

Geography Knowledge organiser

UK Place Knowledge



British Isles – England, Wales, Scotland, Northern Ireland and Republic of Ireland

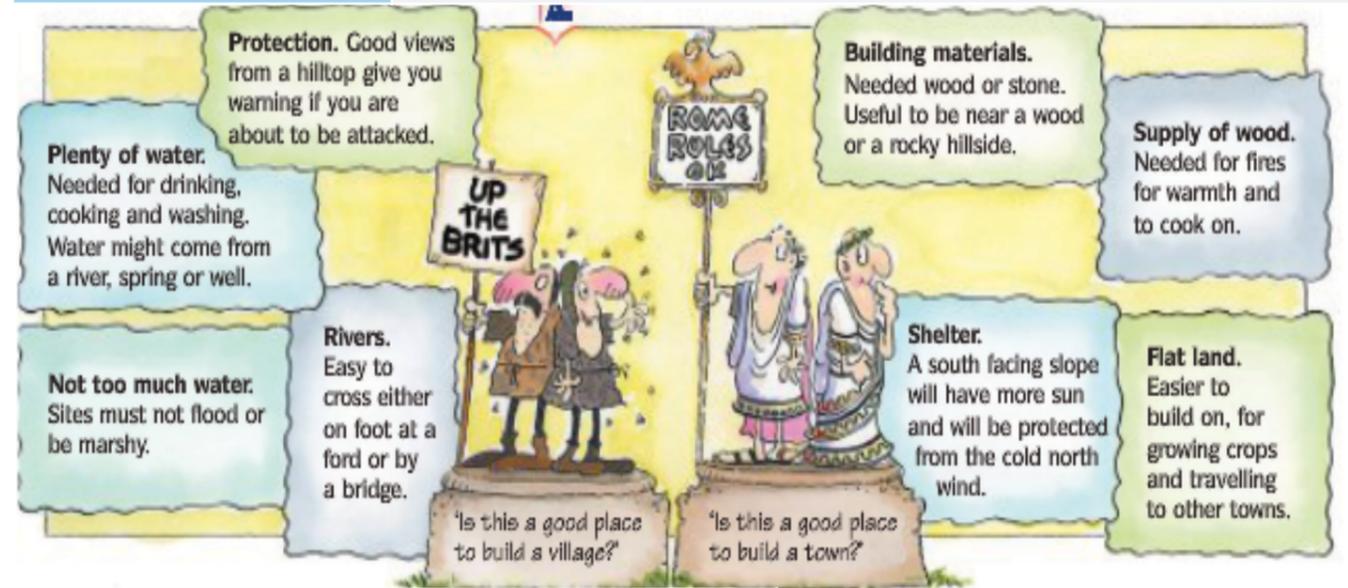


United Kingdom – England, Wales, Scotland and Northern Ireland

UK Settlements

Settlements Key Terms

| | |
|--------------------------|--|
| Distribution | The pattern of how things are spread out, e.g. where people live |
| Sparse population | An area with very few people. |
| Dense population | An area with a large number of people. |
| Settlement | An area where people live, e.g. village, town or city |



Great Britain – England, Wales and Scotland

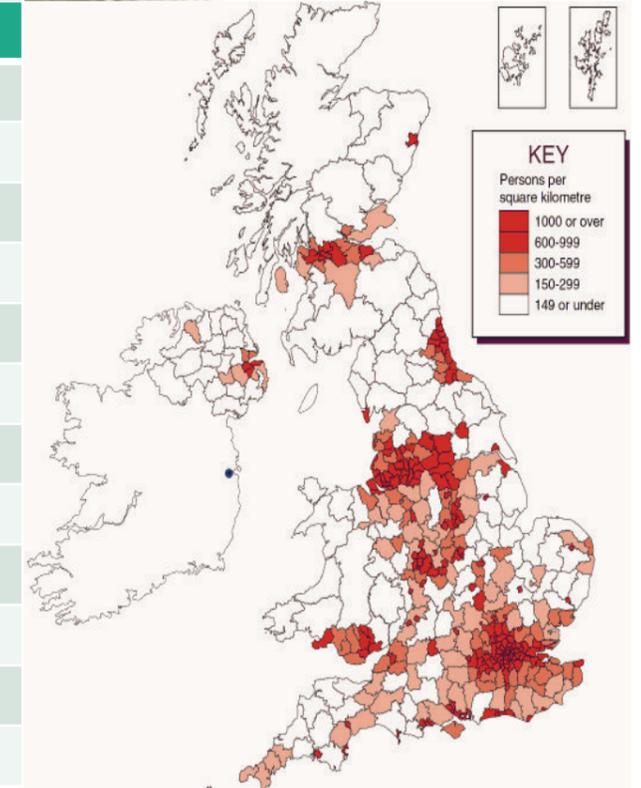
Key Terms

| | |
|-----------------|----------------------------|
| Human | Features that are man-made |
| Physical | Features that are natural |

Human and Physical Attractions of the UK

| Human | Physical |
|------------------------------|------------------|
| Big Ben/Houses of Parliament | Ben Nevis |
| Wembley Stadium | Lake Windermere |
| Liverpool One | River Severn |
| Albert Dock | Snowdonia |
| Angel of the North | Loch Ness |
| Alton Towers | Giant's Causeway |

| City | Population |
|-------------|------------|
| Belfast | 280,000 |
| Birmingham | 992,000 |
| Bristol | 380,000 |
| Cardiff | 310,000 |
| Edinburgh | 450,000 |
| Glasgow | 560,000 |
| Leeds | 720,000 |
| Liverpool | 440,000 |
| London | 7,513,000 |
| Manchester | 420,000 |
| Newcastle | 259,000 |
| Southampton | 220,000 |



UK Rivers

Water Cycle Key Terms

| | |
|-----------------------|---|
| Precipitation | Moisture falling from clouds as rain, snow or hail. |
| Interception | Vegetation prevent water reaching the ground. |
| Surface Runoff | Water flowing over surface of the land into rivers |
| Infiltration | Water absorbed into the soil from the ground. |
| Transpiration | Water lost through leaves of plants. |

Physical and Human Causes of Flooding.

| | |
|--|---|
| Physical: Prolong & heavy rainfall Long periods of rain causes soil to become saturated leading run off. | Physical: Geology Impermeable rocks causes surface run off to increase river discharge. |
| Physical: Relief Steep-sided valleys channels water to flow quickly into rivers causing greater discharge. | Human: Land Use Tarmac and concrete are impermeable. This prevents infiltration & causes surface run off. |

River Management Schemes

| SoJ Engineering | Hard Engineering |
|--|--|
| <p>Afforestation– plant trees to soak up rainwater, reduces flood risk.</p> <p>Demountable Flood Barriers put in place when warning raised.</p> <p>Managed Flooding – naturally let areas flood, protect settlements.</p>  | <p>Straightening Channel – increases velocity to remove flood water.</p> <p>Artificial Levees – heightens river so flood water is contained.</p> <p>Deepening or widening river to increase capacity for a flood.</p>  |

Types of Erosion

The break down and transport of rocks – smooth, round and sorted.

| | |
|-------------------------|--|
| Attrition | Rocks that bash together to become smooth/smaller. |
| Solution | A chemical reaction that dissolves rocks. |
| Abrasion | Rocks hurled at the base of a cliff to break pieces apart. |
| Hydraulic Action | Water enters cracks in the cliff, air compresses, causing the crack to expand. |

Types of Transportation

A natural process by which eroded material is carried/transported.

| | |
|-------------------|--|
| Solution | Minerals dissolve in water and are carried along. |
| Suspension | Sediment is carried along in the flow of the water. |
| Saltation | Pebbles that bounce along the sea/river bed. |
| Traction | Boulders that roll along a river/ sea bed by the force of the flowing water. |

UK Coasts

Formation of Bays and Headlands



- 1) Waves attack the coastline.
- 2) Softer rock is eroded by the sea quicker forming a bay, calm area causes deposition.
- 3) More resistant rock is left projecting out into the sea. This is a headland and is now more vulnerable to erosion.

Formation of Coastal Stack

- 1) Hydraulic action widens cracks in the cliff face over time.
- 2) Abrasion forms a wave cut notch between HT and LT.
- 3) Further abrasion widens the wave cut notch to form a cave.
- 4) Caves from both sides of the headland break through to form an arch.
- 5) Weather above/erosion below – arch collapses leaving stack.
- 6) Further weathering and erosion leaves a stump.

Example:
Old Harry Rocks,
Dorset



Coastal Defences

| Hard Engineering Defences | | |
|---------------------------|---|---|
| Groynes | Wood barriers prevent longshore drift, so the beach can build up. | <ul style="list-style-type: none"> ✓ Beach still accessible. ✗ No deposition further down coast = erodes faster. |
| Sea Walls | Concrete walls break up the energy of the wave. Has a lip to stop waves going over. | <ul style="list-style-type: none"> ✓ Long life span ✓ Protects from flooding ✗ Curved shape encourages erosion of beach deposits. |
| Gabions or Rip Rap | Cages of rocks/boulders absorb the waves energy, protecting the cliff behind. | <ul style="list-style-type: none"> ✓ Cheap ✓ Local material can be used to look less strange. ✗ Will need replacing. |
| SoJ Engineering Defences | | |
| Beach Nourishment | Beaches built up with sand, so waves have to travel further before eroding cliffs. | <ul style="list-style-type: none"> ✓ Cheap ✓ Beach for tourists. ✗ Storms = need replacing. ✗ Offshore dredging damages seabed. |
| Managed Retreat | Low value areas of the coast are left to flood & erode. | <ul style="list-style-type: none"> ✓ Reduce flood risk ✓ Creates wildlife habitats. ✗ Compensation for land. |

