KNOWLEDGE ORGANISER

YEAR 7 – TERM 5

THOMAS HALL SCHOOL

Think Like An
Environmentalist

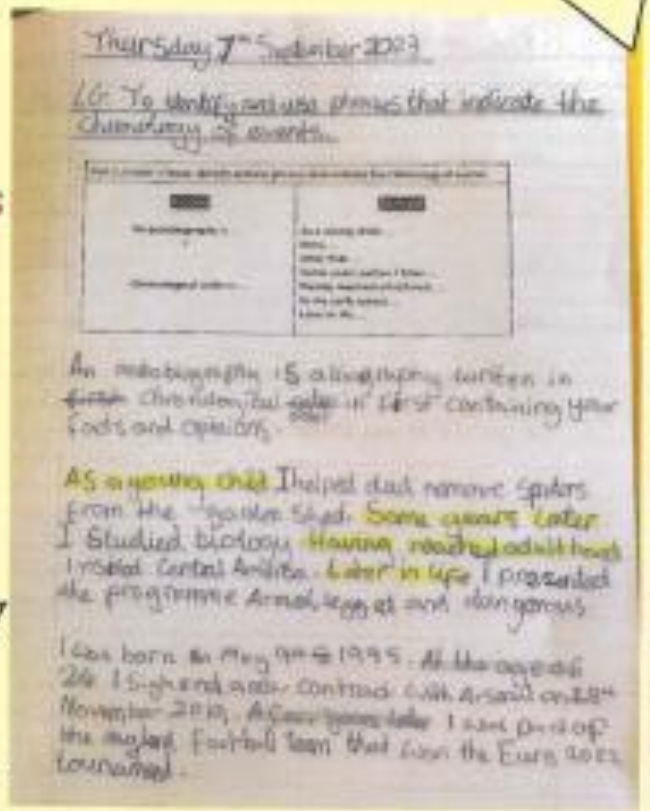
Community, Collaboration and Challenge

Long date and learning goal (LG) on left and underlined.

Minimise errors

Use pencil or blue or black pen for all written work, ruler for straight lines.

Worksheets glued in straight, next to margin.



Numbered questions written in margin.

Always try your best to be neat (even when note taking).

Feel proud

Prepare for the future

Respond to feedback in green pen.

Easier to read and give better feedback

Single line through mistake. No scribbles.

ATTENDANCE MATTERS

EVERY DAY COUNTS
Missing just 1 day every 2 weeks is the same as missing 10% of the school year.

LEARNING
Being in school allows you the best opportunity to learn.

WELLBEING
Attending school supports your mental and emotional health.

FUTURE SUCCESS
Regular attendonce at school is vitol for building the key skills needed for future employment

EQUIPMENT


School Bag


Knowledge Organiser

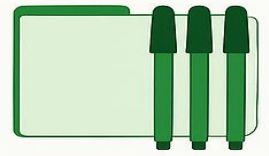

Black and Green Pens


Pencil case


Calculator


Pencil


Rubber


Whiteboard and whiteboard pen


Highlighters


Ruler

SCHOOL DAY

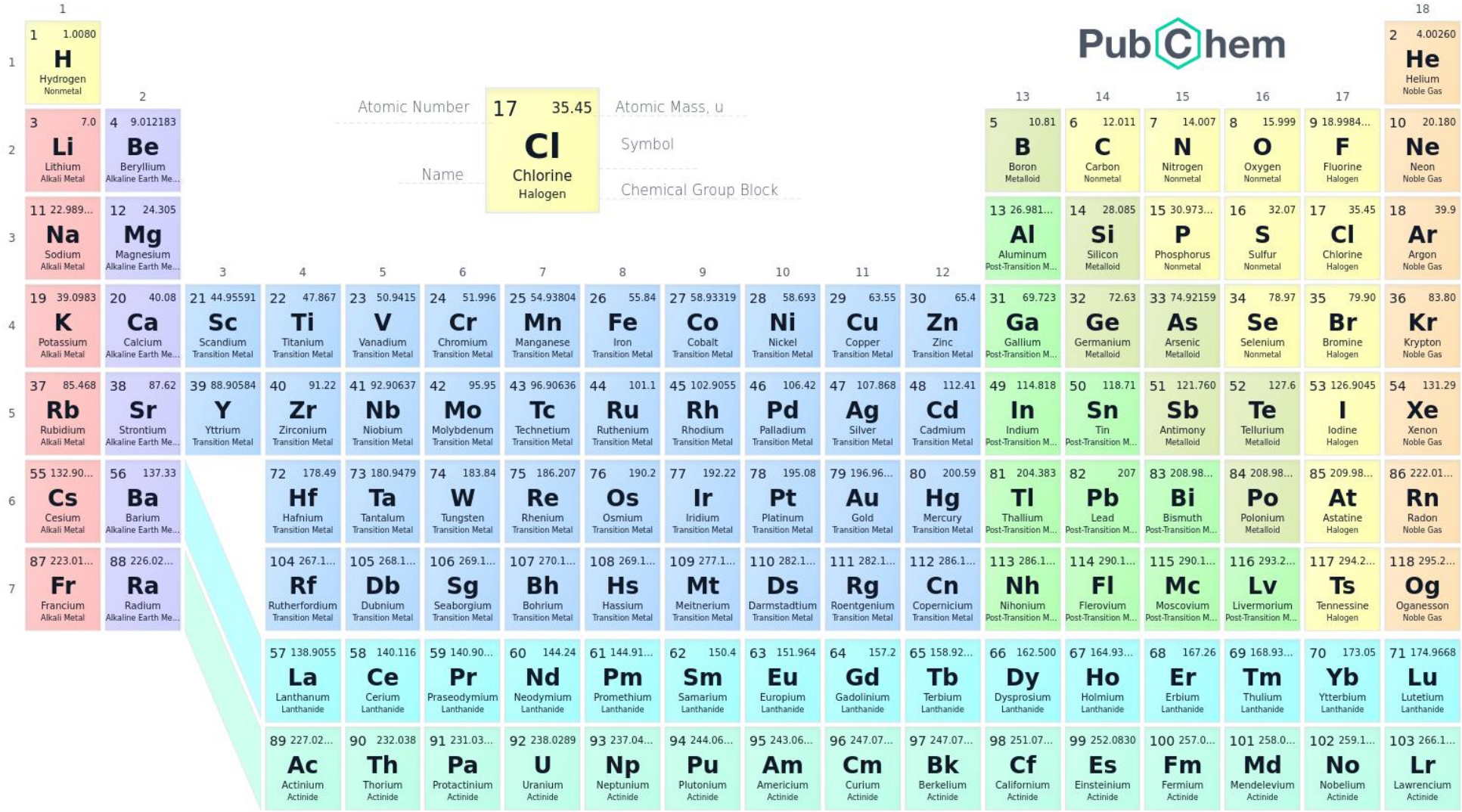
9:00–9:05	AM Reg
9:05–10:20	Lesson 1
10:20–11:35	Lesson 2
11:35–12:05	Break 1
12:05–13:20	Lesson 3
13:20–13:50	Break 2
13:50–15:05	Lesson 4
15:05–15:30	PM Reg – assembly or guided reading

