

CHRIST THE KING

KNOWLEDGE
ORGANISERS

#CTKCARES

Year 7

Term 3





SELF-QUIZZING

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 very easily become overwhelmed. Your long-term memory, on the other hand, is effectively limitless.

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

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

How often should I self-quiz?

Research shows that regular 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 different ways to learn the material in your knowledge organiser.

How to use my Knowledge Organiser

1. 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 your green 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 you struggled with.

2. Draw a mind map, jotting down everything that you can remember from the knowledge organiser. Check accuracy, correct in green pen and then repeat.

3. 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 and recite the information aloud.

4. Use your knowledge organisers to create flashcards. These could be double sided with a question on one side and the answer on the other. Alternatively, a keyword on one side and a definition on

QUICK FACT

Did you know

Research shows students remember 50% more when they test themselves after learning something

50%





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 minutes 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?

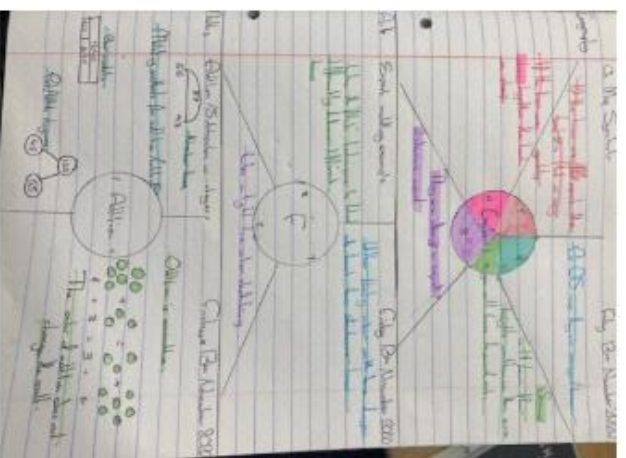
Each homework must meet the following 5 requirements:

1. Write the complete **title and date in full** eg. Tuesday 9th September 2017 on each page, **underlined**
2. You should include a **minimum of words** to summarise the topic. Do not copy the words from the text.
3. Make **full use of the page** for each topic by scaling your notes & images appropriately to use of all the space.
4. You must include **diagrams, sketches or cartoon doodles** to visually represent the topic, try to use humour.
5. **Highlight key words** and phrases, using underline, highlighter pens. Explain technical terms

HOW SHOULD I PRESENT MY WORK?

Please remember that the same rules apply to the presentation of your homework as apply 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:



QUICK TIP

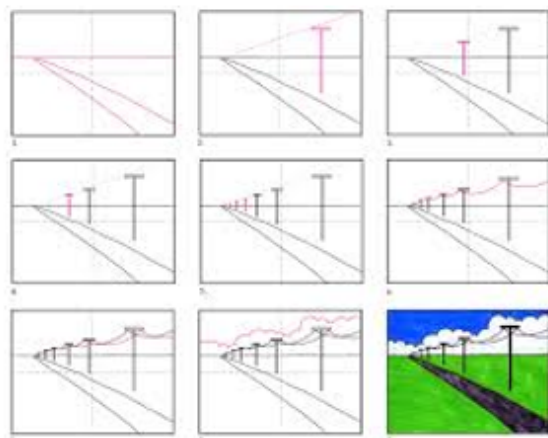
Don't forget

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

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 of 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.

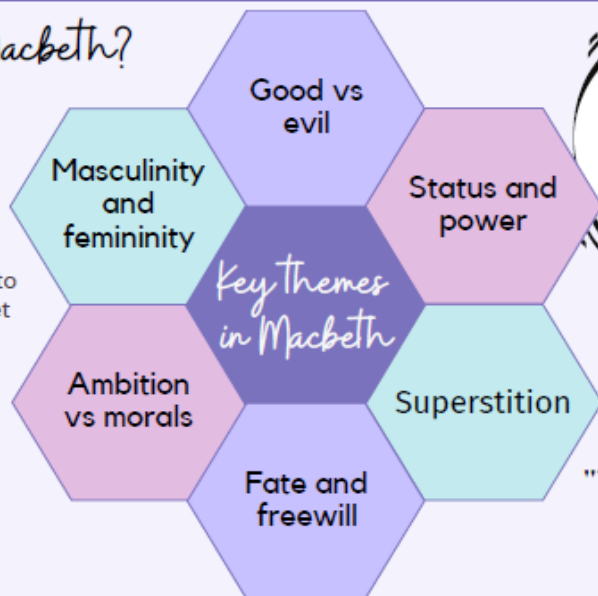
Macbeth kills Duncan and becomes King of Scotland.

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?"

"What's done cannot
be undone."

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

NOTHING IS
but what is not.

Macbeth
(Act 1 Scene 3)

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
WELLWHAT DO I
NEED TO DO
TO IMPROVEHOW ARE THE AUDIENCE
IMPACTED BY THE ACTING
AND DESIGN CHOICESYEAR 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 actor
choices story
successful character
design dialogue
engaging movement
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...

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 production.

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.

Design Key words

WHAT AM I
DOING
WELL ?

WHAT DO I
NEED TO DO
TO IMPROVE ?

WHAT TOOLS DO I
HAVE TO ENGAGE THE
AUDIENCE ?

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 freeze frame.

ROLE ON THE WALL-

Writing down a thorough description of your character's outside appearance and inside thoughts and feelings.

WHAT'S BEHIND THE DOOR?

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.

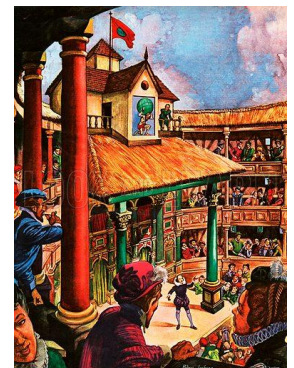
As the watching of plays became more popular, theatres were built instead of using the courtyards of inns. The popularity of stage plays led to the building of the Rose, Swan and Globe Theatres in London between 1587 and 1598.

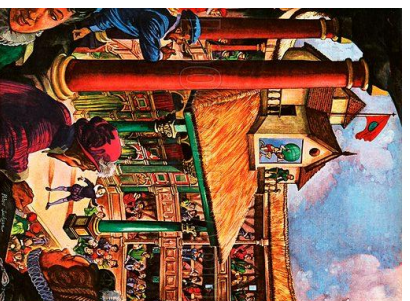
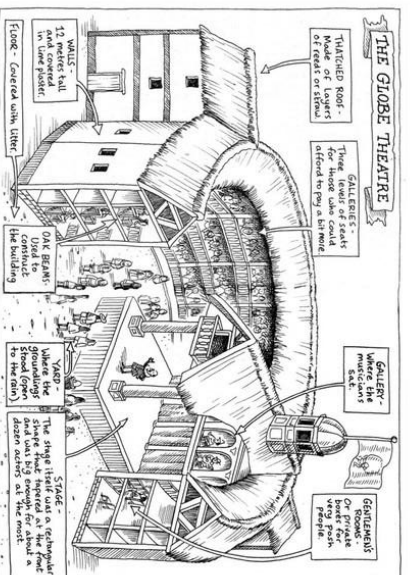
The main features and popularity of the Elizabethan/Jacobean theatre

- 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.

Topic	Macbeth - Detailed Contextual Information
1) First Performance	Macbeth was first performed in 1606, likely with King James I in the audience. Shakespeare may have wanted to please the King through his play's representation of the dangers of challenging monarchy.
2) Historical Inspiration	The play's characters were inspired by historical sources. The real Macbeth ruled Scotland in the 11th century after killing King Duncan but many other facts were changed considerably. James I also claimed to believe that he was a descendant of Banquo and Fleance.
3) Divine Right of Kings	James I promoted the concept of the divine right of kings throughout his reign: the monarch is appointed by God and, therefore, any opposition to him is sacrilegious. In a speech before Parliament James I argued 'Kings are justly called gods.' (1609)
4) Gunpowder Plot	The Gunpowder Plot in 1605 involved Catholics attempting to blow up Parliament and the royal family. Robert Catesby's involvement shocked King James, who had considered Catesby to be one of his most loyal noblemen. Scholars have speculated that the play's characterisation of Macbeth may have been partly modelled on him.
5) Supernatural	Belief in the the supernatural was far more prevalent than it is today. King James I wrote a book on the subject - 'Daemonologie' (1596) - in which he called witches 'detestable slaves of the Devill' and confidently asserted that 'such assaults of Sathan are most certainly practiced'.
6) Gender Roles	Jacobean society was highly patriarchal. Women were typically regarded as emotionally and intellectually weaker than men, needing a husband to look after them. The man was considered to be the head of a marriage and his family.
7) Religious Belief	In the previous century the state religion had changed between Mary, Queen of Scots and Elizabeth I. Under James I as both King and Head of the Church, the country remained strictly Protestant. The Jacobean public was generally god-fearing, interpreting religious concepts such as heaven and hell literally. James I also commissioned a new English translation of the Bible in 1604 which is still read to this day.

Year 7 English
Shakespeare's
Context
(in preparation
for the study of
Macbeth)





Macbeth — Characters

Main Characters

Macbeth

Thane of Glamis, later King of Scotland
Macbeth is a beloved Scottish general who bravely defends his king and country in battle. After hearing the three weird sisters' prophecy that he will one day rule Scotland, Macbeth commits heinous murder and other tyrannous acts in order to secure his position as king.

