with contrasting effect.
Protagonist	One of the major characters in a narrative.
Task 3:	
Exposition	The opening of a story, introducing characters, setting and plot.
Climax	The most intense, exciting, or important point of a narrative.
Denouement	The solution of a mystery, the winding up of a plot, the outcome of a set of events.
Rhetoric	Language designed to have a persuasive or impressive effect.
Metaphor	Language that transports meaning from one 'place' to another. E.g. Juliet is the sun.
Ground	The relationship between the tenor and the vehicle. E.g. 'Juliet is the sun.' Both are bright/warm.
Tenor	The subject of a metaphor. E.g., 'Juliet is the sun,' Juliet is the tenor.
Vehicle	The imagery used to describe the tenor. E.g. 'Juliet is the sun,' The sun is the vehicle.



Year 7 English Term 2B: Legends of the Past

Task 4: How has language changed over time?

Anglo Saxon people spoke Old English

(Anglo Saxon : A term used to describe the people and era in England from 400AD – 1066AD)

(Old English: spoken by the Anglo Saxons)

Middle English: The form of English spoken between 1066 and 1500 AD **after the Norman invasion.**

Task 5: Record the definitions of the vocabulary below and learn how to spell each word.

Vocabulary	Definition
Chivalrous	
Gallant	
Illustrious	
Valiant	
Vengeful	



Year 7 Maths– Term 2B : Fractions and Brackets

All Maths homework is set online through **Sparx Maths**. Set and due in every **Wednesday at 8am**.

Use the QR code on the right to access the site or go to www.sparxmaths.uk and choose student.

To log in, use your school email address and the password you use to access the school computers.
e.g. Joe Bloggs 24BloggsJ@stcuthberts.com

We have chosen to use Sparx Maths as

- The homework is personalised to you.
- Sparx Maths keeps learning from your attempts to create challenging yet achievable questions each week.
- It is proven to improve students grades in Maths.
- There are support videos for each question, if needed.
- It provides your teachers with lots of insights about which topics you need more help with.
- It has consolidation questions each week to help you remember more.
- Because homework is made specifically for you, you will be able to answer every question correctly, but
 - some questions may take slightly longer than others
 - some questions will probably need more than one try to get it right.



Sparx Maths

St Cuthbert's Catholic High School



Student



Teacher



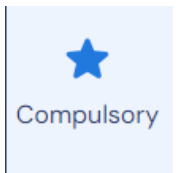
St Cuthbert's Catholic High School
Live life in all its fullness

Year 7 Maths– Term 2B : Fractions and Brackets

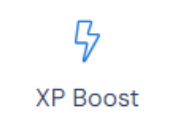


Use your Knowledge organiser book to write down your question number, working out and answers. This will help you to pass your bookwork checks so that you will get fewer.

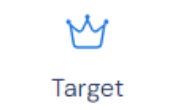
Compulsory personalised homework is set and due in each week on a **Wednesday at 8am**, this includes questions on topics you have recently covered in class, consolidation work and times tables. If you complete it by Monday 8am you will earn extra class charts points!



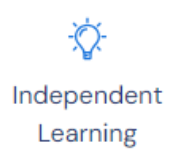
Sparx produces three personalised task for your each week. Two are optional.



- After you finish your **Compulsory** homework, refine your skills by completing similar problems in **XP Boost**



- Further enhance your skills by completing the **Target** work which is a set of six questions chosen specifically to challenge you



- You can also complete **Independent Learning** to support you further. You choose the level for this.

Sparx Maths
St Cuthbert's Catholic High School

Student Teacher

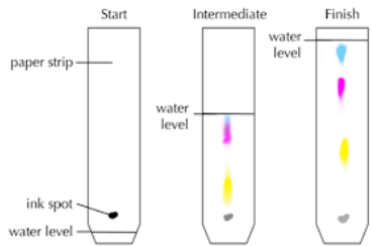
IF YOU DO NOT HAVE ACCESS TO A PHONE, COMPUTER, LAPTOP, TABLET COME TO THE SPARX LUNCH CLUB TUESDAY (A Week) or MONDAY (B week) TO COMPLETE YOUR HOMEWORK

Year 7 Science – Term 2B Particle

Chromatography

A spot of mixture is placed at the bottom of the chromatography paper which is then placed into a solvent, e.g. water.

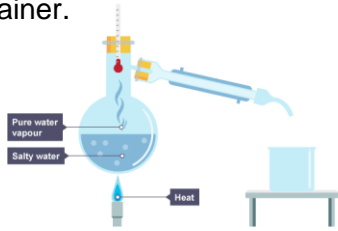
The solvent moves up the paper carrying the components of the mixture. As these move at different rates they separate out.



Distillation

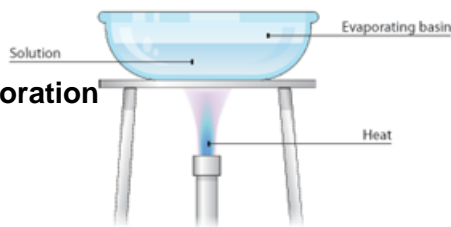
Separating liquid mixtures where each part has different boiling points (crude oil), or separating liquids from dissolved solids (water from sea water).

The mixture is heated until the water evaporates. Water vapour rises, then cools and condenses into a separate container.

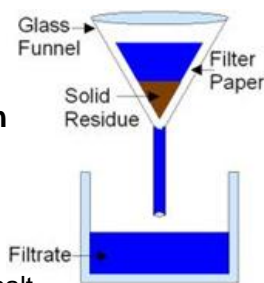


Evaporation

Salt water can be heated to evaporate the water, leaving pure salt. Insoluble solids can be filtered out of a solution.



Filtration



Key Word	Definition
Element	Made of one type of atom. This can be a single atom or a molecule, e.g. oxygen.
Compound	Two or more different atoms chemically joined together to form a molecule, e.g. carbon dioxide.
Mixture	Two or more atoms or molecules, not chemically joined, e.g. air, seawater.
Physical change	Reversible changes in which no new products are formed, e.g. state changes.
Chemical change	Non-reversible changes where new products are formed, e.g. combustion.
Pure	A material made up of only one type of particle (element or compound).
Impure	A material made of more than one type of particle (mixtures).
Evaporation	A change of state from liquid to gas.
Distillation	A process for separating liquid solutions. The solvent is heated and the evaporated gas collected and cooled so it condenses.
Filtration	A mixture is poured through a mesh, separating insoluble solids from the solution.
Chromatography	Used to separate mixtures of coloured compounds.
Solute	The substance that dissolves into the solvent.
Solvent	For example water, it dissolves the solute.
Solution	The solute dissolved into the solvent.
Solubility	How easy it is for a substance to dissolve.
Saturated solution	A solution in which no more solute can dissolve.