Multiplication Grid

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

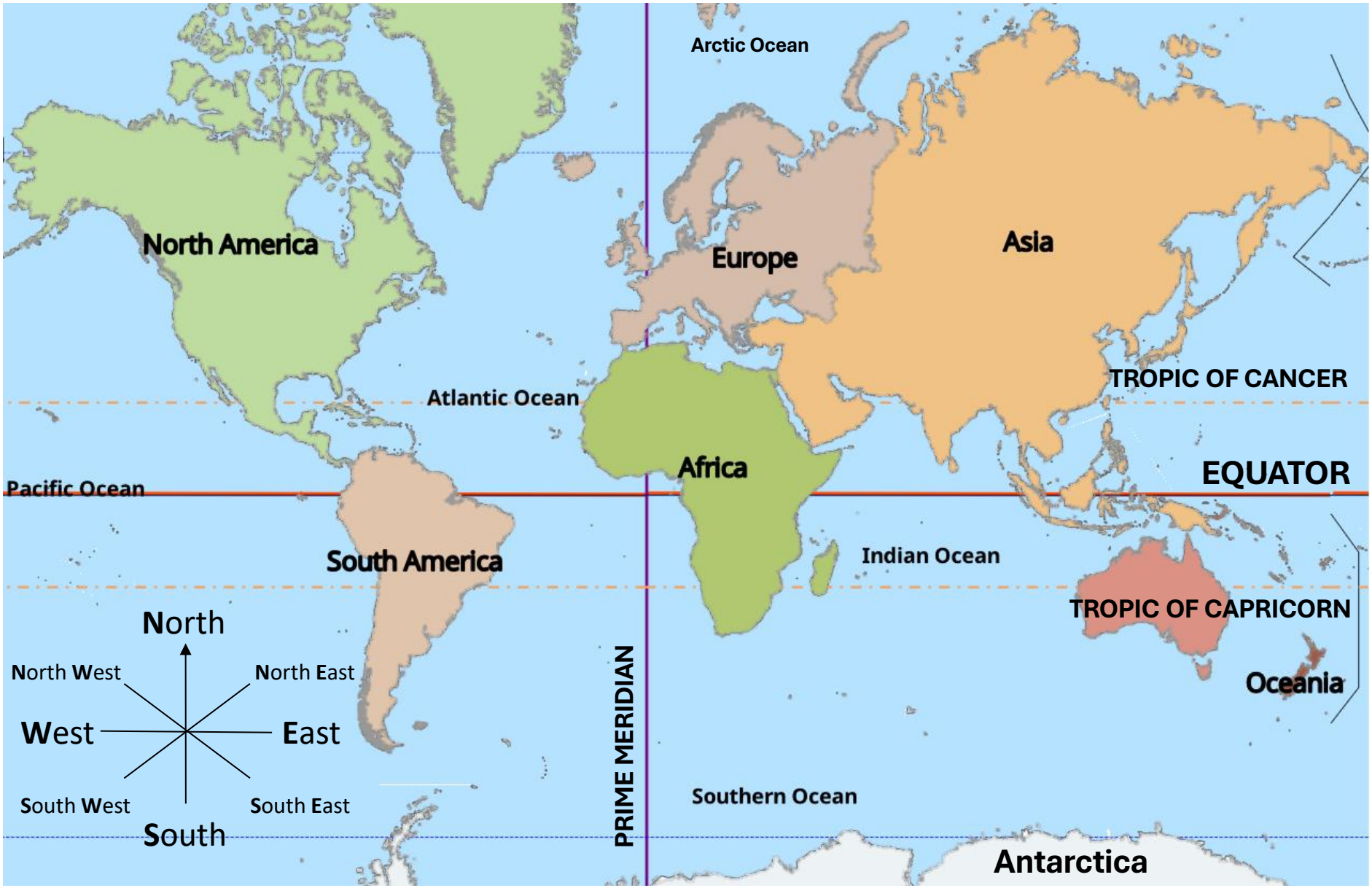
PERIODIC TABLE OF ELEMENTS

Chemical Group Block




01 Adjectives
THAT DESCRIBE:
age: young, old
colour: red, blue
condition: new, used
size: large, medium
speed: fast, slow
etc.
COMPARATIVE:
smaller, better...
SUPERLATIVE:
the smallest,
the worst,
the best...
02 Adverbs
PLACE:
here, there,
outside, everywhere,
upstairs, nowhere,
somewhere....
TIME:
ago, before, since,
yet, for, still,
afterwards...
FREQUENCY:
often, never,
sometimes, always
MANNER:
just, quite,
quickly, hardly,
well, carefully,
barely, almost,
scarcely,
beautifully...
03 Conjunctions
COORDINATING:
and, or, but,
yet, nor, for, so
CORRELATIVE:
both... and...,
either... or...,
just as... so...,
whether... or...,
neither... nor...,
not only... but also...
SUBORDINATING:
after, since, if,
while, although,
before, because,
unless
04 Determiners
TELLS US WHICH:
each, every,
some, none,
all...
TELLS US WHOSE:
my, your, her, his, its,
our, your, their (= possessive
adjectives or determiners)
05 Nouns
COMMON NOUNS: house, dog, laptop...
PROPER NOUNS:
(Capitalised)
London, Paris,
James, William,
Julia, Jennifer...
> VERBAL:
swimming...
> COLLECTIVE:
choir, jury...
> COMPOUND:
mother-in-law...
> COUNTABLE:
book, day...
> UNCOUNTABLE:
traffic, calm...
> ABSTRACT V. CONCRETE:
wit vs. road...
06 Prepositions
PLACE / DIRECTION:
in, at, on,
under, above,
across,
among,
between...
TIME:
in, at, on,
over, until, about,
during, before,
after, while,
through...
OTHER (agent,
phrase...):
by, with, on, over,
to, up, within,
beyond, for...
07 Pronouns
PERSONAL
(subject):
I, you, he, she, it,
we,
you, they
PERSONAL
(reflexive):
myself, yourself,
himself, herself,
itself, ourselves,
yourselves,
themselves
DEMONSTRATIVE:
this, these,
that, those
PERSONAL
(object):
me, you, him, her,
it, us, you, them
POSSESSIVE:
mine, yours, his,
hers, its, ours,
yours, theirs
INTERROGATIVE:
how, where,
when, which...?
INDEFINITE:
somebody,
anyone...
RELATIVE:
that, which,
whose, whom...
08 Verbs
ACTION:
to run, to organise,
to read, to think...
> Transitive
or
> Intransitive
LINKING:
to be,
to look, to appear,
to seem, to smell...
HELPING
(= AUXILIARY):
can, may,
will, must,
should, to be,
to have...
Word Classes

World Map


Arctic Ocean
North America
Europe
Asia
Atlantic Ocean
TROPIC OF CANCER
Africa
EQUATOR
Pacific Ocean
South America
Indian Ocean
TROPIC OF CAPRICORN
Oceania
North
North West
North East
West
East
South West
South East
South
PRIME MERIDIAN
Southern Ocean
Antarctica