Year 7 Knowledge Organiser 1, Section A: The Norman Conquest

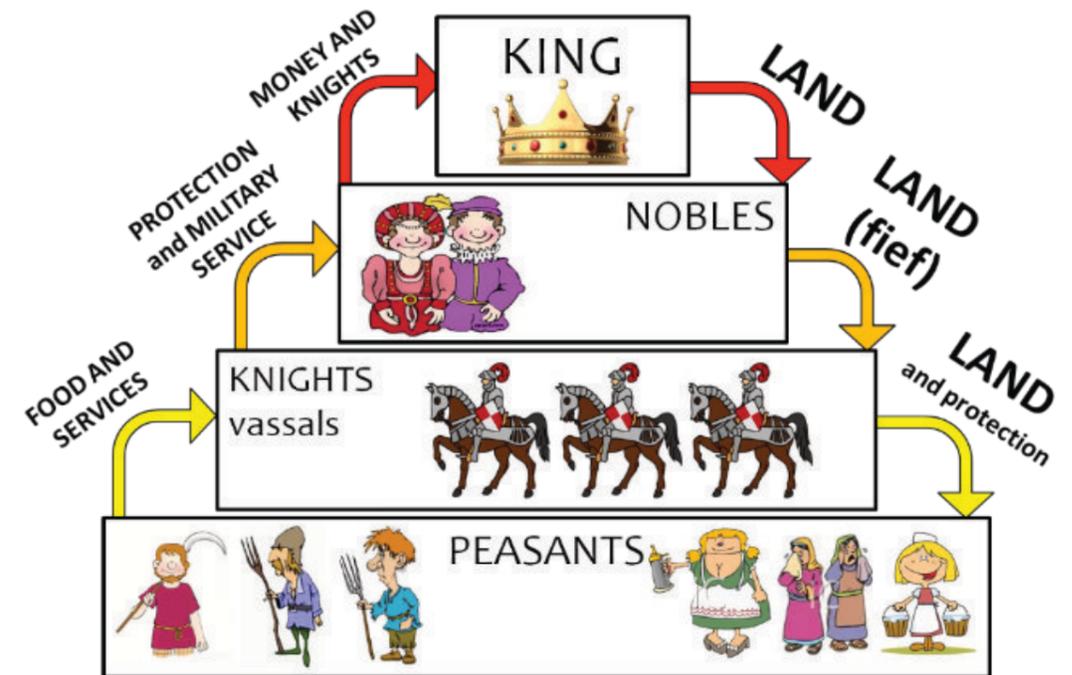
| Key Terms / Events | |
|--------------------------|---|
| 1. Claimant | A person who believes they have a right to the throne. For example: Harald Hardrada (King of Norway), Harold Godwinson (King of England), Edgar the Atheling (Hungary) and William (Duke of Normandy) all wanted the English crown in 1066. |
| 2. Conquest | To invade and take control of another territory, e.g. the Norman Conquest of England (1066). |
| 3. Rebellion | To go against and try to overthrow the King. William faced many rebellions in the early years of his reign. |
| 4. Harrying of the North | William and the Normans attacked the North of England between 1069 and 1070. Houses and crops were burned and many people died of starvation. |
| 5. Feudal System | The way in which society was organised into different groups. The King was at the top, and peasants were at the bottom. Land was given in exchange for services. See Image 1. |
| 6. Fief | Land that was granted to people as part of the Feudal System. |
| 7. Homage | A promise to be loyal to your 'lord'. |
| 8. Absolute monarchy | A monarch who has total authority (total power to make whatever decisions they want). |
| 9. Motte and bailey | The types of castles that the Normans first built when they invaded England in 1066. See Image 2. |
| 10. Domesday Survey | A survey of England carried out by William in 1085-1086 to find out which resources England had and how much he could tax different areas. |
| 11. Succession | Taking over from another monarch (King or Queen). |

Homework focus:

Homework 1 – Section A: The Norman Conquest (Page 1 – 1-17).

Homework 2 – Section B: 12th and 13th Century monarchs (Page 2 – 1-21).

Homework 3 – All aspects.



Feudal Pyramid of Power

Image 1. The Feudal System.

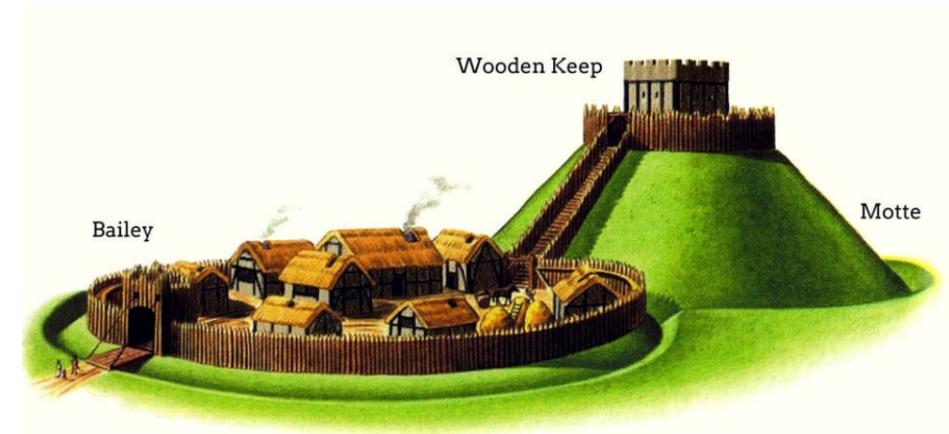


Image 2. Diagram of a Motte and Bailey Castle.

12. 5th January 1066
Edward the Confessor's death.

13. 25th September 1066
The Anglo-Saxons won the Battle of Stamford Bridge. Hardrada died.

14. 14th October 1066
The Normans won the Battle of Hastings; Harold Godwinson was killed.

15. December 1066
William was crowned King of England.

16. Winter 1069-1070
The Harrying of the North.

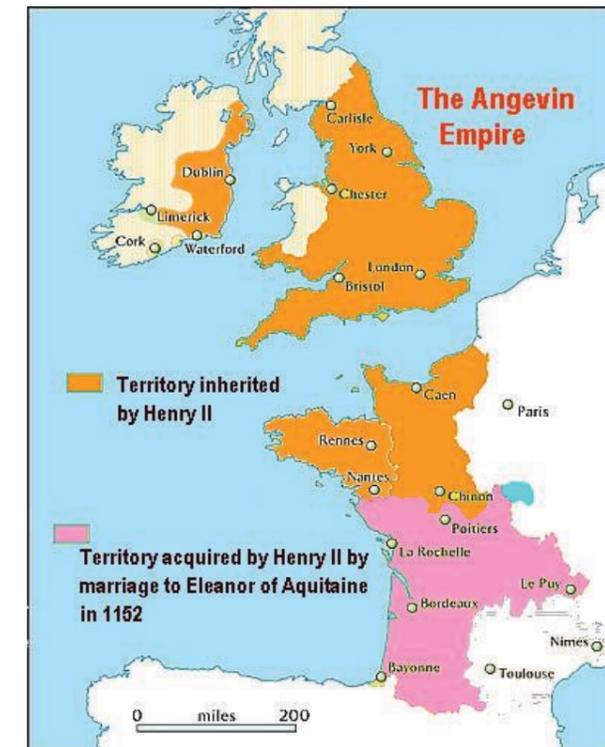
17. 1085-1086
Domesday Survey carried out.

18. 1087
Death of William the Conqueror.

Year 7 Knowledge Organiser 1, Sec 1 on B: Monarchs in the 12th and 13th centuries

| Key Terms / Events | |
|-------------------------------------|---|
| 1. Angevin Empire | The land ruled over by King Henry II, King Richard I and King John I. It contained territory in England, Wales, Ireland, and France. See Image 1. |
| 2. Archbishop of Canterbury | Very important religious position in England. Henry II made Thomas Becket the Archbishop of Canterbury in 1162. |
| 3. Constitutions of Clarendon, 1164 | An attempt by Henry II to reduce the power of the Church and limit the influence of the Pope in England. |
| 4. Crusades | A series of religious wars between Christians and Muslims (1095-1291) that were fought mainly to secure control of holy sites. |
| 5. Treaty of Goulet, 1200 | Ended conflict between England and France over Normandy. King John had to accept that King Philip of France ruled over the territory in France. |
| 6. Scutage | A tax that King John made barons pay if they did not offer him military service. |
| 7. Baron | A member of the nobility. King John made this group very angry by taxing them highly. |
| 8. Chateau Gaillard | John's key defensive castle in Normandy. King Phillip of France took this in 1204 and this led to King John losing Normandy. John is often called 'John Lackland' due to him losing land. |
| 9. Excommunicate | To exclude (expel) somebody from the Church. King John was excommunicated by the Pope between 1209 and 1213. |
| 10. Ba'le of the Bouvines, 1214 | King John was badly defeated at this ba'le. He was attempting to take back Normandy from France. This was a failure. |
| 11. Magna Carta, 1215 | A charter of rights agreed to by King John. This limited the power of the King. |
| 12. Divine right of Kings | The belief that a monarch cannot be subject to any authority on Earth as they have been given the right to rule directly by God. |

Image 1. The Angevin Empire.



| Key People | |
|--------------------------------|---|
| 22. King Henry II | Ruled England between 1154 and 1189. |
| 23. Thomas Becket | Archbishop of Canterbury between 1162 and his murder in 1170. |
| 24. King Phillip II of France | Ruled France between 1180 and 1223. |
| 25. King Richard I (Lionheart) | Ruled England between 1189 and 1199. |
| 26. King John I | Ruled England between 1199 and 1216. |

- | | | | | | | | | |
|---|--|--|--|---|---|--|--|---|
| <p>13. 1154 King Henry II was crowned King of England.</p> | <p>14. 1170 Thomas Becket was murdered (see Image 2).</p> | <p>15. 1189 Henry's sons (Richard and John) rebelled against their father. Henry died shortly after. He was succeeded by Richard.</p> | <p>16. 1189-1192 Richard fought in the Third Crusade. He was captured in 1192 on his way back from the Holy Land.</p> | <p>17. 1199 Richard was killed. He was succeeded by King John.</p> | <p>18. 1204 John lost Normandy to King Philip of France.</p> | <p>19. 1214 John failed to re-take Normandy. His forces were badly defeated at the Ba'le of the Bouvines.</p> | <p>20. 1215 King John signed the Magna Carta.</p> | <p>21. 1216 King John's death.</p> |
|---|--|--|--|---|---|--|--|---|

Knowledge Organiser: *The Strange Case of Dr Jekyll and Mr Hyde* by Robert Louis Stevenson

(English Literature)

| Chapter – summary | | Character | Themes |
|--|---|---|---|
| 1 The Story of the Door | Passing a strange-looking door whilst out for a walk, Enfield tells Utterson about incident involving a misshapen man (Mr Hyde) trampling on a young girl. The man paid the girl compensation with a cheque from a respectable man. Enfield says the odd man had a key to the door. | Dr Henry Jekyll A doctor and experimental scientist who is both wealthy and respectable. | <p>Duality: Many contrasts in terms of setting, character and themes including: reality vs appearance, Jekyll and Hyde, light and dark, the good and evil side of someone, upper class London and working class oho, the idea that humanity is dual in nature. (ambiguous/blurred lines –not black & white)</p> <p>Science and the unexplained: The laboratory is the main setting of the mysterious events in the story. It is not regarded as a place of science, but as somewhere strange. Some men of science are frightened and disgusted, such as Lanyon. The unnatural appearance and behaviour of Hyde makes Utterson both curious and suspicious. Fear lurks in all of the characters – the threat of madness and of a new world, of new science, new disorders that traditional science cannot reason with or explain.</p> <p>Religion: Reference to Satan, God religion and charity work. The men discuss various religious works. Mr Hyde’s evilness is shown as he defaces Dr Jekyll’s favourite religious work. Mr. Hyde is often likened to Satan. Christianity and strong religious beliefs were held in Britain when RL Stevenson wrote this novel.</p> <p>Good vs Evil: The encounters that Hyde has with other characters, particularly with the murder Danvers Carew, show evil and wickedness. It can also be seen with the differences between Hyde and Jekyll. Utterson is a consistently good man who wants to help those who do wrong rather than judge them.</p> <p>Gothic: The key features of the gothic genre are shown through the: setting e.g. the alleyway, character (Hyde), the plot, the vicious murder of Carew, the weather.</p> <p>Hypocrisy: this is shown through the reactions to Hyde’s appearance. No-one can pinpoint what it is that is actually repugnant or disgusting but he seems to create this reaction in all who encounter him. Stevenson shows that Hyde may represent the dark side which is present in all people, but the characters in the novel do not recognise this.</p> <p>Reputation and silence: Each man seems to be isolated from every other, and there is a sense that this masculine world has been hushed by the need to maintain social reputation. They keep their secrets, leƷers and documents, addressed, sealed and enclosed in safes. The dependence on these sheets of paper for the unravelling of the mystery creates a sense of silence and isolation about each character. The men in the novel avoid gossip. Through Mr. Hyde, Jekyll believes he can maintain his reputation while enjoying his darker urges.</p> |
| 2 In Search for Hyde | Utterson looks at Dr Jekyll’s will and discovers that he has left his possessions to Mr Hyde in the event of his disappearance. He visits Dr Lanyon, who no longer speaks with Jekyll due to Jekyll’s latest line of research. Intrigued, Utterson watches the door and sees Hyde unlock it, and is shocked by his appearance. Utterson then goes to warn Jekyll. Jekyll isn’t in, but Poole tells him that the servants have been told to obey Hyde. | Mr Edward Hyde A small, violent and unpleasant looking man; an unrepentant criminal. | |
| 3 Dr Jekyll was quite at Ease | Two weeks later, Utterson goes to a dinner party at Jekyll’s house and tells him about his concerns. Jekyll laughs off his worries, but he makes Utterson promise that he will carry out his will, should it come to it. | Gabriel Utterson A calm and rational lawyer and friend of Jekyll. | |
| 4 The Carew Murder Case | Nearly a year later, an elderly gentleman is murdered in the street by Hyde. A leƷer to Utterson is found on the body. The murder weapon was a broken walking cane of Jekyll’s. He takes the police to Jekyll’s house to find Hyde, but are told he has not been there for two months. They find the other half of the cane and signs of a quick exit. | Dr Hastie Lanyon A conventional and respectable doctor and former friend of Jekyll. | |
| 5 The Incident of the LeƷer | Utterson goes to Jekyll’s house and finds him ‘looking deadly sick’. He asks about Hyde but Jekyll shows him a leƷer that says he won’t be back. Utterson believes the leƷer has been forged by Jekyll to cover for Hyde. That night, he asks his clerk Mr Guest (a handwriting expert) to look over the leƷer. He compares the it with some of Jekyll’s Stating they were writtenwith the same hand. | Richard Enfield A distant relative of Utterson and well-known man about town. | |
| 9 Dr Lanyon’s Narrative | The contents of Lanyon’s leƷer tells of how he received a leƷer from Jekyll asking him to collect chemicals, a vial and notebook from Jekyll’s laboratory and give it to a man who would call at midnight. A grotesque man arrives and drinks the potion which transforms him into Jekyll, causing Lanyon to fall ill. | Poole Jekyll’s manservant. | |
| 10 Henry Jekyll’s Full Statement of the Case | Jekyll tells the story of how he turned into Hyde. It began as a scientific investigation into the duality of human nature and an attempt to destroy his ‘darker self’. Eventually he became addicted to being Hyde, who increasingly took over and destroyed him. | Sir Danvers Carew A distinguished gentleman who is beaten to death by Hyde. | |
| | | Mr Guest Utterson’s secretary and handwriting expert. | |