Lady Macbeth

Macbeth's wife and supporter of her husband's quest for power
At the play's beginning, Lady Macbeth is a powerful figure: she's charming, attractive, ambitious, and seems to be completely devoted to her husband. (We might think of the pair as the original power couple.) She's also a teensy bit worried that her man isn't quite "man enough" to do what it takes to be king. According to Lady Macbeth, her husband is "too full o' the milk of human kindness" (1.5.1), if her husband's going to be the powerful figure she wants him to be, Lady Macbeth's got to take things into her own hands.

Duncan

Duncan is the King of Scotland. While spending the night as a guest at Inverness, he's murdered by Macbeth, who has aspirations to rule the country. In the play, Duncan is a benevolent old man. We never see him out on the battlefield, and he is always full of kindly words. He's also generous when bestowing honors on the soldiers and thanes that protect him and his kingdom. Duncan is so sympathetic and likable a character that murdering him seems horrifying.

Malcolm

Malcolm is elder son of King Duncan and newly appointed as Prince of Cumberland. Known to be the holding place for the next King of Scotland. When we first meet Malcolm, he seems rather weak – he's standing around praising a brave and bloodied captain for saving his life and rescuing him from capture. In other words, Malcolm's the kind of guy who seems to need rescuing. Malcolm's reaction to news of his father's death doesn't recommend him to be king yet, either; it only

Minor Characters

Donalbain — Duncan's younger son
Lady Macduff — Macduff's wife
Lennox and Ross — Noblemen of Scotland that support Malcolm's fight against Macbeth
Son — Macduff's son
Angus — Nobleman of Scotland and supporter against Macbeth
Menteith and Caithness — Noblemen of Scotland in Malcolm's English Army
Porter — servant at Macbeth's castle
Murderers — Macbeth's hired killers
Fleance — Banquo's son who is seen as a threat by Macbeth

shows he's still feeling around for the best course of action. He seems to lack the experience to make him confident or capable. Malcolm's words at the end, praising and gifting his allies and damning his enemies, make it seem like he'll follow right in the footsteps of his dad: gracious and, for the most part, harmless. Even if Malcolm isn't going to be a tough warrior anytime soon, he has folks like Macduff to help out, so long as Malcolm can continue to make the speeches and be pure of heart, which we are sure he is.

Banquo

Banquo is a general in the King's army (same as Macbeth) and is often seen in contrast to Macbeth. Banquo is the only one with Macbeth when he hears the first prophecy of the weird sisters; during the same prophecy, Banquo is told that his children will be kings, though he will not be. How Macbeth plays his part in fulfilling the prophecy makes the play – how Banquo does not creates a nice contrast to our main character.

It's important to note that King James I of England (a.k.a. King James VI of Scotland), the guy who was monarch when Shakespeare wrote *Macbeth*, traced his lineage back to Banquo so it's important that Shakespeare portrays Banquo as a noble figure.

Macduff

Macduff is a loyal Scottish nobleman and the Thane of Fife.
After Macbeth murders Macduff's family, Macduff grieves for his loved ones and then resolves to kill Macbeth in man-to-man combat. At the play's end, he triumphantly carries Macbeth's severed head to Malcolm, the future king.

Weird Sisters (the Witches)

The three weird sisters set the action of the play in motion when they confront Macbeth and prophesize that he will be king of Scotland. We never see them apart and they often speak and act in unison so it's worth considering them here as a single unit.

Apparitions — Visions conjured up by the Witches to inform Macbeth of what he should fear for the future
Doctor and Gentlewoman — Servants that witness Lady Macbeth's sleepwalking
Seiyon — An Officer in Macbeth's Army
Siward — General in the English army fighting with Malcolm
Young Siward — Siward's son in the English army with Malcolm
Captain — Soldier in Duncan's military that reports on Macbeth's success in the battle against Macdonwald
Hecate — Goddess of the Witches

Geography Topic 3: Settlement and Urbanisation

1. Levels of Development

HIC	High Income Country
NEE	Newly Emerging Economy
LIC	Low Income Country

2. 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

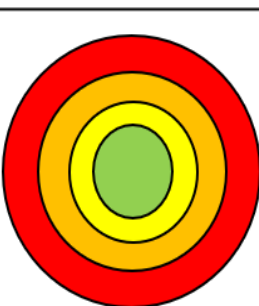
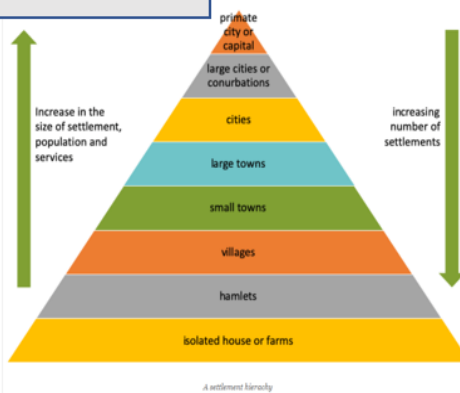
Settlement hierarchy	Order of settlements in a region or country by population OR services
Population change	Change in the number of people in a specified area over time
Land-use	The function of the land – what it is used for.
Terraced Housing	Row of similar houses joined together by their side walls
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
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

Central Business District (CBD)
Industry along transport route
Shanty towns
Basic housing
High cost housing

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

Geography Topic 5: Physical Landscapes in the UK

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

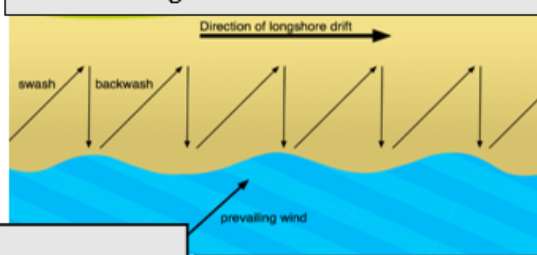
5. Features of a river valley

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

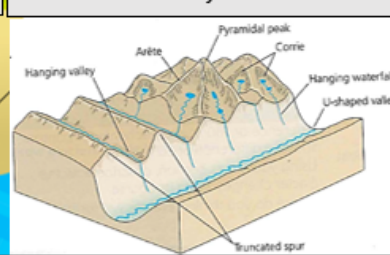
6. Coastal landforms

Beach	Sediment deposited by the sea
Cliff	Steep, often vertical rock face
Bay	Land curves in away from the sea and is surrounded by water 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



9. Landforms in a glacial valley created by erosion



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
Arête	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.

HALF TERM Five – How did the Plains Indians live and survive on the Plains?

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 didn'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. Who were the Plains Indians?

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.
Nomadic	The Plains Indians moved around following the buffalo.
Women	Women would have a traditional role of looking after the children, cooking, Putting up and taking down the tipi.

4. How did the Indian's homes help the Indians to survive?

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. How did the buffalo help the Indian's to survive?

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. How did medicine and spirituality help the Plains Indians survive?

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 small pox. 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



History - Power in Early Modern Britain

1. key features

The Reformation	Henry VIII becomes Head of the Church and England becomes a Protestant country
Counter Reformation	England reverts back to Catholicism
The Spanish Armada	Spain invades England under Elizabeth I
The Gunpowder Plot	Guy Fawkes tries to blow up the Houses of Parliament
Witchcraft	Women were accused of being witches
The English Civil War	A war within England between Charles I and Parliament

2. The English Monarchs

Henry VIII	King who turned England into a Protestant country
Mary I	Henry VIII's daughter with Catherine of Aragon. Reverted England back to Catholicism
Elizabeth I	Daughter of Henry and Anne Bolyen. A Protestant
James I	Son of Mary Queen of Scots. King of Scotland and England. A Protestant
Charles I	Son of James I. Angered Parliament by wanting to become an Absolute Monarch. A Protestant King, but upset Protestants by being married to a Catholic
Oliver Cromwell	A Puritan (extreme Protestant) Led the New Model Army against Charles I in the English Civil War. Took over as Lord Protector of England after Charles

3. Henry VIII and the Reformation

Causes	Henry VIII wanted a male Heir, fancied Anne Boleyn, Henry needed money
Protestant religion	Follows the Church of England
Dissolution of the Monasteries	Destroying the buildings of the Catholic Church
Rufford Abbey	An Abbey in Nottinghamshire which was destroyed during the Reformation

4. Elizabeth I and the Spanish Armada

Portraits	Pictures of monarchs were painted by artists at the time. They often depicted them to be more attractive than what they really were.
Marriage	Elizabeth never married- instead believing that she was married to her country and did not need a man to rule.
The Spanish Armada	A fleet of 130 ships from Spain sent by King Philip II of Spain to try and invade England
Protestants V Catholics	Elizabeth was considered to be more sympathetic towards Catholics than her sister, Mary, was of Protestants. Her sister burned 300 Protestants at the stake. Elizabeth executed 48 Catholic Priests and 20 Laymen

5. James I, The Gunpowder Plot and Witchcraft

Guy Fawkes	A disgruntled Catholic who wanted England to be a Catholic country
Houses of Parliament	The building in London where the Politician and king met to make the laws of the country
Treason	Going against authority. The Gunpowder Plot was considered to be Treason, which was punishable by death
Witchcraft	James I condemned witches in his book. Women who made herbal remedies to heal the sick were treated with suspicion. Men were only allowed to be doctors at the time.

