Penryn College

Belong | Aspire | Succeed

Year 9 Unit 1
Knowledge Booklet

2026 - 2027

Name _____

Tutor Group _____

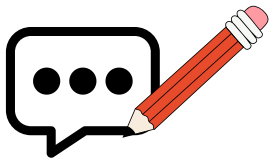
At Penryn College, we are PROUD of the work in our books

★ We show this by ... ★

P
Presentation

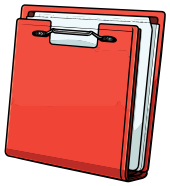
- I write the date neatly in the margin.
- I write and underline the LO and titles.
- I use blue/black pen for writing.
- I draw diagrams in pencil and label them.
- I use my best handwriting.

R
Response



- I complete all questions to the best of my ability.
- I write in full sentences.
- I highlight command words.
- I think deeply about the task.
- I show effort and do not rush my work.

O
Organisation



- I draw a line below the last lesson's work before I start new work.
- I set out my work clearly using steps or paragraphs.
- I keep my book tidy and in order.
- I cross out mistakes neatly with one line.
- I do not doodle in my book.

U
Use of vocabulary

- I use key subject words.
- I check the spelling of important words.
- I highlight/underline key words.
- I include definitions when needed.
- I use vocabulary in the correct context.

D
Dedicated Improvement

- I use red pen to respond to feedback
- I correct my mistakes carefully.
- I edit and improve my work.
- I respond to my teacher's feedback.
- I rewrite incorrect spellings 3 times and apply in a sentence.

Proud Work | Every Lesson | Every Book | Every Student

SCHOOL MARKING CODE

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Symbols - What it means

Sp (spelling)

- You have made a spelling mistake.
- Write the word correctly 3 times at the end of your work to help you remember this spelling in the future.
- Your teacher has chosen the most important spellings for you to learn.

P (punctuation)

- Check your punctuation on this line.
- Have you missed out a capital letter or a full stop? Have you run two sentences together with a comma?
- Go back and correct the problem.

G (grammar)

- Something doesn't make sense! Read your sentence again from the start and make a change to help your reader.
- Have you: Missed a word or letters out? Used a word which sounds the same as the one you want? Given the word the wrong ending?

★ PROUD work. Every lesson. Every book. Every student. ★

At Penryn College we want everyone

Finding My VOICE

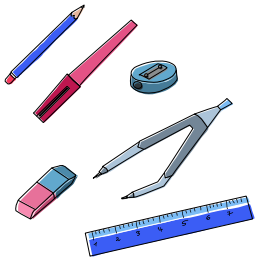
Penryn College

'Belong, Aspire, Succeed'

We do this by:

V	O	I	C	E
VOICE	**OTHERS**	**INQUIRE**	**CRITICAL THINKING**	**EVALUATE**
Express my thinking and share my thoughts	Collaborate with others by listening and connecting ideas	Question and explore deeply	Analyse, Question and reason	Summarise and Conclude
"I think/feel that... because ... " "My view is... because ...."	"Building on what was said..." "That connects to my experience..."	"Can you explain what you mean by...?" "What makes you think that?"	"What evidence supports this?" "Could there be another explanation?"	"The most important point is..." "My thinking has changed because..."

Every lesson | Every discussion | Every student



Equipment List

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Come to every lesson ready to learn!

- Black / blue / red pens (you will need more than one)
- A ruler (15cm minimum)
- Rubber
- Pencils
- Colouring pencils
- Pencil sharpener
- Highlighters
- Glue Stick
- Whiteboard pens
- Geometry set (set square, protractor, compass)
- Scientific calculator
- Water Bottle
- iPad
- Pair of wired headphones for use with iPad

HOW DO I USE MY KNOWLEDGE ORGANISER?

SUMMARISING BIG IDEAS (Cornell Notes)

1. **READ** a full section of your knowledge booklet.
2. I**DENTIFY** the 3–5 most important points — no more.
3. **WRITE** them in your own words, as briefly as possible.
4. **CHECK** against the original — did you miss anything essential?

Focus on the big ideas – if you can explain them clearly, you are more likely to remember the details.