QuotaF ons

“He is not easy to describe... something down-right detestable”

“damned Juggernaut...like Satan”

“Such unscientific balderdash”

“labyrinth”

“If he be Mr Hyde then I shall be Mr Seek”

“pale and dwarfish”

“the moment I choose, I can be rid of Mr Hyde”

“fog rolled over”

“clubbed him to the earth...with ape-like fury”

“dingy windowless structure”

“deep-seated terror of the mind”

“Lanyon declared himself a doomed man”

“If I am the chief of sinners, I am the chief of sufferers”

“abject terror and despair...froze the blood”

“there’s been some foul play”

“God grant there be nothing wrong”

“a monkey jumped from among the chemicals”

“pious work annotated with startling blasphemies”

“something seizing, surprising and revolting”

“man is not truly one, but truly two”

Vocabulary

mysterious

supernatural

grotesque

setting

melancholy

villain

overwrought
emotions

solitude

morals

death

hypocrisy

duality

darkness

identity

eerie

deformity

Satan

evil

Terminology

pathetic fallacy

structure

symbol

gothic

character

protagonist

antagonist

tension

Drama

narrative

multiple narrators/
perspectives

personification

simile

metaphor

irony

imagery

atmosphere

plot

Assessment Objective

AO1: Read, understand and respond to texts.

students should be able to:

- maintain a critical style and develop an informed personal response

- use textual references, including quota] ons, to support and illustrate interpretations

AO2: Analyse the language, form and structure used by a writer to create meanings and effects, using relevant subject terminology where appropriate.

AO3: (NB: not tested I Year 7)

Show understanding of the relationships between texts and the contexts in which they were written.

Context

The term ‘gothic’ comes from the Germanic tribe ‘the Goths’. In Medieval times people often lived in fear due to superstition and ignorance. Castles with gargoyles were built to ward off evil spirits. This architecture is known as ‘gothic’ e.g. Notre Dame. Gothic writing became popular through the Victorian ghost story.

Robert Louis Stevenson - born in Edinburgh, yet had the dual identity of being both Scottish and British. Edinburgh was a city of two sides - he was raised in the wealthy New Town area, but spent his youth exploring the darker, more sinister side of town. Although set in Victorian London, the Old Town – full of poverty and desperation – is where much of the events in the novel take place during the night.

The Industrial Revolution – population moves from country to towns. Scientific exploration, new machinery and inventions. Darwin’s The Origins of Man was published and suggested a theory that unsettled Victorians that man was, in fact, descended from apes. Stevenson would have been aware of this theory and may have influenced his ideas of ‘the beast in man’. Religion vs. science. Religious people believed that you should not go against God and what he created but then scientists such as Dr Jekyll manipulated DNA.



Year 8 Knowledge Organiser - Maths

1

Times Tables Practice

| | | |
|--------------------|--------------------|--------------------|
| $1 \times 1 = 1$ | $1 \times 2 = 2$ | $1 \times 3 = 3$ |
| $2 \times 1 = 2$ | $2 \times 2 = 4$ | $2 \times 3 = 6$ |
| $3 \times 1 = 3$ | $3 \times 2 = 6$ | $3 \times 3 = 9$ |
| $4 \times 1 = 4$ | $4 \times 2 = 8$ | $4 \times 3 = 12$ |
| $5 \times 1 = 5$ | $5 \times 2 = 10$ | $5 \times 3 = 15$ |
| $6 \times 1 = 6$ | $6 \times 2 = 12$ | $6 \times 3 = 18$ |
| $7 \times 1 = 7$ | $7 \times 2 = 14$ | $7 \times 3 = 21$ |
| $8 \times 1 = 8$ | $8 \times 2 = 16$ | $8 \times 3 = 24$ |
| $9 \times 1 = 9$ | $9 \times 2 = 18$ | $9 \times 3 = 27$ |
| $10 \times 1 = 10$ | $10 \times 2 = 20$ | $10 \times 3 = 30$ |

KEY FORMULAE

$$A = bh$$

$$A = bh$$

$$A = \frac{bh}{2}$$

$$A = \frac{1}{2}(a+b)h$$

Key Conversions

| Fraction | Decimal | Percentage |
|---------------|---------|------------|
| $\frac{1}{2}$ | 0.5 | 50% |
| $\frac{1}{4}$ | 0.25 | 25% |
| $\frac{3}{4}$ | 0.75 | 75% |

Key Vocabulary

Area = Measurement of a surface

Perimeter = The continuous line forming the boundary of a closed shape

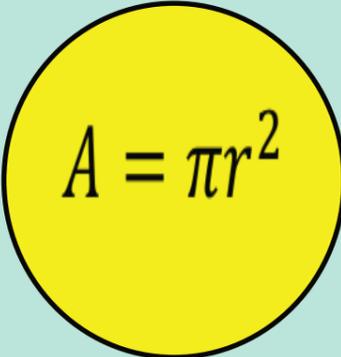
Volume = The amount of space that an object occupies



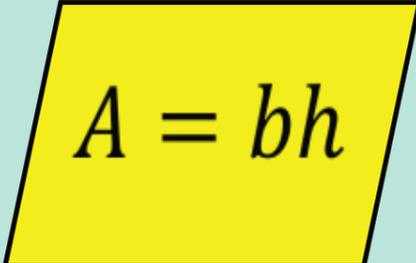
Year 8 Knowledge Organiser - Maths

2

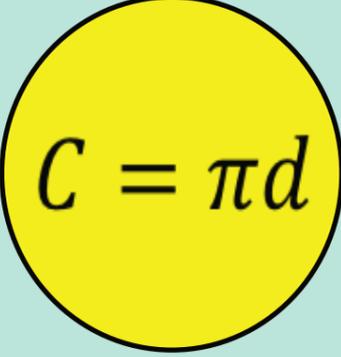
**KEY
FORMULAE**



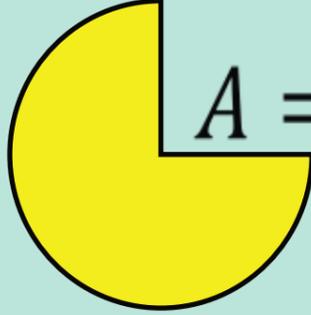
$$A = \pi r^2$$



$$A = bh$$



$$C = \pi d$$



$$A = \frac{3}{4} (\pi r^2)$$

Key Vocabulary

Radius = A straight line from the centre to circumference of a circle

Diameter = A straight line passing from side to side through the centre of a circle

Circumference = Enclosing boundary of a curved shape

Times Tables Practice

| | | |
|--------------------|--------------------|--------------------|
| $1 \times 4 = 4$ | $1 \times 5 = 5$ | $1 \times 6 = 6$ |
| $2 \times 4 = 8$ | $2 \times 5 = 10$ | $2 \times 6 = 12$ |
| $3 \times 4 = 12$ | $3 \times 5 = 15$ | $3 \times 6 = 18$ |
| $4 \times 4 = 16$ | $4 \times 5 = 20$ | $4 \times 6 = 24$ |
| $5 \times 4 = 20$ | $5 \times 5 = 25$ | $5 \times 6 = 30$ |
| $6 \times 4 = 24$ | $6 \times 5 = 30$ | $6 \times 6 = 36$ |
| $7 \times 4 = 28$ | $7 \times 5 = 35$ | $7 \times 6 = 42$ |
| $8 \times 4 = 32$ | $8 \times 5 = 40$ | $8 \times 6 = 48$ |
| $9 \times 4 = 36$ | $9 \times 5 = 45$ | $9 \times 6 = 54$ |
| $10 \times 4 = 40$ | $10 \times 5 = 50$ | $10 \times 6 = 60$ |

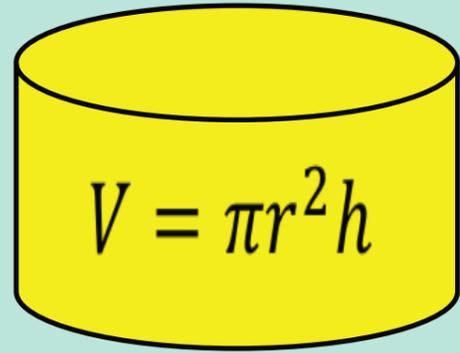
Key Conversions

| Fraction | Decimal | Percentage |
|------------------|---------|------------|
| $\frac{1}{10}$ | 0.1 | 10% |
| $\frac{1}{100}$ | 0.01 | 1% |
| $\frac{1}{1000}$ | 0.001 | 0.1% |