Art

Year 7 Observational Drawing Art Term 5

Introduction to Observational Drawing

- **Objective:** Understand what observational drawing is and why it's important.
- **Activities:**
- Slide presentation on observational drawing
- Blind contour drawing of hand or face
- Discuss line confidence and

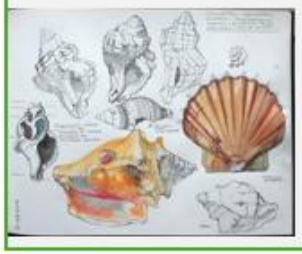
- **Focus**: Understanding light and shadow
- **Knowledge**:
- Shading techniques (hatching, stippling, blending)
- **Key Vocabulary**: tone, highlight,mid-tone, shadow, contrast
- **Skills**:
- Shading a sphere
- Tonal ladder

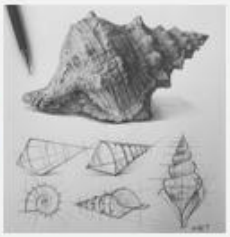
Introduction to Observational Drawing

- **Objective:** Understand what observational drawing is and why it's important.
- **Activities:**
- Slide presentation on observational drawing
- Blind contour drawing of hand or face
- Discuss line confidence and observation

Contour Drawing Techniques

- **Objective:** Practice slow, detailed contourline drawings.
- **Activities:**
- Continuous line drawing of natural objects(e.g., leaves, shells)
- Use of viewfinders for focus
- **Materials:** Viewfinders, natural objects, fine-tip pens





Drawing Basic Forms

- **Objective:** Understand form and volume through geometric shapes.
- **Activities:**
- Still life of simple 3D shapes (cube, sphere, cone)
- Focus on light and shadow
- **Materials:** Lamps, geometric solids, charcoal, graphite

Value & Shading Techniques

- **Objective:** Learn how to create light, shadow, and depth using value.
- **Activities:**
- Value scales using hatching, crosshatching, blending

Still Life Drawing

- **Objective:** Apply skills to draw a simple still life.
- **Activities:**
- Set up basic still life (e.g., cup, apple, book)
- Focus on proportion and negative space
- **Materials:** Objects, graphite pencils, sketch paper
- Emphasize close observation and detail
- **Materials:** Mixed objects, various pencils, ink (optional)

Computing

Computational Thinking

Key Concepts:
Computational Thinking is a method of problem-solving that uses concepts from computer science. It is useful for everyone, not just computer scientists, as it helps break down problems into manageable parts.

Why it's important:
It helps us solve complex problems, design systems, and understand behaviours.

Four Key Components:

Decomposition – Breaking a large problem into smaller, manageable tasks.
Example: Planning a school project by dividing it into research, writing, and presenting.

Abstraction – Filtering out unnecessary details to focus on the important parts.
Example: Explaining how to play a game without going into the underlying technical details.

Pattern Recognition – Identifying patterns and trends in data or problems to make predictions or simplify solutions.
Example: Recognising patterns in your morning routine to optimise your time.

Algorithms – Step-by-step instructions to solve a problem or complete a task.
Example: Following a recipe to bake a cake.

Abstraction

Key Concepts:
Abstraction is focusing only on the most important details and ignoring irrelevant or complex information. It helps manage complexity by simplifying problems or systems.

Examples:
1. When telling a story, you don't include every single detail, just the key points. 2. A smartphone's interface is an abstraction that hides the complex technology (like circuits and software) behind simple icons and gestures.

In Problem-Solving:
Abstraction helps you focus on what truly matters, allowing you to make quicker decisions without being distracted by unimportant details. ***Example***: The London Underground map is a famous abstraction, showing only the routes and stops, ignoring real-world distances.

Decomposition

Key Concepts:
Decomposition is the process of breaking down a big or complex problem into smaller, easier-to-manage parts. This makes it easier to understand the problem and solve each part individually.

Example: When designing a video game:

- Storyline development
- Level design
- Programming
- Art and graphics
- Testing and debugging
- Release planning

Why Decomposition is Useful:
Makes a big problem feel less overwhelming.
Helps identify which parts need the most attention.
Makes it easier to distribute tasks among a team.

Pattern Recognition

Key Concepts:
Pattern Recognition involves identifying patterns or regularities in data or systems to make predictions or simplify problems. It's like being a detective—spotting clues that help you solve mysteries.

Types of Patterns:

Visual Patterns: Recognising repeated designs, like stripes on a zebra.

Numerical Patterns: Recognising sequences or trends in numbers, such as counting by twos (2, 4, 6...).

Behavioural Patterns: Recognising repeated actions, like your dog barking when the doorbell rings.

Why it's Important:
Helps us predict outcomes and solve problems efficiently.
Example: Noticing that it always rains before the local park gets muddy helps you plan for rainy days by wearing boots.

Key Vocabulary

Key Word	*Definition*
Decomposition	Breaking down a complex problem into smaller, easier-to-manage parts.
Abstraction	Filtering out the unnecessary details and focusing on what is important.
Algorithm	Designing a step-by-step solution to solve a problem or complete a task.
Cognitive	The mental processes involved in understanding a problem.
Computational Thinking	Identifying an issue and determining an effective solution for it.
Irrelevant	Not important in the context of the situation.
Pattern Recognition	Observing patterns in data or the environment and using these patterns to make predictions or decisions more efficiently.

Algorithmic Thinking

Key Concepts:
Algorithms are sets of instructions designed to complete a specific task.
An algorithm should be clear, with a defined start and end, and each step must be precise and executable.

How to Create an Algorithm:
Identify the Problem: Clearly define what you need to solve.
Break Down the Task: List each step needed to solve the problem.
Order the Steps: Arrange steps logically, repeating some if needed.
Test the Algorithm: Follow the steps and check if it works.

Examples:
Everyday Algorithm: A set of steps for brushing your teeth (wet the toothbrush, apply toothpaste, brush for 2 minutes, rinse).
Programming Algorithm: Use tools like Scratch to create algorithms for games or stories, where each block of code represents a step.

Why Algorithms are Important:
They help break down tasks into manageable steps.
Clear algorithms make it easier to solve problems and complete tasks efficiently.

Summary of Key Terms:
Computational Thinking: A problem-solving method that uses computer science principles. ***Decomposition***: Breaking a large problem into smaller parts. ***Abstraction***: Focusing only on the important details, ignoring irrelevant information. ***Pattern Recognition***: Identifying and using patterns to predict outcomes or simplify problems. ***Algorithm***: A step-by-step process to complete a task or solve a problem.

Drama

Year 7 | Drama | Term 5

About Shakespeare

William Shakespeare was an English playwright, poet and actor. Shakespeare's plays include Macbeth and Romeo and Juliet.

- Shakespeare was born in 1564 in Stratford-upon-Avon.
- Age 7, he went to school which started at 6am in the morning.
- At 14/15 he left school and fell in love with Anne Hathaway.
- He married Anne Hathaway and had three children.
- He decided to become a writer.
- He moved to London, which was strange, busy and smelly.
- He became a successful writer and player (actor). This made other writers jealous.
- In 1613 he became poorly and stopped writing. He moved back to Stratford.
- Shakespeare died in 1616.