The Periodic Table

A list of all the known elements, arranged into groups (columns going down) and periods (rows going across).

Metals are to the left and non-metals to the right.

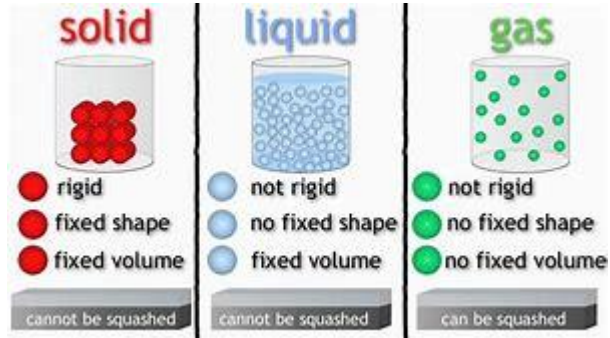
Elements in each group have similar properties.

Periodic Table of the Elements

1																	18														
1 H Hydrogen 1.008	2 He Helium 4.003											13 B Boron 10.81	14 C Carbon 12.011	15 N Nitrogen 14.007	16 O Oxygen 15.999	17 F Fluorine 18.998	18 Ne Neon 20.180														
3 Li Lithium 6.941	4 Be Beryllium 9.012											13 Al Aluminum 26.982	14 Si Silicon 28.086	15 P Phosphorus 30.974	16 S Sulfur 32.06	17 Cl Chlorine 35.453	18 Ar Argon 39.948														
19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.956	22 Ti Titanium 47.88	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.63	33 As Arsenic 74.922	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.80														
37 Rb Rubidium 85.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.94	43 Tc Technetium 98.906	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.905	46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.6	53 I Iodine 126.905	54 Xe Xenon 131.29														
55 Cs Cesium 132.905	56 Ba Barium 137.327	57 La Lanthanum 138.905	58 Ce Cerium 140.12	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.24	61 Pm Promethium 144.913	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.5	67 Ho Holmium 164.930	68 Er Erbium 167.257	69 Tm Thulium 168.934	70 Yb Ytterbium 173.054	71 Lu Lutetium 174.967	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.084	79 Au Gold 196.967	80 Hg Mercury 200.59	81 Tl Thallium 204.383	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium 209	85 At Astatine 210	86 Rn Radon 222.018
87 Fr Francium 223.021	88 Ra Radium 226.025	103 Lr Lawrencium 260.106	104 Rf Rutherfordium 261.103	105 Db Dubnium 262.103	106 Sg Seaborgium 263.103	107 Bh Bohrium 264.103	108 Hs Hassium 265.103	109 Mt Meitnerium 266.103	110 Ds Darmstadtium 267.103	111 Rg Roentgenium 268.103	112 Cn Copernicium 269.103	113 Nh Nihonium 270.103	114 Fl Flerovium 271.103	115 Uup Ununpentium 272.103	116 Lv Livermorium 273.103	117 Uus Ununseptium 274.103	118 Uuo Ununoctium 275.103														
89 La Lanthanum 138.905	90 Ce Cerium 140.12	91 Pr Praseodymium 140.908	92 Nd Neodymium 144.24	93 Pm Promethium 144.913	94 Sm Samarium 150.36	95 Eu Europium 151.964	96 Gd Gadolinium 157.25	97 Tb Terbium 158.925	98 Dy Dysprosium 162.5	99 Ho Holmium 164.930	100 Er Erbium 167.257	101 Tm Thulium 168.934	102 Yb Ytterbium 173.054	103 Lu Lutetium 174.967	104 Hf Hafnium 178.49	105 Ta Tantalum 180.948	106 W Tungsten 183.84	107 Re Rhenium 186.207	108 Os Osmium 190.23	109 Ir Iridium 192.22	110 Pt Platinum 195.084	111 Au Gold 196.967	112 Hg Mercury 200.59	113 Tl Thallium 204.383	114 Pb Lead 207.2	115 Bi Bismuth 208.980	116 Po Polonium 209	117 At Astatine 210	118 Rn Radon 222.018		

Particle Theory

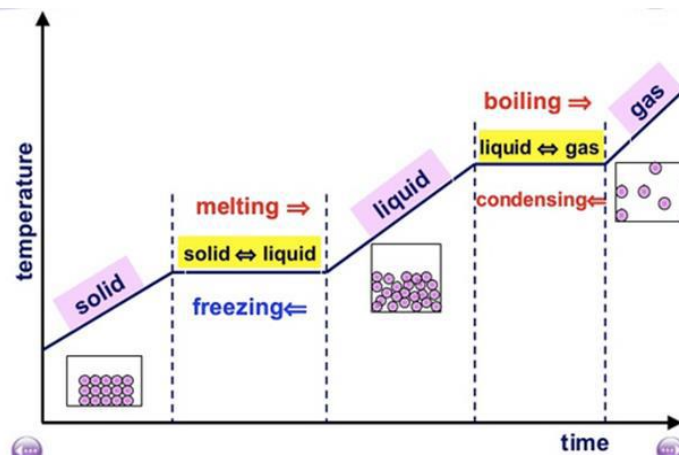
All matter is made up of particles, which are found in three states of matter. Each state has a different arrangement of particles which move in different ways.



In solids, particles are arranged in a regular pattern and are held together by strong bonds. They vibrate in a fixed position.

In liquids, particles are arranged randomly but are still touching each other. Particles can slide past each other and move around.

In gases, particles are far apart and are arranged randomly. Particles carry a lot of energy and they move in different directions at high speed.

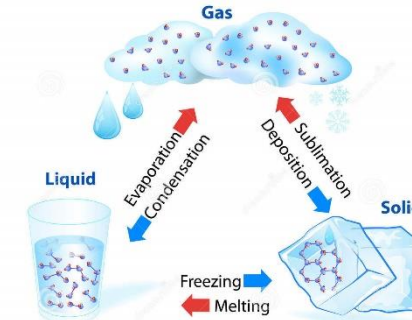


Changes of State

When particles gain or lose energy the substance changes state.