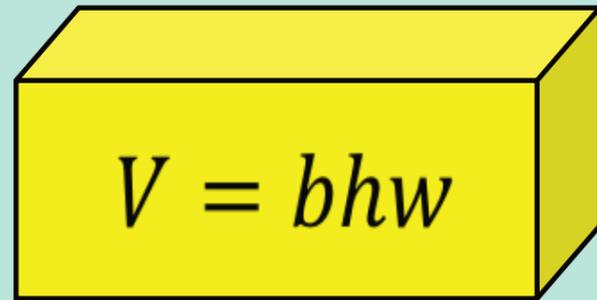


Year 8 Knowledge Organiser - Maths

3

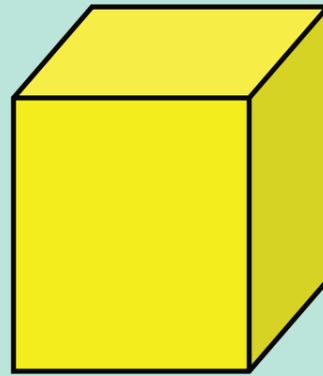


$$V = \pi r^2 h$$



$$V = bhw$$

KEY FORMULAE



$$V = bhw$$

Key Vocabulary

Cross Section = A surface exposed by making a straight cut through a 3D Shape

Surface = The upmost layer of something

Dimension = A measurable extent of a particular kind

Times Tables Practice

$1 \times 7 = 7$

$2 \times 7 = 14$

$3 \times 7 = 21$

$4 \times 7 = 28$

$5 \times 7 = 35$

$6 \times 7 = 42$

$7 \times 7 = 49$

$8 \times 7 = 56$

$9 \times 7 = 63$

$10 \times 7 = 70$

$1 \times 8 = 8$

$2 \times 8 = 16$

$3 \times 8 = 24$

$4 \times 8 = 32$

$5 \times 8 = 40$

$6 \times 8 = 48$

$7 \times 8 = 56$

$8 \times 8 = 64$

$9 \times 8 = 72$

$10 \times 8 = 80$

$1 \times 9 = 9$

$2 \times 9 = 18$

$3 \times 9 = 27$

$4 \times 9 = 36$

$5 \times 9 = 45$

$6 \times 9 = 54$

$7 \times 9 = 63$

$8 \times 9 = 72$

$9 \times 9 = 81$

$10 \times 9 = 90$

Key Conversions

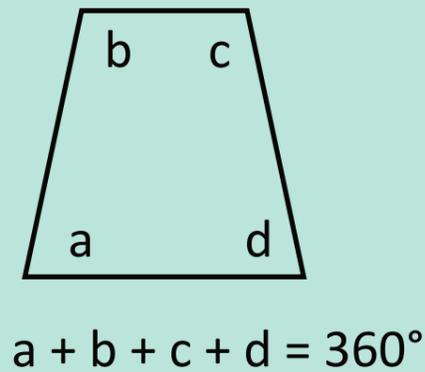
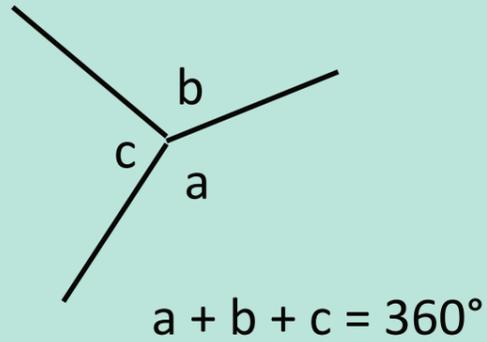
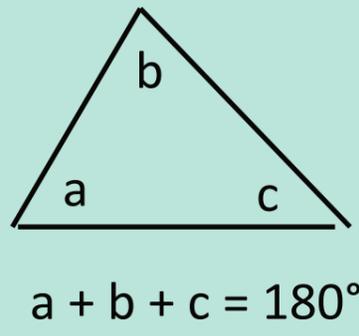
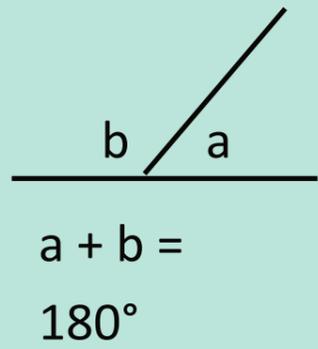
| Fraction | Decimal | Percentage |
|---------------|---------|------------|
| $\frac{1}{5}$ | 0.2 | 20% |
| $\frac{2}{5}$ | 0.4 | 40% |
| $\frac{3}{5}$ | 0.6 | 60% |



Year 8 Knowledge Organiser - Maths

4

KEY ANGLE FACTS



Times Tables Practice

| | | |
|----------------------|----------------------|----------------------|
| $1 \times 10 = 10$ | $1 \times 11 = 11$ | $1 \times 12 = 12$ |
| $2 \times 10 = 20$ | $2 \times 11 = 22$ | $2 \times 12 = 24$ |
| $3 \times 10 = 30$ | $3 \times 11 = 33$ | $3 \times 12 = 36$ |
| $4 \times 10 = 40$ | $4 \times 11 = 44$ | $4 \times 12 = 48$ |
| $5 \times 10 = 50$ | $5 \times 11 = 55$ | $5 \times 12 = 60$ |
| $6 \times 10 = 60$ | $6 \times 11 = 66$ | $6 \times 12 = 72$ |
| $7 \times 10 = 70$ | $7 \times 11 = 77$ | $7 \times 12 = 84$ |
| $8 \times 10 = 80$ | $8 \times 11 = 88$ | $8 \times 12 = 96$ |
| $9 \times 10 = 90$ | $9 \times 11 = 99$ | $9 \times 12 = 108$ |
| $10 \times 10 = 100$ | $10 \times 11 = 110$ | $10 \times 12 = 120$ |

Key Conversions

| Fraction | Decimal | Percentage |
|---------------|---------|------------|
| $\frac{1}{8}$ | 0.125 | 12.5% |
| $\frac{3}{8}$ | 0.375 | 37.5% |
| $\frac{5}{8}$ | 0.625 | 62.5% |

Key Vocabulary

Acute Angle = An angle less than 90°

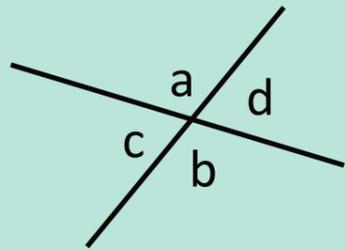
Right Angle = An angle measuring exactly 90°

Obtuse Angle = An angle measuring greater than 90°
but less than 180°



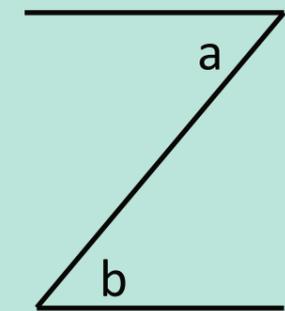
Year 8 Knowledge Organiser - Maths

5



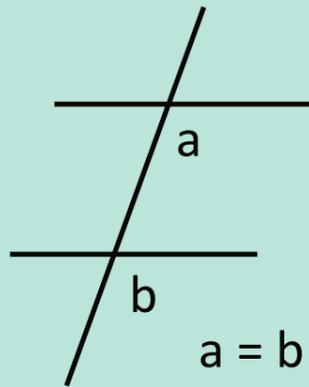
$a = b$

$c = d$



$a = b$

Because
alternate
angles are
equal



$a = b$

Because
corresponding
angles are equal

KEY ANGLE FACTS

Times Tables Practice

$1 \times 6 = 6$

$2 \times 6 = 12$

$3 \times 6 = 18$

$4 \times 6 = 24$

$5 \times 6 = 30$

$6 \times 6 = 36$

$7 \times 6 = 42$

$8 \times 6 = 48$

$9 \times 6 = 54$

$10 \times 6 = 60$

$1 \times 8 = 8$

$2 \times 8 = 16$

$3 \times 8 = 24$

$4 \times 8 = 32$

$5 \times 8 = 40$

$6 \times 8 = 48$

$7 \times 8 = 56$

$8 \times 8 = 64$

$9 \times 8 = 72$

$10 \times 8 = 80$

$1 \times 9 = 9$

$2 \times 9 = 18$

$3 \times 9 = 27$

$4 \times 9 = 36$

$5 \times 9 = 45$

$6 \times 9 = 54$

$7 \times 9 = 63$

$8 \times 9 = 72$

$9 \times 9 = 81$

$10 \times 9 = 90$

Key Vocabulary

Straight Line Angle = An angle measuring exactly 180°

Reflex Angle = An angle greater than 180° but less than 360°

Full Turn Angle = An angle that is exactly 360°

Key Conversions

1 foot = 12 inches

1 inch = 2.54cm

1 tonne = 1000kg

1kg = 2.2pounds

1 yard = 0.9144m

1 foot = 0.3048m

1 stone = 6.35

Average Height of a Man = 1.76m

Average Height of a Female = 1.61m

Height of Radio City Tower = 138m

Height of a Liver Bird = 5.5m

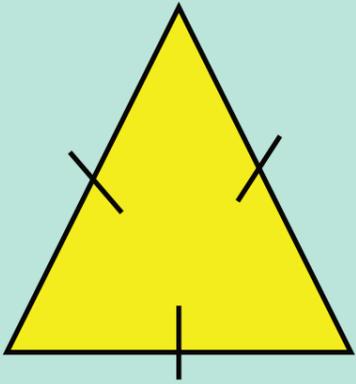
Height of Door = 2m



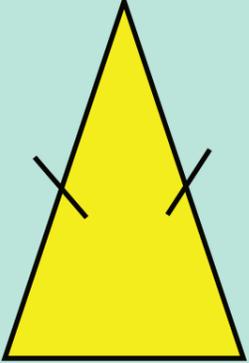
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6

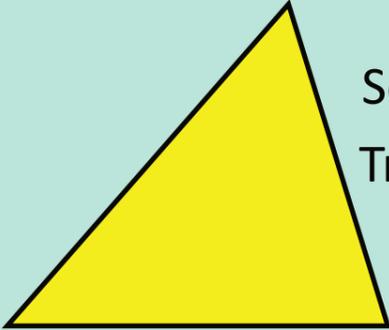
Types of Triangle



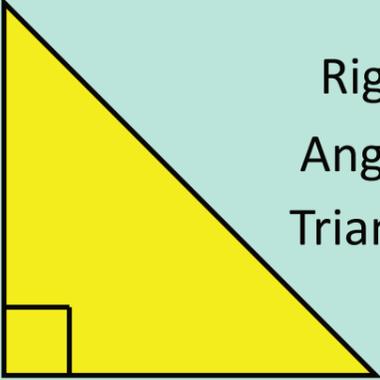
Equilateral Triangle



Isosceles Triangle



Scalene
Triangle



Right
Angled
Triangle

Key Vocabulary

Equilateral Triangle = A triangle with 3 equal sides and 3 equal angles

Isosceles Triangle = A triangle with 2 equal sides and 2 equal angles

Scalene Triangle = A triangle with 3 unequal sides and 3 unequal angles

Times Tables Practice

| | | |
|--------------------|--------------------|----------------------|
| $1 \times 4 = 4$ | $1 \times 7 = 7$ | $1 \times 12 = 12$ |
| $2 \times 4 = 8$ | $2 \times 7 = 14$ | $2 \times 12 = 24$ |
| $3 \times 4 = 12$ | $3 \times 7 = 21$ | $3 \times 12 = 36$ |
| $4 \times 4 = 16$ | $4 \times 7 = 28$ | $4 \times 12 = 48$ |
| $5 \times 4 = 20$ | $5 \times 7 = 35$ | $5 \times 12 = 60$ |
| $6 \times 4 = 24$ | $6 \times 7 = 42$ | $6 \times 12 = 72$ |
| $7 \times 4 = 28$ | $7 \times 7 = 49$ | $7 \times 12 = 84$ |
| $8 \times 4 = 32$ | $8 \times 7 = 56$ | $8 \times 12 = 96$ |
| $9 \times 4 = 36$ | $9 \times 7 = 63$ | $9 \times 12 = 108$ |
| $10 \times 4 = 40$ | $10 \times 7 = 70$ | $10 \times 12 = 120$ |

Key Conversions

1000g = 1kg

1000m = 1km

1000ml = 1l

5miles = 8km

10mm = 1cm

100cm = 1m

100cl = 1l

Units for Distance

Metres, Miles, Inches, Yards, Feet

Units for Weight

Grams, Ounce, Stone, Pound

Units for Volume

Litres, cm³, Gallon, Pint, Fluid Ounce

8Aa NUTRIENTS

The word **diet** means everything you eat.