6. Charles I, the English Civil War and Execution

Absolute Monarch	A monarch who believes that only God can tell them what to do. This made Parliament angry as he didn't consult them
New Model Army	An army based upon ability rather than someone's position in society. Cromwell realised that just because a person was rich, it didn't mean they were a good soldier
Execution of Charles I	Charles was accused of Treason. He was given a 'show trial' where the court had already decided that he was guilty before the trial.

7. Source analysis - key words

Utility	How a source is or isn't useful to us
Reliability	Can we trust the source?
Interpretations	People's opinions about an event or individual
Provenance	What is the source? Who created it? When was it created? Why was it created?
Source content	What does the source tell us. Does our knowledge match up with what the source says?

8. Timeline of key dates

1509	Henry VIII becomes King
1534	Henry VIII declares himself the Head of the Church of England
1547	Edward VI becomes King
1553	Mary I becomes queen
1558	Elizabeth I becomes queen
May 1558	The Spanish Armada
1603	James I becomes King
1605	The Gunpowder Plot
1625	Charles I becomes King
1642-1651	The English Civil War
1649	The Execution of Charles I

What do I need to be able to do?

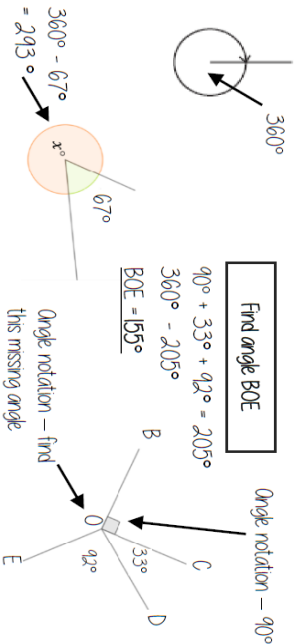
- By the end of this unit you should be able to:
- Understand/use the sum of angles at a point
- Understand/use the sum of angles on a straight line
- Understand/use equality of vertically opposite angles
- Know and apply the sum of angles in a triangle
- Know and apply the sum of angles in a quadrilateral

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

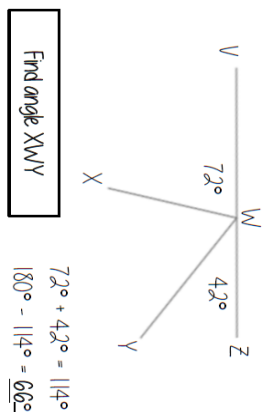
Sum of angles at a point

The sum of angles around a point is 360°

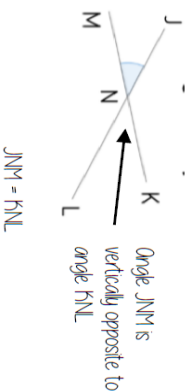


Sum of angles on a straight line

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

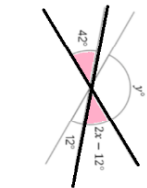
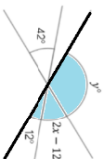


Vertically opposite angles



Vertically opposite angles are the same

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



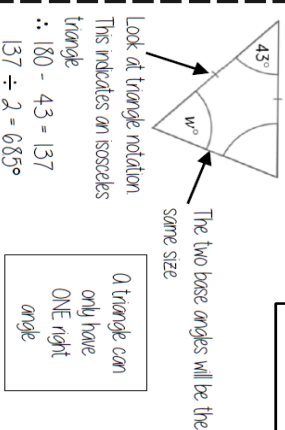
Form equations with information from diagrams

$$2x - 12 = 42$$

$$2x = 54$$

$$x = 27^\circ$$

Sum of angles in triangles



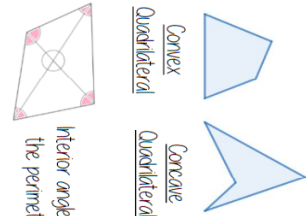
A triangle can only have ONE right angle



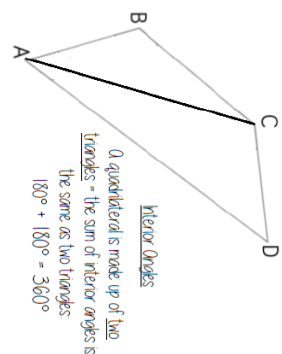
Sum of interior angles in a triangle = 180°

Sum of angles in quadrilaterals

Sum of interior angles in a quadrilateral = 360°

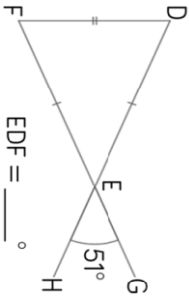


Interior angles are those that make up the perimeter (outline) of the shape



Angle Problems

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



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

Keep working out clear and notes together

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 10s first aids mental addition/ subtraction

Mental methods for multiplication/ division

Multiplication is commutative



$$2 \times 4 = 4 \times 2$$

The order of multiplication does not change the result

Partitioning can help multiplication

$$\begin{aligned} 24 \times 6 &= 20 \times 6 + 4 \times 6 \\ &= 120 + 24 \\ &= 144 \end{aligned}$$

Division is not associative

Chunking the division can help $4000 \div 25$
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. $0.1 = \div 10$

Methods for multiplication 12×0.03

$$\begin{array}{r} 12 \times 3 = 36 \\ 12 \times 3 = 36 \\ 12 \times 0.3 = 0.36 \\ 12 \times 0.03 = 0.036 \end{array}$$

Methods for addition $2.3 + 2.4$

$$\begin{array}{r} 2 + 2 = 4 \\ 0.3 + 0.4 = 0.7 \\ 4 + 0.7 = 4.7 \end{array}$$

Methods for division $15 \div 0.05$

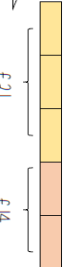
Multiply by powers of 10 until the divisor becomes an integer

$$\begin{array}{r} 1.5 \div 0.05 \\ \times 100 \\ 150 \div 5 = 30 \end{array}$$

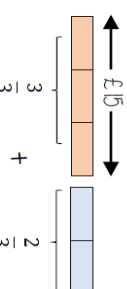
Mental methods for fractions

Use bar models where possible

I've spent $\frac{2}{5}$ of my money I have £2.1 left



How much did they have to begin with?



What is $\frac{5}{3}$ of £15?

Using factors to simplify calculations

$$30 \times 16$$

$$10 \times 3 \times 4 \times 4$$

$$10 \times 3 \times 2 \times 8$$

$$16 \times 10 \times 3$$

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

$$124 \times 5 = 620$$

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

$$620 \div 124 = 50$$

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

$$2a + 2b = 10 \quad \text{Everything} \times 2$$

$$0.1a + 0.1b = 0.5 \quad \text{Everything} \div 10$$

$$a + b = 5$$

$$a + b + 2 = 7 \quad \text{Add 2 to the total}$$

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

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 \cap)
- Union: two ellipses that join (OR \cup)
- 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, eg 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

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

$\xi = \{\text{the numbers between 1 and 50 inclusive}\}$

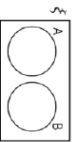
(My sets can relate every number between 1 and 50 including those numbers)

$A = \{\text{Square numbers}\}$

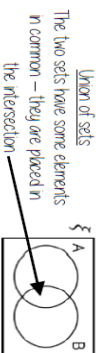
$A = \{1, 4, 9, 16, 25, 36, 49\}$

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

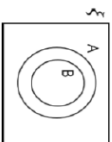
Interpret and create Venn diagrams



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



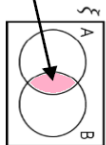
Subset!
All of set B is also in Set A so the ellipse fits inside the set.

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

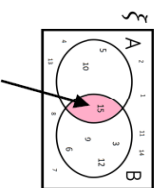
Intersection of sets

Elements in the intersection are in set A AND set B



The notation for this is $A \cap B$

$\xi = \{\text{the numbers between 1 and 15 inclusive}\}$
 $A = \{\text{Multiples of 5}\}$ $B = \{\text{Multiples of 3}\}$

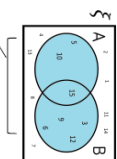


The element in $A \cap B$ is 15

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

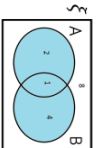
Union of sets

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



$\xi = \{\text{the numbers between 1 and 15 inclusive}\}$
 $A = \{\text{Multiples of 5}\}$ $B = \{\text{Multiples of 3}\}$
The elements in $A \cup B$ are 5, 10, 15, 3, 9, 6, 12

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



The notation for this is $A \cup B$

The Venn shows the number of elements in each set

Sample space – for single events

0. sample space for rolling a six-sided die is $S = \{1, 2, 3, 4, 5, 6\}$



0. sample space for this spinner is $S = \{\text{Pink, Blue, Yellow}\}$

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

Probability of a single event



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

$P(\text{Blue}) = \frac{4}{5}$ There are 4 blue sectors

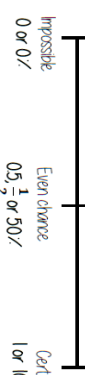
Probability notation $P(\text{event}) = \frac{2}{5}$ There are 10 sectors overall

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



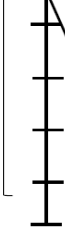
Impossible

Even chance

Certain



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

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 $\frac{4}{5}$

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

The sum of the probabilities is 1

The table shows the probability of selecting a type of chocolate

Dark	Milk	White
0.15	0.25	

Pinkie chocolate = $1 - 0.15 - 0.25 = 0.6$



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 list below are multiples of 3.