Key Characters

The Lovers: Helena, Hermia, Lysander, Demetrius
The Mechanicals: Bottom, Quince, Flute, Snout, Snug, Starveling.
The Fairies: Oberon, Titania, Puck, Cobweb, Mustardseed, Moth, Peaseblossom.
The Athenians: Theseus, Hippolyta, Egeus

Plot

A Midsummer Night's Dream

English

ATTACK UNIT – KNOWLEDGE ORGANISER

CORE FOCUS

- **Theme:** Attack – Threat, Invasion, Fear
- **Texts:** *The War of the Worlds* + Radio Drama
- **Goal:** Create an Alien-Invasion Radio Play

Imagined attacks reflect real human behaviour.

THE WAR OF THE WORLDS – KEY KNOWLEDGE

- ✔ H.G. Wells (1898)
- ✔ Early Science Fiction
- ✔ **Victorian Fears:** Invasion, Technology, Empire
- ✔ Martian Attack & Societal Collapse

RADIO DRAMA CONVENTIONS

- **SFX** – Sound Effects
- **MFX** – Music Cues
- **Voice** – Tone & Emotion
- **Narration** – *Guides the Listener*
- Scene Headings & Directions

MEDIA STUDIES LANGUAGE

- **Audience** – Who it's for
- **Representation** – How it's shown
- **Connotation** – Deeper Meanings
- **Genre Conventions** – Sci-Fi Features
- **Soundscape** – Audio Atmosphere

WRITING & ANALYSIS SKILLS

- Imagery & sensory detail
- Building Tension
- Dialogue & Symbolism
- Genre Structure & SPaG

- Imagery & Detail
- Building Tension
- Dialogue & Symbolism
- Clear Structure & SPaG

ASSESSMENT FOCUS

- Explore Sci-Fi & Fear
- Use Media Language
- Write a Radio Script
- Create Atmosphere
- Build Believable Characters

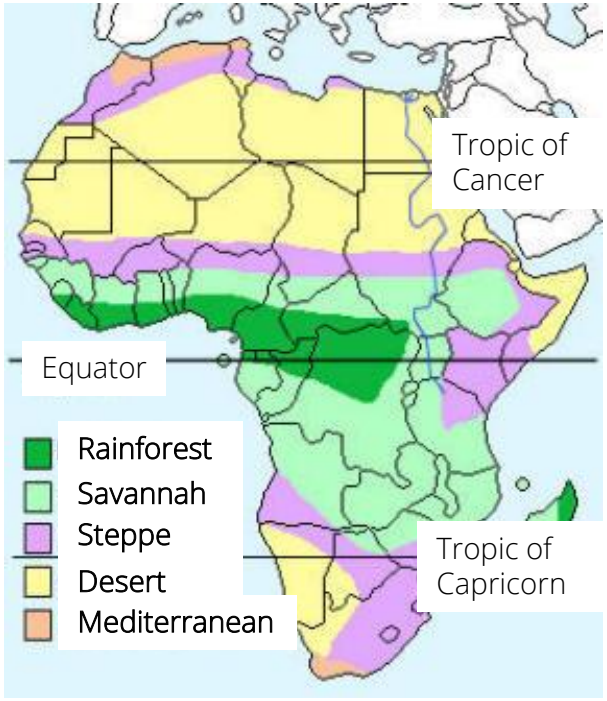
Diversity of Africa Geography

1. Tier 2 & 3 words that describe key concepts related to Africa

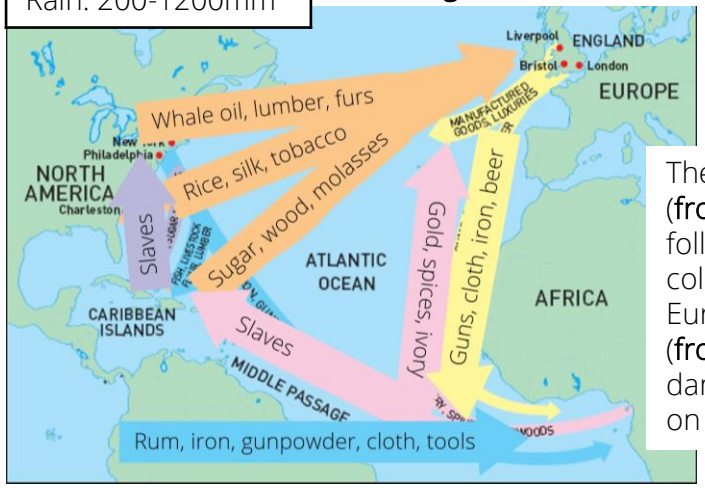
Tier 2	Definition
Stereotype	a widely held but fixed and oversimplified image or idea of a particular person or group of people.
Misconception	a view or opinion that is incorrect because of faulty thinking or understanding.
Colonialism	the process of a country taking full or partial control of another country, territory or people.
Migration	the movement of people from one place to another for a short period of time or permanently.
Tier 3	**Definition**
Primary Industry	an economic activity that extracts or harvests raw materials directly from the natural environment.
Secondary Industry	those that process raw materials obtained from primary industries and transform them into manufactured goods.
Tertiary Industry	economic activities that provide services to other people and industries.
Quaternary Industry	a sector focused on knowledge-based activities, particularly research, development, and IT.
Push Factor	something that makes you want to leave an area.
Pull Factor	something that draws you to a place.
Cause	the reason why something happens.
Impact/Effect	the effects that occur directly or indirectly due to the hazard occurring
Response	the actions to reduce injuries and death from the hazard occurring.

2. Biome Map Africa

Average Climate summaries
Rainforest Temp. 20-27*C Rain. 1500-2000mm
Savannah Temp. 20-30*C Rain. 500-1500mm
Steppe Temp. 10-35*C Rain. 100-500mm
Desert Temp. 30-47*C Rain. 50mm
Mediterranean Temp. 8-28*C Rain. 200-1200mm



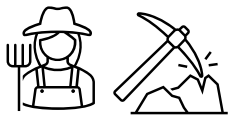
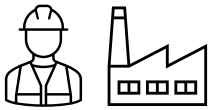
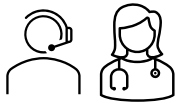
3. Triangle of Trade



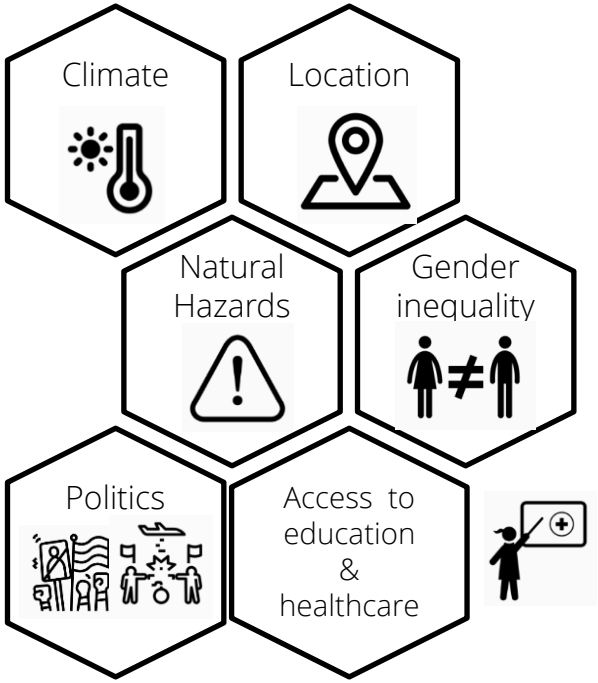
The slave trade (**from 1600s**), followed by colonisation by European nations (**from 1880s**) has a damaging impact on Africa.

