CHRIST THE KING

KNOWLEDGE ORGANISER

YEAR 7 PENTECOST (Term 3)

#CTKCares

Why should I self-quiz?

Your mind is split into two parts: the working memory, and the long-term memory. Everybody's working memory is limited, and therefore it can be very easily overwhelmed. Your long-term memory on the other than is effectively limitless.

You can support your working memory by storing key facts and processes in long term memory. These facts and processes can be retrieved to stop your working memory becoming overloaded.

This booklet contains knowledge organisers for each of your subjects. Each organiser has the key information that needs to be memorised to help you master the subject and be successful in lessons.

How often should I self quiz?

Research shows that regular self-testing improves knowledge retention; in order to learn the information in your knowledge organiser, you will need to work with it more than once! There are many ways to learn the material in your knowledge organiser.

How to use your Knowledge Organiser

- **Cover – Write – Check:** Cover up one section of the knowledge organiser and try to write out as much as you can from memory. Check the knowledge organiser to see if you are right; correct any mistakes and fill in any missing information in a different coloured pen.

  Repeat this process at least twice to fill your page. You could also include content from the previous week's homework, especially if there were some parts that you struggled with.

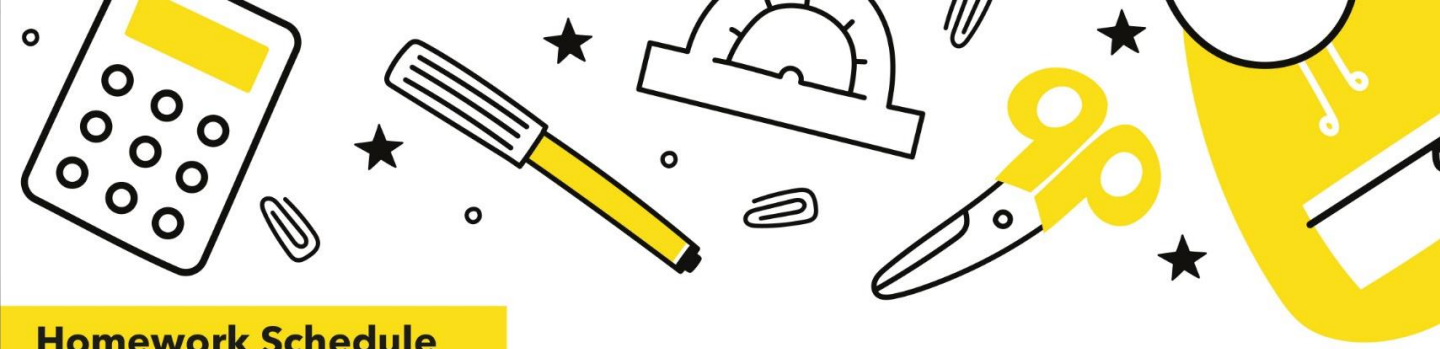
- **Draw a mind map:** Jot down everything that you can remember from the knowledge organiser. Check accuracy, correct in a different coloured pen and repeat.

- **Revision Clock:** Draw a clock and add the topic in the middle. Break the clock face into 10-minute sections. Add notes from the knowledge organiser in each section. Cover the clock ands recite the information aloud.

- **Create Flashcards:** Use the information from your knowledge organiser to create flashcards – these could be double sided, with a question on one side and the answer on another, or a keyword on one side and the definition on the other.

DID YOU KNOW?

Research shows a student remembers 50% more when they test themselves after learning something.



Homework Schedule

You should complete at least one hour of Home Learning per school day.

This will consist of:

- Knowledge Organiser and Online Learning as directed by your teachers.
- If you have no tasks set, carry out Knowledge Organiser activities as per the Knowledge Organiser timetable below.
- Two periods of 20 minute reading each week.

Week 1					
20 Minutes Per Subject	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Subject 1	English	Science	Maths (Mymaths)	Maths	English
Subject 2	RE	PE	RE	Science	Geography
Subject 3	Music	History	Technology / IT	MFL	Art

Week 2					
20 Minutes Per Subject	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Subject 1	Science	English	English	Maths (MyMaths)	Science
Subject 2	RE	Maths	RE	Drama	Geography
Subject 3	Music (Practical)	History	Technology / IT	MFL	Art (Practical)

Read 20 minutes a day and you'll read 1,800,000 words per year.

Reading for 6 minutes a day reduces stress by 68%.

Children learn 4,000 to 12,000 words per year through reading,

What are the homework expectations?

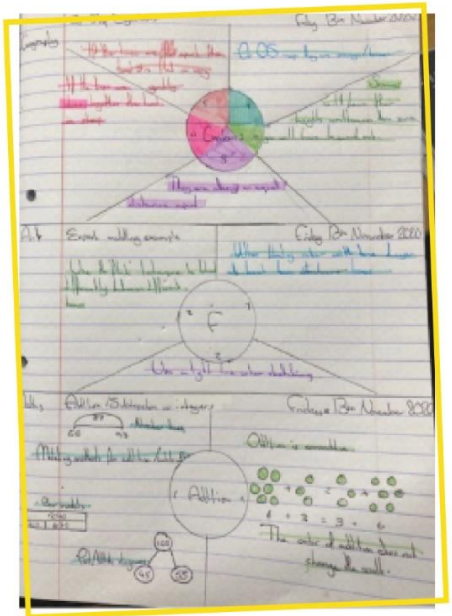
Each homework must meet the following 5 requirements:

- Write the complete title and date in full *e.g Wednesday 7th June 2023* on each page and underline.
- You should include minimum of words to summarise the topic. Do not copy the words from the text.
- Make full use of the page for each topic by scaling your notes and images appropriately to use all the space.
- You must include diagrams, sketches, or cartoon doodles to visually represent the topic, try to use humour.
- Highlight key words and phrases, using underlines and highlighter pens, and explain technical terms.

How should I present my work?

Please remember that the same rules apply to the presentation of your homework as applies for your class work: **dates and titles** (which should be the name of the subject) **need to be underlined with a ruler** and you should **present your work as neatly as you are able to.**

If you are self-quizzing correctly, there should be **evidence of green pen on your page**. Here are some examples of how to set out your work:



DON'T FORGET!

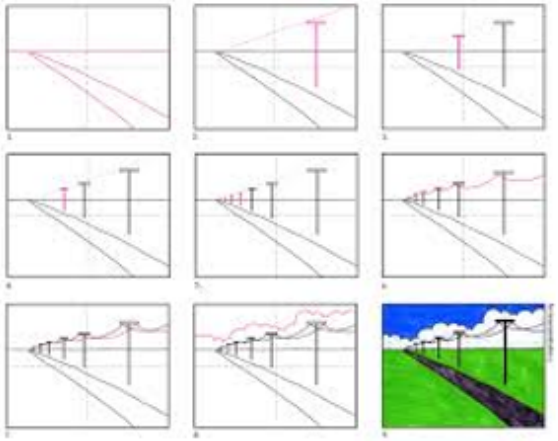
Always record the date, topic, and page number in your Home Learning Book!

Y7 ART – CITYSCAPE

A **Cityscape** in Art can be a type of **landscape** which can include buildings and streets often found in **'urban'** towns and cities. Cityscape Art can take the form of drawings, paintings and photographs

Key words

1.Perspective	**a technique which attempts to create the illusion f depth and 3 dimensions in a drawing or painting.**
2 Horizon line	used to show where the land disappears in the distance
3 Vanishing point	used when drawing in perspective to create a 3D effect
4 Background	usually at the top and back of the painting or drawing and appears to be further away.
5 Foreground	can be seen at the front or bottom of a landscape which appears to be closer.
6 Composition	how you arrange and place the different parts of a piece of artwork
7 Realism	
8 Guidelines	light pencil lines which sketch out the basic image
9 Narrative	Can be used in art to help describe



Step by step guide of drawing a street scene using one point perspective

Order of drawing

1. Horizon line
2. Vanishing point
3. Lines which meet the vanishing point
4. Vertical lines
5. Add details

Hannah Sawtell – (born 1971) Nottingham based artist.

She creates cityscape illustrations have a **Pop Art** feel and depict everyday scenes from local areas in Nottingham.

L.S. Lowry- (1887- 1976) born Salford, Manchester.

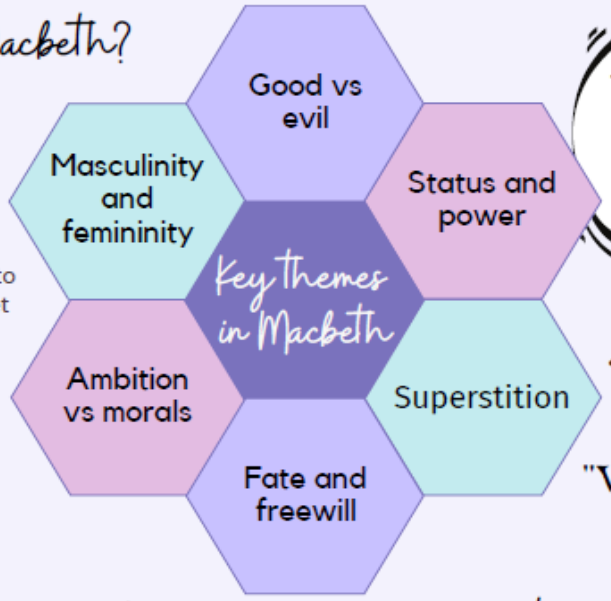
Lowry painted mostly industrial scenes of the North West of England. He developed a unique realist style and is most famous for his 'match stick' looking

WHAT AM I DOING WELL ? WHAT DO I NEED TO DO TO IMPROVE ? WHAT TOOLS CAN WE USE TO CREATE A POWERFUL ATMOSPHERE ?

YEAR 7 MACBETH

What happens in Macbeth?

- Three witches predict great things for Macbeth.
- Lady Macbeth persuades Macbeth to kill King Duncan to get the throne.
- Macbeth kills Duncan and becomes King of Scotland.
- Macbeth has his best friend, Banquo, murdered.
- Macbeth begins to think that he's invincible while also losing his grip on reality.
- Lady Macbeth can't live with the crimes she's helped commit and takes her own life.
- There is a battle and Macduff decapitates Macbeth.



I have no spur
To prick the sides of my intent, but only
Vaulting ambition, which o'erleaps itself
And falls on th'other

Macbeth
(Act 1 Scene 7)

OUT! DAMNED SPOT!

Lady Macbeth
(Act 5 Scene 1)

Unsex me here,
And fill me from the
crown to the toe top-full
Of direst cruelty.

Lady Macbeth
(Act 1 Scene 5)

"There's daggers in men's smiles."

"IS THIS A DAGGER WHICH I SEE BEFORE ME, THE HANDLE TOWARD MY HAND?"

NOTHING IS but what is not.

Macbeth
(Act 1 Scene 3)

"What's done cannot be undone."

"BY THE PRICKING OF MY THUMBS, SOMETHING WICKED THIS WAY COMES."

Rehearsal and performance techniques: Tools to improve your character and engage the audience.

MONOLOGUE
An extended speech by one character; sometimes to another character, sometimes to the audience, sometimes to themselves.

CROSSCUTTING
Showing two scenes side by side on stage and cutting from one to the other; often to show a contrast or two locations.

SOUNDSCAPE
An ensemble (group of actors) use their voices and bodies to create the sounds of a real or imaginary location.

IMPROVISATION
Work that is created spontaneously or without rehearsal. Actors must listen to each other and respond to what is being said without a script.

ATMOSPHERE
The overall feeling or mood created by the actors in a scene. The atmosphere should affect the way to audience experience the scene or play.

CHORAL MOVEMENT
Using movement as a group to emphasise the words being spoken and add to the overall atmosphere being created.

CONSCIENCE ALLEY
All actors except one line up and share the thoughts of a particular character out loud in turn, as the actor playing that character walks down the 'alley'.

HOT SEATING
One actor sits in the 'hot seat'. Everyone in the ensemble asks the actor questions about their character's thoughts and feelings which they answer in role (as their character).

ROLE ON THE WALL
A rehearsal technique involving writing down everything you know about your character from the script. This helps to identify any gaps in your knowledge of the character.

WHAT AM I DOING WELL ? WHAT DO I NEED TO DO TO IMPROVE ? HOW ARE THE AUDIENCE IMPACTED BY THE ACTING AND DESIGN CHOICES ?

YEAR 7 PETER PAN

Physical and vocal Key words

CHARACTERISATION
Using a range of physical and vocal skills to show a character who is different to you.

TONE OF VOICE
The emotion behind what your character says e.g. an angry tone, a surprised tone.

PITCH
How high or low your character's voice is.

ACCENT
The way a person speaks- can show where they are from and sometimes class or status.

PACE
The speed at which your character speaks or moves.

GESTURES
Using your hands (or sometimes eyes and head) to communicate meaning with other characters and the audience e.g. pointing/winking.

BODY LANGUAGE
Showing emotion through the way you sit, stand or position yourself.

FACIAL EXPRESSION
Showing emotion through your face- eyes, mouth, eyebrows...

moment effect scene script stage skills physical suggests choices actor element story dialogue successful design character movement engaging audience line director performance vocal

words we use to talk about theatre

Writing structure

WHAT? Explain **which** element was successful.

HOW? Explain exactly **how** this moment was created.

WHY? **Why** was it successful? What impact did it have on the audience?

- One moment that stood out for me was...
- This helped to communicate to the audience that...
- This effect was created by...
- This could have been communicated more effectively by...
- The actor/designer used... successfully to create...

Design Key words

DESIGNER
The person in charge of making decisions about a particular element of the production.

SET
The scenery and furniture on the stage throughout the production.

PROPS
The items held or used by actors on stage to make the action more realistic.

COSTUME
What the actors wear when performing. Costume can denote character, historical era and the style of the productio.n

MUSIC AND SOUND
Live or recorded sound used to enhance a production and create a certain atmosphere.

LIGHTING
Lighting is used to make sure the audience can see the actors and set, focus their attention on what is important and to create a mood.

REVOLVE
A circular section of the stage which turns separately to the rest.

LEVELS
Used to create different locations or to show status on stage.

COLOUR/FIT/STYLE
Can suggest a character's personality, occupation or status.

WHAT AM I DOING WELL ?

WHAT DO I NEED TO DO TO IMPROVE ?

WHAT TOOLS DO I HAVE TO ENGAGE THE AUDIENCE ?

YEAR 7
WHAT'S BEHIND THE DOOR?

DEVISING TECHNIQUES:
Different tools used to respond to a stimulus...

Narration
Adding a spoken commentary about the action on stage.

Slow motion
Slowly exaggerating your actions to highlight a key moment.

Unison
Movement or speech performed at exactly the same time by more than one person.

Transition
A smooth, clean movement creating fluency from one scene to the next.

Mime
Acting in complete silence, using on physical skills.

DON'T FORGET TO SET TARGETS FOR EACH REHEARSAL PERIOD!

To **devise** means to create a performance from scratch, sometimes using a stimulus.

The **atmosphere** is the overall mood or feeling created for the audience.

Music can be added to build tension or create an atmosphere.

Tension is a growing sense of expectation which engages the audience.

The **climax** is the highest point of tension in the storyline.

THOUGHT-TRACKING-
One actor shares their character's thoughts and feelings with the audience while the other actors hold a freezeframe.

ROLE ON THE WALL-
Writing down a thorough description of your character's outside appearance and inside thoughts and feelings.

VOCAL KEYWORDS

PACE
The speed at which an actor delivers their lines.

PAUSE
Used to emphasise a moment between characters; silence can be used to create atmosphere.

PITCH
How low or high an actor's voice is when delivering their lines.

CLARITY
Delivering dialogue in a clear voice so the audience can hear.

PROJECTION
Using your voice to speak loudly and clearly.

TONE
The emotion behind what your character says e.g. an angry tone, a surprised tone.

PHYSICAL KEYWORDS

BODY LANGUAGE
Showing emotion through the way you sit, stand or position yourself.

GESTURES
Using your hands (or sometimes eyes and head) to communicate with other characters and the audience

FACIAL EXPRESSION
Showing emotion through your face- eyes, mouth, eyebrows.

INTERACTION
How characters react to each other to convey their relationship.

SPACE
The way actors move around the stage space to show their relationship with other characters.

LEVELS
Used to show the 'power' difference between characters.

A STIMULUS IS A STARTING POINT FOR IDEAS

A BRAINSTORM IS A SHARING OF INITIAL IDEAS WITH YOUR GROUP

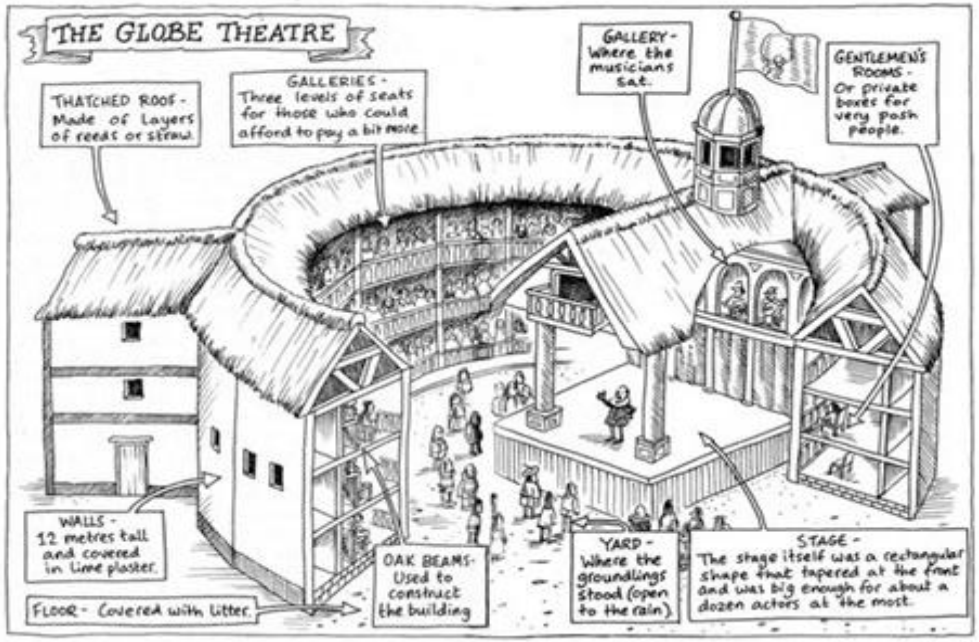
Theatre in the Elizabethan/Jacobean period

At the beginning of the 16th century many plays were based upon religious themes. These were called 'morality plays' and showed good and bad conduct. Others, called 'miracle plays' showed scenes from the Bible.

The main exception to this were the plays put on by wandering groups of actors, known as 'strolling players'. The plays put on by these groups were often far from religious and the authorities tried to ban them.

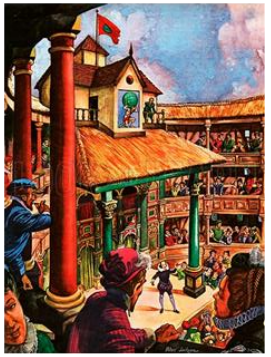
The themes of plays changed during Elizabeth's reign and English playwrights began to write comedies and tragedies. By the end of her reign playwrights such as Marlowe, Johnson and Shakespeare were writing the plays for which they are now famous.

As the watching of plays became more popular, theatres were built instead of using the courtyards of inns. The popularity of stage plays led to the building of the Rose, Swan and Globe Theatres in London between 1587 and 1598.



The main features and popularity of the Elizabethan/Jacobean theatre

- The theatre was open and plays had to be performed in daylight.
- A flag would be flown from the top of the theatre to show a play was going to be performed.
- People sat around the stage in galleries.
- The cheapest place was in front of the stage where ordinary people stood. They were known as 'groundlings'.
- There was very little scenery – a character would tell the audience where the scene was set.
- Women's parts were played by boys.
- Long speeches gave actors a chance to change their clothes.
- There was generally plenty of violence in the plays – Tudor audiences loved it.
- Many enjoyed going to the theatre as it provided good entertainment, an escape from their everyday lives and the chance to socialise and catch up on the latest news.
- Many nobles attended the theatre and the showing of a new play became a social event.
- Puritans disapproved of the non-religious nature of the plays which could lead to bad habits and behaviour. They believed it kept people from going to church.
- The authorities were unhappy because they believed it encouraged people to miss work and be idle, they also felt that theatres were ideal places for thieves and vagabonds to operate and where plague and other infectious diseases could spread.



Year 7 English
Shakespeare's Context
(in preparation for the study of A Midsummer Night's Dream)

Y7 ENGLISH – A Midsummer Night's Dream

The historical context of 1590's England.

English country fairy lore: people believed fairies & mischievous spirits existed (especially the lower classes). They often appeared in stories and were well-known figures in English folklore.

English traditions: on Midsummer eve, English men & women would tell supernatural stories round bonfires in the woods. The 'rite of May' involved youths singing & dancing in the woods.

Women and Family: Men ruled the society, they controlled the women in their lives and oversaw every decision. Women could not marry without their father's consent.

Elizabeth I: reigned England. Several female characters seem to represent her: Hippolyta's military prowess; Titania and her patronage of dancing, music and the arts. However, there was a growing resentment towards Elizabeth I in the 1590's, the fact that many of the women in this play have their power taken away from them could reflect this.

William Shakespeare: Poet, playwright and actor. He was born in Stratford Upon Avon, England but lived most of his life in London. Shakespeare wrote 154 sonnets and around 40 plays.