GETTING THE BIGGER PICTURE (Dual coding: Diagrams and text)

1. **READ** a section of your knowledge organiser.
2. **IDENTIFY** the key ideas, processes or events.
3. **DRAW** a simple diagram, timeline, flow chart or visual representation of the information.
4. **ADD** labels, key vocabulary and brief notes to your diagram.
5. **COVER** the original information and explain the diagram from memory.
6. **CHECK** your work against the knowledge organiser and use a different coloured pen to add any missing details.

Using both pictures and words helps your brain make stronger connections and improves long-term memory.

How can parents support?

- Ask your child to summarise a topic in one minute, out loud, with no notes.
- Ask them to show you the diagram version too — does it match what they said?
- Encourage brevity: a summary that's too long usually means the big ideas haven't been picked out yet.

You will use your knowledge booklet regularly throughout this term. You will use this as part of your lessons, your homework and your revision. Your teachers will guide you to which bits of information to focus on at any given time.

ENGLISH – UNIT 1 – Nightmare Worlds

Core Knowledge

By the end of this unit you will know ...

How McGowan and other writers create a nightmarish tone and atmosphere through:

- Personification
- Imagery
- Metaphor
- Simile
- Verbs and adverbs
- Pathetic fallacy
- Foreshadowing
- Allusion
- Symbolism
- Semantic field
- Allegory
- Stalling
- Colloquial language
- Repeated motif
- Ornithological references

How to select and embed quotes.

How to construct a thesis introduction.

How to use similar methods as McGowan to craft the opening part of a story set in a nightmare world.

Scan for Audio of Book

Think Deeper

- How to incorporate dual interpretation
- Interpreting the wilderness as an extended metaphor
- Explore McGowan's views, concerns and attitudes about:

Brotherhood
Childhood
Poverty
Strong bonds
Resilience
Hope & Despair

Keywords

Bleak – cold, empty, without much hope or life
Isolated – far away from other people or places; alone
Merciless – showing no kindness or pity
Insidious – causing harm gradually and stealthily
Pernicious – extremely damaging in a way which is not always immediately obvious
Treacherous – dangerous in its untrustworthy or unpredictable nature
Necrotic - dead or decaying
Post-apocalyptic - a world where a huge disaster has destroyed much of civilisation to a point where it is beyond recognition
Macabre - strange or unsettling because it involves death or horror
Inhospitable – a person or place who is the opposite of welcoming; a hard place to survive

Previous Knowledge and Unit Overview

- In Year 8, you analysed the way Arranmore was described, focusing on the use of personification.
- You practised using embedded quotes and making inferences.
- You explored family relationships.
- You described a moment of conflict.

Why this?

Year 9 will start with a novella that'll keep you on the edge of your seat. Seemingly simple, the story enables us to appreciate the art of building tension. You'll explore a fraternal relationship and develop your understanding of the complex and changing nature of family relationships.

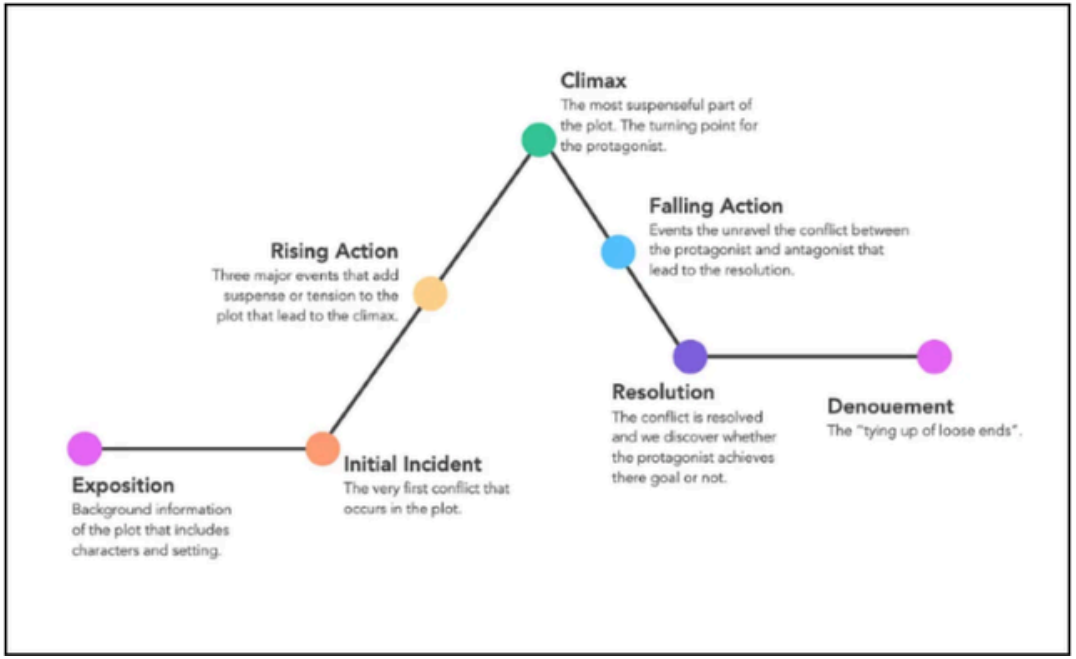
Why now?