Diversity of Africa Geography

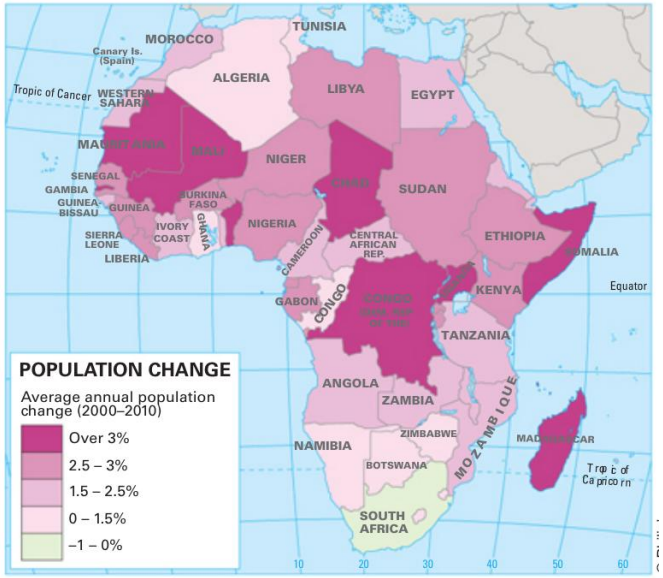
4. Categories of industry

Primary	Secondary	Tertiary	Quaternary
			
Involved with the extraction of raw materials e.g. farming, mining, fishing	Process raw materials into goods e.g. car, phone, food manufacturing	Provide a service e.g. shop assistant, doctor, teacher, call centre assistant	Involves the high-tech sector and research e.g. software designer, scientist

5. Causes of the Development Gap



6. Population Change in Africa



Rapidly increasing population – Mali, DRC, Chad.
Minimal change/small increase – Algeria, Namibia, Ghana
Decreasing population – South Africa

7. Tectonics: Mount Nyiragongo

Case Study:

Location – Democratic Republic of Congo. 6 miles from the city of Goma. Part of the East African Rift Valley.

Type of Volcano – Stratovolcano

Eruptions – 22nd May 2021 (32 people died)
2002 (which killed 250 people). 450,000 people displaced or evacuated. 17 villages destroyed. 3000-8000 people crosses the border into Rwanda.

8. Extreme weather: Cyclone Idai

Case Study:

Background: Occurred around 19th March 2019 – Impacted South Africa especially Mozambique,

Causes: Low lying coastal areas are vulnerable to flooding, budget/money for responding to events are low, climate change including warming of ocean make storms more intense.

Impacts: 1300 died, 3million affected, 400,000 made homeless, 3-4m high storm surge in Beira (port city)

Responses: 900,000 cholera vaccines administered, helicopters & boats from EU for rescues, UK government pledged £18million in support

History

Knowledge organiser: **How did Henry's divorce impact Britain?**

Term	Description	Term	Description
Henry VIII	King of England between June 1509 – January 1547	Catholic	A branch of Christianity which is led by the Pope.
Thomas More	One of Henry VIII's council who was executed.	Protestant	A branch of Christianity which has the monarch as the leader.
Thomas Cromwell	Henry VIII's chief minister who helped Henry get a divorce.	Monarch	A king or a queen
ssCatherine of Aragon	Henry VIII's first wife.	convert	Changing beliefs/ religions
Anne Boleyn	Henry VIII's second wife after his divorce.	Monks/nuns	A group of men/women who are extremely religious and follow strict religious laws.
Edward VI	King of England January 1547 – July 1553	Monastery	A building in which monks live.
'Bloody' Mary I	Queen of England July 1553 – November 1558	corrupt	Acting dishonestly for money
Elizabeth I	Queen of England November 1558 – March 1603. Elizabeth was the last Tudor.	Dissolution	A word which means 'break up'
The Pope	Head of the Catholic Church. Henry needed his permission to divorce Catherine of Aragon	Heresy	The crime of believing in a different religion to the monarch in charge.
Richard Whiting	Abbot of Glastonbury who was executed	Heretic	A person who has committed the crime of heresy.
1534	The Act of Supremacy was passed which established the monarch as the head of the Church of England.	Treason	The crime of betraying your own country. Sometimes heretics were punished as traitors.
1535	Thomas Cromwell sent out inspectors to write reports on the monasteries	Reform	To make changes to something in order to improve it.
1536-1539	The 'dissolution of the monasteries'	The Reformation	The name given to the continued change of the religion of England.
1555-1558	284 Protestants had be burned to death	Martyr	A person who is killed or dies for their beliefs.
'The break from Rome'	A series of events which led to England breaking away from the Catholic Church.	'The Book of Martyrs'	A book which described the negative treatment of Protestants because of the Catholic Church.

YEAR 7 – LINES AND ANGLES

Constructing, measuring and using geometric notation

@whisto_maths

What do I need to be able to do?

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

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

Keywords

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

Letter and labelling convention

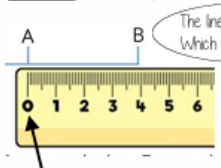
The letter in the middle is the angle
The arc represents the angle

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

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

Draw and measure line segments

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



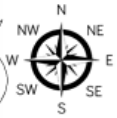
The line segment is 3.9cm
Which is 39mm

AB is a line segment (part of the line)

Make sure the start of the line is at 0.