Vocabulary

1. **Hierarchy (n):** a rank according to status or power.
2. **Patriarchal (adj):** ruled by men.
3. **Submissive (adj):** obedient (following orders).
4. **Elopement (n):** run away secretly.
5. **Egotism (n):** over-confidence/self-absorbed
6. **Malicious (adj):** intending to do harm.
7. **Ephemeral (adj):** lasting for a very short time.
8. **Victim (n):** a person who is tricked or duped.
9. **Duality (n):** the concept of being two things.
10. **Consent (n):** to give permission.
11. **Prose (n):** normal speech.
12. **Verse (n):** language that rhymes.
13. **Blank verse (n):** language that does not rhyme but does follow iambic pentameter.
14. **Dialogue (n):** words spoken by a character.
15. **15. Iambic pentamer:** a specific pattern or rhythm consisting of 10 syllables.

Acts

Act One:

Theseus (Duke of Athens) prepares to marry **Hippolyta** (Queen of the Amazons). He is approached by **Egeus** who complains his daughter refuses to marry the suitor of his choice, **Demetrius** and that he should be allowed to assert the law of Athens: to kill **Hermia** for her disobedience or send her to live in a nunnery. **Theseus** tells **Hermia** she should obey her father, but she refuses, secretly plotting to run away with her love **Lysander**. She confides in **Helena** who is in love with **Demetrius** therefore tells him so that they can pursue the lovers together. Meanwhile, a group of actors discuss a play they will perform at the royal wedding.

Act Two

Oberon and **Titania** (King & Queen of the fairies argue over a **changling boy**. **Oberon** plans to get revenge by asking his servant **Puck** to pour love potion on Titania's eyelids so that she will fall in love with the first thing she sees on opening her eyes. **Oberon** observes **Demetrius** dismissing **Helena** and tells **Puck** to give him a dose of the potion too. **Puck** pours the love potion onto **Lysander's** eyes by mistake who wakes and sees **Helena**, falling in love with her and following her through the woods. **Hermia** wakes to find **Lysander** is gone.

Act Three

The actors rehearse and **Puck** turns **Bottom's** face into the head of a donkey. The other actors run away but **Titania** wakes and falls in love with **Bottom**. **Oberon** is confused when he sees **Helena** and **Lysander**. Realising **Puck's** mistake, he pours love potion onto **Demetrius'** eyes who wakes and sees **Helena** so that now both men are in love with **Helena**. **Helena** believes the men are mocking her. **Lysander** and **Demetrius** challenge each other to a dual. **Puck** places an antidote on **Lysander's** eyes as he sleeps.

Act Four

Oberon orders **Puck** to remove **Titania's** love spell and return **Bottom's** head to normal. **Theseus and Egeus** find the lovers in the wood and **Demetrius** declares that he now loves **Helena**. **Theseus** suggests that the two pairs of lovers get married on the same day that he marries **Hippolyta**. **Bottom** re-joins his fellow actors.

Act Five

The play is performed to the audience's amusement and the fairies bless the marriages.

Shakespeare's BIG IDEAS

Desire

Shakespeare uses the play to show different types of love. The play pokes fun at young love and the all-consuming power of desire. There is a knowing policing of desire in Egeus stepping in between Lysander and Hermia. There is a hint that there is something shameful in not desiring the 'correct' type or person. There is a sense that desire is not something you can control.

Dreams

Within the play dreams are a device to allow the impossible to happen. The play seems to be suggesting that dreams and imagination are as useful as reason and can sometimes help to guide people. By setting the play at night we see the "real" characters, not who they pretend to be during the day.

Power

The play examines the struggle for power particularly between genders. Theseus controls Hippolyta, Oberon controls Titania and Egeus controls Hermia. It also exams the power of love as well as the supernatural powers of the fairies.

Performance

Shakespeare uses the play to mock serious tragedies. He also shows how theatre and performance can be an escape from reality.

Class

In both the fairy world and the human world there is a clear social hierarchy – royalty, nobles, commoners. The lower-class characters in the play are used as comic relief.

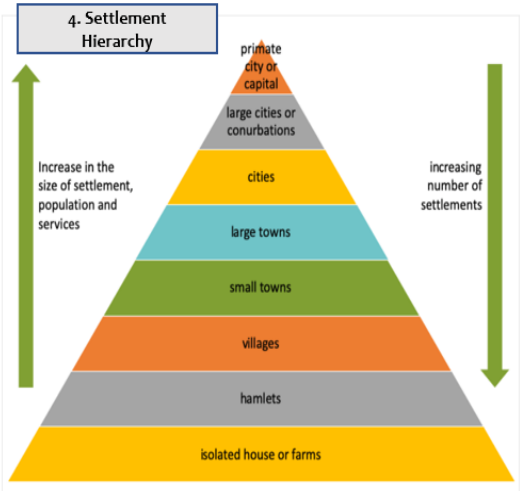
30. Geography Topic 4: Settlement and Urbanisation

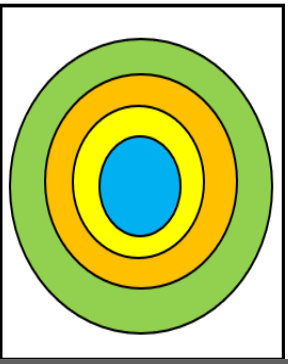
1. Settlement and Urbanisation key words	
Settlement	Where people live
Site	The place the settlement is located
Situation	Where the settlement is in relation to other settlements and surrounding features
Settlement hierarchy	Order of settlements in a region or country by population OR services
Land-use	The function of the land – what it is used for.
Terraced Housing	Row of similar houses joined together by their side walls
Traffic congestion	Slow speeds, longer travel times and queues when traveling in a vehicle.
Derelict building	Empty building which is no longer used and in a poor state of repair.
Retail	The selling of goods
Regeneration	Improving the buildings and landscape to provide benefits for an area
Urbanisation	The increasing percentage of a population living in urban areas
Megacity	A city with a population of over 10 million people

2. Population key words	
Population change	Change in the number of people in a specified area over time
Birth Rate	Number of babies born per 1,000 of population
Death Rate	Number of deaths per 1,000 of population

3. Early factors in choosing settlement location
Flat land
Raw materials
Water supply
Defendable site
Fertile soil
Shelter
Transport links

4. Settlement Hierarchy





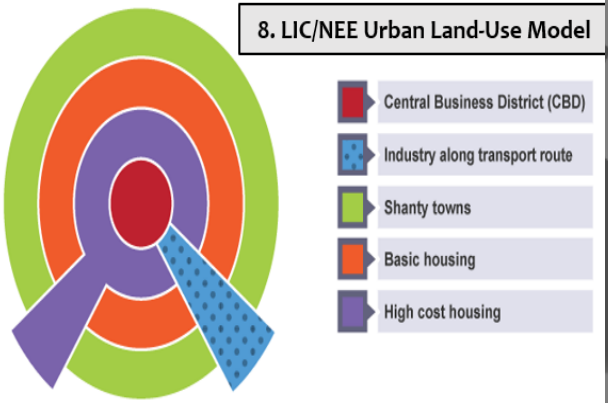
5. HIC Urban Land-Use Model	
CBD	Central Business District. The commercial centre of an urban area.
Inner City	Mainly terraced housing in grid patterns, originally built near to factories to house workers.
Suburbs	Residential area mainly made up of private, semi-detached housing.
Rural-Urban Fringe	The edge of a city where it meets the countryside

6a. Challenges in HIC urban areas
Traffic congestion
Derelict buildings
Lack of green space
Crime
Changing shopping habits

6b. Opportunities in HIC urban areas
Transport links
Education opportunities
Entertainment and leisure
Retail
Close-knit communities

7. Urban Transport Systems	
Integrated Public Transport	Combining modes of transport for ease and efficiency of use
Congestion Charge	Charging polluting cars for entering an urban area
Park and Ride	Cars are parked on the outskirts of an urban area and drivers take public transport from there to the CBD

8. LIC/NEE Urban Land-Use Model

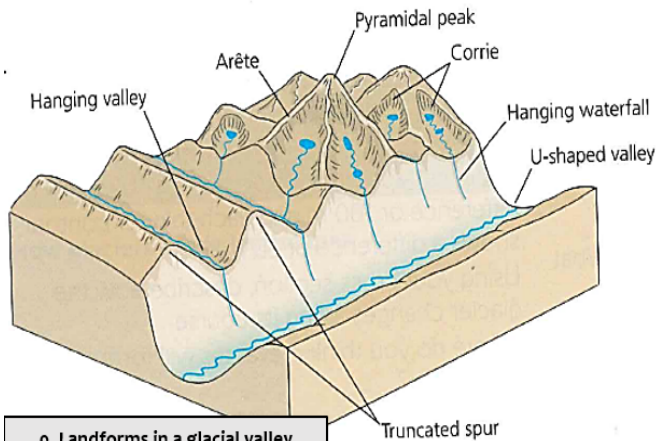


8. LIC/NEE Urban Land-Use Model	
Shanty towns	Self-built housing on the edge of cities
Basic housing	Formally constructed housing with services such as water and electricity
High-cost housing	Similar in structure and style to those found in HICs

9. Causes of urbanisation in LIC/NEE Cities	
Natural Increase	Birth rate is higher than death rate
Rural-urban migration	The movement of people from the countryside to cities
Push factor	A reason a person has for leaving a place
Pull factor	A reason a person has for moving to a place

10. Challenges in LIC/NEE Urban Areas	
Healthcare	Lack of access to healthcare facilities and trained doctors, nurses and midwives
Education	Not enough schools and a shortage of teachers. Wages are low for teachers.
Water supply	Not all the population have access to running water in an urban area
Energy supply	Shortages of supply because homes are not properly connected to the energy grid.
Crime	Lack of education and jobs mean some turn to crime for income.
Informal economy	Poorly paid jobs with no benefits and no tax is paid to the government from these jobs
Air pollution	Traffic congestion and pollutants from factories in the air create smog and unsafe air

31. Geography Topic 5: Physical Landscapes in the UK



9. Landforms in a glacial valley created by erosion

1. Physical Landscapes key words	
Landscape	The visible features of an area of land
Geology	The study of rock types
Landform	Feature created by landscape processes
Coast	The land along the sea
Sediment	Small pieces of material (such as rock) moved by air and water
Glacier	Slow moving mass of ice or compressed snow
Bedrock	Hard, solid rock beneath the top layer of the ground

2. Layers of the landscapes	
Physical (base) layer	The physical landscape sculpted by physical processes and geology
Biological layer	Soil, plants and trees
Human layer	Settlements, communications and farming

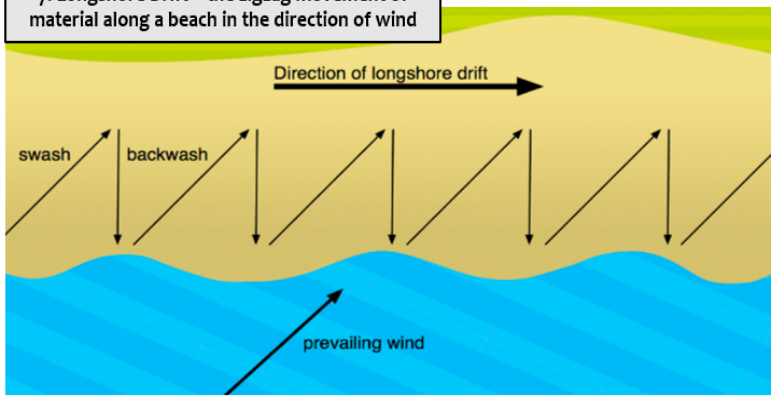
3. The Rock Cycle	
Rock Cycle	One type of rock changes into another type of rock
Igneous	Rock formed on the surface (during eruptions) or deep underground by the cooling of molten rock
Sedimentary	Formed by deposition
Metamorphic	Undergone change due to intense heat and/or pressure

4. Landscape processes	
Weathering	Breakdown of rocks in situ
Erosion	Wearing away and removal of pieces of rock
Transportation	Movement of rocks from an area of erosion to an area of deposition
Deposition	Dropping of rock particles

5. Features of a river valley	
V-shaped river valley	Deep river valley shaped like a V
River Channel	The groove in the land through which water travels
Source	Start of a river
Mouth	End of a river
Drainage Basin	Area of land drained by a river and its tributaries
Tributary	Small river which joins a larger river
Confluence	The point where two rivers meet
Waterfall	A 'step' in the river over which water plunges
Meander	A bend in a river
Floodplain	The flat land either side of the channel which floods when the river bursts its banks

6. Coastal landforms	
Beach	Sediment deposited by the sea
Cliff	Steep, often vertical rock face
Bay	Land curves in away from the sea and is surrounded by land on three sides
Headland	A tall, narrow piece of land projecting into the sea
Cave	A natural hollow in a cliff
Arch	An opening in the cliff from where a cave has collapsed
Stack	Steep, often vertical column in the sea
Spit	A narrow, jutting finger of sand projecting into the sea
Tombolo	A beach which joins an island to the mainland

7. Longshore Drift – the zigzag movement of material along a beach in the direction of wind



8. Glacial processes key terms	
Plucking	The movement of glaciers pulls rock from the bedrock
Abrasion	Scraping of a glacier over bedrock
Freeze-thaw weathering	Changing temperature of water causes rock to weaken and break
Moraine	Debris mixed with ice which is transported by glaciers

10. Glacial landforms key terms	
Corrie	A sheltered, over-deepened hollow with a steep back wall and lip
Arete	Sharp mountain ridge between two corries
Pyramidal Peak	A sharply pointed peak caused by the formation of three or more corries
U-Shaped valley	Deep valley with straight sides and flat bottom – shaped like a U.
Misfit river	River that is too small for a valley
Truncated spurs	Steep cliffs along the sides of a U-shaped valley
Hanging Valley	Small valley hanging high above a U-shaped valley
Fjord	Flooded glacial valley
Ribbon lakes	Long, thin lake found in a U-shaped valley
Glacial till	Debris transported by a glacier where it then melts. This is a mixture of rocks and clay.
Erratic	Very large boulder
Drumlin	Smooth, egg-shaped hills.

Y7 HISTORY – The Stuarts

1. James I	
James I	King of Scotland and England in 1603. Brought up as a Protestant
King James' Bible	Became the standard version of the Bible for the next 250 years
Repressive laws	Laws that were unfair. Catholics hoped James would end these laws that were introduced during Elizabeth's reign.

2. The Gunpowder Plot	
The Gunpowder Plot	A plot against James I and Parliament as a result of the repressive laws towards Catholics
Robert Catesby	Leader of the gunpowder plotters. A Catholic gentleman
Guy Fawkes	Found with 36 Barrels of gunpowder placed directly under the House of Lords
Lord Monteagle	A member of the House of Lords. Received a letter warning him of the plot
Hung, drawn and quartered	Hung by a rope, the abdomen was cut out, then pulled apart by the limbs

3. Charles I	
Absolute Monarch	A ruler who has supreme authority and power
Henrietta- Maria	French Princess. Charles I wife. A Catholic
Ship Money	A tax that Charles I expands to raise money
Personal Rule	Charles ruled for 11 years without Parliament
Raising the standard	Charles summons an army to fight parliament. This is from Nottingham
Short Parliament	Parliament were not happy with Charles about his actions over his personal rule, so he dissolved them after 3 weeks
Long Parliament	Stayed in power for 20 years

4. The English Civil War	
Triennial Act	Ensured Parliament met at least once every 3 weeks
Roundheads	Parliaments' Army who had short hair cuts
Cavaliers	The Royalists army, fighting for Charles I. They had long hair, contrasting with the Roundheads
Civil War	A war between two sides in the same country. The English Civil War was between the Roundheads and Cavaliers
New Model Army	A professional national army and could be sent anywhere in the country. They were strictly disciplined

5. Oliver Cromwell	
Oliver Cromwell	Leader of the New Model Army. Ruled the country after Charles I
The Lord Protector	Cromwell did not want to be called King, but this title gave him the powers of a king

6. Execution of Charles I	
Rump Parliament	The remaining MPs after the ones who supported Charles were banned from entering the House of Commons
Show Trial	Charles's trial was just for 'show'. The decision to execute him had already been made
Treason	Attacking a state or the authority of a country
Peter Bradshaw	A lawyer who was appointed as the judge for Charles's trial. He was so afraid of being assassinated, he wore a bullet-proof hat

7. William Harvey	
Blood circulation	The way the blood flows around the body
Physician	A medical doctor. Harvey was the physician for King James I and Charles I
Harvey's discovery of the heart	Harvey found out that the heart acted as a pump and pumped blood around the body
Witch trials	Harvey was asked by Charles I to assess whether 4 suspicious women were witches

8. Timeline of key dates	
1603	James I became king of England
5th November 1605	The Gunpowder Plot
1625	Charles I becomes King
1634	William Harvey sent to assess if 4 women were witches
22nd Aug 1642- 3rd Sept 1651	The English Civil War
30th January 1649	The Execution of Charles I
Dec 1653- Sept 1658	The rule of Oliver Cromwell

Y7 HISTORY – Native Americans

1. Key words	
Native Americans/ Plains Indians	The term given to the native people who lived in America
The Great Plains	The land which stretches down the centre of America, where the Plains Indians lived in their tribes
Sioux	A large tribe of Indians. It was so big it was called a Nation. The Sioux Nation.
Nomads	People who moved around the land and don't stay in one place
Visions	A thought/ sight which the Indians experienced. It guided them through life and helped them get their special Indian name
Warfare	Wars between Indian tribes and later between Indians and white settlers

2. The Plains Environment	
Prairie Grass	Long and short grass on the Plains
Animals on the Plains	Antelope, buffalo, deer, rabbits, gophers
Climate	Hot and dry in the summer, causing rivers to dry up. Freezing cold in the winter. Strong winds all year round.
Rocky and Appalachian Mountains	Mountain ranges which the Great Plains were between.

3. Social structure	
Hunter/ gatherers	They hunted for food and used the environment to live off. Men and boys would hunt
Tribes	Lived in tribes. Each tribe was made up of bands which could be hundreds of people or just 20 or 30. Bands in each tribe would work together Some tribes disliked each other.
Women	Women would have a traditional role of looking after the children, cooking, Putting up and taking down the tipi.

4. Tipis	
Tipis	The name of the Plains Indian's homes. They were a conical shape and built to adapt to the environment.
Adapting to the Plains	The sides of the tipi could be rolled up in summer to cool them down. They could be padded around in winter to keep heat from the fire in.
Decorations	Patterns/ images which told the story of the Indians' bravery during a hunt
Features	Ears/ flaps/ wooden poles/ doorway/ made from buffalo skin/ scalps hanging as trophies/ put up and taken down easily

5. The buffalo	
Buffalo	Lived in herds on the Plains. The Indians only killed what they needed. They did not hunt for fun.
Uses of the Buffalo	Every part of the buffalo used. Each part of the buffalo helped the Indians survive on the Plains
After the hunt	The women would prepare the buffalo for what they needed.
Demise of the buffalo	The buffalo became hunted by white settlers who wanted to kill off the Plains Indians and change their way of life.

6. Beliefs	
The Great Spirit	Also called Wakan Tanka. He created the world and everything that lived in it. The Indian's worshipped The Great Spirit
Land and nature	Belief that everything in nature had a spirit. Land belonged to The Great Spirit, not to people
Sun Dance	A famous ceremony to get help or guidance from the spirit world. A Sun Dance could last for days. It involved men being hung up by their breast until they got a vision
The Medicine Man	Believed he could cure sickness, drive out evil spirits. He used ointments and potions to treat sickness. Consulted before buffalo hunts for advice on war
Disease	Settlers who came across brought diseases like cholera and smallpox. Dangerous for the Indians as they had no resistance to them

7. Hunting and Warfare	
Horses	Vital for the survival of the Indians- Went to war on them, used to hunt the buffalo, a status symbol as men measured their wealth in horses.
Counting Coup	When at war, Indian's were touched with a stick to show bravery.
Disguise	A method of hunting where the Indians dress up as wolves to get close to the buffalo
Buffalo Dance	A dance to call the buffalo which could last for many days
Scalping	Cutting off a scalp of a victim in war, as a trophy

Y7 HISTORY – French Revolution

1. Key words	
Louis XVI	King of France 1754-1793
Marie Antoinette	Wife of Louis XVI
Ancien Regime	The old form of government in France under Louis XVI
First Estate	Church people – Priests, monks and nuns
Second Estate	Nobles
Third Estate	The Bourgois, Sans Culottes, Peasants

2. The start of the Revolution and the Revolution	
The Enlightenment	An age of new ideas about the world
Bourgeois	Middle classes- merchants, lawyers, bankers
Sans Culottes	Unskilled workers. Wore trousers to the knee
Revolution	A change in political power
The National Assembly	Consisted of the Third Estate. A form of government of France
Declaration of the Rights of Man	The Principles laid out for a new, democratic France

3. The end of Louis	
Varennes	The place where Louis tried to escape to
Republic	People are chosen to rule the country through elections. No monarchy
Committee of Public Safety	It formed the government during the Terror
Place de la Revolution	The place where Louis was executed. A square where many executions took place
Guillotine	A tall frame with a weighted and angled blade at the top, which is released to decapitate the individual

4. The Terror	
The Terror	A period during the French Revolution when many people were massacred or executed
Robespierre	Became the leader of the French Republic after Louis was executed
Vendee	A region in Western France. It was a largely rural area where a lot of rebellion happened at this time

5. Timeline	
1774	Louis became King of France
1787	Louis tried to make nobles pay taxes for the first time
June 1789	National Assembly formed
August 1789	Declaration of the Rights of Man
January 1793	Louis executed
1792-94	The Terror

What do I need to be able to do?