Gaining energy causes particles to move faster and further apart, overcoming the forces between the particles.

Losing energy causes particles to move slower and closer together.



Diffusion

The movement of particles from a high concentration to a low concentration, in liquids and gases. For example oxygen diffuses from our blood into our cells.

Energy Transfer Graph

The graph shows how the temperature of a substance changes as heat is applied.

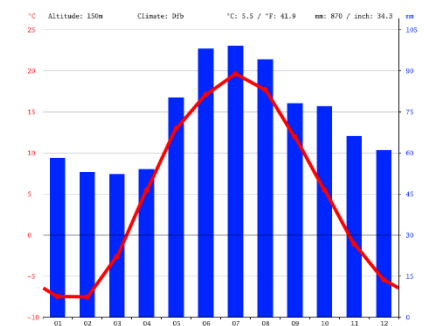
When the line is sloped the temperature of the substance is increasing.

When the line is flat the temperature stays the same even though heat energy is being applied. This is because the energy is being used to make the particles change state.

During the change of state the temperature will stay the same until the state change is complete, e.g. all liquid has turned into gas.

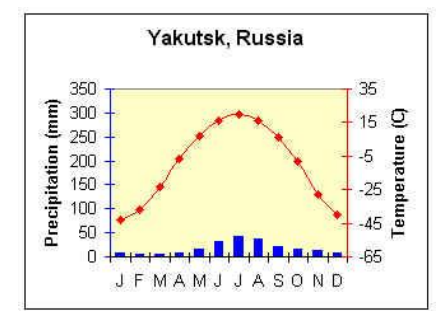
Keywords	
Site	Where something is located in the world
Situation	What is around the location e.g. features
Climate	Average atmospheric conditions measured over 30 years
Climate graph	A composite graph which shows the yearly precipitation and temperature
Precipitation	Rain, hail, sleet and snow
USSR	The United Socialist Soviet Republic. Made up of 15 Republics including Georgia, Estonia and Lithuania
Communism	A theory that all property is owned by the community and each person receives according to their ability and needs.
Steppe	A dry, cold, grassland that is found in all of the continents except Australia and Antarctica
Independence	When a country declares to be its own ruler and governor
Peninsula	a piece of land almost surrounded by water or projecting out into a body of water.
Annexed	add (territory) to one's own territory by appropriation
Decade	10 years
NATO	A group of European countries devoted to international peace
Equality	Being treated fairly by all
Superpower	A nation with an abundance of either military power, wealth, influence, population, culture
Discrimination	The unjust or prejudicial treatment of different categories of people, especially on the grounds of ethnicity, age, sex, or disability

1	2
What is Russia's site and situation?	Investigating Russia's climate and biomes
Russia spans two continents, Eastern Europe and Northern Asia. The capital of Russia is Moscow, located to the east of Russia. Other major cities include Saint Petersburg to the north-west and Novosibirsk to the south. Russia is the largest country, covering 17 million sq. kilometres. Russia borders 14 countries including Azerbaijan, Belarus, China, Estonia, Finland, Georgia, Kazakhstan, North Korea, Latvia, Lithuania, Mongolia, Norway, Poland, and Ukraine. The majority of the population live in the east of the country in mega cities such as Moscow.	Russia's climate ranges from steppes in the south through humid continental in much of European Russia, and subarctic in Siberia to tundra climate in the polar north. Winters vary from cool along the Black Sea coast to freezing in Siberia. Summers vary from warm in the steppes to cool along the Arctic coast. Much of the population lives to the West for resources and a more temperate climate. Russia contains several biomes, including tundra, taiga, temperate woodland, steppe and desert.
Why did the Ukraine war happen? 3	Resources in Russia 4
Ukraine is located in eastern Europe and is the second largest European country with a population of 41 million and land size of 230,000 million square miles. Ukraine declared independence from Russia in 1991, when the Ukrainian Parliament declared they wouldn't follow the USSR laws. On 24th February 2022, Russia invaded Ukraine resulting in over 10,000 deaths and causing one of Europe's largest refugee crisis's since WWII, over 8 million people have been displaced (moved). Russia's official reasoning for the movement is to "demilitarise and de-nazify Ukraine", Putin declared he was protecting the people of Ukraine from genocide.	Russia imports and exports many resources which keeps the economy thriving



Moscow climate graph

5



Yakutsk climate graph

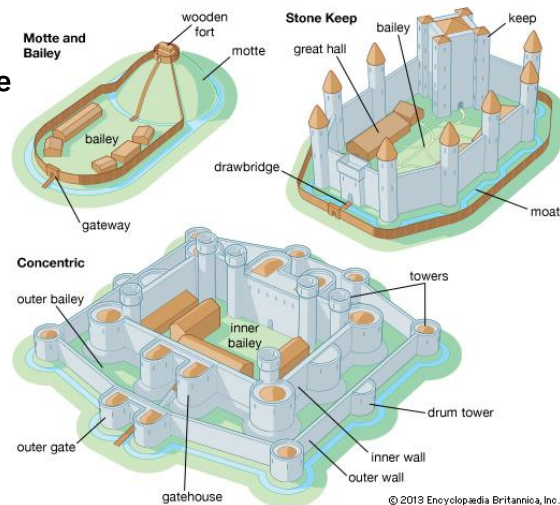
Castles

1

William also kept control by building castles throughout England. Over time 3 types of castles developed throughout Britain.

Motte and Bailey - The first castles built to help fight against rebellions. They were built quickly and made out of wood, meaning that they were not very strong, and could be easily destroyed. The Bailey was on flat land, where majority of the people lived. The Motte was the higher land of the castle, where the fort was.

Stone Keep - This castle was now made out of stone and had towers as a form of defence. The main part of the castle was the Keep, a large square tower, used as the main defence.