Food substances provide the raw materials for your body called **nutrients**.

|  ALLERGY INFORMATION CONTAINS Nuts, Sulphites. Not suitable for NUT allergy sufferers due to manufacturing methods used. | | |
|--|----------|-------------|
| NO ARTIFICIAL COLOURS OR ARTIFICIAL FLAVOURINGS | | |
| NUTRITION | | |
| Typical values | per 100g | per serving |
| Energy kJ | 1865 | 995 |
| Energy kcal | 445 | 240 |
| Protein | 9.8g | 5.2g |
| Carbohydrate | 53.0g | 28.2g |
| of which sugars | 51.0g | 27.2g |
| Fat | 19.1g | 10.2g |
| of which saturates | 3.2g | 1.7g |
| Fibre | 5.0g | 2.7g |
| Sodium | trace | trace |
| Equivalent as salt | trace | trace |

Food Labels

- All food labels must contain a list of ingredients, and point out substances that people may be allergic to.
- You can compare nutrients in different foods using the 'per 100g of food' values
- You cannot compare nutrients in different food using 'per serving of food' since servings of different foods are different sizes.

Food Tests

- Starch** – turns iodine solution from an orange to a blue/black colour
- Protein** – turns Biuret's solution from a blue to a pinky-purple colour
- Fat** – when rubbed on white paper, causes it to become see-through (transparent).



8Ab USES OF NUTRIENTS

Carbohydrates

- Their molecules are made up of **carbon, hydrogen** and **oxygen** atoms
- Carbohydrates are an important source of energy in a healthy diet
The main types of carbohydrates are:
 - Simple carbohydrates (also known as sugars)
 - Complex carbohydrates (these include pasta, potatoes etc.)

Lipids

- The body uses lipids as an energy store, as insulation and to make cell membranes.
- Fats** – These are solid at room temperature eg butter and cheese
- Oils** – These are liquid at room temperature eg oils from nuts, seeds and fish.

Proteins

- Provide materials to make new cells and to repair tissues.
- Beans, eggs, fish, meat and milk are high in protein.

Fibre

- Fibre cannot be absorbed by the body
- Fibre adds bulk to food, and helps it through the digestive system.
- Fruit, vegetables and wholegrain cereals are high in fibre.

Vitamins and Minerals

- Vitamins and minerals help the body to use other **nutrients efficiently**.

Water

- Around 70% of your body mass is water. Chemical reactions in cells take place in water
- You need to frequently drink water to replace the water lost in urine, sweat and breathing out.

8Ac BALANCED DIETS

- To get all the substances your body needs, you must eat a variety of different foods. This is called a balanced diet.
- Getting too much or too little of a nutrient is bad for your health – this is called malnutrition.
- If you lack a nutrient for a long time it can cause deficiency diseases

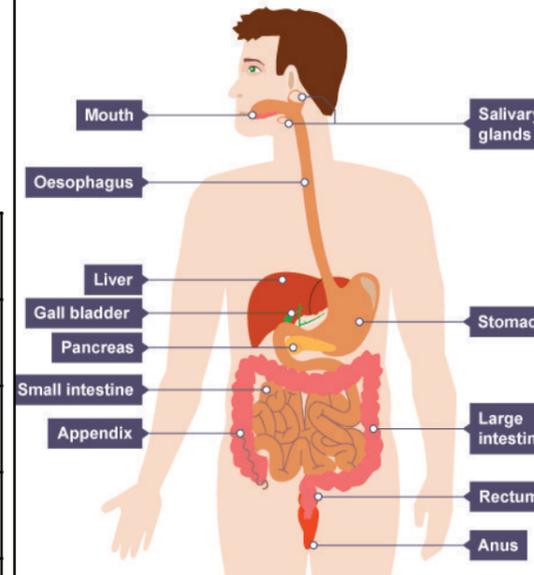
| Nutrient | Deficiency Disease | Symptoms |
|-----------------------|--------------------|---------------------------------|
| Protein | Kwashiorkor or | Swollen belly Weak muscles |
| Vitamin A | Night Blindness | Can't see well in poor light |
| Vitamin C | Scurvy | Painful joints Bleeding gums |
| Vitamin D/ Calcium | Rickets | Weak bones Bent Legs |
| Iron | Anaemia | Tiredness |

- Too many nutrients in general can cause **obesity**
- Too few nutrients can lead to **starvation**



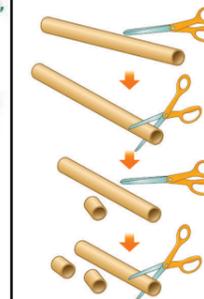
8Ad DIGESTION

- Digestion turns large **insoluble** substances into small **soluble** ones. (**soluble = can be dissolved**)
- The **organs of the digestive system** help us digest food



Stages of digestion

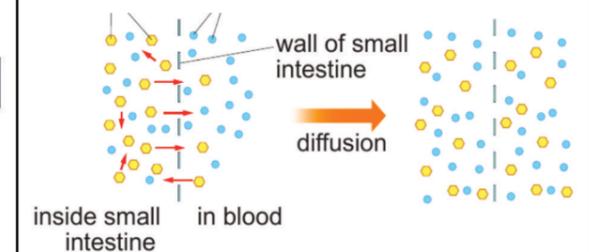
- food is digested in the mouth, stomach and small intestine
- digested food is **absorbed** into the bloodstream in the small intestine
- excess water is absorbed back into **the body** in the large intestine
- undigested** food passes out of the **anus**
- Many digestive** organs produce **enzymes** (substances that are **catalysts** and help speed up food digestion).



- Enzymes** helps the body to break down large molecules which can then be absorbed into the bloodstream.

8Ae ABSORPTION

- Once food is broken down into small molecules, they can then be absorbed into the bloodstream. This happens in the **small intestine**.
- The bloodstream then carries nutrients to **cells** all around the body.
- Substances move naturally from an area where there are lots of molecules (high concentration) to areas where there are a few (low concentration). This is called **diffusion**.



Adaptations for absorption

Absorption across a surface happens quickly and efficiently if:

- the surface is thin
 - its area is large
- The inner wall of the small intestine has adaptation so that substances pass across it quickly and efficiently:
- it has a thin wall, just one cell thick
 - it has many tiny **villi** to give a really big **surface area**



1 | DALTON'S ATOMIC MODEL

In Daltons model of the atom :

- All matter is made up of tiny particles called **atoms**
- The atoms in an **element** are all identical (but each element has its own type of atom)
- Atoms are indestructible and cannot be created or destroyed
- A **compound** is a substance that contains atoms of two or more different elements, and these atoms are chemically joined together.
- During chemical **reactions** atoms rearrange to make new substances
- There are over 100 different elements, which are made up of atoms.
- Elements can be divided into metals and non-metals.
- Chemical symbols and formulae are used to represent elements and compounds.
- Each element is given its own chemical symbol, like **H** for hydrogen or **O** for oxygen. Chemical symbols are usually one or two letters long.
- Every chemical symbol starts with a capital letter, with the second letter written in lower case.
- For example, **Mg** is the correct symbol for magnesium, but mg, and MG are wrong.

| Element | Symbol | Element | Symbol |
|----------|--------|----------|--------|
| Hydrogen | H | Helium | He |
| Oxygen | O | Nitrogen | N |
| Carbon | C | Sulfur | S |
| Lithium | Li | Chlorine | Cl |
| Sodium | Na | Iron | Fe |
| Gold | Au | Copper | Cu |

2 | CHEMICAL PROPERTIES

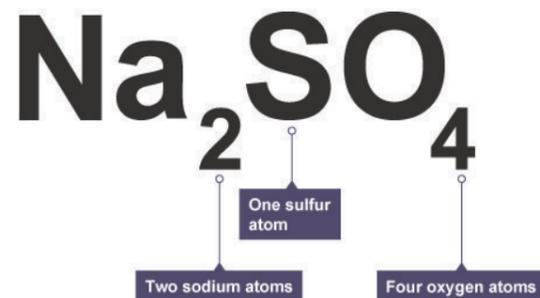
Chemical reactions

Atoms are rearranged in a chemical reaction. The substances that:

- The substances that react together are called the **reactants**
- The substances that are formed in the reaction are called the **products**
- No atoms are created or destroyed in a chemical reaction.
- The total mass of the reactants is the same as the total mass of the products. We say that **mass is conserved** in a chemical reaction.
- Chemical properties of a substance describe how it reacts with other substances.

Chemical formulae

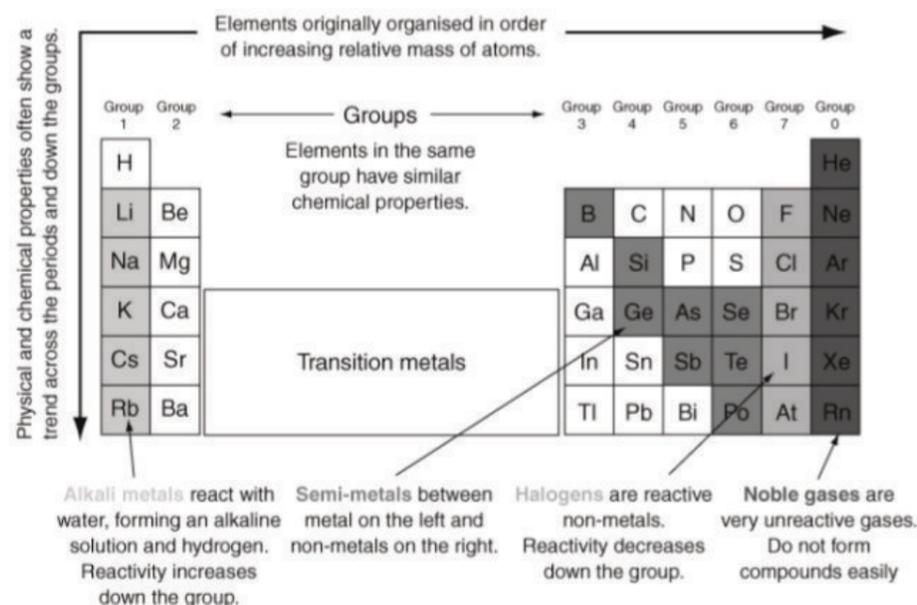
- We use numbers to show when a **molecule** contains more than one atom of an element.
- The numbers are written below the element symbol.
- For example, CO₂ is the **formula** for carbon dioxide. It tells you that each molecule has one carbon atom and two oxygen atoms.
- Take care when writing these formulae. The small numbers go at the bottom. For example CO₂ is correct but CO² is wrong.
- The formula for sodium sulfate is Na₂SO₄. It tells you:



3 | MENDELEEV'S TABLE

- All the different elements are arranged in a chart called the **periodic table**.
- A Russian scientist called Dmitri Mendeleev produced one of the first practical periodic tables in the 19th century.
- The modern periodic table is based closely on the ideas he used:
 - the elements are arranged in order of increasing **atomic number**
 - the horizontal rows are called **periods**
 - the vertical columns are called **groups**
 - elements in the same group are similar to each other

| Metals | Non-metals |
|---|--|
| <ul style="list-style-type: none"> • high melting points • strong, flexible and malleable • shiny (when polished) • good conductors of heat and electricity | <ul style="list-style-type: none"> • low melting points • brittle (when solid) • dull • poor conductors of heat and electricity |



- The main groups are numbered from 1 to 7, and the last group on the right is group 0.
- The section in the middle of the table is called the **Transition Metals**.
- If you know what one of the elements in a group is like, you can make predictions about the other elements in a group.