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

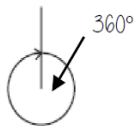
- Understand/use the sum of angles at a point
- Understand/use the sum of angles on a straight line
- Understand/use equality of vertically opposite angles
- Know and apply the sum of angles in a triangle
- Know and apply the sum of angles in a quadrilateral

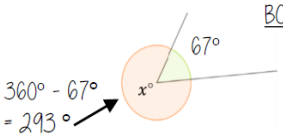
Keywords

Vertically Opposite: angles formed when two or more straight lines cross at a point
Interior Angles: angles inside the shape
Sum: total, add all the interior angles together
Convex Quadrilateral: a four-sided polygon where every interior angle is less than 180°
Concave Quadrilateral: a four-sided polygon where one interior angle exceeds 180°
Polygon: A 2D shape made with straight lines
Scalene triangle: a triangle with all different sides and angles
Isosceles triangle: a triangle with two angles the same size and two angles the same size
Right-angled triangle: a triangle with a right angle

Sum of angles at a point

The sum of angles around a point is 360°



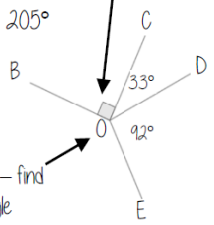


360° - 67°
= 293 °

Find angle BOE

90° + 33° + 92° = 205°
360° - 205°
BOE = 155°

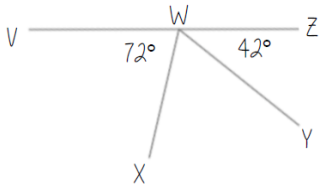
Angle notation – 90°



Angle notation – find this missing angle

Sum of angles on a straight line

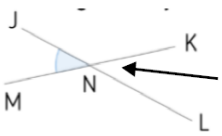
Adjacent angles that share a common point on a line add up to 180°



Find angle XWY

72° + 42° = 114°
180° - 114° = 66°

Vertically opposite angles

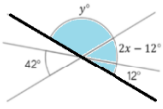


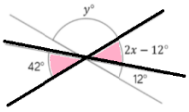
Angle JNM is vertically opposite to angle KNL

JNM = KNL

Vertically opposite angles are the same

Other angle rules still apply
Look for straight line sums and angles around a point

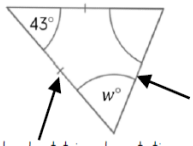




Form equations with information from diagrams:
$2x - 12 = 42$
$2x = 54$
$x = 27°$

Sum of angles in triangles

Sum of interior angles in a triangle = 180°



The two base angles will be the same size

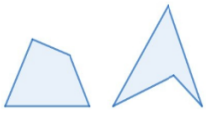
Look at triangle notation
This indicates an isosceles triangle
∴ 180 - 43 = 137
137 ÷ 2 = 68.5°

A triangle can only have ONE right angle

Have a go!
Tearing the corners from triangles forms a straight line which is therefore 180°

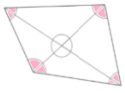
Sum of angles in quadrilaterals

Sum of interior angles in a quadrilateral = 360°

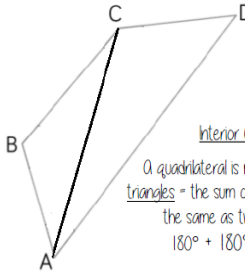


Convex Quadrilateral

Concave Quadrilateral



Interior angles are those that make up the perimeter (outline) of the shape

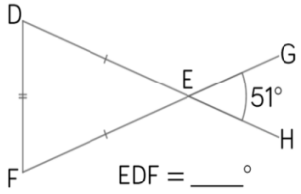


Interior Angles

A quadrilateral is made up of two triangles = the sum of interior angles is the same as two triangles:
180° + 180° = 360°

Angle Problems

Split up the problem into chunks and explain your reasoning at each point using angle notation



EDF = ____ °

Keep working out clear and notes together

1. Angle DEF = 51° because it is a vertically opposite angle DEF = GEH
2. Triangle DEF is isosceles (triangle notation) ∴ EDF = EFD and the sum of interior angles is 180°
   180° - 51° = 129° 129° ÷ 2 = 64.5°
3. Angle EDF = 64.5°

CHRIST THE KING - KNOWLEDGE ORGANISERS

Y7 MATHS – NUMBER SENSE

What do I need to be able to do?

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

- Know and use mental addition/ subtraction
- Know and use mental multiplication/ division
- Know and use mental arithmetic for decimals
- Know and use mental arithmetic for fractions
- Use factors to simplify calculations
- Use estimation to check mental calculations
- Use number facts
- Use algebraic facts

Keywords

Commutative: changing the order of the operations does not change the result
Associative: when you add or multiply you can do so regardless of how the numbers are grouped
Dividend: the number being divided
Divisor: the number we divide by
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign
Equation: a mathematical statement that two things are equal
Quotient: the result of a division

Mental methods for addition/ subtraction

Addition is commutative

6 + 3 = 3 + 6

The order of addition does not change the result

Subtraction the order has to stay the same

360 – 147 = 360 – 100 – 40 – 7

- Number lines help for addition and subtraction
- Working in 10's first aids mental addition/ subtraction

Mental methods for multiplication/ division

Multiplication is commutative

2 × 4 = 4 × 2

The order of multiplication does not change the result

Partitioning can help multiplication

24 x 6 = 20 x 6 + 4 x 6
= 120 + 24
= 144

Division is not associative

Chunking the division can help 4000 ÷ 25
"How many 25's in 100" then how many chunks of that in 4000.

Mental methods for decimals

Multiplying by a decimal < 1 will make the original value smaller e.g x 0.1 = ÷ 10

Methods for multiplication 1.2 x 0.03

12 × 3 = 36
1.2 × 3 = 3.6
1.2 × 0.3 = 0.36
1.2 × 0.03 = 0.036

12 × 3 = 36
÷ 10 ÷ 100 ÷ 1000
1.2 × 0.03 = 0.036

Methods for addition 2.3+2.4

2 + 2 = 4
0.3 + 0.4 = 0.7
4 + 0.7 = 4.7

Methods for division 1.5 ÷ 0.05

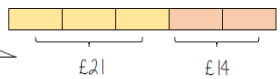
Multiply by powers of 10 until the divisor becomes an integer

1.5 ÷ 0.05
x100 x100
150 ÷ 5 = 30

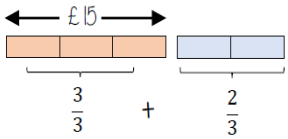
Mental methods for fractions

Use bar models where possible

I've spent $\frac{2}{5}$ of my money I have £21 left



How much did they have to begin with?



What is $\frac{5}{3}$ of £15?

Using factors to simplify calculations

30 x 16

10 x 3 x 4 x 4
10 x 3 x 2 x 8
2 x 5 x 3 x 2 x 2 x 2 x 2
16 x 10 x 3

Multiplication is commutative
Factors can be multiplied in any order

Estimation

Estimations are useful – especially when using fractions and decimals to check if your solution is possible.

Most estimations round to 1 significant figure

Estimations are useful – especially when using fractions and decimals to check if your solution is possible.

210 + 899 < 1200

This is true because even if both numbers were rounded up, they would reach 300 + 900.
The correct estimation would be 200 + 900 = 1100.

Number facts

Use 124 x 5 = 620

For multiplication, each value that is multiplied or divided by powers of 10 needs to happen to the result

620÷ 124 = 50

For division you must consider the impact of the divisor becoming smaller or bigger.
Smaller – the answer will be bigger
(It is being shared into less parts)
Bigger – the answer will be smaller
(It is being shared into more parts)

Algebraic facts

2a + 2b = 10 — Everything x 2

0.1a + 0.1b = 0.5 — Everything ÷ 10

a + b = 5

The unknown quantity isn't changing but the variables change what is done to give the result

Add 2 to the total

a + b + 2 = 7

CHRIST THE KING - KNOWLEDGE ORGANISERS

Y7 MATHS – SETS AND PROBABILITY

What do I need to be able to do?

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

- Identify and represent sets
- Interpret and create Venn diagrams
- Understand and use the intersection of sets
- Understand and use the union of sets
- Generate sample spaces for single events
- Calculate the probability of a single event
- Understand and use the probability scale

Keywords

Set: collection of things
Element: each item in a set is called an element
Intersection: the overlapping part of a Venn diagram (AND ∩)
Union: two ellipses that join (OR ∪)
Mutually Exclusive: events that do not occur at the same time
Probability: likelihood of an event happening
Bias: a built-in error that makes all values wrong (unequal) by a certain amount, e.g. a weighted dice
Fair: there is zero bias, and all outcomes have an equal likelihood
Random: something happens by chance and is unable to be predicted

Identify and represent sets

The **universal set** has this symbol ξ – this means EVERYTHING in the Venn diagram is in this set

A set is a collection of things – you write sets inside curly brackets { }

ξ = {the numbers between 1 and 50 inclusive}

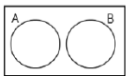
My sets can include every number between 1 and 50 including those numbers

A = {Square numbers}

A = {1, 4, 9, 16, 25, 36, 49}

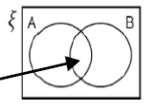
All the numbers in set A are square number and between 1 and 50

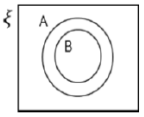
Interpret and create Venn diagrams



Mutually exclusive sets
The two sets have nothing in common
No overlap

Union of sets
The two sets have some elements in common – they are placed in the intersection

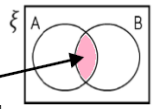




Subset
All of set B is also in Set A so the ellipse fits inside the set

The box
Around the outside of every Venn diagram will be a box. If an element is not part of any set it is placed outside an ellipse but inside the box

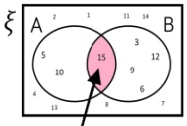
Intersection of sets



Elements in the intersection are in set A AND set B

The notation for this is $A \cap B$

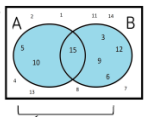
ξ = {the numbers between 1 and 15 inclusive}
A = {Multiples of 5} B = {Multiples of 3}



The element in $A \cap B$ is 15

In this example there is only one number that is both a multiple of 3 and a multiple of 5 between 1 and 15

Union of sets



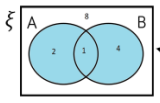
Elements in the union could be in set A OR set B

ξ = {the numbers between 1 and 15 inclusive}
A = {Multiples of 5} B = {Multiples of 3}

The elements in $A \cup B$ are 5, 10, 15, 3, 9, 6, 12

The notation for this is $A \cup B$

There are 7 elements that are either a multiple of 5 OR a multiple of 3 between 1 and 15



This Venn shows the **number of elements** in each set

Sample space – for single events

A sample space for rolling a six-sided dice is S = {1, 2, 3, 4, 5, 6}

A sample space for this spinner is S = {Pink, Blue, Yellow}

You only need to write each element once in a sample space diagram

- A Sample space represents a possible outcome from an event
- They can be interpreted in a variety of ways because they do not tell you the probability

Probability of a single event

Probability = number of times event happens / total number of possible outcomes

$P(\text{Blue}) = \frac{4}{10} = \frac{2}{5}$

There are 4 blue sectors
There are 10 sectors overall

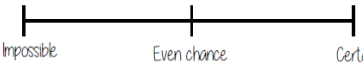
Probability notation P (event)

Probability can be a fraction, decimal or percentage value

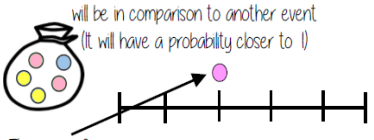
$\frac{4}{10} = \frac{40}{100} = 0.40 = 40\%$

Probability is always a value between 0 and 1

The probability scale



The more likely an event the further up the probability it will be in comparison to another event (It will have a probability closer to 1)



There are 2 pink and 2 yellow balls, so they have the same probability

There are 5 possible outcomes
So 5 intervals on this scale, each interval value is $\frac{1}{5}$

Sum of probabilities

Probability is always a value between 0 and 1

The probability of getting a blue ball is $\frac{1}{5}$
∴The probability of NOT getting a blue ball is $\frac{4}{5}$

The sum of the probabilities is 1

The table shows the probability of selecting a type of chocolate

Dark	Milk	White
0.15	0.35	

P(white chocolate) = 1 – 0.15 – 0.35
= 0.5

CHRIST THE KING - KNOWLEDGE ORGANISERS

Y7 MATHS – PRIME NUMBERS AND PROOF

What do I need to be able to do?

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

- Find and use multiples
- Identify factors of numbers and expressions
- Recognise and identify prime numbers
- Recognise square and triangular numbers
- Find common factors including HCF
- Find common multiples including LCM

Keywords

Multiples: found by multiplying any number by positive integers
Factor: integers that multiply together to get another number.
Prime: an integer with only 2 factors.
Conjecture: a statement that might be true (based on reasoning) but is not proven
Counterexample: a special type of example that disproves a statement
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)
HCF: highest common factor (biggest factor two or more numbers share)
LCM: lowest common multiple (the first time the times table of two or more numbers match)

Multiples

The "times table" of a given number

All the numbers in this lists below are multiples of 3.

3, 6, 9, 12, 15…

This list continues and doesn't end

3x, 6x, 9x …

x could take any value and as the variable is a multiple of 3 the answer will also be a multiple of 3

Non example of a multiple

4.5 is not a multiple of 3 because it is 3 x 1.5

Not an integer

Factors

Arrays can help represent factors

5 x 2 or 2 x 5

Factors of 10
1, 2, 5, 10

10 x 1 or 1 x 10

The number itself is always a factor

Factors and expressions

x x x x x x

$6x \times 1$ OR $6 \times x$

Factors of $6x$
6, x, 1, $6x$, $2x$, 3, $3x$, 2

x x
x x
x x

$2x \times 3$

x x x
x x x

$3x \times 2$

Prime numbers

- Integer
- Only has 2 factors
- and itself

2

The first prime number
The only even prime number

Learn or how-to quick recall…

2, 3, 5, 7, 11, 13, 17, 19, 23, 29…

Square and triangular numbers

Square numbers

odd even odd

Representations are useful to understand a square number n^2

1, 4, 9, 16, 25, 36, 49, 64 …

Triangular numbers

Representations are useful – an extra counter is added to each new row

Add two consecutive triangular numbers and get a square number

1, 3, 6, 10, 15, 21, 28, 36, 45…

Common factors and HCF

1 is a common factor of all numbers

Common factors are factors two or more numbers share

HCF – Highest common factor

HCF of 18 and 30

18: 1, 2, 3, **6**, 9, 18
30: 1, 2, 3, 5, **6**, 10, 15, 30

Common factors (factors of both numbers)
1, 2, 3, 6

HCF = 6

6 is the biggest factor they share

Common multiples and LCM

Common multiples are multiples two or more numbers share

LCM – Lowest common multiple

LCM of 9 and 12

9: 9, 18, 27, **36**, 45, 54
12: 12, 24, **36**, 48, 60

LCM = 36

The first time their multiples match

9 18 27 36 45
12 24 36 48

Comparing fractions

$\frac{3}{5}$ and $\frac{7}{10}$ ← Compare fractions using a LCM denominator → $\frac{6}{10}$ and $\frac{7}{10}$

Conjectures and counterexamples

Conjecture

1, 2, 4….
The numbers in the sequence are doubling each time.

A pattern that is noticed for many cases

Counterexamples

This sequence isn't doubling it is adding 2 each time

Only one counterexample is needed to disprove a conjecture

Product of prime factors

Multiplication part-whole models

30 → 2, 15 → 5, 3
30 → 3, 10 → 2, 5
30 → 5, 6 → 2, 3

All three prime factor trees represent the same decomposition

Multiplication is commutative

$30 = 2 \times 3 \times 5$ ← Multiplication of prime factors

Using prime factors for predictions

e.g. 60	30×2	$2 \times 3 \times 5 \times 2$
150	30×5	$2 \times 3 \times 5 \times 5$

What do I need to be able to do?

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

- Use letter and labelling conventions
- Draw and measure line segments and angles
- Identify parallel and perpendicular lines
- Recognise types of triangle
- Recognise types of quadrilateral
- Identify polygons
- Construct triangles (SAS, SSS, ASA)
- Draw Pie charts

Keywords

Polygon: A 2D shape made with straight lines
Scalene triangle: a triangle with all different sides and angles
Isosceles triangle: a triangle with two angles the same size and two angles the same size
Right-angled triangle: a triangle with a right angle
Frequency: the number of times a data value occurs
Sector: part of a circle made by two radii touching the centre
Rotation: turn in a given direction
Protractor: equipment used to measure angles
Compass: equipment used to draw arcs and circles.

Letter and labelling convention

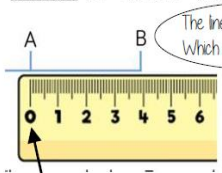
The letter in the middle is the angle
The arc represents the angle

Angle Notation: three letters ABC
This is the angle at B = 113 °

Line Notation: two letters EC
The line that joins E to C

Draw and measure line segments

Conversions 1cm = 10mm, 1m = 100cm

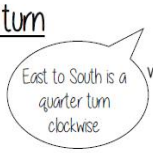


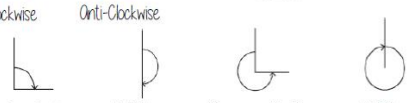
AB is a line segment (part of the line)

Make sure the start of the line is at 0.

Angles as measures of turn

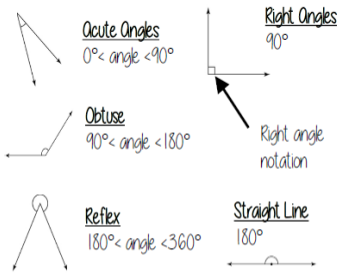
Clockwise Anti-Clockwise





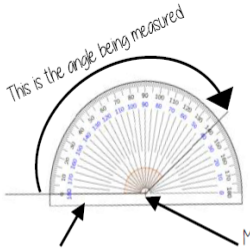
Quarter Turn 90° Clockwise
Half Turn 180°
Three-quarter Turn 270° Anti-Clockwise
Full Turn 360°

Classify angles



Acute Angles 0° < angle < 90°
Right Angles 90°
Right angle notation
Obtuse 90° < angle < 180°
Reflex 180° < angle < 360°
Straight Line 180°

Measure angles to 180°



Read from 0° on the base line. Remember to use estimation. This is an obtuse angle so between 90 ° and 180 °

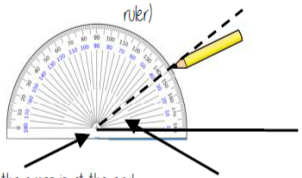
The base line follows the line segment

Make sure the cross is at the point the two lines meet

Draw angles up to 180°

Draw a 35° angle

Make a mark at 35° with a pencil and join to the angle point (use a ruler)

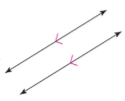


Make sure the cross is at the end of the line (where you want the angle)

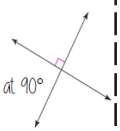
The angle

Parallel and Perpendicular lines

Parallel lines
Straight lines that never meet
(Have the same gradient)



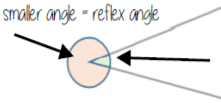
Perpendicular lines
Straight lines that meet at 90°



Angles over 180°

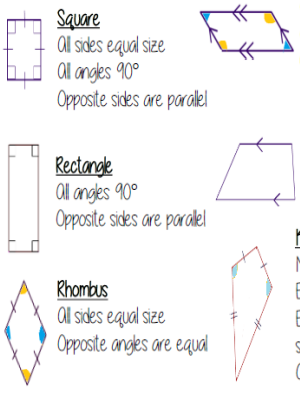
Use your knowledge of straight lines 180 ° and angles around a point 360 °

360 ° - smaller angle = reflex angle



Measure the smaller angle first (less than 180 °

Properties of Quadrilaterals



Square
All sides equal size
All angles 90°
Opposite sides are parallel

Parallelogram
Opposite sides are parallel
Opposite angles are equal
Co-interior angles

Rectangle
All angles 90°
Opposite sides are parallel

Trapezium
One pair of parallel lines

Rhombus
All sides equal size
Opposite angles are equal

Kite
No parallel lines
Equal lengths on top sides
Equal lengths on bottom sides
One pair of equal angles

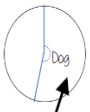
Draw Pie Charts

Type of pet	Dog	Cat	Hamster
Frequency	32	25	3

$\frac{32}{60}$ "32 out of 60 people had a dog"

This fraction of the 360 degrees represents dogs

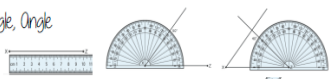
$\frac{32}{60} \times 360 = 192°$



Use a protractor to draw This is 192°

SAS, SSS, ASA constructions

Side, Angle, Angle



Side, Angle, Side

Side, Side, Side

Polygons

3	- Triangle	5	- Pentagon	8	- Octagon
4	- Quadrilateral	6	- Hexagon	9	- Nonagon
		7	- Heptagon	10	- Decagon

If all the sides and angles are the same, it is a **regular** polygon

Tu veux aller au café cet après-midi ?	1	You want to go to the café this afternoon?
Oui, je veux bien merci, à quelle heure ? 	2	Yes, i really want to thank you, what time?
À trois heures trente.	3	At three thirty
Bonjour, comme boisson vous désirez ?	4	Hello, for a drink, what would you like? 
Je voudrais un Orangina sil vous plaît 	5	I would like an orangina please
Je veux un chocolat chaud s'il vous plaît	6	I want a hot chocolate please. 
Oui, d'accord, j'arrive tout de suite	7	Yes, ok, I'll be straight back
…		…
Vous voulez manger quelque chose ?	8	Would you want anything to eat
Je voudrais un croquemonsieur 	9	I would like a toasted sandwich
Et pour moi, un sandwich au jambon s'il vous plaît	10	And for me, a ham sandwich please 
D'accord…	11	Ok
…		…
Vous voulez autre chose ?	12	Do you want anything else?
Je voudrais une glace. 	13	I would like an ice-cream
Quel parfum ?	14	What flavour ?
Fraise s'il vous plaît 	15	Stawberry please
Et pour vous ?	16	And for you ?
Je voudrais une crêpe avec du nutella s'il vous plaît	17	I would like a pancake with Nutella please. 
Voilà, merci	18	Here you go, thank you.
…		…
Pardon monsieur, c'est combien ?	19	Excuse me sir, how much is it?
Ça fa it dix-sept euros, quatre-vingts s'il vous plaît. 	20	That is 17 euros 80 please
Voilà, merci, au revoir 	21	Here you go, thank you, good-bye
Au revoir, bonne journée	22	Good bye, have a good day.