Angles as measures of turn

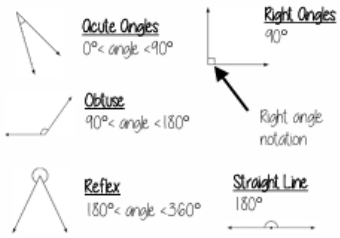
Clockwise | Anti-Clockwise



East to South is a quarter turn clockwise

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

Classify angles



Acute Angles
0° < angle < 90°

Right Angles
90°

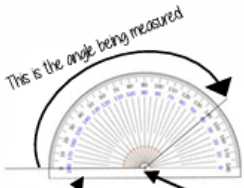
Right angle notation

Obtuse
90° < angle < 180°

Reflex
180° < angle < 360°

Straight Line
180°

Measure angles to 180°



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

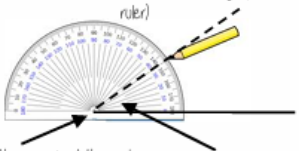
The base line follows the line segment

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

Draw angles up to 180°

Draw a 35° angle

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



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

The angle

Parallel and Perpendicular lines

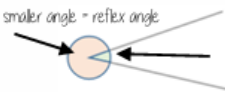
Parallel lines
Straight lines that never meet
(Have the same gradient)

Perpendicular lines
Straight lines that meet at 90°

Angles over 180°

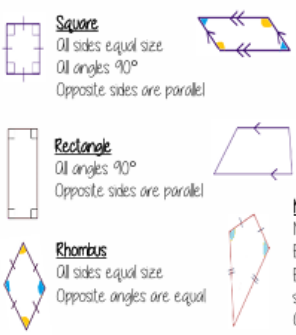
Use your knowledge of straight lines 180 ° and angles around a point 360 °

360 ° - smaller angle = reflex angle



Measure the smaller angle first (less than 180 °

Properties of Quadrilaterals



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

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

Rectangle
All angles 90°
Opposite sides are parallel

Trapezium
One pair of parallel lines

Rhombus
All sides equal size
Opposite angles are equal

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

Draw Pie Charts

Type of pet	Dog	Cat	Hamster
Frequency	32	25	3

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

This fraction of the 360 degrees represents dogs

$\frac{32}{60} \times 360 = 192°$

Use a protractor to draw
This is 192°

SAS, SSS, ASA constructions

Side, Angle, Angle

Side, Angle, Side

Side, Side, Side

Polygons

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

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

Maths

YEAR 7 – LINES AND ANGLES

@whisto_maths

Geometric reasoning

What do I need to be able to do?

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

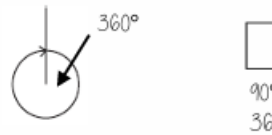
- Understand/use the sum of angles at a point
- Understand/use the sum of angles on a straight line
- Understand/use equality of vertically opposite angles
- Know and apply the sum of angles in a triangle
- Know and apply the sum of angles in a quadrilateral

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

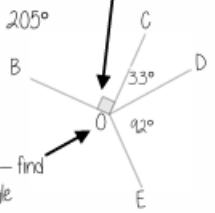
The sum of angles around a point is 360°

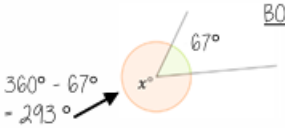


Find angle BOE

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

Angle notation – 90°



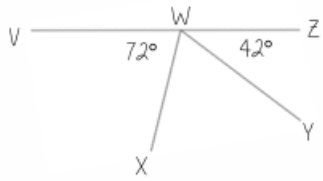


360° - 67°
= 293°

Angle notation – find this missing angle

Sum of angles on a straight line

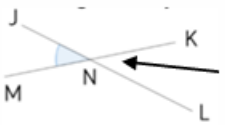
Adjacent angles that share a common point on a line add up to 180°



Find angle XWY

72° + 42° = 114°
180° - 114° = **66°**

Vertically opposite angles

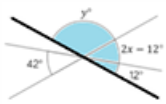


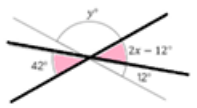
Angle JNM is vertically opposite to angle KNL

JNM = KNL

Vertically opposite angles are the same

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

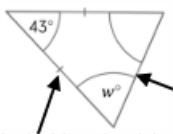




Form equations with information from diagrams:
$2x - 12 = 42$
$2x = 54$
$x = 27°$

Sum of angles in triangles

Sum of interior angles in a triangle = 180°



The two base angles will be the same size

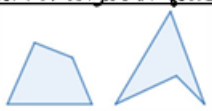
Look at triangle notation
This indicates an isosceles triangle
∴ 180 - 43 = 137
137 ÷ 2 = 68.5°

A triangle can only have ONE right angle

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

Sum of angles in quadrilaterals

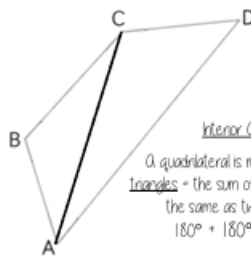
Sum of interior angles in a quadrilateral = 360°



Convex Quadrilateral

Concave Quadrilateral

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

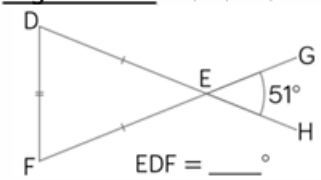


Interior Angles

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

Angle Problems

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



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

Keep working out, clear and notes together

Maths

Music

Year 7 Music Term 5

Year 7:Rhythms of the World

Polyrhythms & Ostinatos

Keywords: Polyrhythm: Two rhythms played at once (e.g. 3 against 2 or 4 against 3)
Ostinato: A short repeating pattern.

African roots → Passed through slavery → shaped modern pop, jazz and Afrobeats.

Practice
Play a 3 vs 2 → "triple / duple"
The phrase "***Nice cup of tea***" helps - Try
Nice and of are the duple (2) (Left hand).
Nice cup tea are the triple (3) (Right hand).
Repeat until playing is confident.

Curry House Rhythms (Indian)

Social context: North Indian classical music → used in Bollywood → global fusion.
Keywords: Tabla, tala, syncopation.
Tala: repeating rhythm cycle.

The Tabla are pairs of drums with a pitch varied by the pressure on the drum skin.

Rhythm ideas –Tintal (16 beats): 4 + 4 + 4 + 4
Tap Left (L) and Right hand (R) in the following sequences.

LLRR LRLR LRLL RLRR (Loop complete line 4 times).
RRLL RLRL RLRR LRLL (Loop complete line 4 times).

Gamelan (Indonesia)

Social Context: Indonesian court and community music → played in (ensemble) → music as teamwork
Keywords: Interlocking, metallophone, gong, cycle
Metallophone: Instrument of tuned metal bars, tubes, rods or plates struck with mallets.

Play layered patterns (Kotekan style)
Right Hand
Left Hand

Rhythms of the Underground

(Electronic)

Social context: Clubs in Chicago/Detroit → electronic dance music → global nightlife

Keywords: **house, techno, loop, syncopation**
Loop: repeating digital pattern.
Syncopation: emphasis (accent) off the beat.
Rhythm idea: Four-to-the-floor: kick on 1, 2, 3, 4
Offbeat hi-hats: "and" of each beat

Hi-Hat	1	+	2	+	3	+	4	+
Snare	1	+	2	+	3	+	4	+
Bass D	1	+	2	+	3	+	4	+

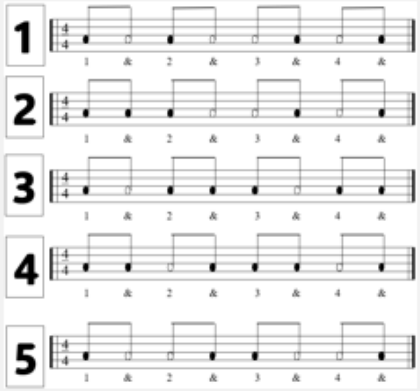
Blues & Gospel

Social history: African American origins → work songs & spirituals → foundation of pop, rock, jazz

Keywords: **shuffle, swing, triplets**
Shuffle (swing): uneven rhythm (long–short feel) – typical 1 trip let, 2 trip let, etc

Rhythm Practice

Exercise 1 Play **black** notes with right hand.
Exercise 2 Play **white** notes with left hand.
Exercise 3 Play both hands **together** (right Black Left white)



Rhythms of the World

PE

Year 7 Physical Education Term 5

1 What is a Leader?

A **leader in sport** helps guide, support, and motivate others. Good leaders set a positive example by being respectful, organised, and encouraging to everyone.