The Domesday Book

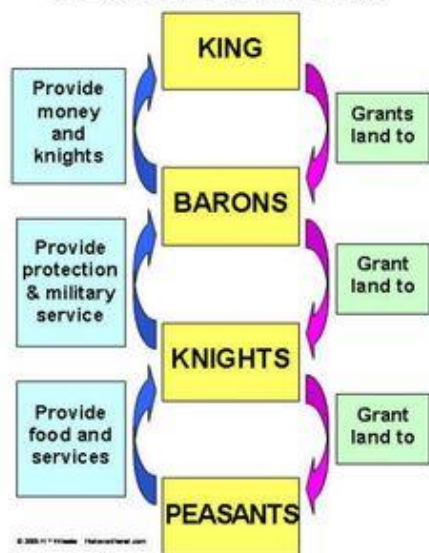
3

In 1086, William sent out surveyors to every part of England, with orders to list:

- how much land was there
- who had owned it in 1066, and who owned it now
- what was the place like, and who lived there
- how much it was worth in 1066 and how much now

William did this to allow him to effectively tax the land and earn money. William also needed to have an idea of what could be seized from landowners who did not show him loyalty.

FEUDAL SYSTEM



Key word	Definition
Social class	Social Class refers to separations in society. These separations can be based on how much wealth, power or knowledge somebody has. People in the same social class typically share a similar level of wealth.
Invasion	The movement of an army into a region, usually in a hostile attack that's part of a war or conflict.
Monarchy	A monarchy is a form of government that has a single person known as a monarch at its head. Monarchs use such titles as king, queen, emperor, or empress
Taxation	Taxes are ways that the government can collect money from its citizens to pay for things that the people need, such as schools and roads.
Nobility	The group of people belonging to the highest social class in a country, often the most rich and powerful.
Knights	Someone born of the nobility and trained to fight, usually in heavy metal armour.
Rebellion	An effort by many people to change the government or leader of a country by the use of protest or violence.
Feudal system	The social structure of Medieval England.
Baron	Noble land owner that pledged their loyalty to the King.
Villein	Peasant at the bottom of the Feudal system.

The Feudal System

After taking the throne in 1066, William has a few problems: 1. He does not trust the English lords, who do not like him. 2. He has to force the English to accept him as King. Many of the English are rebelling and fighting against William. 3. He has to pay the French Knights who helped him to win the throne.

Solution: William crushes the rebellions and took the land away from the English lords and gave it to his supporters instead. William now has his supporters helping him to control the whole country. William also sets up the Feudal System. This forces the English to give William their taxes and promises of loyalty, in return for protection and land to farm. William is at the top of the system, as he holds all the land and money, which he gives to the Barons. They promise William their money, soldiers and loyalty. They give the land to the Knights in return for loyalty and military service. Finally the knights give the land to the peasants. The peasants farm the land and give food, money and services to the knights.



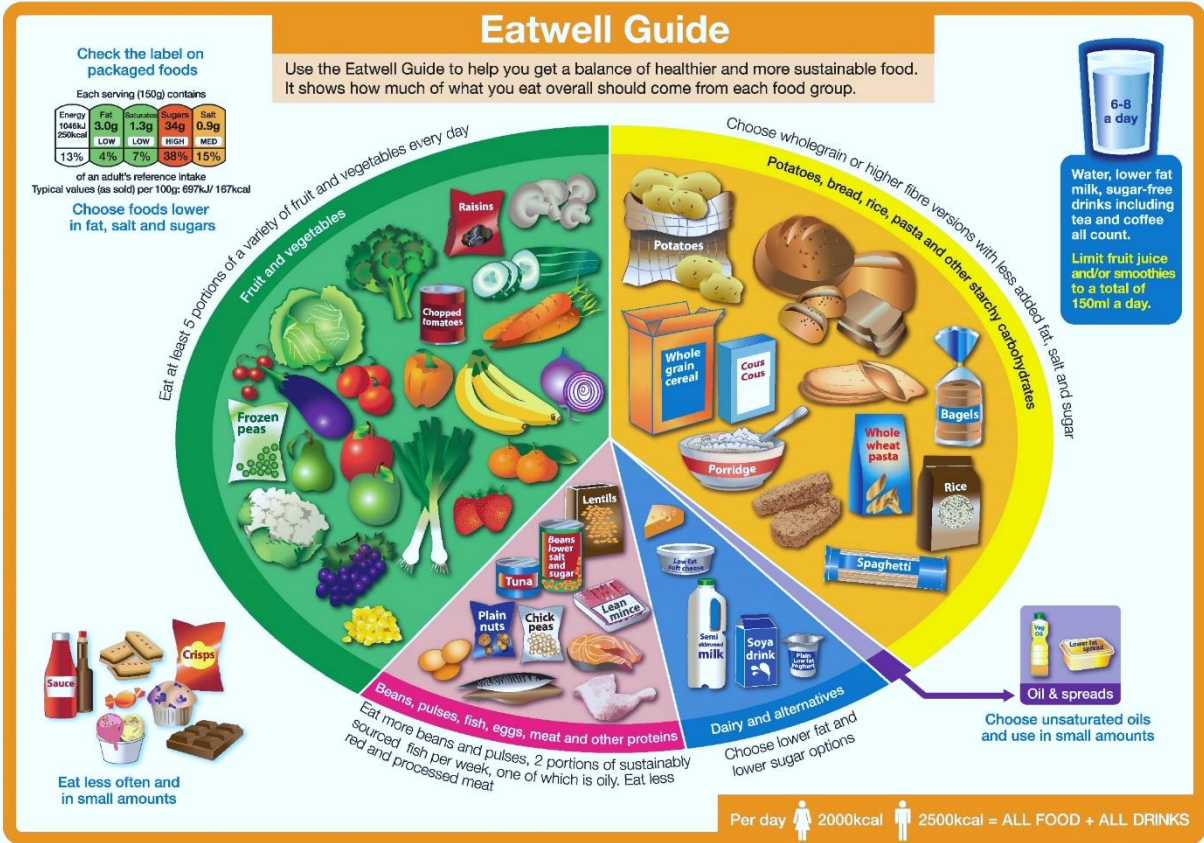
Physical Activity:

- You should aim to be physically active every day and reduce the amount of time you are sat down.
- You should aim to do 60 mins of moderate exercise per day like brisk walking or riding your bike; something that raises your heart rate and makes you feel warmer.

Emotional/Mental Health:

We need to keep our minds healthy as well as our bodies. Here are some ways to ensure you are looking after your mind:

- Be active** – get some vigorous physical activity every day
- Connect** – with other people, not through social media but face to face. Have some conversations. Feel valued.
- Give** – to others. This doesn't have to be an object, it could be time. For example visiting an elderly neighbour or playing with younger brothers and sisters.
- Take notice** – of things around you like the wind on your face or the noises you can hear.
- Keep learning** – seek out new experiences. It's good to be curious and challenge yourself.