FOOD & DRINK

A. FOOD

le pain	bread
le fromage	cheese
le jambon	ham
la viande	meat
le poulet	chicken
le boeuf	beef
le porc	pork
le poisson	fish
le thon	tuna
les pommes de terre	potatoes
les frites	chips
la lait	milk
la glace	ice cream
le yaourt	yoghurt
le gâteau	cake
l'eau minerale	water
les biscuits	biscuits
les pâtes	pasta
le riz	rice

B. LES REPAS

les repas	meals
le petit déjeuner	breakfast
le déjeuner	lunch
le dîner	dinner
le café	coffee
le thé	tea
le sucre	sugar
le jus d'orange	orange juice
le vin blanc/rouge	white/red wine
les céréales	cereal
le pain grillé	toast

C. FRUIT & VEG

les fruits	fruit
les fraises	strawberries
les bananes	bananas
l'ananas	pineapple
le melon	melon
la pomme	apple
la pêche	peach
les poires	pears
les oranges	oranges
le citron	lemon
les legumes	vegetables
les oignons	onions
les haricots verts	green beans
les carottes	carrots
le concombre	cucumber
la laitue	lettuce

D. ADJECTIFS

frais/fraîche	fresh
parfait(e)	perfect
barbant(e)	boring
dégoutant(e)	disgusting
délicieux/	delicious
épicé(e)	spicy
fort(e)	strong
cher(e)	expensive
peu varié(e)	not much choice
de mauvaise	poor quality
impoli	impolite
sale	dirty
sucré	sweet
salé	salty
propre	clean

Positive opinions
J'aime
J'aime beaucoup
J'adore
Je préfère

Negative opinions
Je n'aime pas
Je déteste

+ le/ la/ les

SOME	
de + le	du
de + la	de la
de + les	des

Je mange du pain avec de la confiture.

plus ____ que
= more ____ than

moins ____ que
= less ____ than

e.g. J'aime le poulet plus que le boeuf.
I like chicken more than beef.

Intensifiers
Très = very
Beaucoup = a lot
Un peu = a little
Assez = quite
Trop = too

FOOD & DRINK

Qu'est-ce que vous prenez?
What are you having?

Je prends...
I'm having...

E. AU RESTAURANT/MARCHÉ

le plat principal	main course
l'entrée	Starter
le dessert	dessert
la carte	the menu
les serveurs	the waiters
le service	the service
l'ambiance	the atmosphere
un restaurant lo-cale/chinois/ indien/italien	local/Chinese/ Indian/Italian restaurant
Qu'est-ce que vous voulez/désirez?	What would you like?
Et avec ça?	Anything else?
Avez-vous?	What are you having?
Donnez-moi...	Give me...
s'il vous plaît	please
Comme entrée...	As a starter...

F. LES QUANTITÉS

un kilo de	a kilo of
cinq cent grammes de	500g of
une tasse de	a cup of
une boîte de	a tin of
un carton de	a box of
un litre de	a litre of
une bouteille de	a bottle of

G. LA SANTÉ

manger sainement	to eat healthily
être en bonne santé	to be in good health
surveiller mon poids	to watch my weight
un regime équilibré	a balanced diet
Ce n'est pas bon pour la santé	It's bad for your health

Frequency Phrases
Normalement = normally
En général = in general
Tous les jours = every day

Connectives
Et = and
Aussi = also
De plus = Moreover
Cependant = however
Néanmoins = nevertheless

ESSENTIAL VERBS

AVOIR—TO HAVE

J'ai	I have
Tu as	You have (s)
Il/elle a	He/she has
Nous avons	We have
Vous avez	You have (pl)
Ils/elles ont	They have

ÊTRE—TO BE

Je suis	I am
Tu es	You are (s)
Il/elle est	He/she is
Nous sommes	We are
Vous êtes	You are (pl)
Ils/elles sont	They are

I. KEY VERBS (PRESENT)

Je bois	I drink
Je mange	I eat
J'aime	I like
J'adore	I love
Je préfère	I prefer
C'est	It is
Il y a	There is/are
Je voudrais	I would like
J'ai faim	I'm hungry
J'ai soif	I'm thirsty
J'ai besoin de	I need

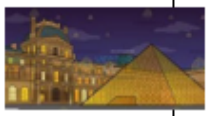
H. COMPLEX PHRASES

Ce que j'aime le plus c'est...	What I like the most is...
Ce que j'aime le moins c'est...	What I like the least is...
Ce que je préfère c'est...	What I prefer is...

J. KEY VERBS (PAST)

J'ai mange	I ate
J'ai bu	I drank
J'ai pris	I had
J'ai aimé	I liked
J'ai préféré	I preferred
J'ai choisi	I chose
C'était	It was

Year 7 – HT6 – J'habite…

J'habite dans un petit appartement au centre-ville de Paris. 	1	*I live in a small flat in the centre of Paris*
Dans mon appartement il y a deux chambres, une cuisine, un salon et une petite salle de bains. 	2	*In my flat there are two bedrooms, a kitchen, a living-room and a small bathroom*
 C'est confortable et assez moderne	3	*It is comfortable and quite modern*
Paris est la capitale de la France et c'est situé dans le nord du pays. 	4	*Paris is the capital of France and it is situated in the north of the country.*
 Ici, on peut visiter la Louvre, le tour Eiffel et l'arc de triomphe. 	5	*Here, you can visit the Louvre, Eiffel tower and the arc de triomphe.*
J'adore ma ville car c'est très animé cependant	6	*I love my town because it is very lively however*
c'est aussi assez sale.	7	*It is also quite dirty.*
 Ici le 14 juillet on fête le jour national, il y a	8	*Here, on the 14th July we celebrate 'national day' there is*
un grand défilé et des feux d'artifices, c'est vraiment chouette 	9	*A big parade and fireworks, it is really great.*

HOME & ENVIRONMENT

Où habites-tu?
Where do you live?

Comment est ta ville?
What is your town like?

C'est...
It is...

A. WHERE I LIVE

J'habite à	I live in
une ville	a town
une grande ville	a city
à la campagne	in the countryside
à la montagne	in the mountains
au bord de la mer	at the seaside
près de la plage	near to the beach
près de l'autoroute	near the motorway
dans la banlieue de la ville	on the outskirts of town
une maison jumelle	a semi-detached house
une grande maison	a big house
une petite maison	a small house
un appartement	a flat
une ferme	a farm

B. LES ADJECTIFS

nul	rubbish
ennuyeux	boring
rurale	rural
calme	calm
mauvais	bad
bruyant	noisy
moderne	modern
ancien	old
vieux	old
joli	pretty
beau	beautiful
affreux	terrible

plus ____ que
= more ____ than

moins ____ que
= less ____ than

e.g. **Bristol est plus bruyant que Malmesbury.**
Bristol is noisier than Malmesbury.

UPGRADE YOUR DESCRIPTIONS

et—and
mais—but
aussi—also
toujours—always
souvent—often
quelquefois—sometimes
normalement—normally
tout—completely
presque tout—almost always
très—very
trop—too
assez—quite
vraiment—really

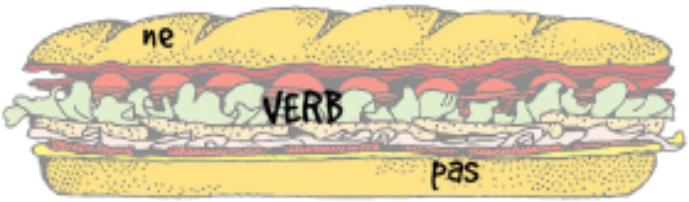
C. DANS LA VILLE

la patinoire	the ice rink
la piscine	the swimming pool
le stade	the stadium
la discothèque	the disco
le port	the port
le bateau	the boat
la fôret	the forest
la mairie	the town hall
la galerie d'art	the art gallery
la gare routière	the bus station
la bibliothèque	the library
le centre commercial	the shopping centre
le centre de loisirs	the leisure centre
le collège	the school
le commissariat	the police station
l'église (f)	the church
la gare (SNCF)	the station
l'hôpital	the hospital
les magasins	the shops

To make a verb **NEGATIVE**, you make a negative sandwich:

ne + verb + pas = not/don't

ne + verb + jamais = never



Je **ne** joue **pas** au foot = I **don't** play football

Je **ne** joue **jamais** au foot = I **never** play football

HOME & ENVIRONMENT

D. LE TEMPS

le temps	the weather
Il fait du soleil	It's sunny
Il fait mauvais	It's bad weather
Il fait du brouillard	It's foggy
Il pleut	It's raining
Il neige	It's snowing
Il y a des orages	It's stormy
Il y a des nuages	It's cloudy
Il y a du vent	It's windy
Il fait froid	It's cold
Il fait chaud	It's hot

E. L'ENVIRONNEMENT

le recyclage	recycling
le verre	glass
le papier	paper
les vêtements	clothes
les sacs en plastique	plastic bags
les déchets	rubbish
les bouteilles	bottles
les journaux	newspapers
les piles	batteries
l'eau	water
l'électricité	electricity
l'essence	petrol

F. LE TRANSPORT

les transports en commun	public transport
Je voyage	I travel
en bus	by bus
en car	by coach
en voiture	by car
en tramway	by tram
en avion	by plane
en scooter	by scooter
à pied	on foot
à velo	by bike

Qu'est-ce que tu fais pour l'environnement?
What do you do for the environment?

Il faut...
You must...

ESSENTIAL VERBS

HABITER—TO LIVE

J'habite	I live
Tu habites	You live (s)
Il/elle habite	He/she lives
Nous habitons	We live
Vous habitez	You live (pl)
Ils/elles habitent	They live

Near Future Tense

Present tense aller + infinitive verb
Je vais habiter
Tu vas visiter
Il/elle va utiliser
Nous allons manger
Vous allez recycler
Ils/elles vont conserver

G. HIGH FREQUENCY VERBS

On peut	You can
Il y a	There is/are
Il y avait	There was
Il y aura	There will be
C'est	It is
Ce sera	It will be
C'était	It was
Ce serait	It would be
Je voudrais + infinitive	I would like to
Je vais + infinitive	I am going to

HIGH FREQUENCY WORDS

ou—or
où—where
quel/quelle—which
qu'est-ce que—what
comment—how
dans—in
parce que—because
car—because

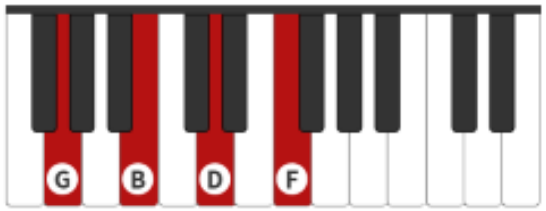
Le passé compose
The perfect tense

Avoir (pres) + past participle = past tense
J'ai habité
Tu as visité
Il/elle a utilisé
Nous avons mangé
Vous avez recyclé
Ils/elles ont conservé

Definitions and theory

I= Tonic	V= Dominant	IV= Subdominant	
I	I	I	I
IV	IV	I	I
V	IV	I	I

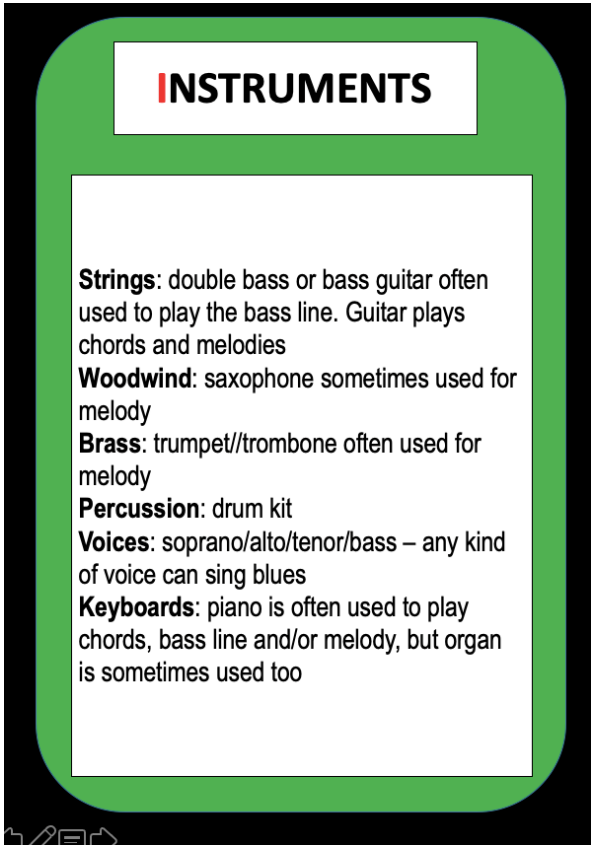
1. **12 bar blues** = music based around this chord progression
2. **Tonic** = chord I
3. **Subdominant** = chord IV
4. **Dominant** = chord V
5. **Improvisation** = making it up on the spot
6. **Turnaround** = where you substitute chord V in bar 12
7. **Seventh chord** = when an extra note is added to a chord, 7 notes above the root, i.e. G7:



Chords and Roman numerals

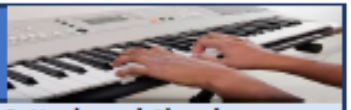
1. Whatever key you are in, count that as '1' (i.e. in C major, 1 is C)
2. From there, count up to 4 and 5 to work out what chords are IV and V (in C, IV is F and V is G)

Instruments for blues

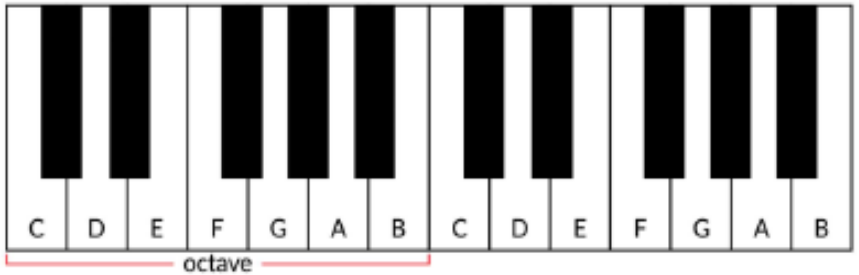


KEYBOARD SKILLS

Exploring Treble Clef Reading and Notation



A. Layout of a Keyboard/Piano

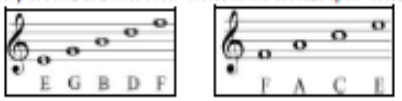


A piano or keyboard is laid out with **WHITE KEYS** and Black Keys (see section G). C is to the left of the two Black Keys and the notes continue to G then they go back to A again. Notes with the same letter name/pitch are said to be an **OCTAVE** apart. **MIDDLE C** is normally in the centre of a piano keyboard.

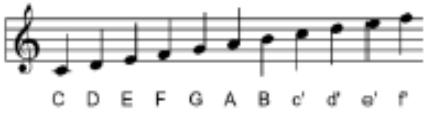
B. Treble Clef & Treble Clef Notation

A **STAVE** or **STAFF** is the name given to the five lines where musical notes are written. The position of notes on the stave or staff shows their **PITCH** (how high or low a note is). The **TREBLE CLEF** is a symbol used to show high-pitched notes on the stave and is *usually* ised for the right hand on a piano or keyboard to play the **MELODY** and also used by high pitched instruments such as the flute and violin. The stave or staff is made up of 5 **LINES** and 4 **SPACES**.

Every Green Bus Drives Fast. Notes in the **SPACES** spell **"FACE"**



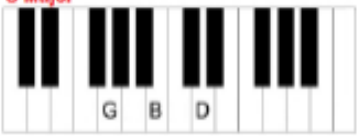
Notes from **MIDDLE C** going up in pitch (all of the white notes) are called a **SCALE**.



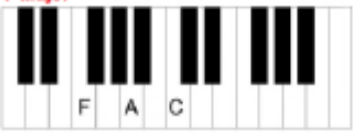
C. Keyboard Chords

C Major

G Major



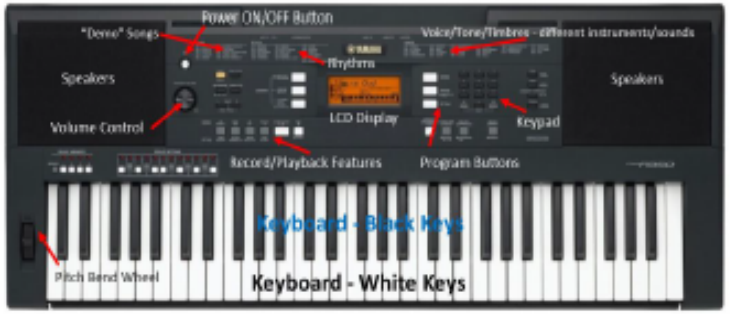
F Major



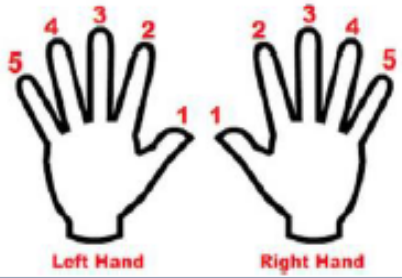
A Minor

Play one – Miss one – play one – miss one – play one

D. Keyboard Functions

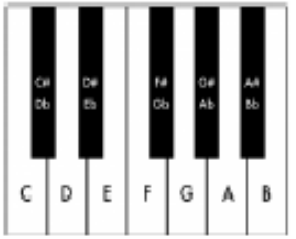


E. Left Hand/Right Hand (1-5)



F. Black Keys and Sharps and Flats

There are five different black notes or keys on a piano or keyboard. They occur in groups of two and three right up the keyboard in different pitches. Each one can be a **SHARP** or a **FLAT**. The # symbol means a **SHARP** which raises the pitch by a semitone *(e.g. C# is higher in pitch (to the right) than C)*. The *b* symbol means a **FLAT** which lowers the pitch by a semitone *(e.g. Bb is lower in pitch (to the left) than B)*. Each black key has 2 names – C# is the same as Db – there's just two different ways of looking at it! Remember, black notes or keys that are to the RIGHT of a white note are called SHARPS and black notes to the LEFT of a white note are called FLATS.



Key Words

Articulation: how certain notes or passages are sung or played.

Fluency: performing music accurately, quickly and with expression.

Diction: how a singer vocalises and pronounces the words of a song.

Interpretation: how a performer will present the material and how emotions are communicated through the performance.

How am I being assessed?

- Accuracy of performance.
- Communication and teamwork.
- Interpretation and fluency of music.
- Technical control of an instrument.

X Factor Performance Task

√ Decide whether you are going to perform as a group, or solo.

√ Practise and rehearse at home, ready to give a good X Factor performance.

√ Perform something that you are confident with.

Music Performance

'To play a wrong note is insignificant; to play without passion is inexcusable.'

Ludwig Van Beethoven

What does '**intonation**' mean?

❖ Intonation is the pitch accuracy of the instrument.

What does '**timing**' mean?

Timing is the ability to keep in time and accurately perform a rhythm.

What does '**timbre**' mean?

❖ Timbre is the tonal quality and sound of an instrument.

Music Performance Tips

√ Your performance does not have to be perfect.

√ Keep going.

√ Practice makes perfect!

√ Be confident and let loose.

√ Be unique.

Why is **constructive criticism** important?

√ It helps you to improve.

√ It helps you to identify was to improve.

√ It is crucial to share opinions with others.

√ Verbal feedback is essential to help support and develop as a musician.

Trampolining

Key Words:

- Routine
- Tuck
- Pike
- Straddle
- Execution

Skills:

- Full Twist
- Seat Drop
- Front Drop
- Back Drop
- Front Somersault

Famous Trampolinists:

Bryony Page

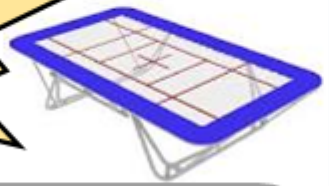
Lu Chunlong

Competitive Rules

1. A routine must always start and finish on feet.
2. Competitors must start their routine within 60 seconds of presenting to the judges.
3. Competitors are allowed one "out" bounce (a straight jump to control their height) at the end of a routine, before sticking the landing.
4. The trampolinist must stop completely—this means the bed must stop moving—and they have to hold still for 3 seconds before moving.
5. All moves must be performed in the 3 basic shapes; tuck, pike and straddle.

Top Tip!

More marks for moves performed on the cross.



Scoring

1. A final trampoline mark is based on a difficulty and execution score.
2. A difficulty score begins at 0.0 and goes up continuously with every difficult skill performed.
3. An execution score is different and begins at a score of 10.0 and is then deducted by judges for errors in performance.