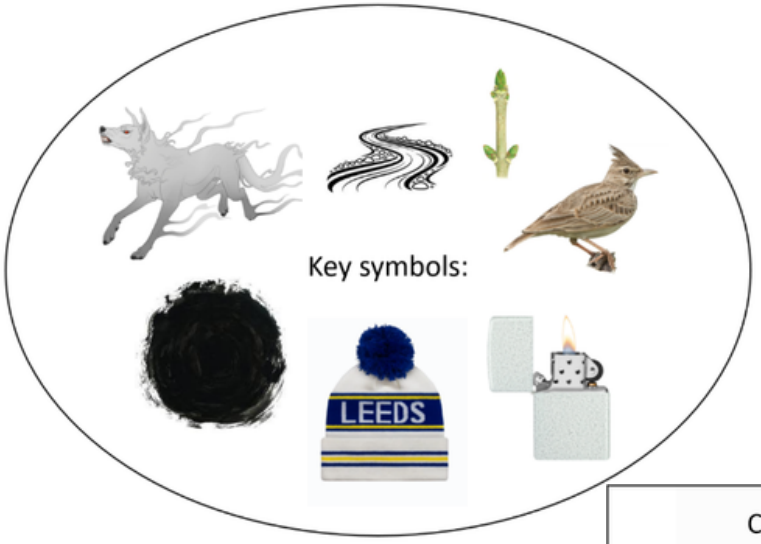
At this point in your journey through literature, you are ready for more complex issues around ableism and to explore how the dystopian genre can address societal concerns.

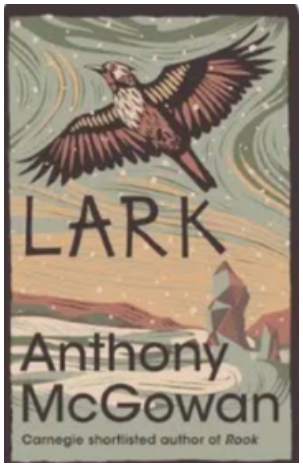
How will you be assessed during this unit?

Reading: An analysis of how a theme is presented in the novella
Writing: The opening of a story

ENGLISH – UNIT 1 – Nightmare Worlds

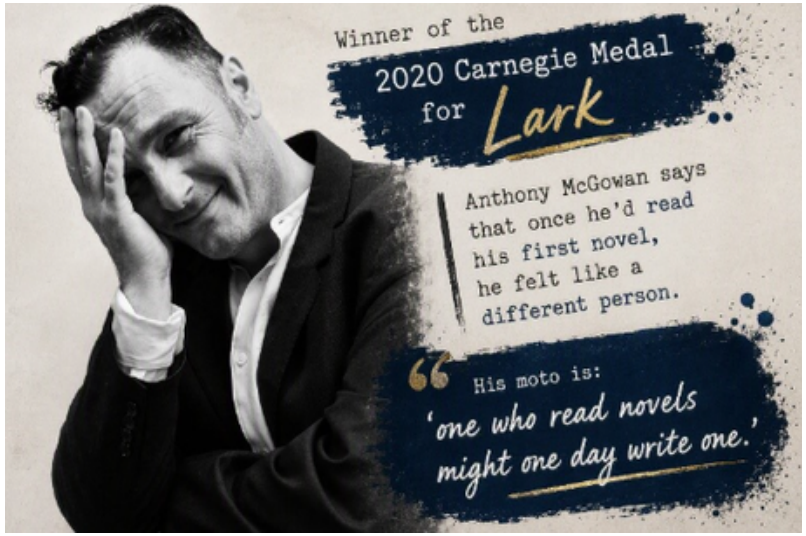






Characters:

Nicky, Kenny, Tina, Mum, Dad, Jenny



MATHS – UNIT 1 – Properties of Number

Core Knowledge

By the end of this unit you will know ...