Source: Public Health England in association with the Welsh Government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

© Crown copyright 2016

Healthy diet: Remember the proportions for each section and some types of food for each. Then think about how you could improve your diet.

Sleep: Work out what time you need to go to bed to get the correct amount of sleep. Find out why sleep is important.



HOW MUCH SLEEP DO YOU NEED?

- INFANTS:** UP TO 16 HOURS, INCLUDING NAPS
 - TODDLERS (1-3 YEARS OLD):** 12-14 HOURS, INCLUDING NAPS
 - PRESCHOOL (3-5 YEARS OLD):** 11-13 HOURS
 - SCHOOL AGE (6-12 YEARS OLD):** 10-11 HOURS
 - TEENS:** 8.5 HOURS TO 9.5 HOURS
 - ADULTS:** 7-9 HOURS
- *ACCORDING TO THE NATIONAL SLEEP FOUNDATION



Artist Focus: Georgia O'Keeffe



Georgia O'Keeffe (November 15, 1887 – March 6, 1986) was an American artist. She was best known for her colourful paintings of enlarged flowers, skulls and landscapes **O'Keeffe** has been recognized as the "Mother of American modernism".

O'Keeffe was fascinated by the bones and skulls she found in the desert landscapes near where she lived. She said:

'To me they are as beautiful as anything I know...The bones seem to cut sharply to the centre of something that is keenly alive on the desert even though it is vast and empty and untouchable.'



Key Words and Specialist Vocabulary:

Natural Forms: Objects found in nature, shells, leaves, seedpods, flowers for example.

Still Life: An arrangement of objects to draw or paint.

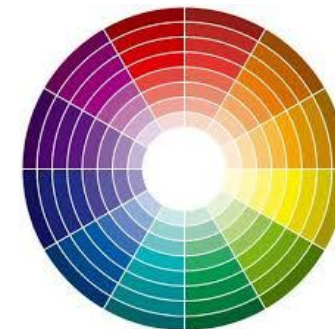
Direct Observational Drawing: Drawings made from looking carefully at something in front of you.



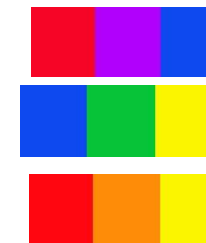
St Cuthbert's Catholic High School
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Harmonious Colours

Harmonious colour schemes use colours that are next to each other on the colour wheel. They usually match well and create serene and comfortable designs.



Harmonious colour schemes are often found in nature and are harmonious and pleasing to the eye. Think of beautiful sunsets, and the colours seen in fire for example.



Practise your skills:

In this unit of work we will be drawing **natural forms** such as fruits and vegetables as well as shells and seed pods.

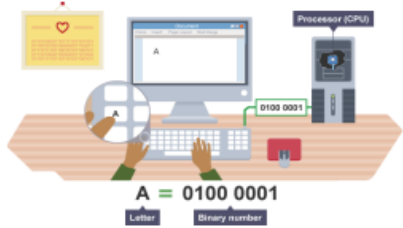
Try cutting an orange or a pepper in half and carefully drawing what you see.



Year 7 Computing – Term 2B: Data Representation

Representing Text

When any key on a keyboard is pressed, it needs to be converted into a binary number so that it can be processed by the computer and the typed character can appear on the screen.



Measurement Unit

4 Bits	1 Nibble
8 Bits	2 Nibble
1024 Byte	1 KB (Kilobyte)
1024 KB	1 MB (Megabyte)
1024 MB	1 GB (Gigabyte)
1024 GB	1 TB (Terabyte)
1024 TB	1 PB (Petabyte)



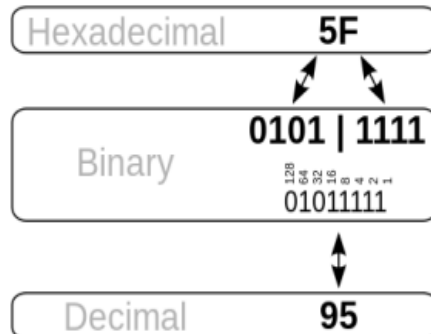
Converting between Bases

1 Binary to Denary

128	64	32	16	8	4	2	1
1	0	0	1	1	0	1	1
<hr/>							
128	0	0	16	8	0	2	1
<hr/>							
= 155							

Write the column values out above your binary number. Only add the column value where the binary number is one.

2 Binary to Hexadecimal



Each hex character is equal to a binary nibble, join the two nibbles together to make your binary number.

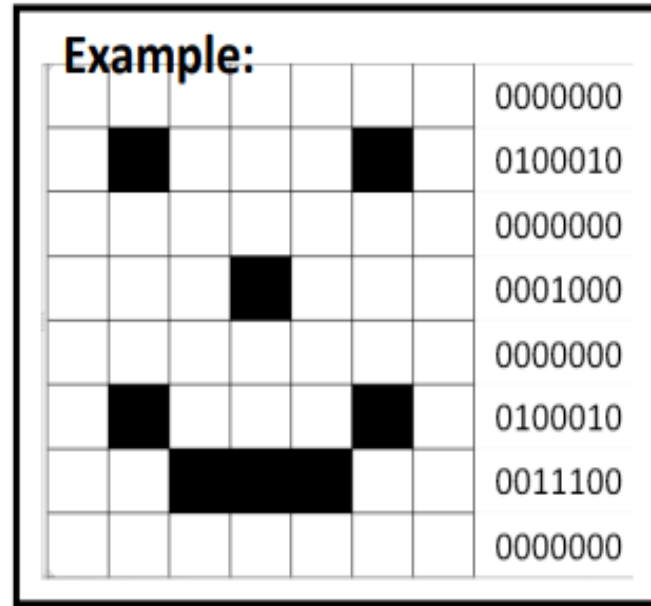
Images

In a **bitmap**, the image is divided into a grid of tiny parts, these are called **pixels**

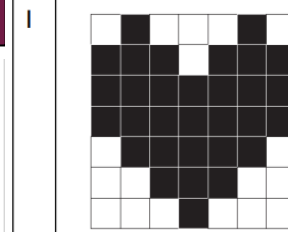
Pixels are the smallest element in an image

The number of bits used to represent the colour or greyscale value of a pixel is called the **colour depth**.