Types of Guidance

Visual Guidance	• Demonstrations • Images • Videos • Observations	Example— demonstration to perform a seat drop in trampolining.
Verbal Guidance	• Coaching points • Feedback • Peer Feedback • Questioning	Example— A coach telling a trampolinist how to correct their position in a skill.
Manual Guidance	When a performer is physically guided or supported by the coach/teacher.	Example— A trampoline coach supporting a front somersault.
Mechanical Guidance	When a piece of equipment or an aid is used to help a performer learn and practise a skill.	Example— Using a hardness when learning somersaults in trampolining.

Table Tennis

Key Words:

Push

Let

Defensive

Balance

Movement

Skills:

Serve

Forehand

Backhand

Topspin

Backspin

Famous table tennis players:

Fan Zhendong

Kelly Sibley

Rules:

1. Games are played to 11 points and must be won by 2 points
2. Alternate serves every 2 points, unless it gets to 10-10 where you change to 1 serve each
3. In singles the serve can land anywhere on the table
4. A serve that touches the net on the way over is a "let" which means you can take the serve again
5. Volleys are not allowed
6. During a rally, if your ball hits the net and goes over itself it is your point
7. If you touch the table with any part of your body you automatically lose the point

Table tennis shot	How to play it
1. Forehand and backhand push	• Face the paddle slightly towards the ceiling. • Strike the ball gently in order to ensure it stays on the table. • This is a defensive shot.
2. Forehand and backhand topspin	• Face the paddle slightly towards the table and hit the ball at the peak of its bounce. • Do this with speed to gain topspin. • This is an attacking shot.

Types of Feedback in Sport

There are two types of feedback...

1. Intrinsic Feedback	• This is the physical feel of the movement as it is performed • It helps the performer to solve problems themselves • It helps them to develop skills independently
2. Extrinsic Feedback	• This is provided by external sources during or after a performance • It can come from teachers, coaches or teammates.

Feedback can also be experienced at different times...

3. Concurrent Feedback	• This is experienced by the performer whilst completing the action • E.g. A gymnast will experience feelings of being in a balanced position whilst they successfully complete a handstand • It is often the case that concurrent feedback is also intrinsic feedback
4. Terminal Feedback	• This is experienced by the performer once the movement has been completed • For example, a cricketer receives terminal feedback about the quality of their shot once the ball reaches the boundary • It is often the case that terminal feedback is also extrinsic feedback

Interpretation and Analysis of Feedback Data

1. Data can be gathered and shared before, during and after a performance.
2. Quantitative data— where you measure amounts. E.g. number of successful passes made in football
3. Qualitative data—how somebody feels about something. E.g. gathering opinions on their most recent performance

Striking and Fielding

Key Words:

Technique
Reactions
Awareness
Decision
Fingers ready
Catching
Throwing
Overarm
Bowling
Batting
Fielding
Coordination

Famous player:

Ben Stokes

Rules:

Two teams, both with 11 players, play an innings of batting and bowling.

When one team is batting they try and score as many runs as they can by hitting the ball around an oval field, within a set boundary.

The other team must get them out by bowling the ball overarm at the stumps, which are at either end of a 22 yard area called a wicket

The bowling team can get the batsmen out by hitting the stumps or catching the ball. Once the batting team is all out, the teams swap over and they then become the bowling side.

Scoring:

One run is scored each time the batsmen cross and reach the set of stumps at the other end of the pitch.

Four runs can be scored if the ball reaches the perimeter of the field

Skills	
Catching (high) 	1 Hands cupped 2 Eyes on the ball 3 Tracking the ball 4 Feet shoulder width apart with knees slightly bent
Catching (low) 	1 Hands cupped 2 Eyes on the ball 3 Tracking the ball 4 Feet shoulders width apart knees slightly bent
Throwing (overarm) 	1 Stand side on 2 Point at the target 3 Flex the throwing arm 4 Eye on the target 5 Shift weight 6 Extend your throwing arm towards the target

Positions in cricket:

Bowler: throws the ball using the overarm technique towards the stumps that a batsman is defending. The bowler aims to either take the wickets or to prevent run scoring opportunities.

Batter: aim is to save the wicket from being hit by the ball. The batter will aim to hit the ball far so that more runs can be scored.

Fielder: there are a number of fielders on a cricket team and all have different roles however the main aim is to stop the ball and field it back the wicket to prevent runs from happening.

Wicket keeper: is the player on the fielding side who stands behind the wicket being watchful of the batsman and ready to take a catch, to stump the batsman out and run out a batsman when occasions arises.

Physical, Emotional and Social Well being

Physical health —the body Emotional health - mind and feelings Social health —interacting with others

1) Well being—a combination of physical emotional and social health

2) Positive effects of training on:

Physical health

- Stronger bones (increased bone density)
- Lower cholesterol/ reduced obesity
- Increase development of components of fitness
- Increased life expectancy

3) Emotional health

- To increase self esteem confidence—increased endorphins released
- Reduce risk of age related diseases– dementia
- Releases stress and tension
- Fun/ enjoyment/ reduced boredom

4) Social health

- To develop teamwork skills
- To meet new people/ friends
- To develop communication skills
- Develop leadership skills

5) Negative effects of training on:

Physical health—overexertion leading to heart failure /over use injuries
Emotional health– training complete injury and cause depression
Social health—training long hours means less time spent with family

8. Physical health: is linked to fitness– being able to perform effectively the physical tasks involved in life

9. Emotional health: or mental health is linked to personal wellbeing—feeling positive about yourself

10. Social health: also contributes to wellbeing– feeling positive about interactions with other people.

6) Positive effects of exercise:

Helps you cope with the physical side of life

Even moderate exercise improves how long you will live

Lowers psychological illness

Lowers risk of eating problems

Gives you a lower resting heart rate and lower blood pressure

Can help weight control

Gives you stronger bones

7) Negative effects of exercise :

Put you at risk of a sport related injury

Time off to recover from injury can lead to psychological problems

Competition pressure can lead to psychological problems

Stresses and needs of a particular sport can lead to long term health problems

Rugby

Basic Rules	
1	Two halves consisting of 40 minutes
2	Each team has 15 players on each side
3	Passes must be played with the ball travelling backwards
4	Tackling cannot be made above should height
5	Attacking players must remain behind the ball whilst active or you run the risk of being called offside

Scoring		
1	Try	awarded when a player places the ball down in their opponent's dead ball area behind the goal. 5 points are awarded.
2	Conversion	a free kick that the team is awarded after a try to earn 2 bonus points. A successful kick needs to pass between the upper posts and top bar
3	Penalty Kick	will gain a team 3 points and is awarded to a team when the opposing team causes an infringement.
4	Drop Goal	can be kicked out of the hand as long as the ball bounces first and can earn a team 3 points

Skills		
1	Running with the ball	Carry the ball in two hands, accelerate into spaces, run direct and look to pick gaps in defensive lines. Draw players towards creating space for others to run into
2	Passing (Offloading)	Pass with accuracy over speed, good communication prevents mistakes. Always be prepared to receive a pass with your hands up ready. Throw a pass you'd like to receive.
3	Tackling	Low body position, shoulder drive below the hip, head safe side, lock arms to prevent leg drive, try to land on the tackled player, release once player is fully grounded
4	Rucking	Low body position - hips above shoulders, stay on feet if you want to play the ball. Drive opposition players off or create a solid base to play from

Rugby Pitch

1, Goal line (try line)

2, Half way line

3, 22m, 10m and 5m line

Injuries in Sport

Types of Injury		
	Injury	**Description**
1	Sprain	Damage to a ligament that crosses a joint.
2	Fractures	Broken bones caused by impact, twisting or repetitive stress on the bone.
3	Dislocation	Joint injuries that occur when the bones meeting at a joint are dislodged through impact, twisting or pre-existing weakness to that area
4	Concussion	Caused by violent impacts to the head
5	Abrasion	Damage to the skin caused by impacts and collisions
6	Torn Cartilage	Cartilage lines the end of bones and can be damaged through twisting actions
7	Overuse injuries	Caused by repetitive actions or poor technique.

How to Treat an Injury (RICE method)		
R	Rest	Immobilise the injured part
I	Ice	Apply an ice pack or other cold object to the affected area
C	Compression	Ensure the ice pack or compress is firmly pressed against the affected area
E	Elevation	Raise the injured limb above the level of the heart

The **RICE** method helps to reduce swelling and pain! Used most commonly for soft tissue injuries or injuries where swelling is likely to occur.

Prevention of Injury	
1	Follow rules and apply them fairly
2	Always use protective equipment. Ensure all protective equipment is in good condition

Key Words:

- Contact
- Replaying
- Distance
- Free pass
- Penalty pass

Skills:

- Passing
- Catching
- Footwork
- Attacking
- Defending
- Shooting

Famous Netball players:

Helen Housby

Imogen Allison

Netball

Rules:

A team consists of 7 players (GK,GD,WD,C,WA,GA,GS)

You cannot move with the ball.

You cannot snatch or hit the ball out of a player's hands.

You cannot contact another player (pushing or barging).

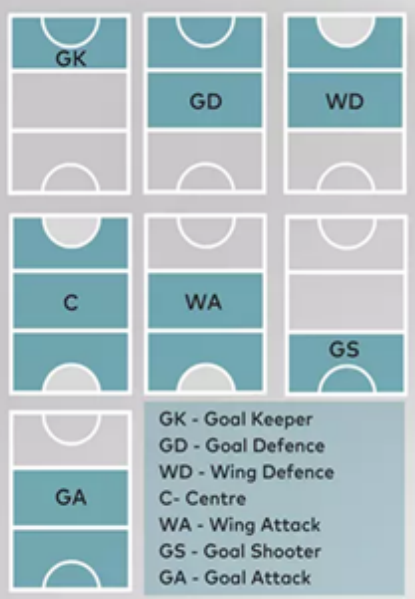
You must stand 1 metre away from the person with the ball (known as 1m distance).

You cannot hold the ball for more than 3 seconds.

You cannot replay the ball (drop it and pick it up again).

You must stay within your designated area of the court.

Netball Court Positions



FREE PASS GIVEN	PENALTY PASS GIVEN
Travel with the ball.	Contact another player.
Distance less than 1m.	Contact on the ball when held by a player.
Holding the ball for over 3 secs.	
Replaying the ball.	
Offside.	

Factors of Participation

AGE

Ageing affects people in different ways.
Children need to develop gross motor skills from an early age to become confident movers.
Adolescents experience a growth spurt that changes their physical development.
Older people may experience decrease in flexibility and strength and weight gain making participation in sport more difficult.

GENDER

There is a big drop in girls' participation in sport each week from the age of 11. By age 14, boys are twice as active than girls.
Research shows that common barriers to participation for girls or women are due to:
They don't see the relevance of sport in their lives
They dislike taking part with boys or men who play too aggressively
They are more motivated by having fun, making friends, and keeping fit than excelling

SOCIO-ECONOMIC STATUS

Socio-economic status recognises that fact that income and wealth influence people's life experiences. For example, the more money you have, the more likely you are to participate in sport. This could be due to these following factors:

ETHNICITY

Over half of people in black and minority ethnic (BME) communities do no sport or physical activity.
One of the main reasons why BME communities have lower rates of participation is the lack of BME role model involved in leading and organising sport. For example, only 5% of coaches are from BME communities and only 7% of sports professionals (other than performers) are from BME communities.

DISABILITY

The participation of disabled people in sport is much lower than that of non-disabled people, for all age groups. This is due to:

Physical barriers – e.g. a lack of adapted equipment
Logistical reasons – e.g. a lack of transport or inappropriate communication
Psychological reasons – e.g. lack of confidence and other people's attitudes

Health and Fitness

Key Words:

Diet
Carbohydrates
Fats
Protein
Vitamins
Minerals
Water
Fibre
Heart Rate
Stretching

Health	A state of complete mental, physical and social well-being; not merely the absence of illness or infirmity
Fitness	The ability to meet the demands of the environment
Performance	How well a task is completed

Warm Up

	There are three elements to a warm up:
1	Pulse raising activity—e.g. a run
2	Stretching—the key muscles which are to be used in your session
3	Games related activity—this involves undertaking activities in the sport that you are about to participate in

There are lots of different types of training that can be undertaken. This includes:

Circuit,

Continuous,

Cross

Fartlek

Weight

Plyometric

Cool Down

	There are two elements to a cool down:
1	Pulse reducing activity—e.g. a slow jog reduced to a walk
2	Static stretching—stretching that is done stood still to reduce heart rate
3	A cool down is undertaken to remove lactic acid from your working muscles.
4	The cool down also helps to reduce heart rate and bring your heart rate back down to pre exercise conditions.

Diet

1	**Diet**	Diet is an essential part of providing our bodies with energy we need to maintain a healthy lifestyle and optimise performance. It
2		is important that food and drink are consumed to enable to body to perform to its best.
3		The 7 factors of a balanced diet include carbohydrate, protein, fat, vitamins,
4	**Key Elements**	There are seven key elements of a balanced diet. These include: Carbohydrate, Proteins & Fats—Macro Nutrients Vitamins & Minerals—Micro Nutrients Water and Fibre
5	**Macro Nutrients**	All of these provide energy for the body. Carbohydrates is the main energy source which can be fond in foods such as pasta.
6		Protein allow growth and repair of musde. It can be found in foods such as chicken, fish, egg and nuts.
7		Fat provides a slow release of energy and can be found in butter, eggs and other dairy products.
8	**Micro Nutrients**	Vitamins are given different letters which affect different elements of the body. For example, Vitamin C is found in oranges and is good for vision and healthy skin.
9		Minerals, such as calcium, help to improve bone strength and improve teeth quality.
10	**Other elements**	Water is used to hydrate the body and can be found in fruits and vegetables.
11		Fibre is important as it helps to aid digestion and prevent constipation. This can be found in wholemeal foods such as wholemeal bread and cereals.
12	**Calorie Counting**	Calorie counting involves counting how many calories you consumer per day and it helps to ensure you do not add weight to your body.
13		Aathlete would then identify how many calories they used during a day. If the athlete consumes more calories than they burnt, they will add weight to their body. If the athlete eats less calories than they use, they will lose weight and fatigue.

Handball

Key Words:	
3 seconds on the ball	Players are only allowed to have possession of the ball for 3 seconds.
Contact	Contact is allowed in handball.
Goalkeeper	Goalkeeper can leave the D but not in possession of the ball.
Corners	Awarded if the ball comes off a defender and goes behind the goal.
Penalty throw	Awarded if a defender steps into the D.

Skills:	
Shooting	Players can shoot from outside of the D or by performing a jump shot.
Dribbling	Players can move with the ball by bouncing but only for 3 seconds.
Passing	Passing is done with one hand or two and can include a shoulder pass and bounce pass.

Famous Player

Danish player Mikkel Hansen
Three time world player of the year.
Olympic, World and European champion.

Rules:

A match consists of two periods of 30 minutes each.

Each team consists of 7 players; a goalkeeper and 6 outfield players.

Outfield players can touch the ball with any part of their body that is above the knee.

Once a player receives possession, they can pass, hold possession or shoot.

If a player holds possession they can have the ball for up to 3 seconds, after they can dribble or take three steps (without dribbling).

Only the goalkeeper is allowed to come in contact with the floor of the goal area.

Goalkeepers are allowed out of the goal area but must not retain possession if they are outside the goal area.

Positions in Handball:

Goalkeeper: a player who is positioned inside the goalkeeping area responsible for defending goals.

Left Wing: attacking player responsible for left hand side of the court.

Left Back: stands to the left of centre back and tries to prevent the opposition from shooting.

Centre back: stands in the middle of the court and provides both defending and attacking options.

Pivot player: an attacking player who travels along the opponents six metre line.

Right Back: has some responsibilities as the left back down the opposite side.

Right Wing: has the same responsibilities as the left wing but down the opposite side.

Lifestyle Choices

Lifestyle choices - the choices you make that can affect your health and fitness.

1) Eating a healthy diet:

- Boosts your energy levels, so you are better able to enjoy life.
- Will supply your body with the central nutrients it needs for a healthy immune system helping you fight off illnesses
- Reduces the risk of developing serious health conditions such as heart disease type 2 diabetes high blood pressure high cholesterol or stroke
- Communication stress levels and improve your sleep patterns
- Will help you lose weight if you are currently overweight or maintain a healthy weight

2) Eating an unhealthy diet:

- Leads to deficiencies in essential nutrients and causes health conditions such as osteoporosis and rickets as well as fatigue and muscle weakness
- Leads to an increase in weight and body fat which puts you at risk of developing health conditions such as heart disease type 2 diabetes high blood pressure high cholesterol and stroke
- Can affect your concentration levels and make you feel lethargic making it more difficult to find the energy to exercise
- Can affect your quality of sleep
- Can cause you to feel guilty and depressed especially if you overheat

3) Living an active life:

- Lowers your risk of disease
- Lowers your risk of developing mental health conditions such as depression or dementia
- Please yourself esteem the quality of your sleep and your energy levels
- Reduces stress and anxiety
- Improve your fitness levels

4) Living an inactive life:

- Increases your risk of disease
- Increases your risk of low self esteem anxiety and depression
- Decreases your muscle mass overall strength and energy levels making daily tasks such as carrying shopping bags more difficult

5) A good work/rest/sleep balance:

- Improve your physical emotional and social health
- Makes you feel more in control of your life helping to reduce stress
- You are better at making good decisions

6) A poor work/ rest/ sleep balance can:

- Increase your risk of depression
- Lead to weight gain
- Increase your risk of illness and disease
- Increase stress and anxiety
- Results in poor quality sleep

Football

Key Words:	
1	Shooting/ striking
2	Passing
3	Defending
4	Attacking
5	Tackling
6	Crossing
7	Chipping
8	Lobbing
9	Throwing
10	Heading
11	Dribbling
12	Control

Scoring
- The aim is to outscore your opponent bet getting the ball into the net
- The whole ball must cross the goal line for it to constitute a goal
- You may score with any part of your body excluding your arms and hands
- You can score from anywhere on the pitch
- Defending is as important as scoring. If you can't prevent opponents from scoring, you will struggle to win

Rules:	
1	A senior football match consists of two 45-minute halves and must have a 15-minute break in the middle
2	A team can start with a maximum of 11 players, of which one is the designated goalkeeper
3	A team is able to make substitutions at any time of the match and are able to make a maximum of three changes
4	A referee may award a foul if they believe an unfair act is committed by a player. A foul contravenes the laws of the game and can be given for a range of offences (for example, kicking the player, pushing, handball etc).
5	In cases of foul play, a referee can penalise players with either a yellow or red card. A yellow card gives a player a warning about their conduct and a red card requires them to leave the pitch . 2 yellow cards is a sending off
6	A throw-in is awarded to a team if the opposition kicks the ball over the side-lines
7	A corner kick is awarded to a team if the opposition kicks the ball over the goal line and either side of the goal posts
8	A player is deemed offside if they are in front of the last defender when a teammate passes the ball through to them

Commercialisation in Sport

The Media in Sport
Positive influences of media:
1. Raise awareness of sport 2. Promote healthy active lifestyles 3. Positive role models 4. Celebrate effort and success 5. Provide a sense of belonging 6. Generate revenue and attract investment
Negative influences:
1. Intrude on performers' privacy 2. Showcase negative values and behaviour 3. Undermine officials and their decisions 4. Under-representing women's, black and minority ethnic and disability sport

The golden triangle

The golden triangle shows the relationship between sport, the media and sponsorship. It represents the commercial – money-making – nature of sport

Sponsorship in Sport	
Types of sponsorship	
1. Individuals	wear a brand, endorse products and pay for travel costs
2. Teams/ Clubs	wear kit, have a company name for the stadium
3. Sports	rename competitions
4. Events	allow use of their logo and provide free product to athletes
Benefits of sponsorship for sports	
1. Individuals	cover costs of kit/equipment
2. Teams/ Clubs	pays towards kit/equipment and facility maintenance
3. Sports	pays for coaching
4. Events	covers venue hire and catering
Disadvantages for sport	
1. Sponsorship can be limited and withdrawn	
2. Some sponsorships give a bad image to sport (e.g. alcohol)	
3. Performers can become reliant on sponsor	
Benefits for sponsors	
1. Raise awareness of their brand/company Advertise products and services	
2. Improves company reputation	
3. Increases sales through media exposure	
Disadvantages for sponsors	
1. Uncertain investment as sporting success not guaranteed	
2. If the sport or performers cause bad publicity, this reflects badly on the brand	

Key Words:

- Lay-up
- Jump shot
- Travel
- Double Dribble

Skills:

- Dribbling
- Jumping
- Passing
- Catching
- Shooting
- Footwork

Famous basketball players:

Michael Jordan

Steph Curry

Basketball

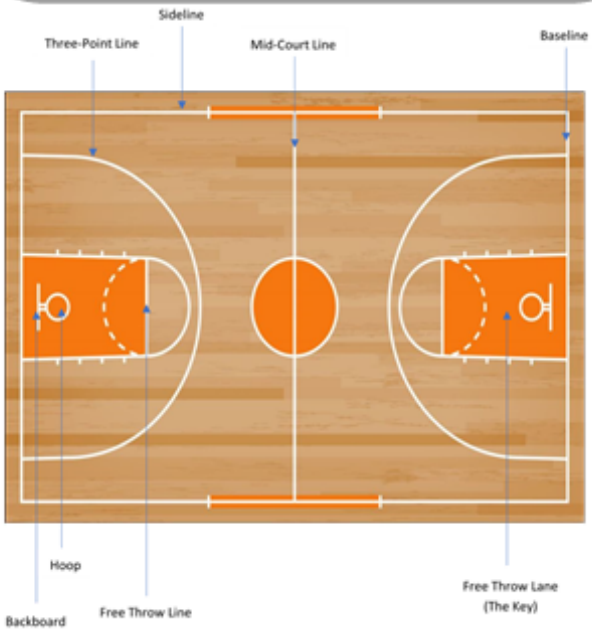
Rules:

Travelling—Players are not allowed to carry or move with the ball in their hands. Side line ball to the opposition is awarded if this occurs.