5 | CHEMICAL TRENDS

Reactions of metals

Metals react with oxygen to produce compounds called metal **oxides**.

- For example, magnesium reacts with oxygen to produce magnesium oxide. The reaction can be represented by this word equation: magnesium + oxygen → magnesium oxide
- Metal oxides are **bases**. They react with acids and **neutralise** them.
- Some metal oxides dissolve in water and, when they do, they produce **alkaline** solutions.

Reactions of non metals

Non-metals react with oxygen to produce non-metal oxides.

- For example, sulfur reacts with oxygen to produce sulfur dioxide. The reaction can be represented by this word equation: sulfur + oxygen → sulfur dioxide
- Non-metal oxides react with bases and neutralise them. Some non-metal oxides dissolve in water, when they do, they produce **acidic** solutions..

Periodic Table Knowledge Organiser



L'Arche (Liverpool)

The L'Arche Community was founded in 1964 in France by Jean Vanier and Fr. Thomas Philippe. They decided to help people with learning disabilities. They started by inviting two young men to live in their community because in the 1960s young people with learning disabilities were put into care, often in 'prison like' asylums. They were not encouraged to be themselves and lost their independence – all choices were made for them.

Jean Vanier felt that these people should live in a home where they could learn to live with friends and be independent with the help of other adults and make decisions for themselves like what clothes to wear. So people in L'Arche today live in ordinary houses with their assistants and can fully get involved in the life of their community and experience God's love of all. Music is important to the L'Arche community and Liverpool with its rich musical heritage is a wonderful place where the L'Arche community thrives!

| Key word | Meaning |
|----------------|--|
| Belonging | Being part of a group. For example; family, friends or football team. |
| Common Good | Working towards making the world good and fair for all people. |
| Dignity | We are all made specially by God so therefore all humans deserve respect. |
| Grace | The unconditional love God has for all. |
| Judgement | After death we will be judged based on how we lived our lives. If we are good we will be rewarded. |
| Kingdom of God | Heaven. |
| Miracle | An event that breaks the laws of science which shows God's powers |
| Parable | A story told by Jesus which has a deeper meaning about God's relationship with mankind. |
| Sin | An act which goes against God's teachings. |

The Parable of sheep and goats.

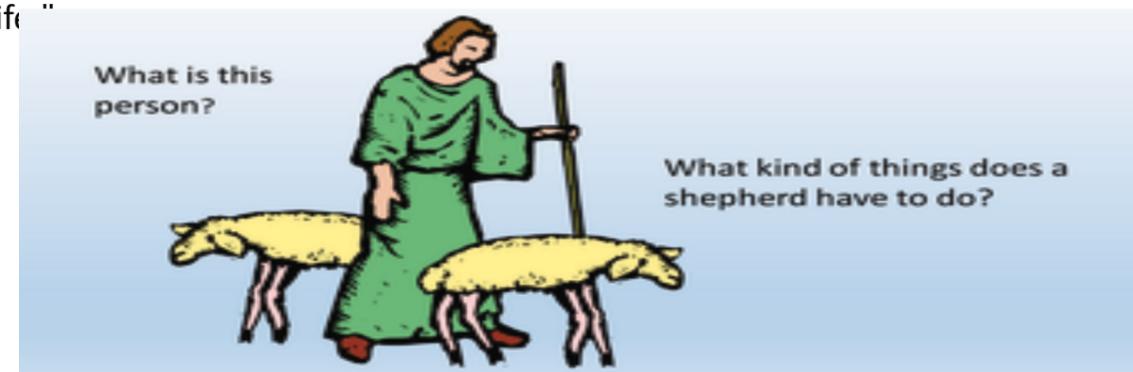
Jesus said "When the Son of Man comes as King and all the angels with him, he will sit on his royal throne, and the people of all the nations will be gathered before him.

Then he will divide them into two groups, just as a shepherd separates the sheep from the goats. He will put the righteous people on his right and the others on his left. Then the King will say to the people on his right, 'Come, you that are blessed by my Father! Come and possess the kingdom which has been prepared for you ever since the creation of the world. I was hungry and you fed me, thirsty and you gave me a drink; I was a stranger and you received me in your homes, naked and you clothed me; I was sick and you took care of me, in prison and you visited me.'

The righteous will then answer him, 'When, Lord, did we ever see you hungry and feed you, or thirsty and give you a drink? When did we ever see you a stranger and welcome you in our homes, or naked and clothe you? When did we ever see you sick or in prison, and visit you?' The King will reply, 'I tell you, whenever you did this for one of the least important of these members of my family, you did it for me!'

Then he will say to those on his left, 'Away from me, you that are under God's curse! Away to the eternal fire which has been prepared for the Devil and his angels! I was hungry but you would not feed me, thirsty but you would not give me a drink; I was a stranger but you would not welcome me in your homes, naked but you would not clothe me; I was sick and in prison but you would not take care of me.'

"Then they will answer him, 'When, Lord, did we ever see you hungry or thirsty or a stranger or naked or sick or in prison, and would not help you?' The King will reply, 'I tell you, whenever you refused to help one of these least important ones, you refused to help me.' These, then, will be sent off to eternal punishment, but the righteous will go to eternal life."



Who will be on God's right and who will be on his left? How will God decide which side we will be on?





En el Colegio



| | | |
|---------------------|-----------|---|
| Una asignatura | Subject | 1 |
| El inglés | English | |
| Las matemáticas | Maths | |
| El español | Spanish | |
| El francés | French | |
| La historia | History | |
| La geografía | Geography | |
| Las ciencias | Science | |
| El teatro | Drama | |
| El dibujo | Art | |
| La música | Music | |
| La tecnología | DT | |
| La informática | IT | |
| La educación física | PE | |
| La religión | RE | |

| | |
|--------------------|---------------------|
| Me gusta/n | I like |
| Me gusta/n mucho | I really like |
| Me encanta/n | I love |
| No me gusta/n | I don't like |
| No me gusta/n nada | I really don't like |
| Odio | I hate |

| | |
|---------------------------------|-------------------------------|
| Me gusta el inglés | I like English |
| Me gustan mucho las matemáticas | I really like maths |
| Me encanta el español | I love Spanish |
| No me gustan las ciencias | I don't like science |
| No me gusta nada la geografía | I really don't like Geography |
| Odio la tecnología | I hate DT |

Gramática

Adjectives have masculine and feminine forms, and singular and plural forms.

- Many adjectives end in **-o** or **-a** in the singular.
- Some end in **-e**.
- Some end in a consonant.

| | | |
|-------------|------------------|--------------------|
| | El/La ... | Los/Las ... |
| | es ... | son ... |
| funny | divertido/a | divertidos/as |
| good | bueno/a | buenos/as |
| boring | aburrido/a | aburridos/as |
| interesting | interesante | interesantes |
| important | importante | importantes |
| easy | fácil | fáciles |
| difficult | difícil | difíciles |
| useful | útil | útiles |

| | |
|--------|---------|
| Porque | because |
| Es/son | it is |

| | |
|---|--|
| Me gusta el inglés porque es fácil | I like English because it is easy |
| Me gustan las matemáticas porque son útiles | I like maths because it is useful |
| No me gusta la historia porque es difícil | I don't like history because it is difficult |
| Odio las ciencias porque son aburridas | I hate science because it is boring |

3 |



El profesor/La profesora es ...

- Simpático/a
- Antipático/a
- Bueno/a
- Malo/a
- Severo/a
- Aburrido/a
- Divertido/a

¿Cómo es el profesor / la profesora?



| | |
|--|-------------------------------------|
| El profesor de historia es muy severo | The history teacher is very strict. |
| La profesora de dibujo es bastante simpática | The art teacher is quite friendly. |
| La profesora de dibujo es un poco severa | The art teacher is a bit strict. |

Year 7 – Design and Technology

Knowledge Organiser



Synthetic plastics are made from oil, coal or gas.
Natural plastics are made from materials such as amber and rubber. **Biopolymers** can be made from Starchy vegetables such as corn.

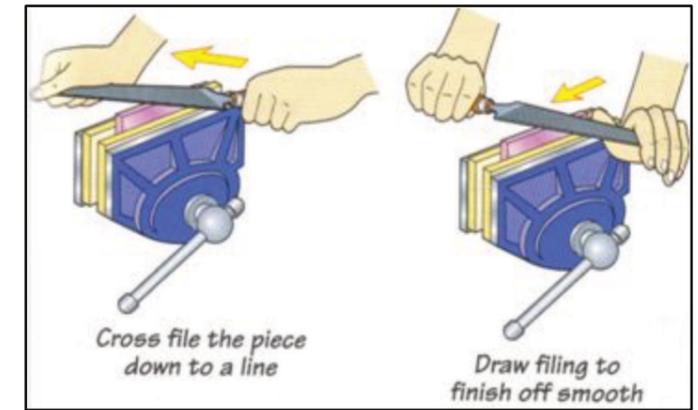


Thermoplastic and Thermosetting Plastics

Plastics can be split into two groups, these are **Thermoplastic and Thermosetting**.

Thermoplastics can be heated and shaped many times. They will soften when heated and can be shaped when hot. The plastic will harden when cooled. Some common thermoplastics are ABS, Nylon, Acrylic, Polystyrene, Polypropylene.

Thermosetting plastics can only be heated and shaped once. If re-heated they cannot soften as the polymer chains are interlinked.



Cross filing – Is used to shape and remove material.
Draw Filing – Is used to remove the cross filing marks/smooth.

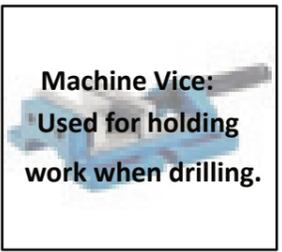
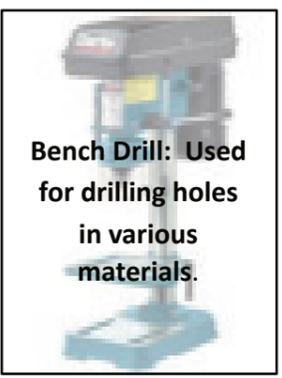
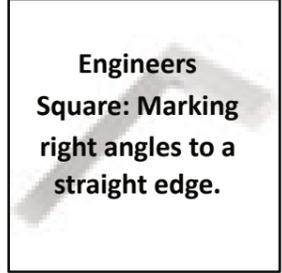
Key Words

Understand and be able to spell the words below.