Properties of Number:

- How to determine the highest common factor (HCF) and lowest common multiple (LCM) by listing
- How to create a prime factor tree to express numbers as a product of primes
- How to sort prime factors into a Venn diagram to use to determine HCF and LCM of large values

Fractions:

- How to add and subtract fractions and mixed numbers
- How to multiply and divide fractions and mixed numbers
- How to calculate a fraction of an amount

Standard Form:

- How to express a large number in standard form
- How to express a small number less than 1 in standard form
- How to compare and order numbers written in standard form

Keywords

Properties of Number:

- **Factor –** a number that divides exactly into another number e.g. 3 is a factor of 12
- **Multiple –** a number that is several lots of another number e.g. 48 is a multiple of 12
- **Prime –** a number with exactly 2 factors: 1 and itself e.g. 2,3,5,7,11
- **Product –** to multiply, e.g. the product of 4 and 6 is 24

Fractions:

- **Numerator –** the top number in a fraction
- **Denominator** - the bottom number in a fraction
- **Reciprocal –** the reciprocal of a number is what you multiply it by to get 1. e.g. 3/5 is the reciprocal of 5/3

Standard Form:

- **Indices –** the power belonging to a number, in standard form we work with powers of 10
- **Express –** an instructional word asking you to “write” the number in a different form

Think Deeper

- Use prime factors to determine whether a number is a square or cube
- Use the vocabulary of union and intersection with regards to Venn diagrams
- Explore rational and irrational numbers including surds
- Multiply numbers written in standard form

Previous Knowledge

In years 7 and 8 you would have covered:

- Listing factors, multiples and primes
- Identifying the HCF and LCM of a pair of numbers
- Adding and subtracting fractions with different denominators
- Multiplying and dividing fractions
- Finding fractions of amounts
- Writing large and small numbers in standard form

MATHS – UNIT 1 – Properties of Number

Adding and Subtracting Fractions

When the denominators are different

Change to equivalent fractions with common denominators, then add or subtract

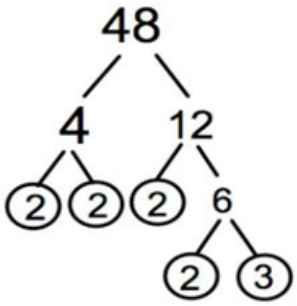
$\frac{1}{3} + \frac{1}{4} =$ $\quad$ $\frac{1}{2} - \frac{1}{5} =$

$\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$ $\quad$ $\frac{5}{10} - \frac{2}{10} = \frac{3}{10}$

Ordinary Number	Standard Form
29	2.9×10^{1}
350	3.50×10^{2}
4716	4.716×10^{3}
600000000	6×10^{8}
0.3	3×10^{-1}
0.09	9×10^{-2}
0.0071	7.1×10^{-3}
0.000502	5.02×10^{-4}

Prime Factor Decomposition

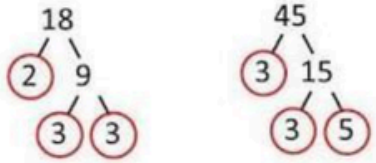
Express 48 as a product of prime factors



$48 = 2 \times 2 \times 2 \times 2 \times 3 = 2^4 \times 3$

Find the **Highest Common Factor (HCF)** & **Lowest Common Multiple (LCM)** of 18 & 45.

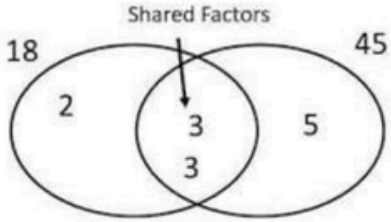
1) Complete Prime Factorisation for both numbers.