Double Dribble—This is when a player dribbles the ball twice after the ball comes to rest or they put two hands on the ball. Side line ball to the opposition is awarded if this occurs.

Scoring—2 points awarded for a basket scored within the 3 point line. 3 points are awarded for a basket scored from outside the 3 point line. 1 point is awarded for a free throw.

Physical contact—No contact is permitted between players. Side line ball is awarded to the opposition.



Classification of Skill

The classifications fit on a continuum...

Environmental influence

Closed ⟷ Open

Difficulty

Basic ⟷ Complex

Organisational Level

Low ⟷ High

1. Open	Where the environment is constantly changing E.g. a tackle in rugby The timing and style of the tackle is heavily influenced by many factors including the ball carrier, the tackler's teammates and the position on the pitch
2. Closed	Where the environment always remains the same E.g. a darts throw The exact timing of the throw is down to the athlete, who is throwing the same weight dart in a similar each time
3. Basic	A skill the player finds easy and needs little concentration to do E.g. 400m race This skill has very few sub-routines
4. Complex	A skill that requires the performer's complete attention to do E.g. a somersault on a trampoline This skill has many sub-routines
5. Low Organisational	A skill that can be split into sub-routines easily and each sub-routine can be practiced separately E.g. front crawl Sub-routines that can be practiced separately include: arm pull, breathing stroke, leg kick, tumble turn
6. High Organisational	A skill that isn't made up of sub-routines and needs to be practised as a whole skill E.g. A cyclist completes the action of cycling in one go This skill is almost impossible to breakdown

Key Words:

Anabolic Steroids
Beta Blockers
Diuretics
Narcotic Analgesics
Stimulants

Athletics

Throws

1. Javelin, Shot Putt, Discus and Hammer are all throwing events.
2. All throws have to land in a set area. If they do not land in this set area, then they will be classed as a foul.
3. The distances thrown are measured in metres.

Jumps

1. These events require you to take off from one foot. If you take off from two feet, then your jump will be a foul.
2. High jump involves jumping over a high bar which is raised if you clear the bar.
3. Long jump involves jumping as far as you can from one foot, behind the take off board.
4. Triple jump involves a three step process of 'hop, step and jump.'
5. High jump, long jump and triple jump are all jump events.

Sprinting

1. The 100m, 200m and 400m are all sprint events.
2. All require athletes to remain in their own lane throughout the race.
3. The race starts by the official starter shouting 'Take your marks, set, go'
4. Triple jump involves a three step process of 'hop, step and jump.'
5. High jump, long jump and triple jump are all jump events.

Middle Distance

1. 800m and 1500m are called 'middle distance' events. You can change lanes in this event.
2. The race starts by the official started shouting 'take your marks, go.'

Drugs in Sport

1 **Stimulants**	Affects the Central Nervous System (CNS)
2	**Advantages:** increases mental and physical alertness.
3	**Side effects:** High blood pressure, heart and liver problems and are addictive!
4	**Sports:** any sports where increased alertness is useful.
5 **Narcotic Analgesics**	Kills pain but could make injuries worse long term.
6	**Advantages:** avoid pain, can perform when injured.
7	**Side effects:** addictive with withdrawal symptoms, cause long term injury, low blood pressure and constipation.
8	**Sports:** any sports where masking pain is useful.
9 **Diuretics**	Acts as a 'masking agent'– flushes other drugs out.
10	**Advantages:** increases the amount you urinate – causes weight loss.
11	**Side effects:** dehydration due to fluid loss and cramps.
12	**Sports:** Weight division sports e.g. Boxing; Horse racing.
13 **Beta Blockers**	Drugs that control heart rate.
14	**Advantages:** they lower heart rate, steady shaking hands, relax and calming effects
15	**Side effects:** low blood pressure, nausea, tiredness, depression and heart failure.
16	**Sports:** archery
17 **Anabolic Steroids**	Allows you to train harder for longer.
18	**Advantages:** increases muscle mass, strength, power and bone growth
19	**Side effects:** infertility, high blood pressure, heart attacks, stroke à **result in death!**
20	**Sports:** athletics, weightlifting, boxing.

Y7 RE – To the ends of the Earth

Key Words		
1	Holy Spirit	The third person of the Trinity, true God, who Christians believe inspires people.
2	Pentecost	A Christian festival celebrating the time when the Holy Spirit came down to the apostles; also a Jewish festival known at Shavuot, celebrating the harvest and the giving of the Torah at Mt Sinai.
3	*Ruah*	A Hebrew word meaning wind or breath; God's Spirit that was breathed in Adam to bring him to full life.
4	People of God	One of the names of the Church, emphasising the community of believers united by their belief in God, the Father, Son and Holy Spirit.
5	Body of Christ	One of the names of the Church, emphasising the community of all those who are members of Christ's body through Baptism, with Jesus as their head, working together like one body.
6	Temple of the Holy Spirit	One of the names of the Church, emphasising the community of all those who are led by God's spirit in their lives given to them through the sacraments.
7	Confirmation	The Sacrament of Initiation that completes Baptism and strengthens a person's faith by being sealed with the Holy Spirit as a nature member of the Church.
8	Fruits of the Holy Spirit	The behaviours and attitudes that are shown by a person who is filled with the Holy Spirit, such as love, joy and kindness.

Key Facts	
1	Symbols are used to communicate beliefs about the **Holy Spirit**. The symbols are based on biblical accounts of the **Holy Spirit** (dove, fire, wind) and link to Christian worship and rituals.
2	The Holy Spirit gives Christians 7 gifts: love, wisdom, understanding, counsel, fortitude, knowledge, piety and fear of the Lord.
3	**Pentecost** is when the Holy Spirit came to the apostles, filling them with confidence and the ability to speak different languages to spread the Good News. It is known as the birthday of the Church.
4	The Bible shows that the Holy Spirit played an important role in Jesus' life: Jesus was conceived of the Holy Spirit, the Holy Spirit appeared as a dove when Jesus was baptised, Jesus said God's spirit had anointed his to do God's work.
5	The Holy Spirit helped the apostles to carry out the mission given to them by Jesus, gave the early Christians perseverance in a time of persecution and continues to bring more people to the Church community.
6	Individual Christians can feel the **Holy Spirit** at work in their lives: the Holy Spirit guides people in their vocation, individuals are anointed in the Holy Spirit at Baptism which is sealed during **Confirmation**.
7	At **Confirmation** a person celebrates receiving the gifts of the Holy Spirit, which helps them to live a Christian life and follow God.

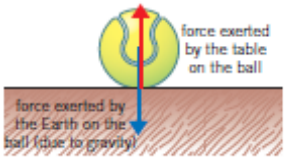
Key Quotes	
1	I believe in the Holy Spirit, the Lord, the giver of life, who proceeds from the Father and the Son, who with the Father and the Son is adored and glorified, who has spoken through the prophets. (Nicene Creed)
2	As soon as Jesus was baptized, he went up out of the water. At that moment heaven was opened, and he saw the Spirit of God descending like a dove and alighting on him. (Matthew 3:16)

What is a force?

- A **force** can be a **push** or a **pull**
- A force is measured in **Newtons** (N)
- We measure forces with a **newton meter**
- Forces explain why objects will move, change direction and change speed

- Forces always act in pairs, we call these **interaction pairs**

e.g. the tennis ball exerts a downward force of **weight** onto the table, the table exerts an equal and opposite reaction force onto the ball



Types of forces

- **Contact forces** act when two objects are physically touching
- **Air resistance** and **friction** are examples of contact forces

- **Non-contact forces** act when two objects are physically separated (not touching)
- Examples of non-contact forces include **gravitational force** and magnetic forces
- We call the region where an object experiences a non-contact force a **field**, examples of these include gravitational fields and magnetic fields

Gravity

- **Gravity** is a non-contact force that acts between two objects
- **Gravitational force** pulls you back to Earth when you jump
- The size of the gravitational force depends on the mass of the two objects and how far apart they are

- **Weight** is the downward force caused by gravity acting upon the mass of an object, it is measured in Newtons (N)
- **Mass** is the amount of matter within an object, whereas weight is the downward force of the object, we measure mass in **kilograms**
- We calculate weight with the equation:

$$\text{weight (N)} = \text{mass (kg)} \times \text{gravitational field strength (N/kg)}$$

- The value of the gravitational field strength can vary, so although a person's mass would be the same on different planets, their weight would not be

Balanced and unbalanced forces

- When forces acting on an object are the same size, but acting in different directions, we say that they are **balanced**
- When forces are balanced, the object is either not moving (stationary) or moving at a constant **speed**

- When the two forces acting on an object are not the same size, we say that the forces are **unbalanced**
- When forces are **unbalanced**, the object will either be in **acceleration** or **deceleration**
- The **resultant force** is the difference between the two unbalanced forces

Speed

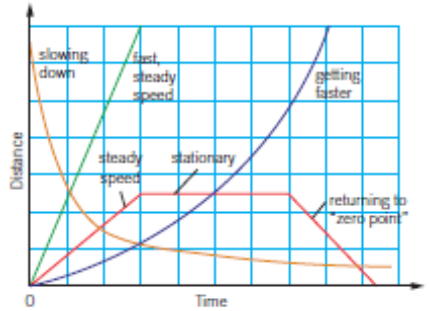
- **Speed** is a measure of how quickly or slowly that something is moving
- We measure speed in meters per second (m/s), this means that distance must be in meters and time must be in seconds
- We calculate speed with the following formula:

$$\text{speed (m/s)} = \frac{\text{distance travelled (m)}}{\text{time taken (s)}}$$

- **Relative motion** compares how quickly one object is moving compared to another
- If both objects are moving at the same speed, they are not changing position in comparison to one another, meaning that their relative speed is zero

Distance-time graphs

- **Distance-time graphs** tell the story of a journey, they show how much distance has been covered in a certain period of time



- To find the average speed, the total distance must be divided by the total time

Keyterms Make sure you can write definitions for these key terms.

acceleration, air resistance, balanced, contact force, deceleration, distance-time graph, field, force, friction, gravity, gravitational force, interaction pair, kilograms, mass, Newton, newton, non-contact, pull, push, relative motion, resultant force, speed, unbalanced, weight

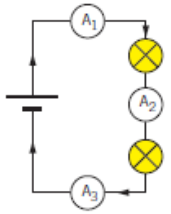
Y7 SCIENCE - FORCES

Key word	Definition	Retrieval Question	Retrieval Answer
Acceleration	Speeding up	List 2 things that forces do	Push or pull
Air resistance	A non-contact force exerted by air particles on an object	Describe the difference between a contact force and a non-contact force	Contact forces act when you touch something, non-contact forces occur when objects are not touching
Balanced	Forces acting on an object are the same	State 2 examples of contact forces	Friction and air resistance
Contact force	When 2 objects are physically touching	State 2 examples of non-contact forces	Gravity and magnetism
Deceleration	Slowing down	What are pairs of forces called	Interaction pairs
Distance – time graph	A graph that shows the story of a journey	State the units of force	Newtons (N)
Field	The region where an object experiences a force	What is a resultant force?	The forces acting on an object added together
Force	A push or a pull	State what is meant by equilibrium	When the forces acting on an object are the same size
Motion	Movement	What force acts on stationary objects?	Reaction
Gravity	A non-contact force that acts between 2 objects	State an example of a resistive force	Air resistance, friction
Gravitational force	The force that brings you down to Earth when you jump	What happens to an object if the forces are not balanced?	The object changes speed or direction
Interaction pair	Equal forces acting in opposite directions	State what is meant by speed?	How far something travels in a time
Kilograms	The unit of measurement for mass	Give the equation for calculating speed	Speed (m/s) = distance travelled (m) ÷ time taken (s)
Mass	The matter which makes up an object	State what is meant by average speed?	The overall distance travelled divided by the overall time taken
Newton	The unit of measurement for force	State what is meant by relative motion	The speed of an object relative to the speed of an observer
Non-contact	When 2 objects are not touching	State what a distance-time graph shows	The distance something travels over a certain time
Pull	A force	What does a horizontal line on a distance-time graph show?	The object is stationary/not moving
Push	A force	What does a straight diagonal line on a distance-time graph show?	The object is moving at a constant speed
Relative motion	How quickly an object is moving compared to another	What does a curve on a distance-time graph show?	The object is accelerating

Key word	Definition	Retrieval Question	Retrieval Answer
Resultant force	The difference between 2 unbalanced forces	State what is meant by acceleration	How quickly the speed of an object increases or decreases
Speed	A measure of how quickly or slowly something is moving	What is gravity/gravitational force?	A non-contact force that pulls objects towards the Earth
Unbalanced	When forces acting on an object are different	What factors affect the size of a gravitational force?	The mass of the object, how far apart the objects are
Weight	A downward force caused by gravity	Describe what is meant by a field	A region where something experiences a non-contact force
		What is the difference between mass and weight?	Mass is the amount of "stuff" something is made of; weight is a force
		State the equation for calculating weight	Weight (N) = mass (kg) x gravitational field strength (N/kg)
		State what is meant by gravitational field strength	The force that acts on every 1kg of an object
		Describe how the Earth stays in orbit around the Sun	The Earth exerts a force on the Sun and the force of gravity on the Sun keeps the Earth in orbit

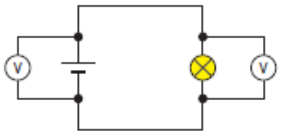
Current

- **Current** is the amount of **charge** flowing per second
- The charges that flow in a circuit are **electrons**, they are negatively charged
- **Electrons** leave the negative end of the **cell** and travel around the circuit to the positive end of the cell
- Current has the unit of Amps (A) and is measured with an **ammeter** (which is placed in series or in the main circuit)



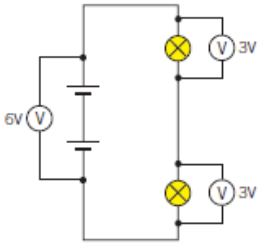
Potential difference

- **Potential difference** is the amount of energy transferred by the cell or **battery** to the charges
- The value of potential difference tells us about the force applied to each charge and then the energy transferred by each charge to the component which it passes through
- Potential difference has the unit of volts (V) and is measured with a **voltmeter** (which is placed in parallel to the circuit)



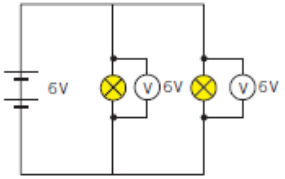
Series circuits

- **Series** circuits only have one loop
- If one component breaks, the whole circuit stops working
- Current is the same everywhere in a series circuit
- The total potential difference from the battery is shared between the components in a series circuit
- Adding more bulbs decreases the brightness of the bulbs



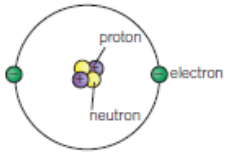
Parallel circuits

- **Parallel** circuits have more than one loop
- If one component breaks, the rest of the circuit will still work
- Current is shared between the different loops in the circuit
- The potential difference is the same everywhere in the circuit
- Adding more bulbs does not affect the brightness of the bulbs



The atom

- The **atom** consists of a central nucleus with electrons orbiting around the outside in shells
- **Electrons** have a negative charged
- **Protons** are inside the nucleus and have a positive charge
- **Neutrons** are inside the nucleus and have a neutral charge



Static electricity

- Static electricity is the caused by the rubbing together of two **insulators**
- This causes electrons to be transferred, leaving one object with a positive charge, and one object with a negative charge

- Like charges will **repel**, opposite charges will **attract**

Resistance

- **Resistance** is a measure of how easy or how hard it is for charges to pass through a component in a circuit
- Resistance has the unit of ohms (Ω)
- Resistance is calculate by measuring potential difference and current and using the following equation:

$$\text{resistance } (\Omega) = \frac{\text{potential difference (V)}}{\text{current (A)}}$$

- Materials with a high resistance are said to be **insulators**
- Materials with a low resistance are said to be **conductors**

Key terms Make sure you can write definitions for these key terms.

ammeter atom attract battery cell conductors current electrons electric charge insulator neutral neutrons parallel potential difference protons repel resistance series voltmeter

Key word	Definition
Ammeter	A device to measure current
Atom	The particles all objects are made from
Attract	Opposite charges moving towards each other
Battery	A device that stores chemical energy and converts it to electrical energy
Cell	A single electrical energy source
Conductors	A material with a low electrical resistance
Current	The amount of electric charge flowing through the circuit per second
Electrons	Negatively charged particles
Electric charge	The force experienced when an object is placed in an electromagnetic field
Insulator	A material with a high electrical resistance
Neutral	No charge
Neutrons	Particles with no charge
Parallel	Electric circuits with more than loop
Potential difference	The amount of energy transferred by cell / battery to the charges
Protons	Positively charged particles
Repel	Similar charges moving away from each other
Resistance	A measure of how easy or difficult it is for charges to pass through a circuit
Series	Electric circuits with only one loop
Voltmeter	A device to measure potential difference

Retrieval question	Retrieval answer
What does a battery/cell do in a circuit?	Provides the push to make charges move
What is meant by the potential difference?	A measure of how much energy is transferred between two points in a circuit.
State what 3 things potential difference across a cell tell you about?	The size of the force on the charges, the energy transferred by the cell, the energy transferred by the charges to the components
Name the piece of equipment used to measure potential difference	Voltmeter
State the units of potential difference	Volts
What is meant by the rating of a battery/cell?	The potential difference it is designed to work at
State what is meant by resistance	How easy or difficult it is for charge to pass through a component
State the units of resistance	Ohms (Ω)
Give the equation for calculating resistance	Resistance (Ω) = potential difference (V) ÷ current (A)
Describe what the resistance is like for an electrical conductor	Resistance is low
Describe what the resistance is like for an electrical insulator	Resistance is high
Describe how components are arranged in a series circuit	In one loop
What happens to the rest of the bulbs if one breaks in a series circuit?	They all go out
Describe the link between the p.d between components and the pd across the battery in a series circuit	The p.d. Across the components adds up to the p.d. Across the battery
Describe how components are arranged in a parallel circuit	Parallel to each other in different branches
What happens to the rest of the bulbs if one breaks in a parallel circuit?	They stay on providing they are on a different branch
Describe the link between the p.d between components and the pd across the battery in a parallel circuit	The p.d. Across each component is equal to the p.d. Of the battery
Describe what a current is	The amount of charge flowing per second
Name the piece of equipment used to measure current	Ammeter
Describe what happens to current in a series circuit	The current is the same everywhere
State the units of current	Amps (A)
State what happens to the current in a series circuit if you add more components	The current gets smaller because the resistance gets bigger
Describe what happens to current in a parallel circuit	The current in all the branches adds up to the total current
State what happens to the current in a parallel circuit if you add another branch	The total current increases
What are the two types of charge?	Positive (+) and negative (-)
What is the force called between charges?	Electrostatic force
What are the three parts of an atom called?	Proton, neutron, and electron
What charge does each part of an atom have?	Protons are positive, electrons are negative, and neutrons have no charge
State why atoms have no overall charge	They contain an equal number of protons and electrons
Describe how you can make an object positively charged, such as a balloon?	By rubbing the object against another object
State what an electric field is	The field around a charge
Describe what happens to the electric field strength as you move further away from a charge	It decreases

Variation

- The differences in characteristics of living things is known as **variation**
- There is a large amount of variation between different **species**, but within species many more characteristics are shared
- Even though two organisms may look the same, they will always have variation between them

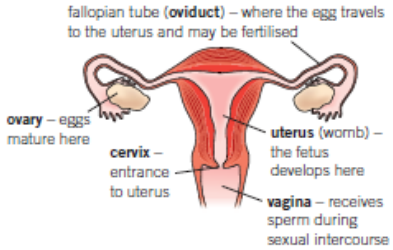
Inherited variation	Environmental variation
• Is anything that comes directly from your parents, anything that you inherit • Examples can include lobe less or lobed ear lobes and eye colour	• Is any type of variation that is caused by your surroundings • Factors that can cause environmental variation include diet, education and lifestyle

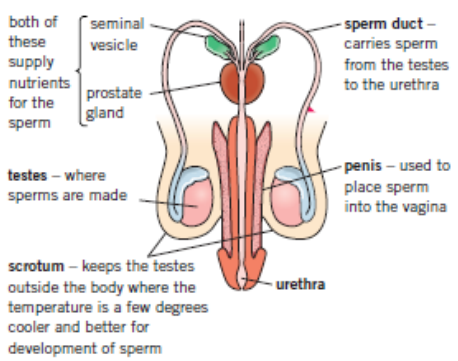
- Environmental factors can also impact inherited factors, for example a poor diet can affect height or your exposure to the sun can affect skin tone
- Characteristics which are inherited and not affected by environmental variation include natural eye colour, blood group and genetic diseases

Adaptations

- **Adaptations** are characteristics which organisms have developed to best survive in their surroundings
- Organisms with the best suited adaptations can breed and pass these on
- Those who are not best adapted will die out and not be able to pass on their genes

Reproductive systems



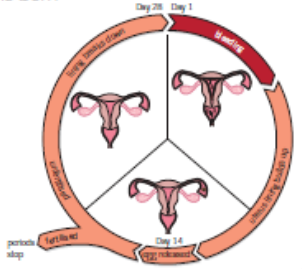


Adolescence

- **Adolescence** is the process in which a child changes into an adult, it involves both physical and emotional changes
- The physical changes alone in this time are known as **puberty**, these are caused by **sex hormones**

The menstrual cycle

- The **menstrual cycle** is the process in which an egg is released from an ovary and leaves through the vagina
- Day 1: blood from the uterus lining leaves through the vagina, which is known as a **period**
- Day 5: the bleeding stops and the uterus lining starts to re-grow
- Day 14: an egg is released from one of the ovaries during **ovulation**
- If the egg is **fertilised** than the menstrualcycle stops until the baby is born



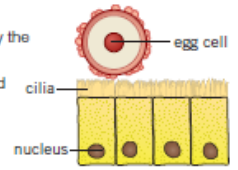
Fertilisation, implantation and gestation

- Egg cells and sperm cells are also called **gametes**, and each contains half the genetic information needed to form a complete organism.