Example:



Binary Bitmap Images



Each square is referred to as a pixel. Each pixel can either be on or off. If the pixel is blank usually you would say the value of this pixel is 0 and if the pixel is black then the value of this pixel is 1. Can you work out the binary combination for the image above?

Adding Binary

- Rules for adding binary:
- 0 + 0 = 0
 - 0 + 1 = 1
 - 1 + 1 = 10
 - 1 + 1 + 1 = 11



Key Vocabulary

1	Storage Capacity	Bit – A single binary digit e.g. 0 or 1 Nibble – Four binary digits e.g. 1011 Byte – Eight binary digits e.g. 00110101
2	Binary	This numbering system only uses two digits: 0 which means off and 1 which means on.
3	Denary	This numbering system uses ten digits: 0-9.
4	Hexadecimal	This numbering system uses sixteen characters: 0-9 and the A-F
5	Overflow	When adding binary numbers together if your answer results with more than 8 bits an overflow has occurred. e.g. 111101011

Number conversions (Denary > Binary > Hex)

Binary to denary (01001101)

- Place the binary numbers under the **binary place values** starting from **right to left**
- Add together the headings where there is a 1 underneath**
- E.g. 64+8+4+1 = 77

128	64	32	16	8	4	2	1
0	1	0	0	1	1	0	1

Denary to binary (56)

- Work from the **left** and attempt to **subtract** the heading from your number
- If you can do it without getting a negative number then put a 1 under the heading and use the answer in the next column
- If you can't put a 0 under the heading and move to the next column

128	64	32	16	8	4	2	1
0	0	1	1	1	0	0	0

Binary to hexadecimal (01001101)

- Split the **Byte** in half, this time use the top place values to convert each half (**nibble**) into **denary**

A	10
B	11
C	12





KEYWORDS FOR TERM 2B

Net	The net of a 3D shape is what it looks like if it is opened out flat. A net can be folded up to make a 3D shape.
Tab	A little piece of card on a net, they are needed to glue the shape together.
Specification	A detailed description of the design and materials used to make something.
Brief	A short description of what is being made.
Template	A shaped piece of material used so that everything is the same.
Score	When you cut into the cardboard so it's easier to fold.
Prototype	A first version of something.
Evaluate	The judgement about something.
Moodboard	A visual collection of images that designers use for inspiration.
Thumbnail	A quick drawing that helps designers plan their product.



THE FOLLOWING VIDEO SHOWS HOW TO MAKE A CUBE OUT OF A SHEET PAPER.

YOU WILL USE THIS TECHNIQUE LATER IN THE TERM TO MAKE A BOX. WATCH THE VIDEO AND REFRESH YOUR MEMORY, YOU CAN PRACTICE THE DRAWING AT HOME.

WHAT IS SCORING?

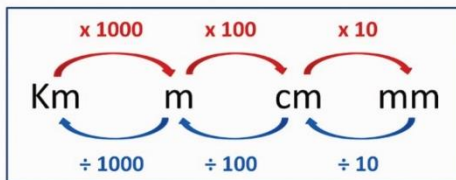


SCORING CARDBOARD IS WHEN YOU TAKE YOUR CRAFT KNIFE AND GENTLY CUT INTO THE CARDBOARD, THIS IS DONE SO THE CARD CAN BE FOLDED INTO SHAPES.

- A** is for **Aesthetics**
- C** is for **Cost**
- C** is for **Customer**
- E** is for **Environment**
- S** is for **Size**
- S** is for **Safety**
- F** is for **Function**
- M** is for **Material**

Converting LENGTH Units

It is easiest to use a conversion look-up diagram like the one below.



5km = ? m **Need to x 1000** 5 x 1000 = 5000m ✓
 120cm = ? m **Need to ÷ 100** 120 ÷ 100 = 1.2m ✓

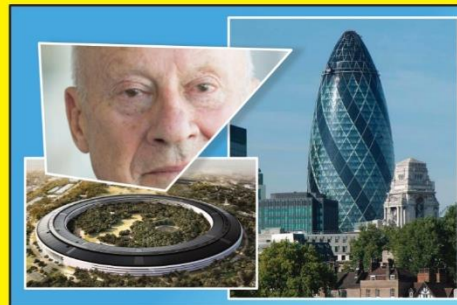
WHAT ARE MOODBOARDS?

MOODBOARDS ARE A COLLECTION OF IMAGES THAT DESIGNERS USE AS INSPIRATION FOR THEIR DESIGNS. THESE CAN BE ALL LINKED TO A THEME, FOR EXAMPLE THE COLOUR BLUE. EACH IMAGE ON THAT MOODBOARD WILL BE SOMETHING BLUE RELATED, THE SEA, THE SKY, BLUE CHEESE AND BLUEBERRIES.

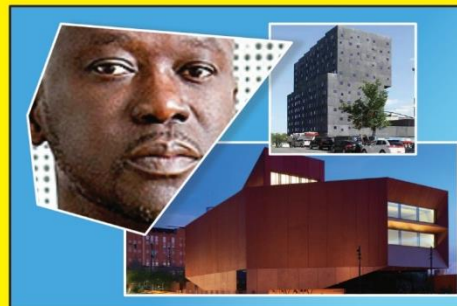
SOME MOODBOARDS MIGHT BE BASED AROUND CATS AND HAVE LOTS OF CATS RELATED IMAGES.



Phillip Starck



Norman Foster



David Adjaye



Zaha Hadid



Year 7 Drama – Term 2B: Practicing vocal and physical skills

Key terminology	Definition
Pace	The speed at which an actor speaks
Pitch	How high or low an actors voice is
Volume	How loud or quiet an actors voice is
Accent	How an actor speaks based on where the character comes from
Clarity	How clear our words and phrases are
Pause	A temporary stop in action or speech
Emphasis	Stress given to a word or words when speaking to indicate particular importance.
Facial expression	How we communicate our emotions through use of our facial features
Gesture	A movement of part of the body, especially a hand or the head, to express an idea or meaning.
Emotion	A strong feeling deriving from one's circumstances, mood, or relationships with others.
Still image	When actors create a stage image using their bodies with no movement
Slow motion	Students reduce the speed at which a drama is enacted, to highlight a scene or bring a big moment into focus. It can also be used to create dramatic tension by slowing the action when building up to an important event.
Mime	A technique of suggesting action, character, or emotion without words, using only gesture, expression, and movement.
Tension	The development of suspense in drama, usually due to conflict.