$18 = \cancel{2} \times \cancel{3} \times \cancel{3}$

$45 = \cancel{3} \times \cancel{3} \times \cancel{5}$

2) Input the Prime Factors into a Venn diagram



3) **HCF** = Product of **shared** factors

$3 \times 3 = 9$

4) **LCM** = Product of **all** factors in the diagram

$2 \times 3 \times 3 \times 5 = 90$

Multiplying Fractions

STEP ONE $\quad$ STEP TWO $\quad$ STEP THREE

$$\frac{3}{4} \times \frac{1}{2} = \frac{3 \times 1}{4 \times 2} = \frac{3}{8}$$

Simplify?

Dividing Fractions

$$\frac{2}{3} \div \frac{4}{5} \rightarrow \frac{2}{3} \times \frac{5}{4}$$

Keep $\quad$ Change $\quad$ Flip

Step 1: Keep-Change-Flip

$$\frac{2}{3} \times \frac{5}{4} = \frac{2 \times 5}{3 \times 4} = \frac{10}{12} = \frac{5}{6}$$

Step 2: Multiply $\quad$ **Step 3: Simplify**

SCIENCE – UNIT 1 – Energy and Particles

Core Knowledge

By the end of this unit you will know how ...

- To identify energy stores.
- To identify energy transfers.
- To apply the law of conservation of energy.
- To explain how to reduce thermal energy transfers.
- To describe internal energy.
- To calculate efficiency.
- To explain the properties of matter using the particle model and forces of attraction between particles.
- To explain changes of state using the particle model and forces of attraction between particles.
- To describe specific heat capacity and how to calculate it.
- To describe specific latent heat and how to calculate it.
- To describe what gas pressure is and how it can be changed.

Think Deeper

- Compare the similarities and differences between different types of energy and identify the correct equation.
- Interpret heating and cooling graphs that include changes of state.
- Distinguish between specific heat capacity and specific latent heat.

Previous Knowledge

- Energy can be stored and transferred in different ways.
- Temperature depends on the energy of particles.
- Energy transfers by conduction, convection and radiation.
- The particle model explains states of matter and changes of state.
- The particle model explains mixtures and solutions.

Keywords

- **Store of energy** - A store of energy describes the different ways in which energy can be stored.
- **Energy transfer** - An energy transfer takes place when the amount of energy in some stores decreases and increases in others.
- **Thermal conduction** - the transfer of energy through a material due to collisions between moving or vibrating particles.
- **Dissipate** - Friction can cause energy to dissipate (spread out and become unusable) into the surroundings, causing them to heat up.
- **Efficiency** - Efficiency is the fraction of energy supplied to an object or system that is usefully transferred by it.
- **States of matter** - The states of matter are used to describe the three physical states that matter commonly exists in: the solid state, liquid state and the gas state.
- **Forces of attraction** - Forces of attraction are pulling forces that keep particles close together.
- **Melting** - When a substance changes from a solid state to a liquid state.
- **Boiling** - When a substance in the liquid state is heated, gas bubbles form and it changes to the gas state.
- **Pure substance** - A pure substance in chemistry is a single element or compound that is not mixed with any other substance.
- **Heating/cooling curve** - shows temperature changes of a substance over time as it is heated/cooled.
- **Intermolecular forces** - are forces between particles.

SCIENCE – UNIT 1 – Energy and Particles

Energy Stores and Systems

Energy Stores	
kinetic	Moving objects have kinetic energy.
thermal	All objects have thermal energy.
chemical	Anything that can release energy during a chemical reaction.
elastic potential	Things that are stretched.
gravitational potential	Anything that is raised.
electrostatic	Charges that attract or repel.
magnetic	Magnets that attract or repel.
nuclear	The nucleus of an atom releases energy.

Energy can be transferred in the following ways:

mechanically – when work is done;

electrically – when moving charge does work;

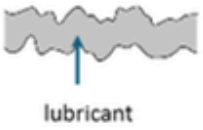
heating – when energy is transferred from a hotter object to a colder object.

Conservation of Energy

Energy can never be created or destroyed, just transferred from one form to another. Some energy is transferred usefully and some energy gets transferred into the environment. This is mostly wasted energy.