3, 6, 9, 12, 15,...

The list continues and doesn't end

3x, 6x, 9x, ...

Non example of a multiple

45 is not a multiple of 3 because it is 3×15

Not an integer

Factors

Arrays can help represent factors

Factors of 10

1, 2, 5, 10

10 x 1 or 1 x 10

5 x 2 or 2 x 5

Factors and expressions

6x x 1 OR 6 x x

2x x 3

3x x 2

The number itself is always a factor

Factors of 6x

6, x, 16x, 2x, 3, 3x, 2

Prime numbers

2

- Integer
- Only has 2 factors and itself
- 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

Representations are useful to understand a square number n^2

odd even odd

1, 4, 9, 16, 25, 36, 49, 64, ...

Triangular numbers

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

dot two consecutive triangular numbers and get a square number

1, 3, 6, 10, 15, 21, 28, 36, 45, ...

Common factors and HCF

Common factors are factors two or more numbers share

HCF – Highest common factor

HCF of 18 and 30

1, 2, 3, 6, 9, 18

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 = 36

The first time their multiples match

9, 18, 27, 36, 45, 54

12, 24, 36, 48, 60

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.

Counterexamples



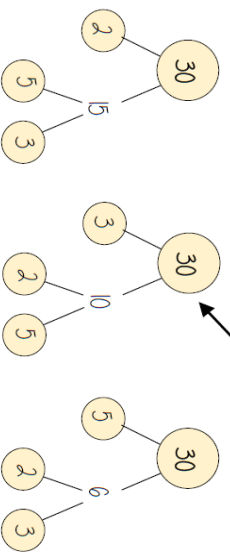
This sequence isn't doubling it is adding 2 each time

A pattern that is noticed for many cases

Only one counterexample is needed to disprove a conjecture

Product of prime factors

Multiplication part-whole models



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

eg 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

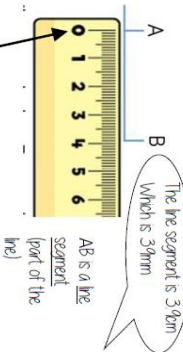


Angle Notation: three letters ABC
This is the angle at B = 113°

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

Draw and measure line segments

Conversions: $1\text{cm} = 10\text{mm}$, $1\text{m} = 100\text{cm}$



Make sure the start of the line is at 0.

Angles as measures of turn



Classify angles

Acute Angles
 $0^\circ < \text{angle} < 90^\circ$

Right Angles
 90°

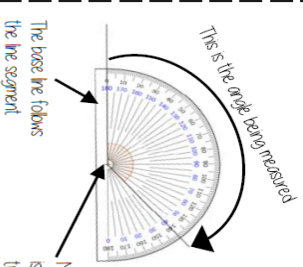
Obtuse
 $90^\circ < \text{angle} < 180^\circ$

Right angle notation

Reflex
 $180^\circ < \text{angle} < 360^\circ$

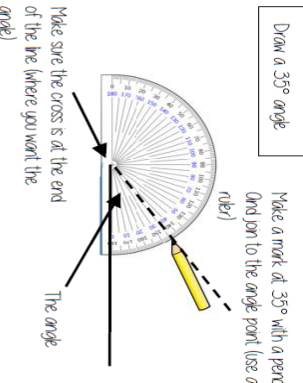
Straight Line
 180°

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°

Draw angles up to 180°



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

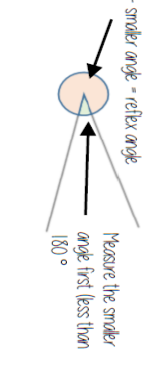
Parallel and Perpendicular lines

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°



Properties of Quadrilaterals

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

Rectangle
All angles 90°
Opposite sides are parallel

Rhombus
All sides equal size
Opposite angles are equal

Trapezium
One pair of parallel lines

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

Draw Pie Charts

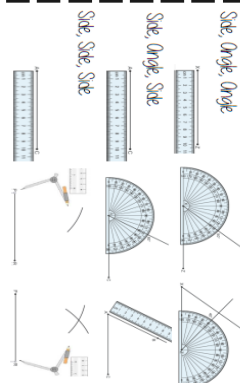
Type of pet	Dog	Cat	Hamster
Frequency	32	25	3

$\frac{32}{60}$ "32 out of 60 people had a dog"
This fraction of the 360 degrees represents dogs
 $\frac{32}{60} \times 360 = 192^\circ$
Use a protractor to draw
This is 192°

Polygons

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

SAS, SSS, ASA constructions



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	Strawberry 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 minérale	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 légumes	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
dégoûtant(e)	disgusting
délicieux/	delicious
épicé(e)	spicy
fort(e)	strong
cher(e)	expensive
peu varié(e)	not much choice
de mauvaise	poor quality



Positive opinions

J'aime
J'aime beaucoup
J'adore
Je préfère

+

le/
la/
les

Negative opinions

Je n'aime pas
Je déteste

plus ____ que
= more ____ than
moins ____ que
= less ____ than

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



SOME

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

Je mange du
pain avec de la
confiture.



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...

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

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 régime équilibré	a balanced diet
Ce n'est pas bon pour la santé	It's bad for your health

Connectives

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

Frequency Phrases

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

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

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 mangé	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

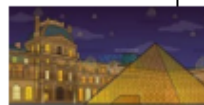
It is comfortable and quite modern

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?

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	on the outskirts of
la ville	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

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

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

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

Comment est ta ville?
What is your town like?

C'est...
It is...

UPGRADE YOUR DESCRIPTIONS

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

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 forêt	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

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

Qu'est-ce que tu fais
pour

l'environnement?
What do you do for the
environment?



ESSENTIAL VERBS

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	public transport
en commun	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 vélo	by bike

Il faut...
You must...

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 composé
The perfect tense

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

INSTRUMENTS

Strings: double bass or bass guitar often used to play the bass line. Guitar plays chords and melodies

Woodwind: saxophone sometimes used for melody

Brass: trumpet/trombone often used for melody

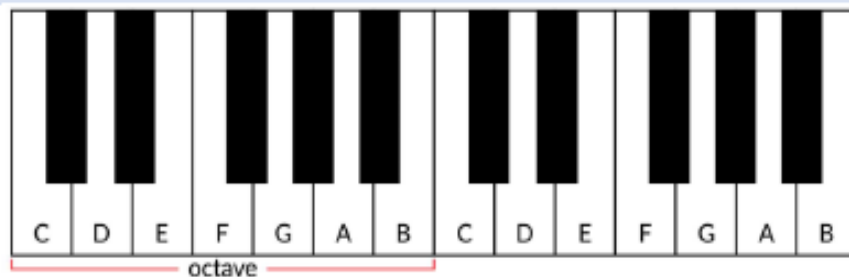
Percussion: drum kit

Voices: soprano/alto/tenor/bass – any kind of voice can sing blues

Keyboards: piano is often used to play chords, bass line and/or melody, but organ is sometimes used too

KEYBOARD SKILLS

A. Layout of a Keyboard/Piano

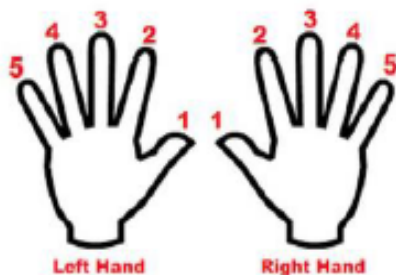


A piano or keyboard is laid out with **WHITE KEYS** and **Black Keys** (see section G). C is to the left of the two Black Keys and the notes continue to G then they go back to A again. Notes with the same letter name/pitch are said to be an **OCTAVE** apart. **MIDDLE C** is normally in the centre of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

D. Keyboard Functions



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



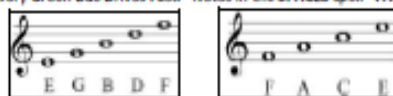
Exploring Treble Clef Reading and Notation

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* used 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 **LINE**s and 4 **SPACE**s.



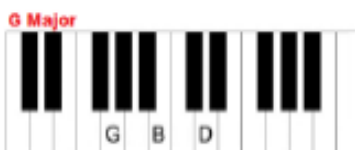
Every Green Bus Drives Fast. Notes in the **SPACES** spell "FACE"



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



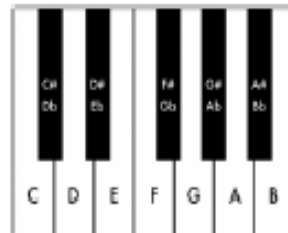
C. Keyboard Chords



Play one - Miss one - play one - miss one - play one

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**.





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.

What does 'timbre' mean?

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

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.

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.

Music Performance

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

Ludwig Van Beethoven

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 what to improve.
- ✓ It is crucial to share opinions with others.
- ✓ Verbal feedback is essential to help support and develop as a musician.

Key Words:

Routine

Tuck

Pike

Straddle

Execution

Skills:

Full Twist

Seat Drop

Front Drop

Back Drop

Front Somersault

Famous Trampolinists:

Bryony Page



Lu Chunlong

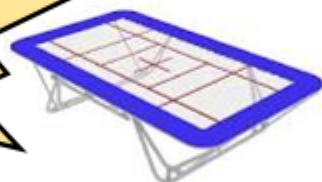
Trampolining

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.