Egg cells

An egg is released by the ovaries every month

The egg cell is moved along the oviduct towards the uterus by **cilia**



Sperm cells

Sperm cells are produced in the testicles/testes

Sperm are mixed with nutrients and fluid from the glands to form **semen**

During sexual intercourse a man will release semen into the vagina (**ejaculation**)

If a sperm meets the egg **fertilisation** may happen

The fertilised egg may then **implant** in the uterus lining and form an **embryo** (ball of cells)

- During **gestation** the developing **fetus** needs nutrients from the mother, these are passed through the **placenta** which is connected to the fetus by the **umbilical cord**
- Nutrients are passed from the mother to the baby and waste products are passed back from the baby to the mother
- The baby is protected from bumps to the mother by the **amniotic sac** which acts as a shock absorber

Just a dot	•	1 week – cells beginning to specialise
3 mm long		4 weeks – spine and brain forming, heart beating
3 cm long		9 weeks – tiny movements, lips and cheeks sense touch, eyes and ears forming
7 cm long		12 weeks – fetus uses its muscles to kick, suck, swallow, and practise breathing

Key terms Make sure you can write definitions for these key terms.

adaptation adolescence amniotic sac cervix cilia egg cell embryo environmental variation fertilisation fetus gamete gestation implantation inherited variation menstrual cycle ovary oviduct ovulation penis period placenta puberty reproductive system scrotum semen sex hormones species sperm cell sperm duct testicles umbilical cord urethra uterus vagina variation

Keyword	Definition
Adaptation	Characteristics which organisms develop to best survive in their surroundings
Adolescence	The physical and emotional process of a child changing into an adult
Amniotic sac	A protective membrane filled with fluid that protects the foetus in the uterus
Cervix	The entrance to the uterus
Cilia	Tiny hairs on the surface of cells in the fallopian tubes
Egg cell	Female sex cell released from the ovary
Embryo	A ball of cells that can become a foetus
Environmental variation	Variation caused by the surroundings
Fertilisation	When a sperm cell joins with an egg cell
Fetes	The unborn offspring
Gamete	Egg cells and sperm cells
Gestation	The time required for the foetus to develop (aka pregnancy)
Implantation	The settling of the fertilised egg into the uterus
Inherited variation	Characteristics inherited from your parent's genes
Menstrual cycle	The process in which an egg is released from an ovary and leaves the vagina
Ovary	Part of the female reproductive system that holds and matures the egg cells
Oviduct	The tube the egg travels down to the uterus
Ovulation	When the mature egg is released from the ovary
Penis	Part of the male reproductive system that places sperm into the vagina
Period	The loss of blood and tissue from the uterus
Placenta	Provides nutrition to the developing foetus
Puberty	The physical changes during adolescence
Scrotum	Part of the male reproductive system that keeps the testes outside the body
Semen	The fluid that supplied the nutrients for the sperm
Sex hormones	Hormones involved in puberty and adolescence
Species	Individuals that can breed and produce fertile offspring
Sperm cell	The male reproductive cell
Sperm duct	Part of the male reproductive system which carries the sperm from the testes
Testicles	Part of the male reproductive system where sperm are made
Umbilical cord	Carries the blood from the mother to the foetus
Urethra	Part of the male reproductive system the tube that carries the semen out of the penis
Uterus	Part of the female reproductive system where the foetus develops
Vagina	Part of the female reproductive system which receives the sperm during intercourse
Variation	The differences between individuals of the same species

Retrieval Question	Retrieval Answer
What is meant by variation	Differences in characteristics
What is meant by species	A group of closely related organisms that are very similar to each other
What is meant by inherited variation	Characteristics that have come from their parents
List 3 examples of inherited characteristics	Eye colour, hair colour, nose shape (any sensible answers)
State what is meant by environmental variation	Characteristics that are affected by your surroundings
List 3 examples of environmental characteristics	Diet, education, lifestyle (any sensible answers)
State what is meant by continuous variation	A characteristic that can take any value within a range
Give an example on continuous variation	Height, body mass, hair length, arm span (any sensible answers)
What type of graph should be used to plot continuous data?	Histogram
State what is meant by discontinuous variation	Characteristics that can only result in certain categories
Give an example of discontinuous variation	Gender, blood group, eye colour (any sensible answers)
What type of graph should be used to plot discontinuous data?	Bar chart
State what is meant by the term adaptation	Features/characteristics that enable an organism to be successful, and so survive
Describe 2 ways animals are adapted to live in a desert	Large body heats up slowly, do not sweat, wide feet do not sink into sand, move around at night to feed, produce concentrated urine, and dry faeces
Describe 2 ways plants are adapted to live in a desert	Waxy layer covering the plant, large stems to store water, wide roots to collect water from a large area, spines instead of leaves to reduce water loss
Give 2 advantages of trees losing their leaves in winter	Saves energy, provide a layer of warmth and protection around the base of the tree, reuse nutrients from the leaves
State 3 ways that different animals adapt to the winter	Hibernation, migration, grow thicker fur
Retrieval Question	Retrieval Answer
State what is meant by adolescence	The time during which you change from a child to an adult
State what is meant by puberty	Physical changes to your body
Give 3 examples of changes that only happens to boys during puberty	Voice breaks, testicles and penis get bigger, testicles produce sperm, shoulders widen, hair grows on face and chest
Give 3 examples of changes that only happens to girls during puberty	Breasts develop, ovaries release eggs, periods start, hips widen

Retrieval Question	Retrieval Answer
What are sex hormones?	Chemical messengers that travel around your body in the blood
State the function of the male reproductive system	To produce sperm cells
Describe the function of the; testes, sperm duct, urethra, and penis	Testes - produce sperm and sex hormones, sperm duct - carry sperm from the testes to the penis, urethra - carries urine and sperm, penis - allows the male to release sperm into a female, carries urine or semen
State the function of the female reproductive system	To produce egg cells
Describe the function of the; ovaries, oviducts, uterus, cervix, vagina	Ovaries - contain egg cells/releases them, oviducts - carry an egg to the uterus, uterus - where a baby develops, cervix - a ring of muscle that keeps the baby in place in the uterus, vagina - receives sperm
State what is meant by the gametes	Reproductive cells (male - sperm cell, female - egg cell)
State what is meant by fertilisation	The nucleus of the sperm and the nucleus of the egg join together
Describe how an egg travels along the oviduct	Tiny hairs called cilia move the egg down the oviduct to the uterus
State what happens during sexual intercourse	The male places the penis in the vagina and sperm are released
Describe how sperm cells travel to the egg	Sperm swim from the vagina, through the cervix and into the uterus
State what happens during implantation	The embryo attaches to the uterus
Give one cause of infertility in males and females	Males - low sperm count, females - eggs not being released, blocked fallopian tubes
State what is meant by gestation	The time from fertilisation until birth
Give 2 things that a foetus needs to grow	Nutrients and oxygen
Describe the function of the; placenta, umbilical cord, amniotic fluid	An organ where substances pass between the mother's blood and the foetus
Describe how a baby is born	The mother's cervix relaxes, muscles in the uterus contract gradually pushing the baby out of the vagina
State the approximate length of the menstrual cycle	28 days
Describe the stages of the menstrual cycle	Bleeding (menstruation), uterus lining builds up, egg released, lining breaks down
State what is meant by ovulation	The release of an egg from the ovaries
Name two different methods of contraception	Condoms, contraceptive pill

Y7 SCIENCE - REACTIONS

Chemical reactions

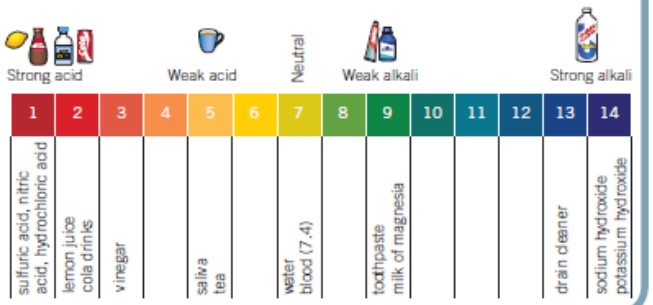
- A **chemical** reaction is a change in which atoms are rearranged to make new substances
- A **reversible** reaction is one where the products can react to get back the substances which you started with, most chemical reactions are not reversible
- You can look for signs that a chemical reaction has taken place such as flames, smells, heat change, a loud bang or gentle fizz

Acids and alkalis

- **Acids** and **alkalis** are the chemical opposites of one another
- Both acids and alkalis can be **corrosive** and **irritants**

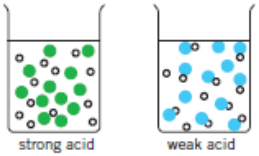
To see whether a substance is an acid or an alkali, we can use an **indicator**. Indicators show how acidic or how alkaline a solution is by showing its position on the **pH scale**, one example of this is **universal indicator**

- If the solution has a pH value of 1–6 it is **acidic**
- If the solution has a pH value of 8–14 it is **alkaline**
- If the solution has a pH value of 7 it is known as **neutral**



Acid strength

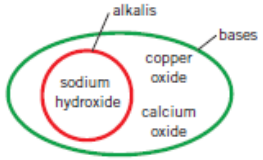
- The strength of an acid depends on how much of the acid has broken apart when it has dissolved in water
- Hydrogen chloride dissolves in water to form hydrochloric acid, this is a **strong acid** as all of the particles split up
- A **weak acid** will have particles that do not all split up



- The **concentration** of the acid is the amount of acid which has dissolved in 1 litre of water
- The more concentrated the acid, the lower the pH

Neutralisation

- **Neutralisation** reactions are any reaction in which acids react with a **base** to cancel out the effect of the acid
- These reactions form a neutral solution with a pH of seven
- A **base** is any substance which neutralises an acid
- An alkali is a base which has been dissolved in water



Salts

Salts are substances which are formed when an acid reacts with a metal or metal compound

Different acids form different types of salts:

- Hydrochloric acids form chloride
- Sulphuric acids form sulphates
- Nitric acids form nitrates

Metal reactions

When a metal reacts with an acid it will produce a salt and hydrogen gas, the fizzing that you see is the hydrogen gas being given off

metal + acid → salt + hydrogen

magnesium + hydrochloric acid → magnesium chloride + hydrogen

When a metal reacts with oxygen a metal **oxide** is formed, this process is known as **oxidation**

metal + oxygen → metal oxide

aluminum + oxygen → aluminum oxide

- When a metal reacts with water it forms a metal **hydroxide** and hydrogen gas.
- The alkali (group 1) metals react most vigorously, giving off a brightly coloured flame

metal + water → metal hydroxide + hydrogen

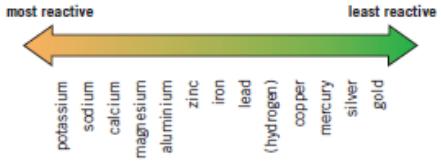
sodium + water → sodium hydroxide + hydrogen

When a more reactive metal reacts with a compound containing a less reactive metal, it can take it's place, this is known as a **displacement** reaction

- If the metal on it's own is higher in the **reactivity series** than the metal in the compound a reaction will take place
- If the metal on it's own is lower in the reactivity series than the metal in the compound, a reaction will not take place

The reactivity series

- The **reactivity series** describes how reactive different metals are compared to one another
- The higher the metal is in the reactivity series the more reactive it will be this means that it will react much more vigorously



Key terms Make sure you can write definitions for these key terms.

acid acidic alkali alkaline base chemical chemical reaction concentration concentrated corrosive displacement hydroxide indicator irritant neutral neutralisation oxide oxidation pH scale reversible reactivity reactivity series salt strong acid universal indicator weak acid

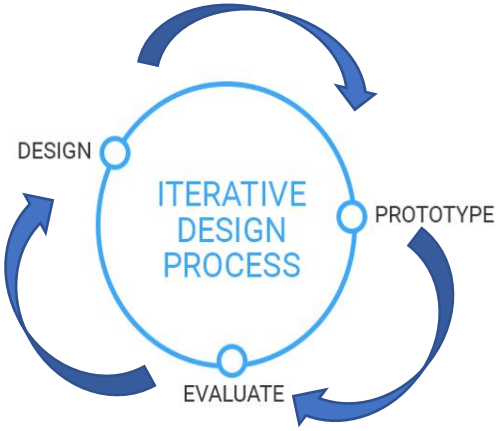
Keyword	Definition
Acid	A solution with a pH value less than 7
Acidic	A solution with a pH between pH1 and pH6
Alkali	A soluble base
Alkaline	A solution with a pH between pH8 and pH14
Base	Any substance which neutralises an acid
Chemical	A substance obtained by a chemical process
Chemical reaction	A change in which atoms are rearranged to create new substances
Concentration	The amount of substance dissolved in 1 litre of water
Concentrated	A solution with many solute particles per litre
Corrosive	A substance that can burn
Displacement	When a more reactive metal reacts with a compound containing a less reactive metal
Hydroxide	An ion containing hydrogen and oxygen
Indicator	A chemical used to identify substances as either acid or alkaline
Irritant	A chemical that makes the skin or eyes itch
Neutral	A solution of pH 7
Neutralisation	Reactions in which an acid reacts with a base to reach pH 7
Oxide	A substance which contains oxygen
Oxidation	A chemical reaction in which a substance combines with oxygen
pH scale	A measurement of a substance being acid, alkaline or neutral
Reversible	A change in which it is possible to get back to the original substances
Reactivity	The likelihood of a substance undergoing a chemical reaction
Reactivity series	A list of metals showing how different metals are compared to one another
Salt	A salt is a compound in which the hydrogen atoms of an acid are replaced by atoms of a metal
Strong acid	An acid in which all the acid particles split up when it dissolves in water
Universal indicator	A chemical which reacts with acids and alkalis to give a colour change
Weak acid	An acid in which only some of the acid particles split up when it dissolves in water

Retrieval Question	Retrieval Answer
State what a chemical reaction is	A change in which atoms are rearranged to make new substances
Describe 3 pieces of evidence that suggest a chemical reaction is taking place	Flames or spark, smell, substances get hotter/colder, fizzing/bubbling (effervescence)
Name 3 useful materials made in chemical reactions	Medicines, fabrics, building materials (any sensible answers)
Give examples of two types of physical change	Melting (any change of state), dissolving
List the chemical names of 3 acids	Hydrochloric, nitric, sulfuric
State two hazards of using a corrosive solution	Burns skin and eyes
State two hazards of using an irritant solution	Swelling and redness (itching)
What is meant by a concentrated solution?	A solution that has lots of particle per litre
What is meant by a dilute solution?	A solution that has few particles per litre
State what an indicator is	A dye that turns different colours in acid and alkaline solutions
Describe the colour change of blue litmus when it is added to an acid	Red
Describe the colour change of red litmus when it is added to an acid	Red
State what the pH scale is	A measure of how acidic or alkaline a solution is
State what pH numbers (and colours) correspond to; strong acids, weak acids, strong alkalis, weak alkalis	Strong acids - 0-3, weak acids - 4-6, strong alkalis - 11-14, weak alkalis - 8-10
Name 3 strong acids and 2 weak acids	Strong - hydrochloric, nitric, sulfuric, weak - ethanoic (acetic), citric
Describe the difference between a strong acid and a weak acid	All particles split up (ionise) in a strong acid, only a few particles split up in a weak acid
What is meant by a concentrated acid?	Lots of acid particles per litre
What is meant by a dilute acid?	Few acid particles per litre
Describe what happens during a neutralisation reaction	An acid reacts with a substance that cancels it out, the pH goes to 7
State the difference between an alkali and a base	Base - a substance that neutralises an acid and is insoluble, alkali - soluble base
Describe a method for making a neutral solution from an acid and an alkali	Measure a specific volume of acid, add indicator, slowly add alkali until the pH reaches 7
State 2 examples of where neutralisation reactions are useful	Neutralising soil or lakes (any sensible answers)

Retrieval Question	Retrieval Answer
Describe what a salt is	A substance that forms in a chemical reaction between an acid and a metal (compound)
State the products formed when an acid reacts with a metal	Salt + hydrogen
State the products formed when an acid reacts with a base	Salt + water
What salts does nitric acid make?	Nitrate
What salts does hydrochloric acid make?	Chloride
Describe a method for making and separating a salt from the reaction of an acid and a base	Add a base to an acid until no more reacts, filter to remove the unreacted base, heat the solution to evaporate most of the water, leave to crystallise
State what an element is	A substance that contains just one type of atom
What is the periodic table?	A list of all the elements grouped together with similar properties
State the name of 3 magnetic elements	Iron, cobalt, nickel
State the name of the only liquid metal and liquid non-metal	Liquid metal - mercury, liquid non-metal - bromine
Describe 5 properties of metal elements	Good conductors of electricity, good conductors of heat, shiny, high density, malleable
Describe 5 properties of non-metal elements	Poor conductors of electricity, poor conductors of heat, dull, low density, brittle
What is the difference between a chemical and a physical property?	Chemical properties - describe chemical reactions, physical properties - describe things you can observe and measure without changing the material
Describe two differences between metal and non-metal oxides	Metal oxides - most are solids, most are bases, non-metal oxide - most are gases, most are acids
State what is meant by a reactant?	The starting substances in a chemical reaction
State what is meant by a product?	The substances that are made in a chemical reaction
State the product formed when a metal reacts with oxygen	Metal oxide
Describe what happens during an oxidation reaction	A substance reacts with oxygen to make an oxide
Name the products formed when an acid reacts with a metal	Salt + hydrogen
Name the salt made when sulfuric acid reacts with a metal	Sulfate
List the metals in order of most reactive to least; copper, silver, gold, magnesium, iron, lead, zinc, platinum	Magnesium, zinc, iron, lead, copper, silver, gold, platinum

Research	
It helps designers to gain a better understanding of the problem that needs solving and equips us with the knowledge to be more successful when we start to design	
Primary research	Collecting information/ data directly from people, first hand. Examples include interviews and observations, product analysis
Secondary research	Gaining information/ data from existing sources or published information. Examples include books and the internet
Product analysis	Examining an existing product to find out information about it. When analysing a product you may consider; how its made, what its made from, what its function is, strengths and weaknesses, cost to make, components used in manufacture, shape, colour, size
Target market	The person/ group of people you are designing your product for
Needs and wants	**Needs** – what the target market needs a product to do in order for it to work **Wants** – desirable qualities that a target user would *like* a product to have For example: A target user needs a travel cup that will contain a liquid without it spilling but they may want it to have an adjustable handle to make it easier to carry
Material investigation	Experimenting with materials to find out their working properties

Models and Prototypes	
Designers make models and prototypes before deciding on a final design. Faults and improvements can be identified and corrected, before they manufacture a final product. Target user feedback can be gained along the way	
Models	Models can be made whilst designing. They can be models of individual parts or the whole product. It helps designers see how parts/ a product will look and work
Prototype	A **prototype** attempts to simulate the final design, aesthetics, materials and functionality of the intended design. It is the final step before a product is manufactured. A prototype is made after lots of modelling has taken place



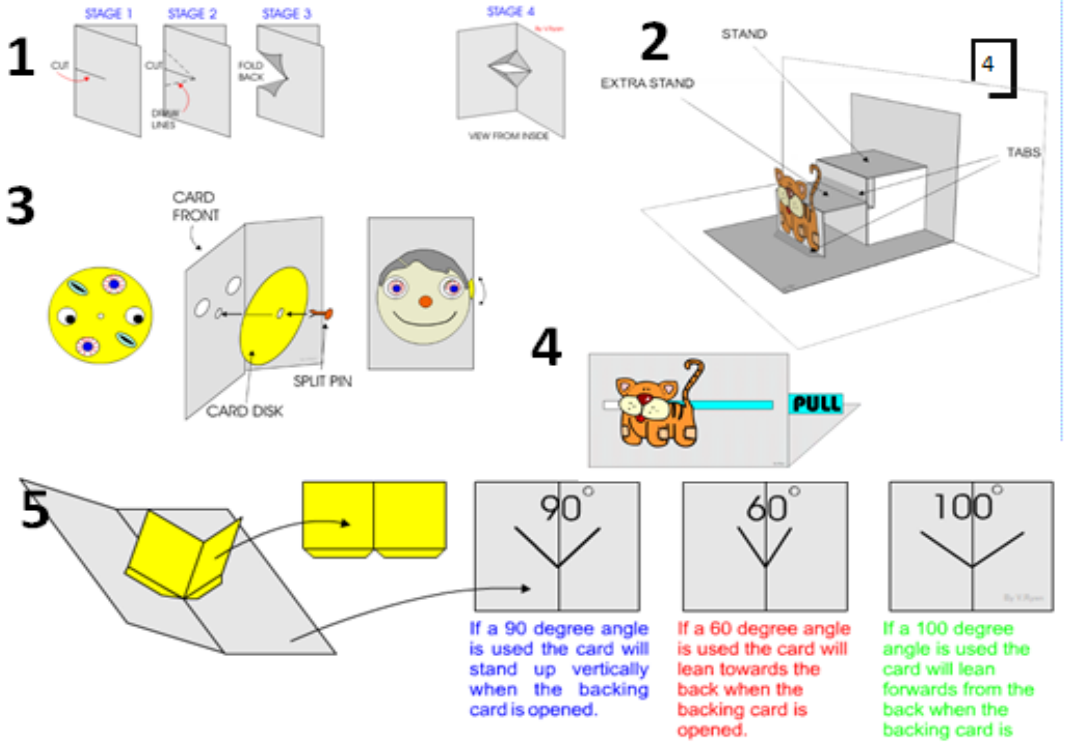
Iterative design:
A design process that works on a continuous cycle until a solution is found. A designer will produce designs, model the design, evaluate the success of the design. The process starts again with the designer making alterations until a suitable solution is found

SCAMPER:
When designing you can use different aspects of SCAMPER to improve/ alter your design. For example if your design is too complex, you may choose to eliminate parts of it to simplify the design

Paper Manufacture	1
1	Trees chopped down and logs put into a rotating drum to remove the bark
2	Wood is then put through the chipper to make wood chips. Sometimes these are taken from unused offcuts from sawmills. This saves waste
3	Mixed with chemicals and water to create pulp
4	Pulp is washed and bleach is added to make it white
5	Dyes can be added to colour the pulp for coloured paper
6	Pulp is put through big rotating drums. These flatten the pulp into paper and remove moisture through pressure and heating the pulp

Key Words—Graphics	2
Product	Something that is designed and manufactured usually to sell
Lignin	Organic polymers that help form structures in plants. The make plants and trees more rigid
Pulp	Broken down wood chips. With the lignin dissolved it is now soft and fibrous
Paper machine	A continuously running series of manufacturing processes that turns pulp into paper
Product Analysis	Exploring existing products for inspiration and to consider what to avoid. It helps with the designing process
Dimensions	Measurement of something. Width, height, depth
Design Brief	A description of what is required from a new project or product. What it should do, who it is aimed at, how long it will take, etc.
Score	The process of making a crease in **paper** so it will fold easier. This can be done using a craft knife, ruler or a metal edge
GSM	**Paper** is measured in grams. **GSM** stands for grams per square meter.