Year 7 Food – Term 2B: Hygiene and the Eatwell Guide

Food hygiene and safety

- Wash hands before preparing any food, after handling raw meat, after sneezing/coughing and going to the toilet.
- Wear a clean apron.
- Cover cuts with a blue plaster.
- Tie hair up.
- Remove jewellery and nail varnish before handling food.
- If you are ill, do not cook.
- Follow the 4Cs – cleaning, cooking, chilling and cross-contamination.

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



SCAN TO WATCH



SCAN FOR QUIZ

Key vocabulary	Definition
Ambient	Room temperature – usually between 15°C and 25°C.
Chilled storage	A refrigerator where the temperature is
Danger zone	Range of temperatures (5°C to 63°C) in which bacteria multiply very quickly.
Enzymic browning	When enzymes in cut fruit/vegetables come into contact with oxygen in the air. This causes the fruit to turn brown.
Frozen storage	Food is preserved in a freezer
Hazard	Anything that can cause harm or danger.
High risk food	A food that, if not stored correctly, could grow harmful bacteria.
Macronutrients	The main nutrients found in food – carbohydrates, fat and protein
Micronutrients	Nutrients found in small quantities in food, such as vitamins and minerals
Rubbing in	Method where fat is rubbed into flour using your fingertips.

The hand blender

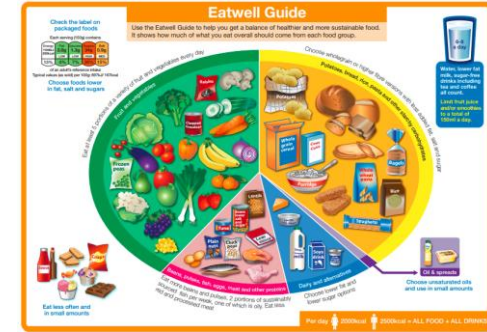
- Only turn on the blender when it is in the food – to prevent splashing.
- Do not use if damaged.
- Do not blend very thick foods for more than 3 minutes as the blender will overheat.
- Do not scrape mixture out of the blender when it is still plugged in.
- Turn off when finished and only wash the blade attachment.



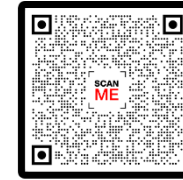
Example of enzymic



The Eatwell Guide



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



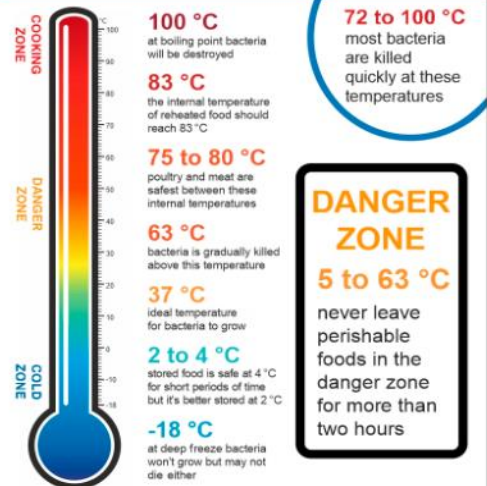
SCAN TO WATCH



SCAN FOR QUIZ

SAFE TEMPERATURES

To prevent food poisoning



Weighing and measuring

Ingredients are measured in many different ways depending on whether they are liquid or dry ingredients or in small or large quantities. Here are some of our most used measurements and their abbreviation. Grams (g) Kilogram (Kg) Millilitre (ml) Litre (l) Tablespoon (tbsp.) Teaspoon (tsp.)

The 8 tips for healthy living

- 1 Base your meals on starchy foods.
- 2 Eat at least 5 portions of fruit/vegetables.
- 3 Eat two portions of fish per week, one oily.
- 4 Cut down on saturated fat and sugar.
- 5 Eat less salt – no more than 6g.
- 6 Get active to be a healthy weight.
- 7 Drink plenty of water – 1½ - 1 litres.
- 8 Eat breakfast every day.

Most used measurements
Kilogram = 1000g
Litre = 1000ml
Tablespoon = 15ml
Teaspoon = 5ml



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Year 7 Music – Term 2B: Band Skills

The Ukulele

The ukulele is a member of the guitar family of instruments. It generally employs four nylon strings.

The ukulele originated in the 19th century as a Hawaiian adaptation of the Portuguese machete, a small guitar-like instrument, which was introduced to Hawaii by Portuguese immigrants, mainly from Madeira and the Azores. It gained great popularity elsewhere in the United States during the early 20th century and from there spread internationally.

The Four Chord Song

One popular chord progression used in popular music is the 'four chord sequence', and it uses chords: I – V – vi – IV.

It is one of the most commonly used chord sequences.

Next time you are listening to some music, see if you can identify it in any songs you are listening to.

The Guitar

The strings run between the headstock of the guitar, where they are affixed to tuning pegs that can be rotated to tighten and slacken them, and the bridge, where they're fixed to the guitar's body. On an acoustic guitar, the strings are fixed to the bridge with removable pegs, and on an electric guitar the strings are generally strung through an eyelet.

The neck of the guitar is the long wooden piece of wood, flat on one side (this is called the fretboard) and curved on the other. The fretboard is inlaid with metal frets that demarcate the different notes.

Chords

A chord, in music, is any harmonic set of pitches consisting of multiple notes (also called "pitches") that are heard as if sounding simultaneously.

Chords and sequences of chords are frequently used in modern West African and Oceanic music, Western classical music, and Western popular music; yet, they are absent from the music of many other parts of the world.

The Piano

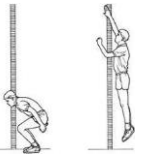
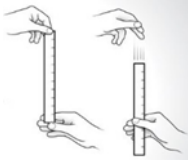
The piano is a stringed keyboard instrument in which the strings are struck by wooden hammers that are coated with a softer material (modern hammers are covered with dense wool felt; some early pianos used leather).