Key Words:

Push

Let

Defensive

Balance

Movement

Skills:

Serve

Forehand

Backhand

Topspin

Backspin

**Famous
table tennis
players:**

Fan Zhendong



Kelly Sibley

Table Tennis**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 back-hand push	<ul style="list-style-type: none"> • 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 back-hand topspin	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 shoulder 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

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

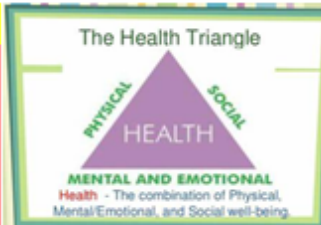
7) Negative effects of exercise :

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



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.

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 shoulder 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.

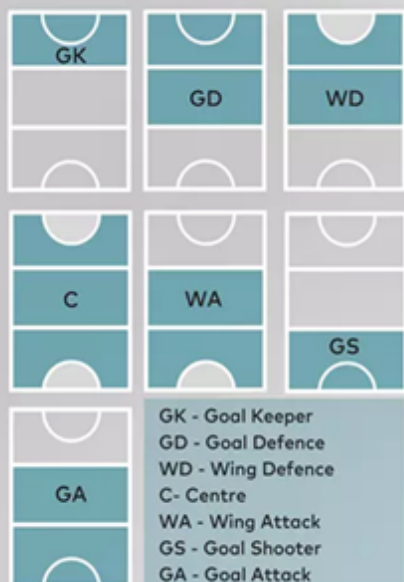
You cannot contact another player (pushing or barging).

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

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

This includes:

Circuit,
Continuous,
Cross
Fartlek
Weight
Plyometric

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

	<u>There are three elements to a warm up:</u>
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

Cool Down

	<u>There are two elements to a cool down:</u>
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 the 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 found in foods such as pasta.
6		Protein allow growth and repair of muscle. 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 consume per day and it helps to ensure you do not add weight to your body.
13		An athlete 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 Mikkell 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 overeat

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 by 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

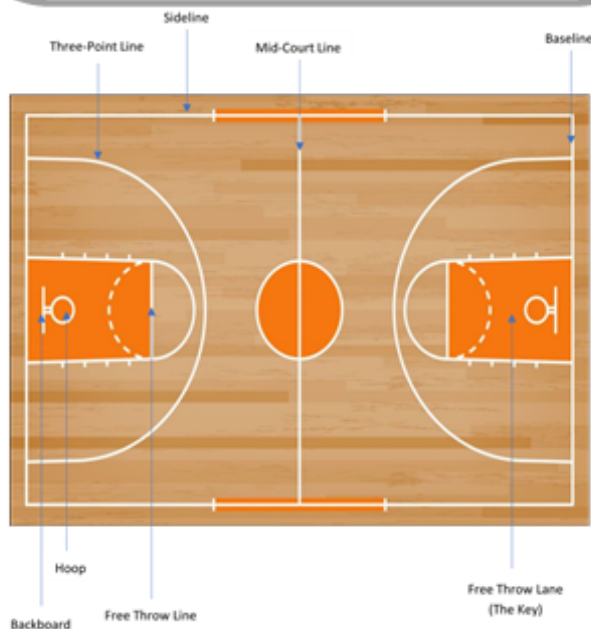
Rules:

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...



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

- Anabolic Steroids
- Beta Blockers
- Diuretics
- Narcotic Analgesics
- Stimulants

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.

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.

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.



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.'

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 → result in death!
20	Sports: athletics, weightlifting, boxing.

Key Words

1	Ascension	Jesus' return to heaven after his resurrection
2	Crucify	To kill a person by nailing them to a large wooden cross
3	Garden of Gethsemane	The garden where Jesus was arrested
4	Las Supper	Jesus' final meal with the disciples, where he predicts Peter's denial and Judas' betrayal
5	Palm Sunday	The day Jesus entered Jerusalem on a donkey
6	Pentecost	The day that the Disciples were filled with the Holy Spirit
7	Prophecy	A prediction that something will happen
8	Reconciliation	Repairing our relationship with God by accepting we have done wrong and asking for forgiveness

Key Quotes

1	... he scattered the coins of the money-changers and overturned their tables. To those who sold doves he said, 'Get these out of here! Stop turning my Father's house into a market!' (John 2:15-16)
2	Saul...began to preach in the synagogues that Jesus is the Son of God. All those who heard him were astonished and asked, 'Isn't he the man who caused havoc in Jerusalem among those who call on this name? And hasn't he come here to take them as prisoners to the chief priests?' (Acts 9:19-21)

**Unit 3: Biblical
Literacy
New Testament –
Jesus in Jerusalem**
**Key Facts**

1	In the week before this death, Jesus rode into Jerusalem on a donkey and was greeted by crowds who put down palm leaves. Christians remember this on Palm Sunday.
2	The first three Gospel writers say that Jesus caused a disruption in the temple in the week leading up to his death, known as the 'cleansing of the Temple'. John places this story at an earlier point in Jesus' life.
3	According to the first three Gospels, Jesus ate a meal with his disciples the night before he died. He told them to eat bread and drink wine in remembrance of him. He also predicted that he would be betrayed by Judas Iscariot and deserted by the other disciples.
4	Jesus was arrested in the Garden of Gethsemane by the Jewish authorities. The Jewish leaders could not kill Jesus themselves because they were living under Roman rule, so they accused Jesus of treason to Pontius Pilate, who sentenced him to death.
5	Jesus was mocked, tortured and killed by a method called crucifixion. He dies with a sign above him saying 'King of the Jews'. According to Luke, Jesus promised a criminal on a cross next to him that he would be in paradise with him that day.
6	The Gospel writers have differing claims that after Jesus' death he was resurrected. Christians believe that Jesus' death and resurrection made it possible for sins to be forgiven and be reconciled with God.
7	The growth of the Christian Church after Jesus' death is recorded in the book of Acts. After being filled with the Holy Spirit on the day of Pentecost, the disciples spread the message about Jesus.
8	A Pharisee named Saul/Paul originally persecuted Christians, but he converted to Christianity following a dramatic experience on the road to Damascus. He is credited with writing 13 of the books of the New Testament, although biblical scholars disagree about whether all 13 of them were actually written by him.

Key Words

1	Allah	The Arabic word for God.
2	Ka'aba	A holy site in Mecca which Muhammad dedicated to God after destroying its 360 idols.
3	Mecca	A city in present-day Saudi Arabia; Muhammad was born here in 570CE.
4	Medina	One of the main cities in Arabia in the time of Muhammad (originally called Yathrib).
5	Mosquw	the place of worship for Muslims; it literally means 'place of prostration'.
6	Qu'ran	The holy book of Islam, which Muslims believe contains the word of God; it literally means 'recitation'.
7	Shirk	The Arabic word for the sin of worshipping anything other than God.
8	Tawhid	Belief in the oneness of God.

Key Quotes

1	He is God: there is no other God than Him. It is he who knows what is unseen and what is seen, He is the Lord of Mercy, the Giver of Mercy... (Qu'ran 59:22-23)
2	Those who believe and do good deeds will have an unfailing reward. (Qu'ran 95:6-7)

**Unit 4 - Islam
History and Belief****Key Facts**

1	Islam is a monotheistic religion so they believe in one God who created everything, has complete control over their lives and what happens to them after they die.
2	Tawhid is the believe that God is one – the most important belief.
3	Anything that goes against tawhid is shirk.
4	It has around 1.6 billion followers in the world, who are known as Muslims.
5	Muhammad, their last prophet, was born in 570CE and he founded Islam. Muslims believe in the other prophets in the Bible, including Abraham, Moses and Jesus, but they believe their messages were corrupted so God sent one final prophet, Muhammad.
6	God revealed the Qu'ran to Muhammad and it teaches Muslims how to live their lives – it is in Arabic. It was revealed to Muhammad on the Night of Power.
7	It's is split into 114 surahs and is believed to be the word of God so is treated with great respect
8	By the end of Muhammad's life he was the most influential man in Arabia. He had united warring tribes under Islamic rule and all of the polytheistic tribes had become Muslims, as well as some of the Jews.

The crescent moon and star are the symbol of Islam and often feature on flags and mosques

Key Words

1	Adhan	The call to prayer.
2	Eid ul-Adha	A four-day celebration in the final month of the Islamic calendar.
3	Eid ul-Fitr	A three-day celebration after Ramadan.
4	Ihram	A state of holiness or purity entered into by pilgrims before beginning Hajj pilgrimage to Mecca.
5	Jihad	Literally 'struggle'; this can be physical or spiritual.
6	Mihrab	An alcove in a mosque wall showing the direction of Mecca.
7	Salah	Prayers that Muslims must perform 5 times a day.
8	Shahadah	The Muslim declaration of faith – there is no god but God, and Muhammad is his messenger.

Key Quotes

1	La ilaha illa Allah, Muhammad rasul Allah. (Translation: There is no god but God, and Muhammad is his messenger) (The Shahadah)
2	They ask you [Prophet] about fighting in the sacred month. Say, 'Fighting in that month is a great offence, but to bar others from God's path, to disbelieve in Him, prevent access to the Sacred Mosque, and expel its people, are still greater offences in God's eyes: persecution is worse than killing'. (Qu'ran 2:217)

**Unit 4 - Islam
In the Modern
World****Hajj**

Attending the pilgrimage to Mecca once in your lifetime.