Lubrication reduces the amount of friction. When an object moves, there are frictional forces acting. Some energy is lost into the environment. Lubricants, such as oil, can be used to reduce the friction between the surfaces.

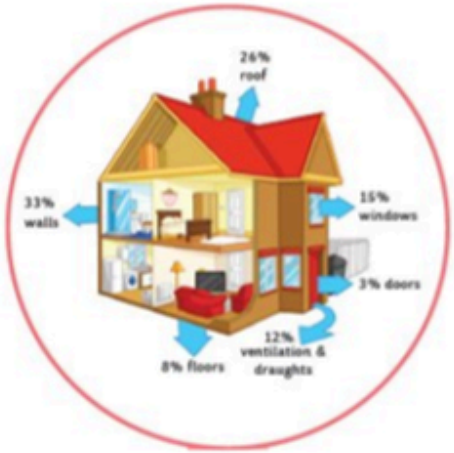
catching;



surfaces parted: no catching

Insulation – reduces the amount of heat lost. In your home, you can prevent heat loss in a number of ways:

- thick walls;
- thermal insulation, such as:
- loft insulation (reducing convection);
- cavity walls (reduces conduction and convection);
- double glazing (reduces conduction).



Efficiency

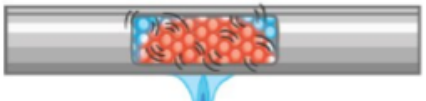
When energy is transferred, some energy is wasted. The less energy that is wasted during the transfer, the more efficient the transfer.

There are two equations to calculate efficiency:

$$\text{efficiency} = \frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$$

$$\text{efficiency} = \frac{\text{useful power output}}{\text{total power input}}$$

Conduction – when a solid is heated, the particles vibrate and collide more, and the energy is transferred.



Convection – when a liquid or a gas is heated, the particles move faster. This means the liquid or gas becomes less dense. The denser region will rise above the cooler region. This is a convection current.

SCIENCE – UNIT 1 – Energy and Particles

AQA Combined Science: **Physics Topic 3 Particle Model of Matter**

Required Practical

Measuring the density of a regularly shaped object:

- Measure the mass using a balance.
- Measure the length, width and height using a ruler.
- Calculate the volume.
- Use the density ($\rho = m/V$) equation to calculate density.

Measuring the density of an irregularly-shaped object:

- Measure the mass using a balance.
- Fill a eureka can with water.
- Place the object in the water - the water displaced by the object will transfer into a measuring cylinder.
- Measure the volume of the water. This equals the volume of the object.
- Use the density ($\rho = m/V$) equation to calculate density.

Density

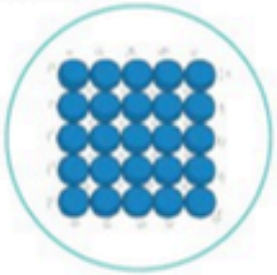
Density is a measure of how much mass there is in a given space.

Density (kg/m^3) = mass (kg) ÷ volume (m^3)

A more dense material will have more particles in the same volume when compared to a less dense material.

Particles

Solids have strong forces of attraction. They are held together very closely in a fixed, regular arrangement. The particles do not have much energy and can only vibrate.



Liquids have weaker forces of attraction. They are close together, but can move past each other. They form irregular arrangements. They have more energy than particles in a solid.

Gases have almost no forces of attraction between the particles. They have the most energy and are free to move in random directions.

Particles

Gas particles can move around freely and will collide with other particles and the walls of the container. This is the pressure of the gas.

If the temperature of the gas increases, then the pressure will also increase. The hotter the temperature, the more kinetic energy the gas particles have. They move faster, colliding with the sides of the container more often.

Density

The density of an object is 8050kg/m^3 and it has a volume of 3.4m^3 - what is its mass in kg?

8050 = mass ÷ 3.4

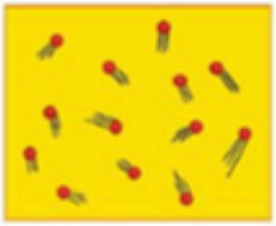
8050 × 3.4 = mass

27 370kg

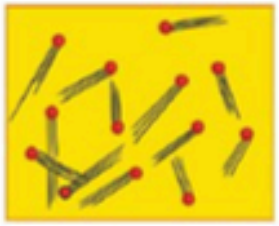
SCIENCE – UNIT 1 – Energy and Particles

Internal Energy

Particles within a system have kinetic energy when they vibrate or move around. The particles also have a potential energy store. The total internal energy of a system is the kinetic and potential energy stores.