- Polymer
- Acrylic
- High Impact Polystyrene (HIPS)
- Finite
- Sustainable
- Biodegradable
- Vacuum Forming
- Laser Cutting
- Safety
- Thermoplastic
- Thermosetting Plastics
- Biopolymers
- Computer Numerically Controlled (CNC)
- Computer Aided Design (CAD)
- Computer Aided Manufacture (CAM)
- Engrave
- Moulding
- Sketch
- Modelling
- Isometric
- Engineer's Steel Square
- Steel Rule
- Line Bender/Strip heater
- Wet and Dry Paper
- File

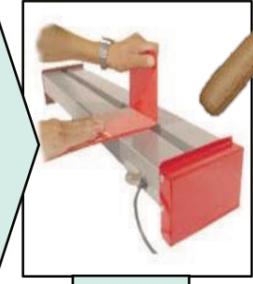


Remember the Safety Rules: Tie back long hair to prevent entanglement. Wear an apron to protect your clothing.
 Roll up long sleeves to prevent entanglement.
 Stack Chairs to prevent tripping. Wear Goggles on Machines to protect your eyes.
 One at a time on machines.



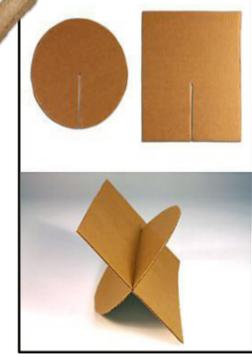
Forming Thermo Plastics
 Understand and be able to explain the processes of:

- Thermo Forming (Oven)
- Strip Heater/Line Bender
- Vacuum Forming
- Injection Moulding

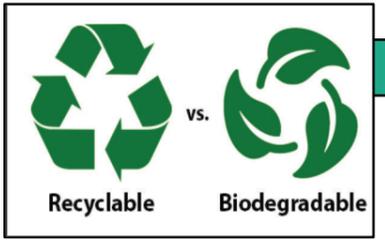


Line Bending

- Mark out
- Heat Plastic Until soft.
- Bend to desired angle
- Hold until cool



Prototype – A model of a design used for testing development and evaluation.



Sustainable – Products that provide environmental, social and economic benefits while protecting public health and environment over their **whole** life cycle, from the extraction of raw materials until the final disposal. The material will not run out

Biodegradable – It means a product or material that can break down/rot into natural materials in the environment without causing harm.

Year 7 – Design and Technology - CAD

Knowledge Organiser



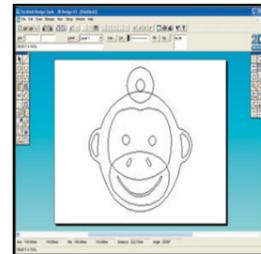
Forest Stewardship Council
Sustainable Timber

A net is a flat two dimensional shape that can be folded and glued to form a three dimensional object.

Key Words

Understand and be able to spell the words below:

- Polymer
- Acrylic
- Coniferous
- Sustainable
- Recyclable
- Laser Cutting
- Safety
- Thermoplastic
- Computer Numerically Controlled (CNC)
- Computer Aided Design (CAD)
- Computer Aided Manufacture (CAM)
- Engrave
- Sketch
- Modelling
- Isometric
- Modify
- Vector
- Bitmap
- Dimensions
- Scale
- Render
- Grid
- Accuracy
- Packaging
- Cardboard
- Surface Development (Net)
- Tessellation



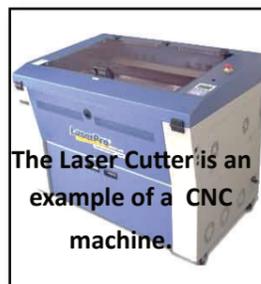
Be able to identify 2D Design Drawing icons. Line, arc, circle, rectangle, text and freeform curve.



Computer Aided Design (CAD) is the process of using specialist software to create designs for new products or components.

Red lines or fill areas engrave.

Black lines or fill areas cut.



Understand and be able to explain the advantages of disadvantages of using CAD/CAM.

CAD Advantages. Can be more accurate than hand-drawn designs – it reduces human error. You can save and edit ideas, which makes it easier and cheaper to modify your design as you go along. You can modify existing ideas, which saves £ me.

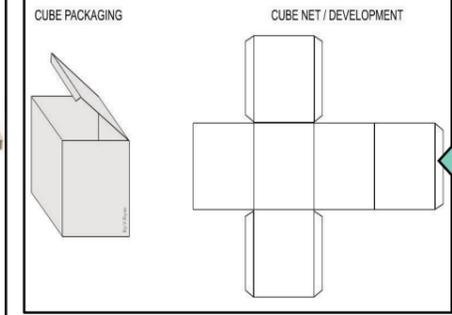
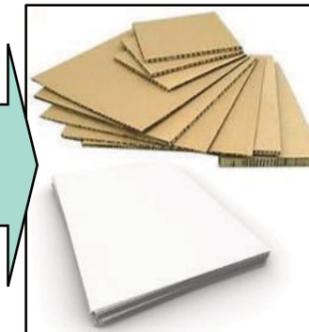
CAM Advantages. Is faster because machining speeds are higher. greater accuracy. greater consistency: every finished product is the same.

Disadvantages of CAD/CAM
The software/equipment itself is expensive so initial costs are high. Need to be trained how to use the software and machinery.

Computer Aided Manufacture (CAM) uses saved CAD files to make new products or components as prototypes through the use of Computer Numerically Control (CNC) machinery.

Papers and boards are made from natural fibres (cellulose), usually sourced from wood. Wood fibres are mostly sourced from faster growing softwoods rather than hardwoods.

Paper is characterised by weight. The weight is measured in grams per square metre (GSM).



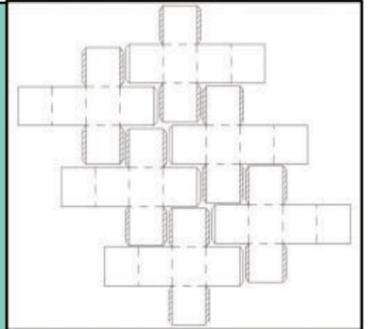
Softwoods come from coniferous trees which are evergreen, needle-leaved, cone-bearing trees. Examples include pine and spruce.

Hardwoods come from broad-leaved, deciduous trees which tend to lose their leaves in autumn/winter. Examples include oak and beech.



Tessellation

An arrangement of shapes closely fitted together, in a repeated pattern without gaps or overlapping.

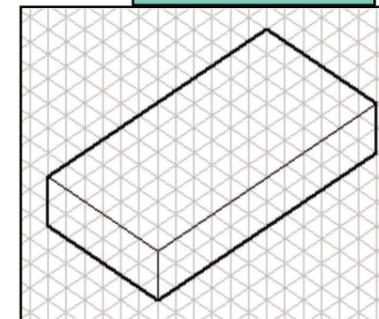


Try Square
Used for marking and measuring.

Glass Paper:
An abrasive paper used for smoothing rough surfaces on wood.

A Blind Hole does not go through the material.

PPE – Personal Protective Equipment.
Safety Glasses/Goggles. Used to protect the eyes when preparing materials and when operating machinery.



Isometric projection is a method for visually representing three-dimensional objects in two dimensions.

Remember the Safety Rules:

- Tie back long hair to prevent entanglement.
- Wear an apron to protect your clothing.
- Roll up long sleeves to prevent entanglement.
- Stack chairs to prevent tripping.
- Wear Goggles on machines to protect your eyes.
- One at a time on machines.





Year 7 Art & Design - Knowledge Organiser

A: Key Skills:

- 1: Composition and layout
- 2: Typography skills
- 3: Observation skills
- 4: Colour blending techniques

B: Expressing an opinion: Sentence starters

- I feel/believe that
- In my opinion
- It seems to that
- Based on my experience

1: OBSERVATION:

'the action or process of closely observing or monitoring something or someone'

Georgia O'Keeffe in detail:

Georgia O'Keeffe is one of the most significant and intriguing artist of the twentieth century, known internationally for her boldly innovative art. Her distinct flowers, dramatic cityscapes, glowing landscapes, and images of bones against the stark desert sky are iconic and original contributions to American Modernism.

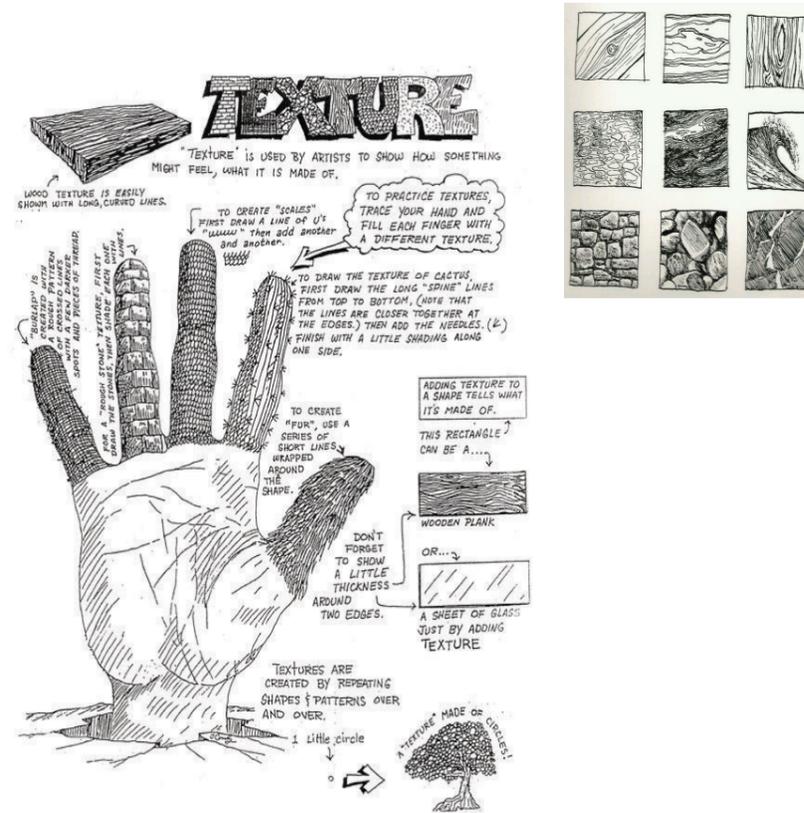


Key Words

- Composition
- Refine
- View
- Perspective
- Detail
- Colour

2: TEXTURE: Visual texture

'the feel, appearance, or consistency of a surface'



3: IMAGINATION:

'the faculty or action of forming new ideas, or images or concepts of external objects not present to the senses'

Jan Pieńkowski

Jan Michal Pieńkowski is a Polish-British author of children's books—as illustrator, as writer, and as designer of movable books. He has also designed for the theatre

A **Silhouette** is the image of a person, animal, object or scene represented as a solid shape of a single colour, usually black, with its edges matching the outline of the subject.

Key Words

- Imagination
- Mysterious
- Character
- Monochrome
- Genre
- Atmosphere
- Heroine
- Silhouette
- Gothic





Preventing and Treating Injury

A **PAR-Q** also known as a physical activity readiness questionnaire, is a simple questionnaire that can be used by anyone who is planning to [start an exercise program](#). It ensures competitors are in good health. **FITT** relates to frequency, intensity, time and type and must be considered when planning exercise.

Risk of injury can be reduced by:

- following the rules of the game
- using personal protective equipment
- wearing the correct clothing and footwear
- warming up and cooling down
- using the appropriate level of competition
- lifting and carrying equipment safely
- make sure equipment /facilities are in good condition



Warming up and cooling down

We warm up to ensure the body is fully prepared for exercise by raising **body temperature** and **heart rate** to ensure the delivery of **oxygen** to the muscles.