**Sawm**

Fasting during the month of Ramadan.

**Zakat**

Making an annual charitable donation to help the poor.

**Salah**

Praying five times a day.

**The Shahadah**

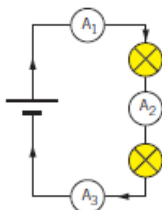
The belief that there is no God but Allah and that Muhammad is his messenger.

Key Facts

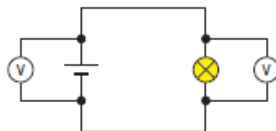
1	There are 5 practices, known as the Five Pillars of Islam, that are central to life as a Muslim
2	The 1st and most important is the Shahadah (the declaration of faith)
3	The 2nd pillar is salah (prayer 5 times a day). In mosques, a muezzin gives the adhan from either inside the mosque or from one of the minarets so that people know it is time to pray. Muslims perform wudu (washing) before praying and pray facing the direction of Mecca
4	During the month of Ramadan, Muslims fast from sunrise to sunset. The 30 days of fasting are followed by a celebration called Eid ul-Fitr. Those who are ill, elderly, young, pregnant or travelling do not have to fast.
5	Hajj is a pilgrimage to Mecca that every Muslim tries to do once in their lifetime. Before arriving in Mecca, pilgrims enter the state of ihram and wear white cotton clothes. In order to become a hajji or hajja. Pilgrims must circle the Ka'aba, walk or run between the hills of Marwah and Safa, pray for forgiveness on Mount Arafat and stone Satan at Mina. Approximately 3 million Muslims go on hajj each year. The pilgrimage lasts for 5 days.
6	The question of whether Muslim women should wear a hijab, niqab, burqa or burkini causes much controversy, both within and outside Islam
7	The majority of Muslims view jihad (which means struggle) as a personal struggle to live a good life as a Muslim (the greater jihad). They condemn the views and actions of Islamic militants
8	5% of people in Britain are Muslims. They face a number of challenges including Islamophobia.

Current

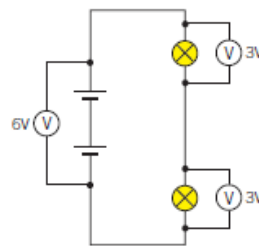
- Current** is the amount of **charge** flowing per second
- The charges that flow in a circuit are **electrons**, they are negatively charged
- Electrons** leave the negative end of the **cell** and travel around the circuit to the positive end of the cell
- Current has the unit of Amps (A) and is measured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

**Potential difference**

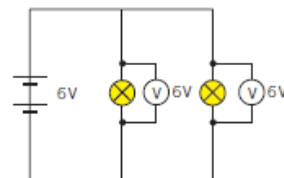
- Potential difference** is the amount of energy transferred by the cell or **battery** to the charges
- The value of potential difference tells us about the force applied to each charge and then the energy transferred by each charge to the component which it passes through
- Potential difference has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

**Series circuits**

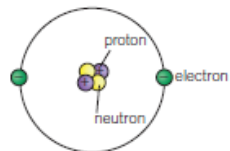
- Series** circuits only have one loop
- If one component breaks, the whole circuit stops working
- Current is the same everywhere in a series circuit
- The total potential difference from the battery is shared between the components in a series circuit
- Adding more bulbs decreases the brightness of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

**Parallel circuits**

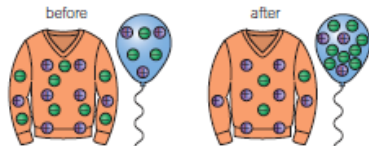
- Parallel** circuits have more than one loop
- If one component breaks, the rest of the circuit will still work
- Current is shared between the different loops in the circuit
- The potential difference is the same everywhere in the circuit
- Adding more bulbs does not affect the brightness of the bulbs

**The atom**

- The **atom** consists of a central nucleus with electrons orbiting around the outside in shells
- Electrons** have a negative charge
- 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 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 calculated 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) \div 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

- Is anything that comes directly from your parents, anything that you inherit
- Examples can include lobe less or lobed ear lobes and eye colour

Environmental variation

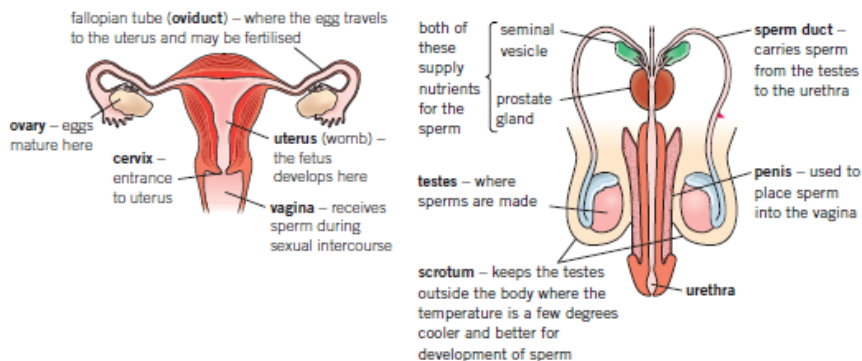
- Is any type of variation that is caused by your surroundings
- Factors that can cause environmental variation include diet, education and lifestyle

- 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

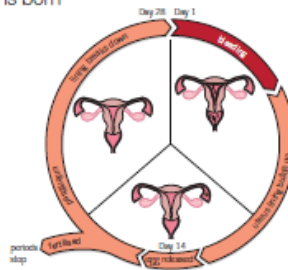


Adolescence

- 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 menstrual cycle stops until the baby is born

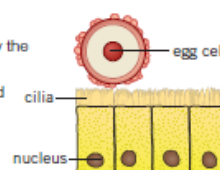


Fertilisation, implantation and gestation

- 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**



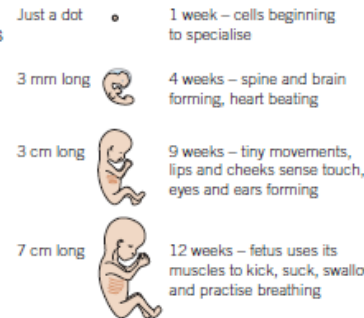
Sperm cells

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



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
Fetus	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

Changes of state

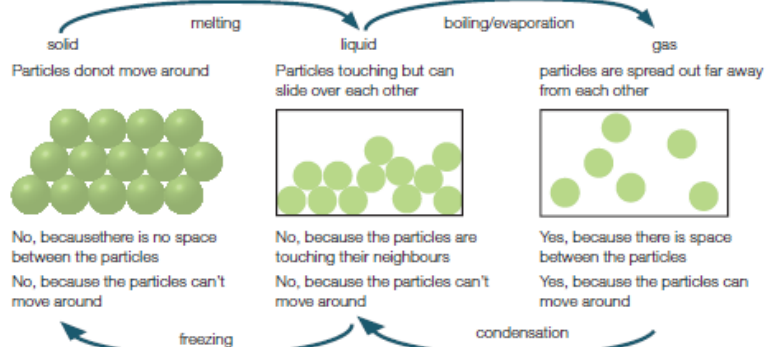
changes of state
state of matter
how do the particles move?

arrangement of particles

can it be compressed?

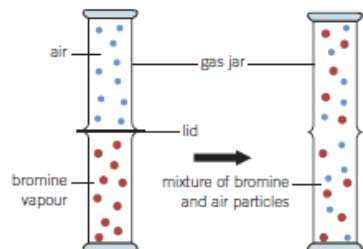
can it flow?

changes of state



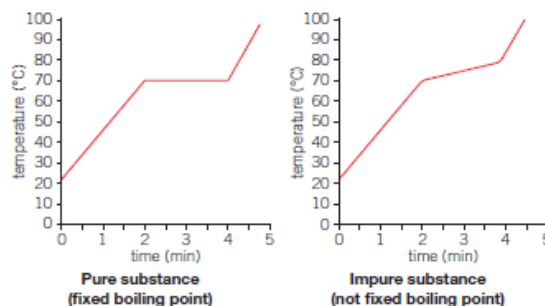
Diffusion

- Diffusion** is the movement of particles from an area of high concentration (lots of the same particle) to an area of low concentration (not a lot of the same particle)
- It is a random process which does not need energy
- The speed of diffusion can be increased by:
 - A higher temperature
 - Smaller particles diffusing
 - A gas rather than a liquid
- Diffusion does not happen in a solid as the particles can't flow



Melting and boiling points

- The **melting point** of a substance is the temperature at which it turns from a solid to a liquid, or a liquid to a solid
- The **boiling point** of a substance is the temperature at which it turns from a liquid to a gas or a gas to a liquid
- Pure substances** have a fixed (sharp) boiling or melting point, whereas **impure substances** have a range which appears as a diagonal line on a graph



Mixtures

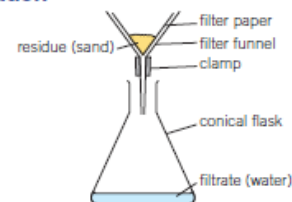
- Mixtures** are different **substances** which are together, they are not chemically bonded and so are easy to separate
- The substances which make up a mixture keep their own **properties** unlike those in a compound
- A mixture is an **impure** substance as it does not have a fixed melting point, instead it has a range