2 Qualities of a good leader

Good leaders are **confident, clear communicators, fair, responsible**, and show **good listening skills**. They create a safe and enjoyable environment for everyone to improve.

3 Communication Skills

Communication includes using a **loud, clear voice**, **body language**, and giving **simple instructions**. Eye contact and gestures help make your message more effective.

4 Organising Warm Ups

Leaders should plan warm-ups with three parts:

- A **pulse raiser** is a light activity that **increases your heart rate** and gets your blood flowing.
- **Mobility exercises** focus on moving your **joints** through their full range of motion.
- **Stretches** lengthen your **muscles** and improve flexibility.

Warm-ups get the body ready and help prevent injury.

5 Demonstrating Skills

Demonstrations should be **clear, accurate, and done slowly first**. Face your group, use key teaching points, and check that everyone understands.

6 Giving Feedback

Give **positive feedback** (what went well) and **developmental feedback** (what to improve). Use "What went well..." and "Even better if..." to support others constructively.

Coaching and Leadership

Science

Particle Model

Keyword	Definition
Particle	A very tiny object such as an atom or molecule, too small to be seen with a microscope.
Particle model	A way to think about how substances behave in terms of small, moving particles.
Gas pressure	Caused by collisions of particles with the walls of a container.
Density	How much matter there is in a particular volume, or how close the particles are.
Evaporate	Change from liquid to gas at the surface of a liquid, at any temperature.
Boil	Change from liquid to a gas of all the liquid when the temperature reaches boiling point.
Condense	Change of state from gas to liquid when the temperature drops to the boiling point.
Melt	Change from solid to liquid when the temperature rises to the melting point.
Freeze	Change from liquid to a solid when the temperature drops to the melting point.
Sublime	Change from a solid directly into a gas.
Melting point	The temperature when a solid becomes a liquid.
Boiling point	The temperature when a liquid becomes a gas.

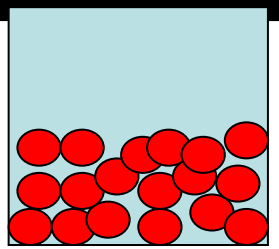
Moving particles

Particles move faster as the temperature goes up.

Interactions between particles break as they move faster.

Substances expand as they get hotter.

Liquid



Particles move freely past each other

Cannot be compressed

Takes the shape of the container

Can be poured

Density

Density (g/cm^3) = $\frac{\text{mass (g)}}{\text{Volume } (cm^3)}$

An object less dense than water will float.

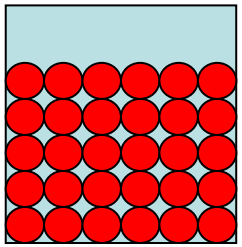
Melting

Freezing

Boiling/Evaporating

Condensing

Solid



Particles are close together

Particles vibrate at fixed points

Cannot be compressed

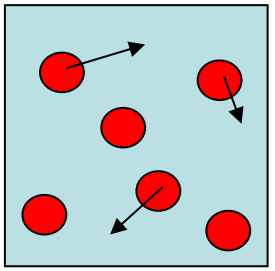
Hold their shape

Cannot be poured

Subliming

Deposition

Gas



Particles are fast moving and spread out

Can be compressed

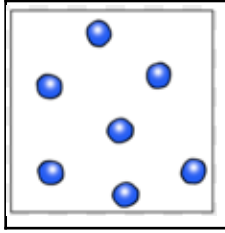
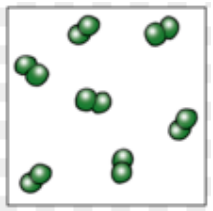
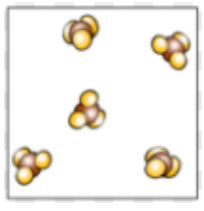
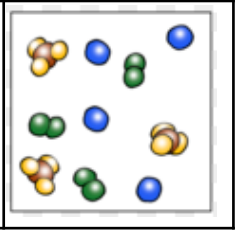
Fills the container

Can be poured

Science

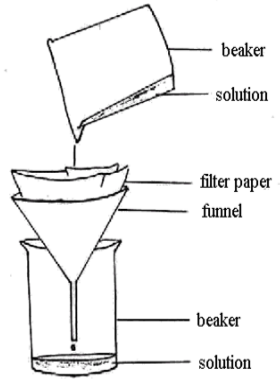
Keywords

Atom	The smallest particle of an element.
Molecule	Two or more atoms chemically bonded together.
Element	A substance made up of only one type of atom.
Compound	Substance made from two or more elements chemically bonded together.
Mixture	Two or more substances mixed together, but not bonded together. A mixture is not a pure substance.
Solute	A solid that can dissolve in a solvent.
Solvent	A liquid that dissolves another substance.
Solution	Mixture formed when a solvent dissolves a solute.
Solubility	A measure of how much a substance dissolves in a certain volume of solvent.

Atoms	Molecules	Compounds	Mixtures
			

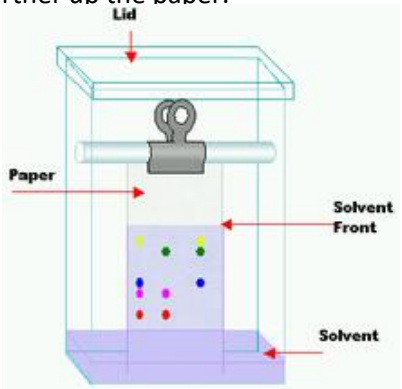
Filtration

Separating substances using a filter to separate an insoluble solid from a liquid. The insoluble solid (residue) stays behind on the filter paper, and the solution passes through the filter paper (filtrate`



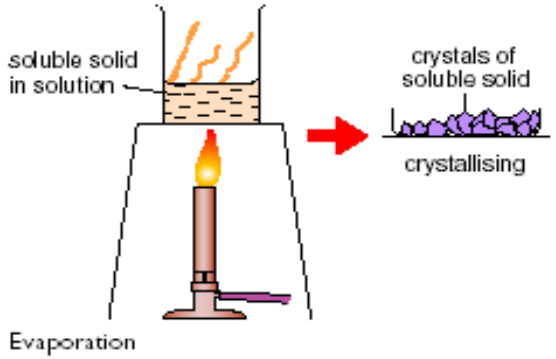
Chromatography

Chromatography is a method for separating soluble substances from one another. Some of the coloured substances dissolve in the solvent better than others, so they travel further up the paper.



Crystallisation

Crystallisation is used to separate a soluble solid from a liquid. The liquid evaporates away leaving solid crystals behind.