Cooling down helps lower the body temperature and heart rate. It is important to cool down after **anaerobic exercise** as it helps prevent a build up of **lactic acid** and **muscle soreness**.

RICE is a process that should be followed in order to treat minor injuries, as it can stop them from getting worse. RICE stands for rest, ice, compression and elevation.

Overuse injuries are caused by overtraining and repeated actions e.g. shin splints. An acute injury is sudden and usually the result of trauma e.g. broken leg or torn muscle.

Common types of injury

Fractures –cracked or broken bones caused by a blow. Symptoms include pain and inability to move the injured area.

Concussion –caused by impact to the head. Symptoms include unconsciousness, headaches and confusion.

Strains –when a muscle or tendon is overstretched or torn e.g. tennis elbow.

Dislocation –when the bones is forced out of its normal position in the joint. Symptoms include pain and swelling where the injury occurred.

Sprains –when ligaments are overstretched or torn around a joint, eg twisted or sprained ankle.

Abrasions –caused by friction or rubbing between the skin and a rough surface e.g. grazes or blisters.

KS3 MUSIC KNOWLEDGE ORGANISER

Treble Clef

E F G A B C D E F

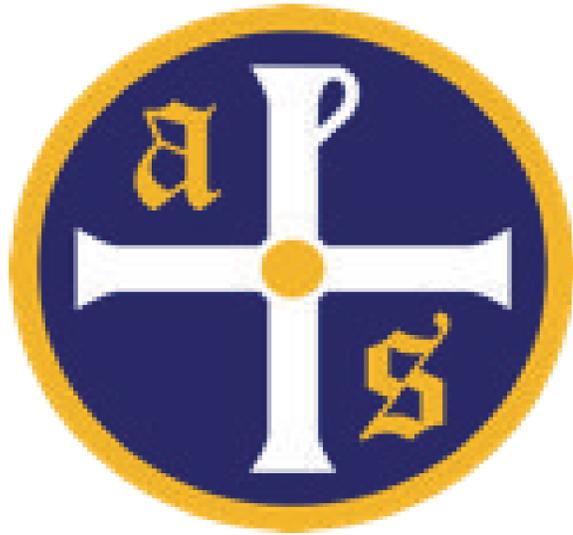
E G B D F

F A C E

Musical Elements

| | | |
|-----------|--------------------|--|
| Timbre | Sound quality | |
| Pitch | High or low sounds | |
| Texture | How many sounds? | |
| Tempo | Fast or slow? | |
| Duration | Long or short? | |
| Structure | The musical plan | |
| Dynamics | Loud or quiet? | |

| | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---|---|
| D \flat | E \flat | G \flat | A \flat | B \flat | D \flat | E \flat | G \flat | E \flat | G \flat | | |
| C \sharp | D \sharp | F \sharp | G \sharp | A \sharp | C \sharp | D \sharp | F \sharp | G \sharp | F \sharp | | |
| C | D | E | F | G | A | B | C | D | E | F | G |



naturalistic

musical

Style

physical theatre



laughter

verbal feedback

Audience

facial expressions

who was your target audience?

KS3 Keywords

Spellings

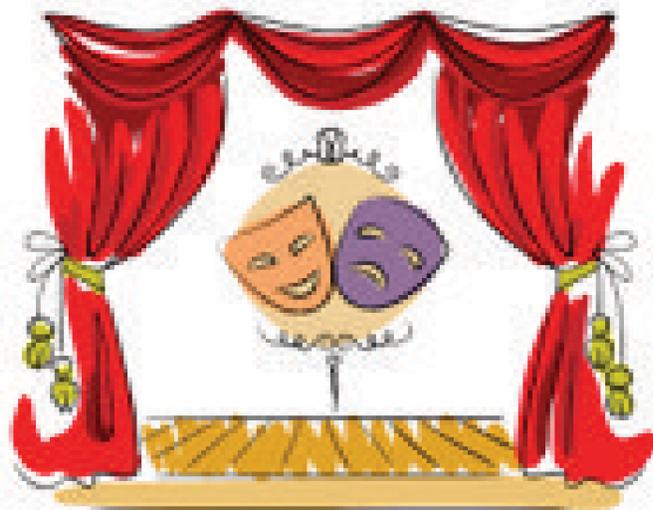
role on the wall

hot seating

Rehearsal techniques

freeze frames

thought tracking



set

lights

sound

Technical elements

make-up

costume

How did it fit with the acting/style of the play?



Year 7 – Design and Technology - Food Knowledge Organiser



Key Words

Understand and be able to spell the words below:

Nutrition
Heathy Eating Eatwell Guide
Balanced Diet
Cooking
Baking
Chopping
Slicing,
Health and Safety
Food Hygiene
Oven
Hob
Designing
Sensory Analysis
Seasonality
Ingredients
Vegetables
Savory
Food Provenance
Portion Size
Method
Nutrition
Protein
Carbohydrates
Vitamins
Minerals
Evaluation

Basic Nutrition

Food is essential—it provides vital **nutrients** for survival, and helps the body function and stay healthy.

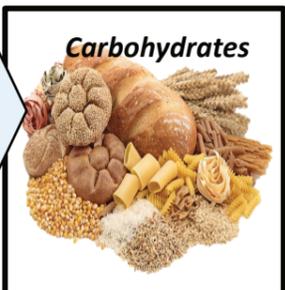
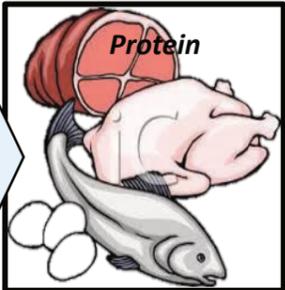
Protein: The nutrient that helps build and repair the body and we get from Meat and Fish

Carbohydrates: The Nutrient that's give use energy and we get from grains (pasta, rice, bread potatoes)

Fats: The Nutrient that gives energy, soluble vitamins and helps us keep warm.

Vitamins: These help keep the bodies systems in working order.

Minerals: These help the body process different nutrients and keep us healthy.



Healthy Eating

1. Base your meals on starchy foods.
2. Eat lots of fruit and veg.
3. Eat more fish.
4. Cut down on saturated fat and sugar.
5. Try to eat less salt –not more than 6g a day.
6. Get active and try to be a healthy weight.
7. Drink plenty of water.
8. Don't skip breakfast.

The Eatwell Guide

The Eatwell plate highlights the different types of food that make up our diet.

Eat at least 5 Portions of a variety of fruit and vegetables a day

Base meals on potatoes, bread, rice, pasta or other starchy carbohydrates

Eat some beans, pulses, fish, eggs, meat and other protein

Have some dairy or dairy alternatives (such as soya drinks and yoghurts)

Choose unsaturated oils and spreads, and eat in small amounts

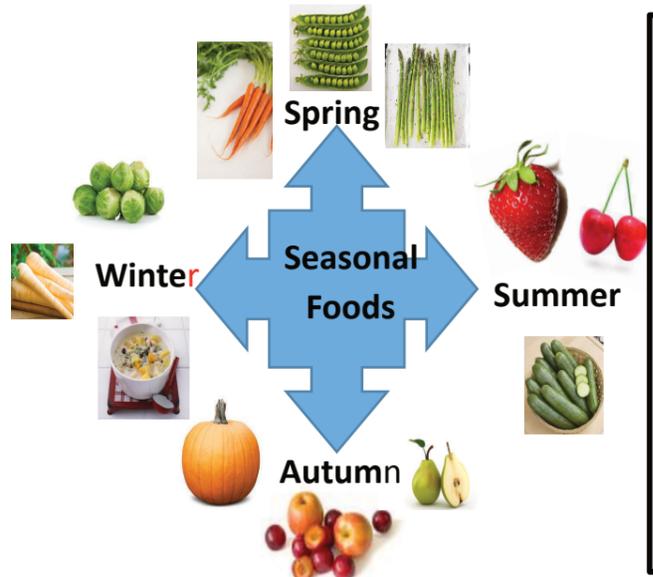
6-8 a day

Health and Safety

- Wear a clean apron
- Wash your hands
- Tie back long hair
- Keep food preparation surfaces clean
- Remove nail varnish
- Store food appropriately.
- Do not run
- Wipe up food spills immediately.
- Handle knives and other sharp equipment with care.
- Turn handles of saucepans away from the front of the stove when cooking.
- Wash kitchen and eating utensils after use in hot soapy water.
- Dry equipment properly
- Put away equipment
- Use oven gloves when removing items from the oven

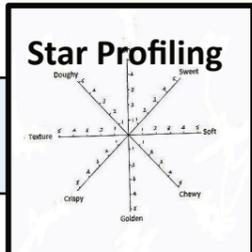
Glossary of Terms -Understand and be able to explain the following:

- **Ingredients** –Parts that make up a food product
- **Savoury Food Product** -The opposite to a sweet product
- **Health** –The state of being ill from injury or sickness
- **Seasonality** –Refers to the times of year when a given type food is at its peak.



Sensory Analysis

The scientific way of analysing and measuring human responses to food and drink.



PREVENT CROSS CONTAMINATION

USE CORRECT COLOUR CODED CHOPPING BOARDS & KNIVES

- RAW MEAT
- RAW FISH
- COOKED MEATS
- SALADS & FRUITS
- VEGETABLES
- DAIRY PRODUCTS

Computer Science Programming

Programming is writing computer code to create a program, in order to solve a problem. Programs consist of a series of instructions to tell a computer exactly what to do and how to do it.

Algorithms are a set of instructions that describes how to get something done. It is crucial that the steps in an algorithm are sequenced and performed in the right order – otherwise the algorithm will not work correctly. Algorithms are written using statements and expressions. There are three basic building blocks (constructs) to use when designing algorithms: sequencing, selection and iteration. We create programs to implement algorithms. Algorithms consist of steps but programs consist of statements.

| Keywords | |
|----------------------|---|
| Algorithm | A step-by-step procedure for achieving a task; an algorithm is used to solve a problem by breaking it down into stages |
| Programming Language | A special language programmers use to develop software programs, scripts, or other sets of instructions for computers to execute |
| Code | A set of written instructions in a particular programming language |
| Event | An event triggers specific lines of code to run. E.g. when sprite touched Run "add a point". |
| Control Flow | An element of code that affects the order in which instructions are executed when a program runs e.g. an IF statement |
| Conditions | A condition is something that must be true in order for something to happen. E.g. if sprite touched = True then add a point. |

Sequencing

Sequencing is the specific order in which instructions are performed in an algorithm

Algorithms consist of instructions that are carried out (or performed) one after another.



Variable

Computer programs use variables to store information

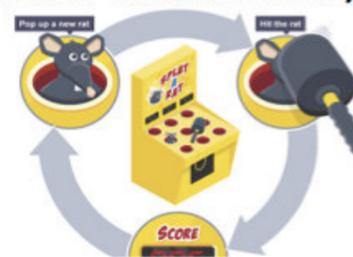
Variables could be used to store the score in a game, the number of cars in a car park or the cost of items on a till. They work in a similar way to algebra, where a letter in your code can stand for a number.



Iteration

Iteration is the process of repeating steps

Iteration allows us to simplify our algorithm by stating that we will repeat certain steps until told otherwise. This makes designing algorithms quicker and simpler because they don't have to include lots of unnecessary steps



Selection

Selection is a decision or question

At some point, a program may need to ask a question because it has reached a step where one or more options are available. Depending on the answer given, the program will follow a certain step and ignore the others.