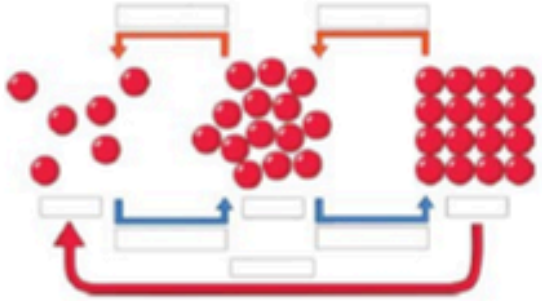
Low Temperature



High Temperature

If the system is heated, the particles will gain more kinetic energy, so increasing the internal energy.

Changing State

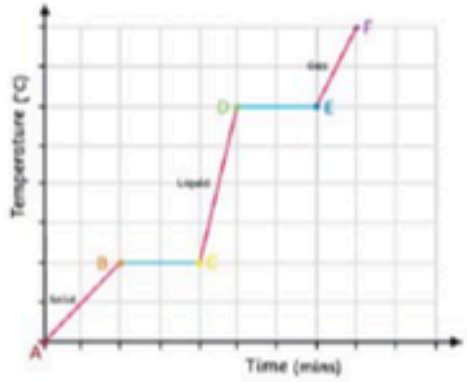


If a system gains more energy, it can lead to a change in temperature or change in state. If the system is heated enough, then there will be enough energy to break bonds.

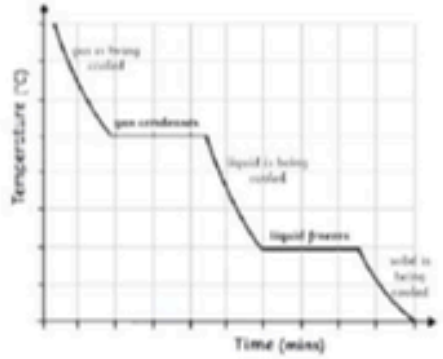
When something changes state, there is no chemical change, only physical. No new substance is formed. The substance will change back to its original form. The number of particles does not change and mass is conserved.

Specific Latent Heat

Energy is being put in during melting and boiling. This increases the amount of internal energy. The energy is being used to break the bonds, so the temperature does not increase. This is shown by the parts of the graph that are flat.



When a substance is condensing or freezing, the energy put in is used to form the bonds. This releases energy. The internal energy decreases, but the temperature does not go down.



The energy needed to change the state of a substance is called the latent heat.

Specific latent heat is the amount of energy needed to change 1kg of a substance from one state to another without changing the temperature. Specific latent heat will be different for different materials.

- solid → liquid - specific latent heat of **fusion**
- liquid → gas - specific latent heat of **vaporisation**

Specific Latent Heat Equation

The amount of energy needed/released when a substance of mass changes state.

energy (E) = mass (m) × specific latent heat (L)

$E = mL$

GEOGRAPHY – UNIT 1 – Conflict

Core Knowledge

By the end of this unit you will know ...

- The Middle East is a region where South Eastern Europe, Western Asia and North Africa meet. It includes the Arabian Peninsula and countries such as Syria, Egypt, Turkey and Iran.
- The Middle East is socially, economically and environmentally diverse. It has valuable oil and gas resources, but these can create conflict and export difficulties.
- The Middle East has a hot, dry climate, with average temperatures above 20°C for 5 months and less than 10mm of rainfall for 6 months.
- Plants such as the dragon blood tree and desert rose are adapted to the hot, dry climate with waxy coatings, few leaves and long roots.
- Syria is in the Middle East and is bordered by Turkey, Iraq, Jordan, Lebanon and Israel. Three main terrain challenges are rivers, mountains and desert.
- One cause of conflict in Syria was the harsh treatment of the "Freedom Boys", who were tortured after writing anti-government graffiti.
- The conflict caused 500,000 casualties, 2 million children out of school, and 90% of people living below the poverty line, reducing quality of life.
- Asylum seekers and refugees leave their homes because of danger and fear for their lives.
- Around 3.5 million refugees moved to neighbouring countries (Turkey, Lebanon and Jordan). Many then travelled northwest towards Europe to seek asylum.