- A **solution** is a type of mixture which is made up of two parts
- A **solute** is the part which has dissolved in the solution
- A **solvent** is the liquid part which the solute has dissolved into

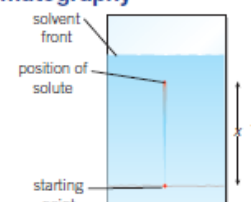
- The **solubility** of a substance is a measure of how much of it will **dissolve**
- Not all solutes will dissolve in all solvents
- Solutes which do not dissolve are known as **insoluble**
- Substances which do dissolve are known as **soluble**
- The **solubility** of a substance can be increased by increasing the temperature of the solution or by stirring the solution
- A **saturated solution** is one where the maximum amount of solute has dissolved in it, no more solute will be able to dissolve

Separating Mixtures

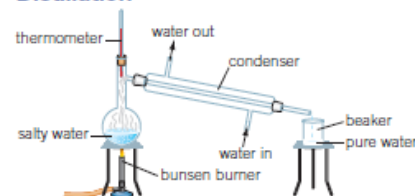
Filtration



Chromatography



Distillation



Evaporation



Key terms

Make sure you can write definitions for these key terms.

boiling point chromatography condensation diffusion dissolve distillation evaporation filtration freezing impure substance melting point mixture
property properties pure substance saturated solution substance soluble solubility solute solution solvent

Keyword	Definition
Boiling point	The temperature a liquid turn into a gas
Chromatography	The technique for the separation of mixed substances in a solution
Condensation	When a gas cools and forms a liquid
Diffusion	The movement of particles from an area of high concentration to an area of low concentration
Dissolve	When a solid disappears into a liquid
Distillation	The technique of separation of a mixture of liquids
Evaporation	When a liquid is heated and forms a gas
Filtration	The technique of separating a solid and a liquid
Freezing	When a liquid cool and forms a solid
Impure substance	2 or more elements or compounds not chemically joined
Melting point	The temperature a solid turn into a liquid
Mixture	Different elements or compounds that are not chemically joined
Property	A characteristic or behaviour of a substance
Properties	A group of characteristics or behaviours of a substance
Pure substances	A substance made up of just 1 chemical element or compound
Saturated solution	A solution that cannot dissolve any more solute (solid)
Substance	Any element, compound, or mixture
Soluble	The property of dissolving
Solubility	The measurement of how much substance will dissolve in a given volume of liquid
Solute	The solid that is dissolved into a solution
Solution	The solid and liquid mixture. It consists of the solute and the solvent
Solvent	The liquid part of a solution

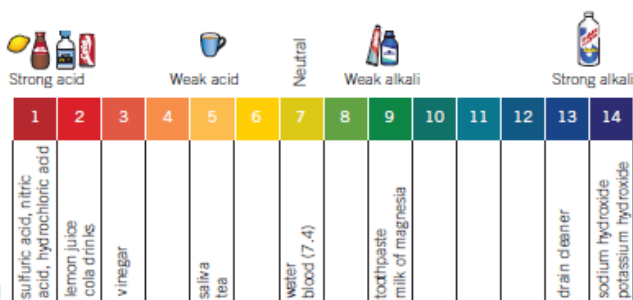
Retrieval Question	Retrieval Answer
What are all materials made up of?	Particles
What is meant by a substance?	Something that is made up of one type of material
What 3 things does the property of a substance depend on?	What its particles are like, how the particles are arranged, how its particles move around
What is density?	How much matter there is in a certain volume/how heavy it is for its size
State why gold has a higher density than aluminium.	A gold particle has a greater mass than an aluminium particle
Name the three states of matter	Solid, liquid, gas
Can you compress a solid/liquid/gas?	Gas - yes, solid + liquid - no
Does a solid/liquid/gas flow?	Gas + liquid - yes, solid - no
Describe the shape of solid/liquid/gas?	Solid - particles touch each other, arranged in a pattern, liquid - particles are not as closely packed, particles move around randomly, gas - particles are widely spaced, move around randomly
Why can you compress a gas and not a solid or liquid?	Particles are widely spaced out in a gas, particles touch each other in a solid
Why do liquids and gases flow but solids do not?	Particles move randomly in a liquid, particles vibrate in a solid
What change of state happens during melting?	Solid to liquid
What change of state happens during freezing?	Liquid to solid
Describe how particle movement and energy changes during melting	Particle movement increases, energy of particles increases
Describe how particle movement and energy changes during freezing	Particle movement decreases, energy of particles decreases
What is a melting point?	The temperature at which a substance melts
What change of state happens during boiling?	Liquid to gas
Describe how particle movement and energy changes during boiling	Particle movement increases, energy of particles increases
What is a boiling point?	The temperature at which a substance boils
What is evaporation?	When particles with the most energy leave the liquid state
State two differences between evaporation and boiling?	Evaporation - happens at any temperature, boiling - happens only at the boiling point
What is condensation?	Gas to liquid
What is sublimation?	Solid to gas
What is diffusion?	When particles in liquids and gases spread out
List three factors that affect the speed of diffusion?	Temperature, particle size, the state of the diffusing substance
How does temperature affect the speed of diffusion?	At higher temperature, diffusion happens more quickly
How does particle size affect the speed of diffusion?	The bigger the particle, the more slowly it diffuses
Why does diffusion happen faster in gases than in liquids?	Particles are far apart and travel a long way before hitting another particle
State what is meant by gas pressure	The force gas particle exert when they collide with a container
How does the number of particles affect gas pressure?	The greater the number of particles, the higher the gas pressure
How does temperature affect gas pressure?	The greater the temperature of particles, the higher the gas pressure
State what an element is	A substance that cannot be broken down into other substances
State what a molecule is	A group of two or more atoms joined together
State what a compound is	A substance that is made up of atoms of two or more elements joined together
Retrieval Question	Retrieval Answer
State what is meant by a pure substance	Contains one substance only/not mixed with anything else/particles are all the same
State what is meant by a mixture	Contains two or more substances, which could be elements or compounds
Name four common examples of mixtures	Air, seawater, rocks, foods (any sensible answers)
What is the melting point like for a pure substance?	A pure substance has a fixed melting point
What is the melting point like for an impure substance?	An impure substance melts across a range of temperatures
State what a solution is	A mixture of a liquid with a solid or gas in it
State what a solute is. Give an example	The solid dissolved in liquid, e.g. Salt, sugar (any sensible answers)
State what a solvent is. Give an example	The liquid that dissolves the solid, e.g. Water, alcohol (any sensible answers)
Describe what happens to particles when they dissolve	Water particles surround each solid particle
Can gases dissolve?	Yes (most)
State the meaning of the term saturated solution	A solution that cannot dissolve any more solid/solute
State what is meant by solubility?	The maximum mass of solute that dissolves in 100g of water
How does temperature affect solubility?	The higher the temperature, the greater the mass of solute that will dissolve
What does a solubility curve show?	How much solid can dissolve in a solvent across a range of temperatures
What type of mixture is filtration used for?	An insoluble solid from a liquid
What is a filtrate?	The solution that passes through filter paper
What is a residue?	The solid that remains in the filter paper
State 2 uses of filtration	Making coffee, river water (any sensible answers)
Describe how filtration can be used to separate sand from salt water	Add water to the mixture, stir to dissolve the salt, pour into a filter paper funnel, salt solution passes through, the residue is sand
Describe how evaporation can be used to separate salt from sea water	Heat the solution, water evaporates, the salt remains
State 2 uses of evaporation	Glue drying, making crystals (any sensible answers)
Describe how distillation uses boiling and condensing to separate water from salt water	Heat the solution, water boils leaving the solution as steam, steam travels down a condenser and cools down, steam condenses to form liquid water
State the difference in properties that allows you to separate water and salt using distillation	Salt has a higher boiling point than water
What is chromatography used for?	Separate a mixture of dyes
Describe how chromatography can be used to separate a mixture of substances	Place the substance on chromatography paper, lower into a beaker containing a solvent, allow the solvent to travel up the paper, dry the chromatogram
Why do some substances travel further up the paper than others?	Some substances mix better with water/some substances are more strongly attracted to the paper
State what a chromatogram is	The mixture separated on the paper
State 2 uses of chromatography	Separate colours in a dye, identify nutrients in food (any sensible answers)

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**

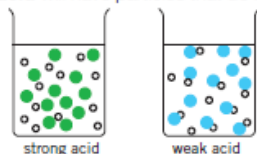


To see whether a substance is an acid or an alkali, we can use an **indicator**. Indicators show how acidic or how alkaline a solution is by showing its position on the **pH scale**, one example of this is **universal indicator**

- 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

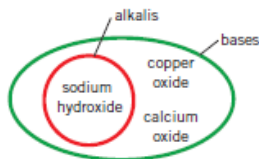
- The strength of an acid depends on how much of the acid has broken apart when it has dissolved in water
- Hydrogen chloride dissolves in water to form hydrochloric acid, this is a **strong acid** as all of the particles split up
- A **weak acid** will have particles that do not all split up



- 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

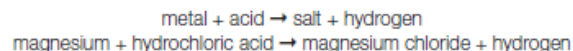
Salts are substances which are formed when an acid reacts with a metal or metal compound

Different acids form different types of salts:

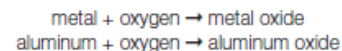
- Hydrochloric acids form chlorides
- Sulphuric acids form sulphates
- Nitric acids form nitrates

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



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



- 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
- $$\text{metal} + \text{water} \rightarrow \text{metal hydroxide} + \text{hydrogen}$$
- $$\text{sodium} + \text{water} \rightarrow \text{sodium hydroxide} + \text{hydrogen}$$

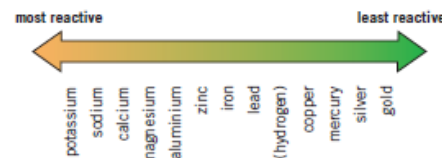
When a more reactive metal reacts with a compound containing a less reactive metal, it can take its place, this is known as a **displacement** reaction



- If the metal on its own is higher in the **reactivity series** than the metal in the compound a reaction will take place
- If the metal on its 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

Paper Manufacture

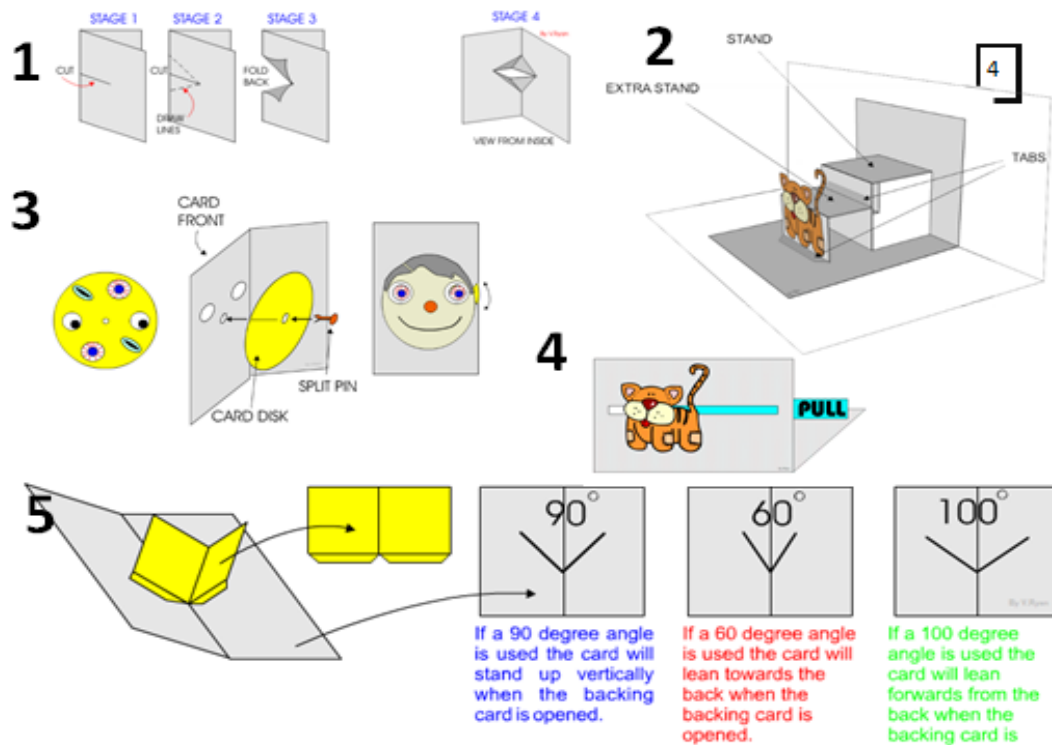
1	Trees chopped down and logs put into a rotating drum to remove the bark
2	Wood is then put through the chipper to make wood chips. Sometimes these are taken from unused offcuts from sawmills. This saves waste
3	Mixed with chemicals and water to create pulp
4	Pulp is washed and bleach is added to make 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

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

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

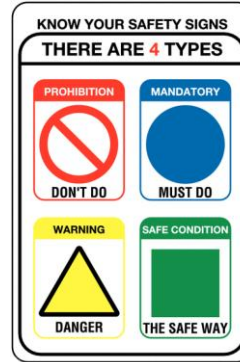
1. Key Vocabulary & Definition

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

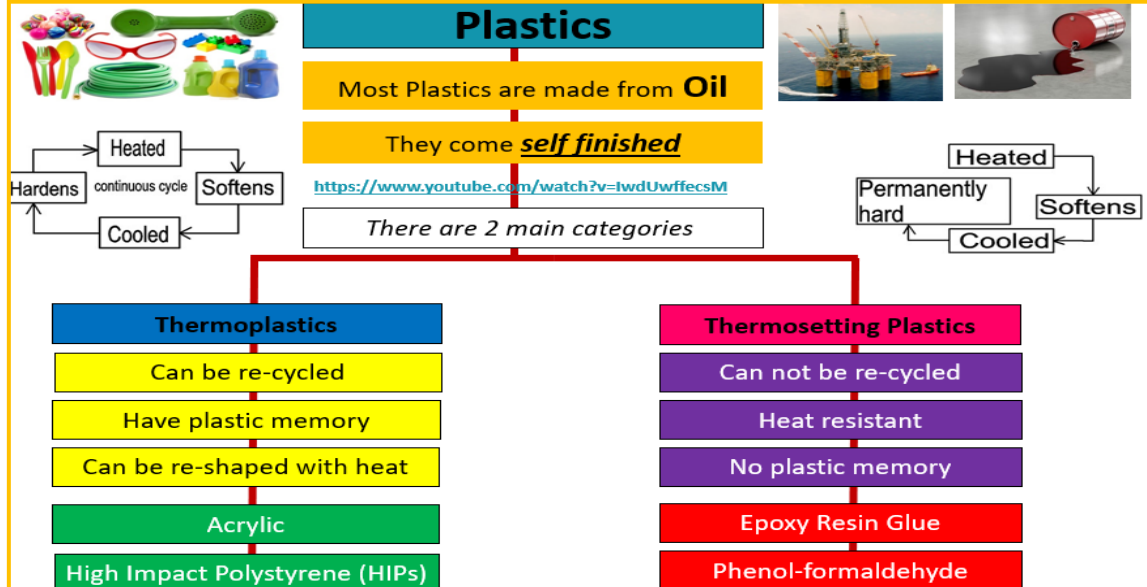


Example of rules in the workshop

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.

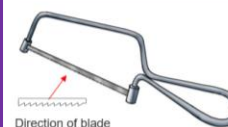




5. Workshop Tools



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



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

3 Basic knife skills

Bridge



Claw



- 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.

2 Preparing for a practical

Notes

Wash your hands again:

- If you have touched your face, coughed or sneezed
- after touching raw meat (including poultry)
- after going to the toilet
- after touching the bin
- after touching pets or handling money.

For safety reasons it is better not to wear nail varnish when cooking.

Wear shoes to cover and protect your feet (not sandals or bare feet).

This resource was originally developed with funding from the Big Lottery Fund

CHILDREN'S FOOD TRUST
Eat. Drink. Be Safe.



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



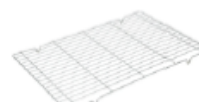
Peeler



Frying Pan



Rolling pin



Cooling rack



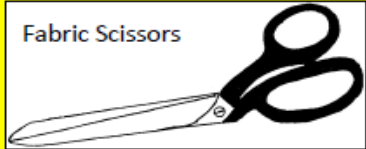
Vegetable knife

Year 7 Fibres and Fabrics

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

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.

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	Iron	Fabric Scissors	Needle
Embroidery Scissors			

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.

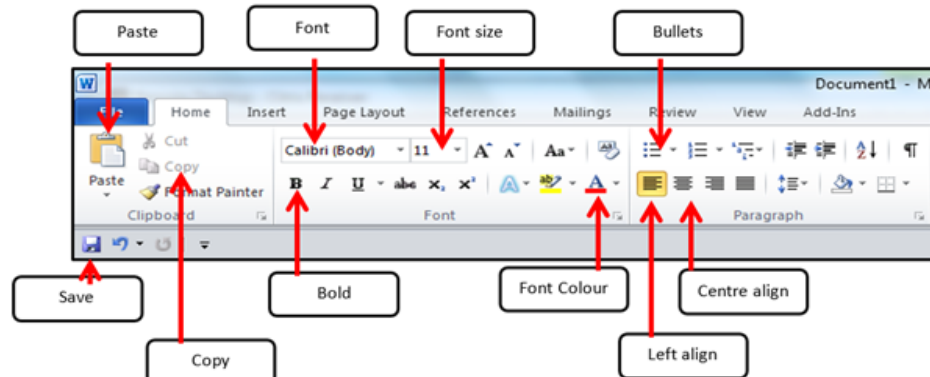


Microsoft Teams

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 data 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





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 intentions.

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

Gaining access to a computer, with the intention 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.

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

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
Can't be bothered going 2 school today I hate school



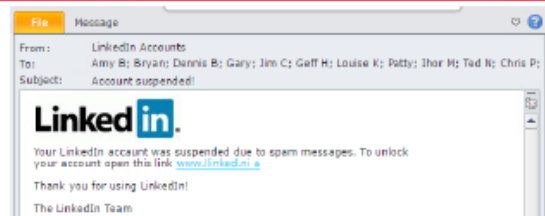
As an internet user, you need to know if something is real or fake. Criminals on the internet try to get information from people.

Phishing

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?



What would you?

You get an email from someone you don't 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