Year 7 Physical Education – Term 2B

Fitness Testing

Test	Component measured	How to complete the test
Ruler drop test	Reaction time	A partner will hold the ruler in line with your hand, which is to be partly open. When your partner lets go, you must grip the ruler as quickly as possible, then measure your score in 'cm'.
Vertical Jump test	Power	To start, you raise your arm against the wall to record the first measurement. A step is taken into the wall, before performing an explosive jump upwards to record a second measurement. The distance between both measurements is your score.
One minute press-up test	Muscular Endurance	As many press-ups as possible to be completed in one minute.
One minute sit-up test	Muscular Endurance	As many sit-ups as possible to be completed in one minute.



Effects of Exercise on Body

Short-term effects	Long-term effects
Increased breathing rate	Increased Cardiovascular endurance
Increased heart rate	Increased Muscular Strength
Increased muscle contractions	Increased muscle tone
Increased body temperature	Improved posture
Increased demand for oxygen	Denser bones

Components of Fitness

Component of Fitness	Definition
Cardiovascular Endurance	The ability to exercise the WHOLE body for long periods of time without tiring.
Muscular endurance	The ability to exercise the a set of muscles for long periods of time without tiring.
Flexibility	The range of movement at a joint.
Muscular Strength	The ability to exert force.
Power	A combination of strength x speed.
Reaction time	The onset of time between a stimulus and response.
Agility	The ability to move the body quickly and under control when changing direction.
Speed	The ability to move across a distance in the quickest possible time.
Balance	The ability to maintain equilibrium.



Year 7 Spanish – Term 2B: School Facilities



subjects



teachers



opinions



uniform



facilities



school rules

School facilities	<p>En mi instituto hay... - in my school there is</p> <p>mi insti tiene - my school has</p> <p>Mi escuela primaria tenía - my primary school had</p> <p>En mi escuela primaria había - in my primary school there was...</p>	<p>un salón de actos - a hall</p> <p>un comedor - a canteen</p> <p>un campo de fútbol - a football pitch</p> <p>un patio - a yard/playground</p> <p>un gimnasio - a gym una</p> <p>piscina - a pool</p> <p>una biblioteca - a library</p> <p>una pista de tenis - a tennis court unos</p> <p>laboratorios - some science labs</p> <p>muchas aulas - lots of classrooms</p> <p>menos/más exámenes - more/less exams</p> <p>más oportunidades para hacer deporte - more sports opportunities</p>
	<p>Mi insti es... - my school is...</p>	<p>mixto - mixed feminino - all girls</p> <p>masculino - all boys público - state school</p> <p>privado - private</p>
	<p>Las clases comienzan a las _____ - classes start at _____ o'clock</p> <p>Las clases terminan a las _____ - classes end at _____ o'clock</p> <p>La hora de comer/el recreo dura _____ minutos - lunch/break lasts _____ minutes</p> <p>El día escolar es muy largo - the school day is really long</p>	
School rules	<p>No se debe - you mustn't</p> <p>Está prohibido - it's not allowed</p> <p>No se permite - you're not allowed</p>	<p>dañar las instalaciones - damage the facilities</p> <p>ser agresivo o grosero - be aggressive or rude</p> <p>correr en los pasillos - run in the corridors usar</p> <p>el móvil en clase - use your phone in lessons</p> <p>llevar zapatillas de deporte - wear trainers</p> <p>comer chicle - chew gum</p> <p>llevar joyas/maquillaje - wear jewellery/make up</p>
	<p>Se debe - you must</p> <p>Hay que - you have to</p> <p>Tienes que - you have to</p> <p>Se permite - you're allowed to</p>	<p>ser puntual - be on time</p> <p>respetar el turno de palabra - wait your turn to speak</p> <p>respetar a los demás - respect others trabajar duro</p> <p>- work hard escuchar en clase - listen in class hacer</p> <p>los deberes - do your homework</p>
	<p>Las normas - the rules</p>	<p>son are demasiado estrictas - too strict</p> <p>necesarias - necessary</p> <p>importantes - important</p> <p>fomentan la buena disciplina - promote good discipline</p> <p>limitan la individualidad - limit individuality</p> <p>fastidian a los alumnos - annoy the pupils</p>

Teachers

	<p>paciente - patient impaciente</p> <p>- impatient tolerante - tolerant</p> <p>severo/estricto - harsh/strict</p> <p>listo - clever tonto - silly/stupid</p> <p>perezoso - lazy trabajador(a) - hardworking</p> <p>simpático - nice antipático - mean/unpleasant</p>
<p>es - is</p>	
<p>El/la profesor/a de (ciencias) - My (science) teacher</p>	<p>enseña bien - teaches well</p> <p>explica bien - explains well</p> <p>tiene buen sentido del humor - has a good sense of humor tiene expectativas altas - has high expectations</p> <p>crea un buen ambiente de trabajo - creates a good working atmosphere nunca se enfada - never gets angry me hace pensar - makes me think</p> <p>nos da consejos/estrategias - gives us advice/strategies nos pone muchos deberes - gives us a lot of homework</p>

Uniform

<p>Tengo/tenemos que llevar... - I/we have to wear</p> <p>(No) llevo/llevamos - I/we (don't) wear</p> <p>Es obligatorio llevar... - it's compulsory to wear</p> <p>No me gusta llevar - I don't like wearing</p>	<p>un jersey - a jumper</p> <p>un vestido - a dress</p> <p>una camisa - a shirt</p> <p>una corbata - a tie</p> <p>una falda - a skirt</p> <p>unos zapatos - shoes</p> <p>unos calcetines - socks</p> <p>unas medias - tights</p>	<p>blanco - white</p> <p>negro - black</p> <p>morado - purple</p>	<p>porque/ya que/dado que - because</p>	<p>mejora la disciplina - improves discipline</p> <p>limita la individualidad - limits individuality</p> <p>da un imagen positiva del insti - gives a positive impression of the school</p> <p>ahorra tiempo por la mañana - saves time in the morning</p>
<p>Ojalá pudiera llevar... - If only I could wear...</p>	<p>unos vaqueros - jeans</p> <p>una sudadera - a hoody</p> <p>zapatillas de deporte - trainers</p>			

Notes

A series of horizontal dotted lines for writing notes.



Notes

A series of horizontal dotted lines for writing notes.



Notes

A series of horizontal dotted lines for writing notes.



Notes

A series of horizontal dotted lines for writing notes.





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