Substances

Science

Keywords

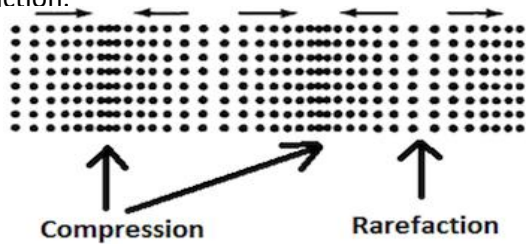
Vibration	A back and forth repeating motion.
Vacuum	A space with no particles of matter in it.
Oscilloscope	Device for viewing patterns of sound waves that have been turned into electrical current.
Absorption	When energy is transferred from sound to a material.
Echo	Reflection of sound waves from a surface back to the listener.

Waves

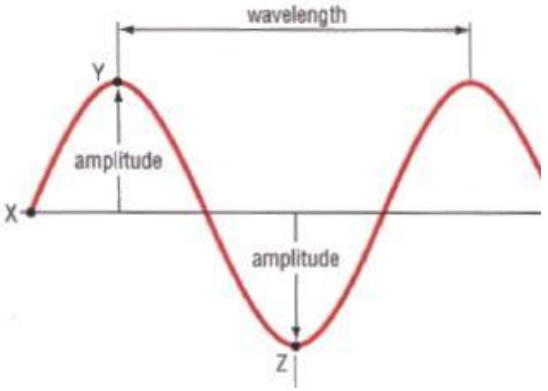
Waves can travel in two ways:

1. Longitudinal waves travel in straight lines - where the direction of vibration is the same as that of the wave.
2. Transverse waves move at right angles to the direction of the wave.

Sound waves are longitudinal waves. They involve particles and have areas of compression and rarefaction.



Wave Characteristics

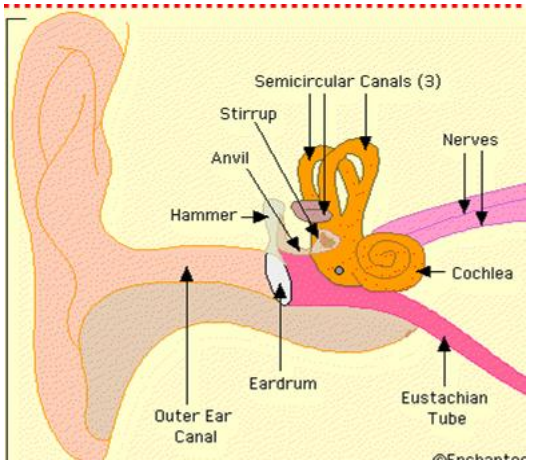


Wavelength
The distance from a point on one wave to the same point on the next wave.
Measured in metres and has the symbol λ (Greek letter lambda).
A shorter wavelength = higher frequency.

Frequency
The number of waves passing a point every second and is measured in hertz (Hz).
A higher frequency means a high pitch.

Amplitude
The height of the wave from the centre line to a peak or trough.
Measured in metres.
The more energy a wave has the bigger the amplitude and the louder the sound.

The Ear & Hearing



1. Your outer ear channels sound waves into your ear.
2. The sound waves travel along the auditory canal.
3. The ear-drum vibrates when a sound hits it.
4. The vibrating ear-drum makes the little bones in your ear vibrate.
5. The vibrations pass along the auditory nerve your brain.
6. Your brain sorts the messages and you hear the sound.

Hearing loss could be caused by:
Wax blocking the ear
Loud noises tearing eardrum
Ear infection
Small bones in the ear can get stuck together
Loud noises can damage the cochlea

Sound

Science

Light

Keywords

Normal line	A line drawn at right angles to the surface where the ray hits. Angles are measured from this line.
Absorption	Light is transferred to a material and is not reflected or transmitted.
Transmitted	Light that passes through an object is transmitted.
Scattering	When light bounces off an object in all directions.
Transparent	An object that allows light through without scattering.
Translucent	An object that allows light through with scattering.
Opaque	An object that allows no light through.

Reflection

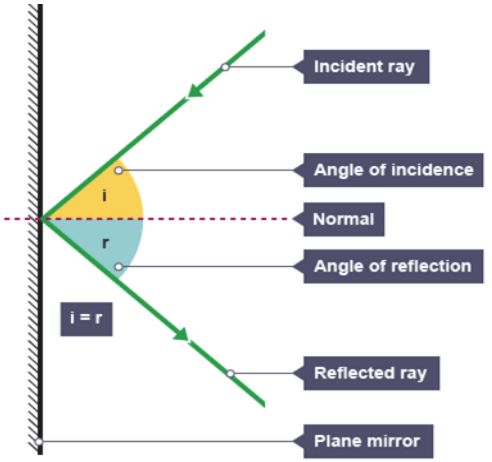
When light is reflected it bounces off of something.

We use ray diagrams to draw reflections.

To help us with our ray diagram, we can draw a line 90° to the reflective material.

This line is called the normal.

Angle of incidence = angle of reflection.



Calculating wave speed

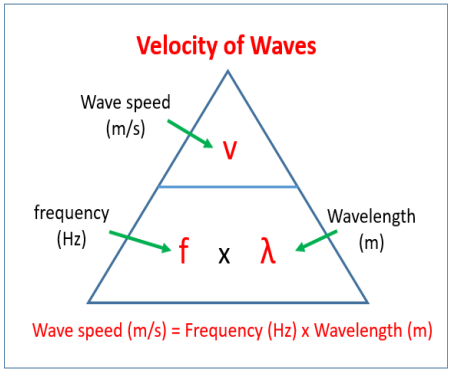
Speed = wavelength x frequency
(m/s) (m) (Hz)

Symbol equation: $v = f \times \lambda$

Equation rearranged:

Wavelength = Speed / frequency

Frequency = Speed / wavelength

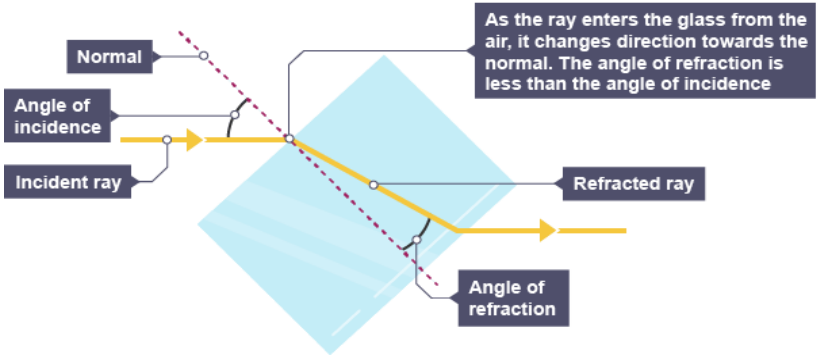


Refraction

Waves are refracted when they change speed.

When waves slow down they bend towards the normal line. This happens when light travels from air to glass.

When waves speeds up they bend away from the normal line. This happens when light travels from glass to air.



The angle of refraction is less than the angle of incidence.