Paper/ card mechanisms		3
1	Pop up	a pop up feature that fits on the crease of the paper/ card. Often used to create mouths for characters
2	Stand	A feature that creates a stand across a crease in the paper/ card. Design features are usually added to it so they stand out
3	Rotating	A disk that rotates, usually used in conjunction with a window cut into a piece of card that goes over the disk. A split pin secures the two pieces together
4	Sliding	a moving component that moves across the page with the use of a slide bar
5	V-Fold	A feature that stands up from the page. V folds have to be created on the crease of the paper
6	Spring	A feature that uses two strips of paper that are overlapped to create a spring. A design feature is usually placed on top of the spring



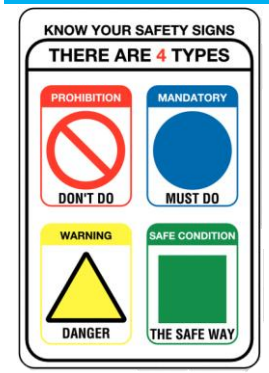
Key topics: Health and Safety, Safety Signs, Plastics, Tools and Materials, Woods, Metals, Processes, Marking out, measurement, Cutting out, Shaping, Wasting And Finishing

1. Key Vocabulary & Definition

Health & Safety	Keeping yourself and others safe when using tools and equipment
Thermoplastic	A polymer that has a memory and can be reshaped when heated
Thermosetting plastic	A polymer that is heat resistant, once shaped it cannot be reformed
Hardwood	From deciduous tree. They are slow growing and more expensive
Softwood	From coniferous trees or evergreen trees that is fast growing. They have pines and cones.
Manufactured board	Sheet materials manufactured from layers or particles of wood – MDF, Plywood and chipboard

Processes	
Wasting	Method used to remove and shape material through sawing, drilling, filing, laser cutting etc
Draw Filing	Method used to remove scratches from the acrylic
Cross Filing	Method used to smooth the edges of the acrylic
Wet and Dry	An abrasive paper used with water to shape and finish the edge of the acrylic
Finishing	Adding polish or finish to material to enhance, protect or preserve materials.

2. Health and safety



Example of rules in the workshop

1. Always listen carefully to the teacher and follow instructions.
2. Know where the emergency stop buttons are positioned.
3. Always wear an apron.
4. When attempting practical work all stools should be put away.
5. Report any damage to equipment as this could cause an accident.
6. Ask questions, especially if you do not fully understand.
7. Do not use a machine if you have not been shown how to operate it safely by the teacher.
8. Always be patient, never rush in the workshop.
9. Always use a guard when working on a machine.
10. Use tools carefully. Keep hands away from moving / rotating machinery.
11. keeping both hands behind the cutting edge.

3. Plastics

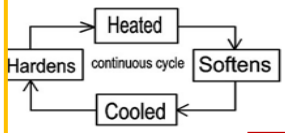
Most plastics are made of **fossil fuels**. Crude oil and natural gas go to refinement to be turned into multiple different products. Including ethane from crude oil and propane from natural gas.

Plastics

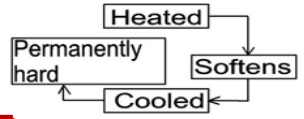
Most Plastics are made from **Oil**

They come ***self finished***

https://www.youtube.com/watch?v=IwdUwffecsM



There are 2 main categories



Thermoplastics	Thermosetting Plastics
Can be re-cycled	Can not be re-cycled
Have plastic memory	Heat resistant
Can be re-shaped with heat	No plastic memory
Acrylic	Epoxy Resin Glue
High Impact Polystyrene (HIPs)	Phenol-formaldehyde

4




Products made of wood

Woods

TIMBER

A natural renewable resource

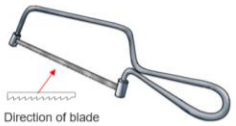
Facts	Hardwoods	Softwoods
	Deciduous	Coniferous
	Loose leaves	Evergreen
	Grows some of the year	Grows all year round
	Rings closer together	Rings further apart
	100 years to grow	30 – 40 years to grow
Examples & uses	Oak, Ash, Beech	Pine, Cedar, Douglas Fir
	Furniture	Building

Manufacture Board: Plywood, MDF, chipboard.

Usually cheaper than solid timber	Does not tend to warp	Strips or pieces of wood glued together	Has many uses including furniture making and building works

5. Workshop Tools

A Coping Saw
Used to cut out more detailed shapes in wood.



Direction of blade

A Junior Hacksaw
A fine-toothed saw used to cut metal and plastic. It is a smaller version of the regular hacksaw.

A Tenon Saw
A Tenon Saw is used for cutting straight lines in timber known as tenons.

A File
A file is used to remove material from a piece of wood, plastic or metal. It can be flat, rectangular, square, triangular round or half rounded in shape.

A Bench Hook
A bench hook is hooked over the edge of a workbench or secured in a workbench vice. Use to hold your work in place when cutting, preventing your work from slipping.

A Try Square
A try square is a woodworking tool used for marking and checking 90° angles on pieces of wood.

6. Materials and their Characteristics

WOOD	TYPE	CHARACTERISTICS
Pine	SOFTWOOD	Easy to work with, reasonably strong and light weight. Straight grain with lots of knots.
Plywood	MANUFACTURED BOARD	Alternate layers of wood are glued together at 90 degrees to each other. Very strong, outside finished with a high quality veneer.
Medium Density Fiberboard	MANUFACTURED BOARD	Woodchips are broken down into a pulp, mixed with glue and compressed. It has a smooth surface, which makes it easy to paint and finish.
PLASTIC	**TYPE**	**CHARACTERISTICS**
Acrylic	THERMOPLASTIC SHEET	Hard, shiny and resistant to weathering but scratches easily.

Year 7 – Food Preparation and Nutrition:
A healthy balanced diet

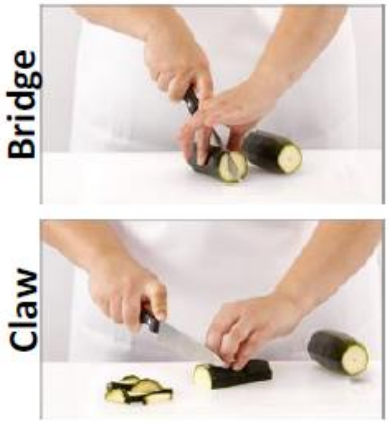
Key topics: The Eatwell guide, the 4 C's, nutrients, knife skills, using the oven and hob, combining ingredients, shaping, forming, testing for readiness, weighing and measuring, washing up and clearing away.

1 The 4 C's

Cooking	Cleaning	Chilling	Cross Contamination
Cooking kills bacteria. Food needs to be heated till steaming hot with the core temperature reaching 75*C for 30 seconds.	Cleaning kills bacteria. Wash hands before, during and after food preparation. Wash all work tops, utensils, chopping boards and equipment. Rinse fruit, salad and vegetables.	Chilling prevents microbial growth. Cool food to below 5*C as quickly as possible. Defrost food in the fridge.	Bacteria is transferred from one object to another. Keep raw and cooked food separate. Never wash raw meat. Keep raw meat and shellfish on the bottom shelf of the fridge.

2 Preparing for a practical

3 Basic knife skills



- Ensure you don't hurt yourself or others.
- Use a firm grip and even pressure.
- Always cut down towards the chopping board, never cut towards yourself.
- Carry a knife with the point facing downwards.
- Don't touch the knife blade.
- Always put a knife down, don't hand it to someone else.
- Never leave your knife soaking in the washing up bowl.
- Never catch a falling knife.
- Always hand your knife back in at the end of the lesson.

4

8 tips for a healthy lifestyle. 5

- Base your meals on starchy foods.
- Eat lots of fruit and vegetables.

- Eat more fish.
- Cut down on saturated fat and sugar.

- Try to eat less salt- no more than 6g a day.

- Get active and try to be a healthy weight.

- Drink plenty of water.

- Don't skip breakfast.

6 Key Terms

Keywords	Definition
Cross contamination	When bacteria is transferred from one object to another.
Diet	The type of foods that a person eats. Some people have special diets depending on their age or needs.
Nutrients	Nutrients are chemical compounds in food that are essential for the body to function properly and maintain health.
Macro nutrients	These are nutrients that are needed by the body in large quantities; they are Carbohydrates, Proteins and Fats.
Micro Nutrients	These are nutrients that are needed by the body in small amounts; they are vitamins and minerals.
Health	This defines your physical wellbeing. Good health indicates that you are free from illness.
Enzymic browning	an oxidation reaction that takes place in some foods, mostly fruit and vegetables, causing the food to turn brown.

7 Nutrients

Nutrient	Function	Food sources
Carbohydrate	This is the primary source of **energy**.	Bread, pasta, rice and potatoes.
Fat	This is used as a secondary source of **energy**. It helps to **insulate** the body and maintains **brain function**.	Meats, cheese, butter, oils, nuts and seeds.
Protein	The bodies building block. Helps the body to **grow and repair** itself.	Nuts, eggs, fish, meat, beans and pulses.
Vitamins	There are many different vitamins and they play a vital role in keeping **skin, eyes, hair** and **blood healthy.**	Fruits and vegetables, meats, dairy, eggs, cereals, sunlight etc.
Minerals	Minerals help your body **grow, develop** and stay healthy. They help build **strong bones, teeth, blood** and **nervous systems.**	Dairy, vegetables, fish, meat, cereals etc.
Fibre	Prevent **constipation**, Increase the feeling of **fullness**, reduce the risk of heart disease, diabetes and some cancers	Wholegrain cereals, fruits and vegetables.
Water	it is a **lubricant** for joints and eyes; it is the main component of **saliva**; it helps get rid of **waste**; it helps regulate body **temperature**.	Juice, fruit, vegetables, soup, smoothies.


Chopping board


Weighing scales


Saucepan


Measuring spoons


Measuring jug


Grater


Colander


Sieve


Peeler


Frying Pan


Rolling pin


Cooling rack


Vegetable knife

Year 7 Fibres and Fabrics

1

Key word	Definition
Fibre	A fibre is the smallest element of a fabric; it looks like a human hair.
Fabric	Textile fabrics are woven or knitted from **yarn**, which is made from **fibres**:
Woven	Fabric which constructed by interlacing two yarns at right angles to each other
Natural Fibre	Natural fibres are from **plants** and **animals**
Synthetic Fibre	Man-made fibres, such as those made from oil
Knitted	Fabric which is constructed using interlocking loops
Printing Technique	Fabric printing is a fun way to add colour and pattern to the surface of textiles
Renewable	They are replaced by new growth
Sustainable	They are replaced at a rate equal to or greater than the rate at which they are used)
Biodegradable	They decompose/rot

3

Fibres

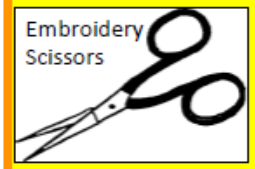
Fibres come from several sources and can be either:

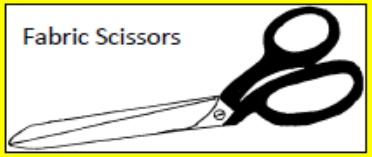
Natural	From plants or animals. Plants – Cotton and Linen Animals - Silk and Wool	They are renewable, sustainable and biodegradable
Synthetic	Manmade/ manufactured) From fossil fuels (coal, oil and gas). Nylon, Polyester, acrylic	Cannot be replaced, do not decompose and contribute to environmental problems if they end up in landfill.

2

Fibre	Source	Used for
Cotton	grows in hot climates, on bushes from seeds. When the seeds ripen they split open to reveal fluffy white cotton.	Products made from cotton include jeans, blouses, T-shirts, sheets and towels
Linen	is made from the inner bark of the flax plant. The plants have a straight stalk with blue flowers, and are grown mostly in Europe	Products made from linen include tea towels, table cloths and summer clothing.
Silk	is made from the cocoon larvae of the silkworm, and was first developed in China.	The fabric is smooth, soft texture and is one of the strongest natural fibres.
Wool	is taken from the coats of sheep and other animals, such as goats, alpacas and even rabbits!	It is used for clothing, suits, blankets and furniture upholstery. However wool can shrink and is not as durable as cotton or silk.
Nylon	is made by combining chemical taken from coal, water, air, petroleum, natural gas and agricultural by-products	Nylon is lightweight, strong, durable and resistant to damage. Nylon is used to make swimwear, umbrellas and waterproof bags.
Polyester	comes from crude oil. When made into fabric, it tends to feel slippery and silky. Some polyester is blended with other fabrics to provide more stretch, or to reduce skin irritation.	Polyester is used to make shirts, jackets and furnishings.

Equipment





4

Year 7 ICT Knowledge Organiser

Logging on

USERNAMES these begin with 20 followed by First Name Initial and then Surname. Bob Smith would be 20bsmith

Strong Passwords are usually more than 8 characters with a mixture of uppercase, lowercase letters, numbers and symbols. They should be changed frequently. You should never share passwords.

ONE DRIVE is where you save all your personal documents at Christ the King. You can access this using your email address to login to Office.Com.

Email Address example: 20bsmith@christtheking.notts.sch.uk

Sending Email we use Outlook at CtK to send Emails. You should type an email address into the To: field. If you want to send a copy of the message to another person use the CC: field – this stands for **CARBON COPY.** If you do not want anybody to know you are sending a person a copy you should use the **BCC – Blind Carbon Copy box.** You can use the **High Importance button** to mark your message as important.

Key Vocabulary

Personal Data – data that can be used to identify an individual. This could be Name, date of birth or home address.

Spam – irrelevant or unwanted emails or messages, usually sent to a lot of people. Normally used for advertising or spreading harmful programs. To reduce spam, tick the 'do not share my email box' on forms.

Identity Theft is when somebody pretends to be you using your person information, usually stolen online or through theft. Thieves may set up bank accounts and credit cards in your name.

Geo Tagging is when your location is tagged in social media posts or saved to a picture when you take it. Posting your location can be dangerous.

Phishing is when somebody pretends to be somebody you trust, usually in an email and asks for information which will help access your accounts or steal your identity. You should always check emails asking for information to see if they are trustworthy.

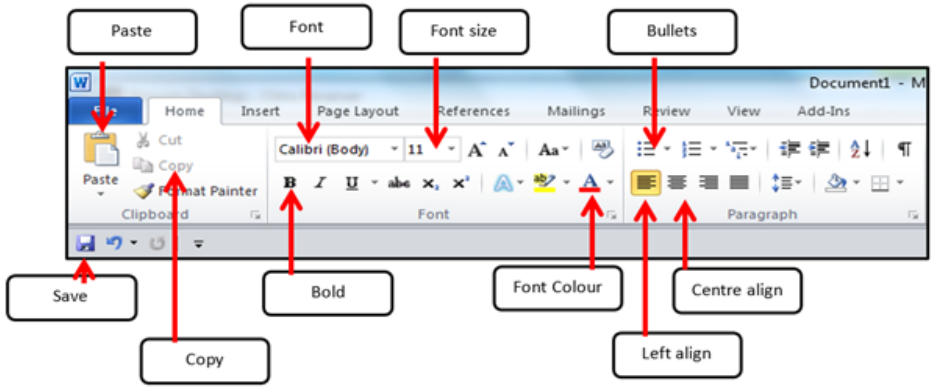
Firewall – security software preventing unauthorised access to a computer.

Anti Virus – Software that scans and removes malicious/harmful software on your computer.

Microsoft Teams

At CTK we use Microsoft Office Teams in class, for assignments, and to connect with students. You can also download the '**Teams**' app on your desktop or phone, then use your **School email** and **password** to sign in to access it.

Vocabulary	
File	A specific piece of fata held on a computer
Folder	A virtual location where programs, files and other folders can be located
Shortcut key	A combination of keys that when pressed simultaneously, perform some task that ordinary requires to use a mouse.
Email	Messages sent electronically over a computer network
Attachment	A computer file sent along with an email message
Search engine	A computer program that is used to look for information on the internet
Social network	An online platform that allows users to create a public profile and interact with other users on the website
Online profile	A social identity that an internet user establishes in online communities and websites
Privacy settings	The part of a social networking website, internet browsers, piece of software. Etc. that allows you to control who sees information about you
Cyberbullying	Using technology to bully someone
Virus	A program or piece of code that is loaded onto your computer without your knowledge and runs against your wishes and has detriment effect



E-Safety

ICT

Unit - Keywords

Cyberbullying	The bullying of another person using the internet, mobile phones and other digital devices, with the intent to deliberately upset them.
Netiquette	Correct or acceptable way of communicating on the internet.
Cyberstalking	Repeated use of electronic communication to harass or frighten someone.
Online Grooming	Deliberate act taken to befriend and create an emotional connection with a child, resulting in not good intensions.
Sexting	Sending sexually explicit messages or images by cell phones and other electronic devices.
Password	A secret word or phrase that must be used to gain access to something.
Hacking	Gainnig access to a computer, with the intension of stealing data or causing damage
Download	Copying data from one computer system to another, typically over the internet.
Chat room	A website, or part of a website which allows people to communicate via a computer network in real time.
Block	Action taken to stop interactions from set people via online communication.
Spam	An email that is sent to a large number of people and mostly consists of advertising.

Websites you can Trust

No one is in charge of the internet so anyone can post or publish anything to it. Some content may be unsuitable. Websites that you can trust include those from:

- the Government – if the address has 'gov.uk' in it, it's a UK Government website
- the National Health Service (NHS) – if the address has 'nhs.uk' in it, it's an NHS website
- the Police – the official website is www.police.uk
- the BBC – all of the BBC's websites have 'bbc.co.uk' in their address

10 Ways To Stay Safe On Facebook

1) Monitor suspicious activity/links.
2) Remove friends as appropriate.
3) Keep your wall clean.
4) Turn off Facebook Chat.
5) Change your password often.
6) Be careful who you share your password with.
7) Hide your year of birth.
8) Keep your private info private.
9) Adjust your privacy settings.
10) Protect your mobile device.

Digital Footprint

Your digital footprint is **everything** on the Internet that's about you. This could mean photos, audio, videos, texts, your posts on friends pages, etc.

As you get older, a strong online presence can bring with it all kinds of benefits

Does this give a good online impression/digital footprint?

Andrew Field @andyfield · 2m
Cant be botherd going 2 school today I hate school

Phishing

As an internet user, you need to know if something is real or fake. Criminals on the internet try to get information from people.

Top Ten ways to Prevent Phishing	
1) The message contains a mismatched URL	2) You didn't initiate the action
3) URLs contain a misleading domain name	4) You're asked to send money to cover expenses
5) The message contains poor spelling and grammar	6) The message makes unrealistic threats
7) The message asks for personal information	8) The message appears to be from a government agency
9) The offer seems too good to be true	10) Something just doesn't look right

Spot the Problem
What is the issue with the following email?

Ways in which to reduce SPAM

Spam is very difficult to avoid but there are ways to reduce it:

- Use a spam filter – most email clients try to stop spam from reaching you by using a spam filter. It recognises common spam emails and stops them from getting through. Check your spam email regularly as sometimes real emails are mistaken for spam.
- Do not give your email address out – if you don't trust the website or if supplying your email address is optional, don't give it to them.

Free anti-virus applications

- AVG
- Avast!
- Microsoft Security Essentials

What would you?

You get an email from someone you dont know

1. Delete it straight away and tell a parent
2. Reply to the email and ask who they are
3. Open the email to see what it is

A random person in a chatroom asks for your picture

1. Find a good photograph and send it to them
2. Ask them to send their picture to you first
3. Do not send your picture and tell an adult