Think Deeper

- Terrain challenges in Syria, especially the mountains and deserts can create difficulties for refugees and troops to cross.
- The region's challenging geography—including deserts and strategic locations at a crossroads of continents—has historically fueled resource conflicts (especially over oil), shaped internal ethnic and religious divides, and facilitated global power struggles.
- Animals such as the jerboa have adapted by burrowing underground and being nocturnal to stay out of the hot sun during the day. They have large feet and a long tail to balance in the sand, and they do not need to drink water to adapt to the dry climate, they get all their hydration from the food they eat.
- The causes of the conflict in Syria also include the unrest from the Arab Spring in many Middle Eastern countries, as well as the poverty and social difficulties caused by poor harvest and increased grain prices. Some people believe that global superpowers wanting control of natural resources such as oil also fueled the conflict.

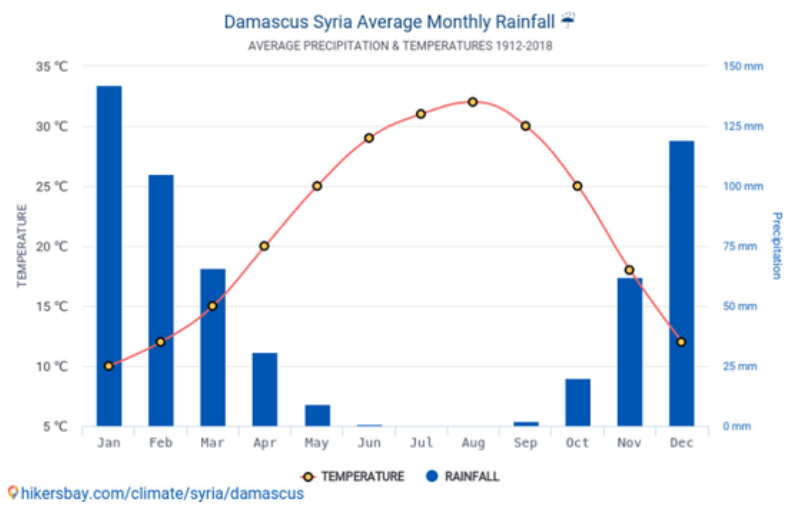
Keywords

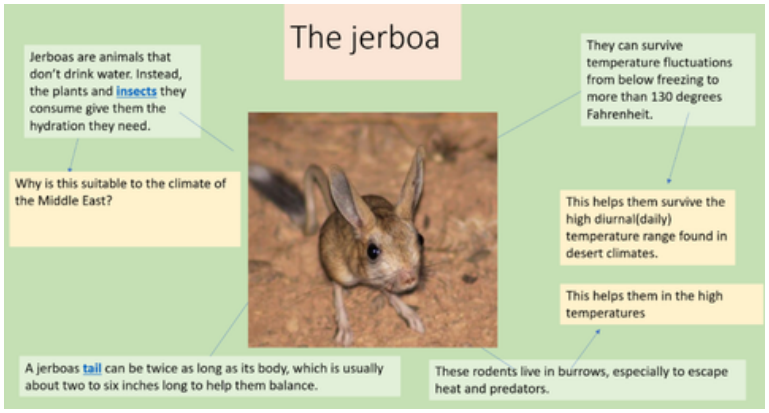
- Asylum Seeker- a person who has left their country (often suddenly) for survival because they cannot get protection there from persecution, war or violence.
- Birth Rate- the number of births per thousand people in a country each year.
- Conflict – a disagreement, fight or war.
- Civil War- a war being fought between two sides within the same country.
- Death Rate- the number of deaths per thousand people in a country each year.
- Development – Process of growth and change for a country, this can be social, economic and environmental.
- GNI per capita – Gross National Income – the total income a country earns each year divided by the population. Measured in US dollars.
- HDI – Human Development Index – the measure of wealth, health and education of a county.
- Indicator – data to measure a country's development.
- Islamic State (IS)- a militant group who use violence against anyone who doesn't agree with their extreme views.
- Life expectancy – the average number of years a person can expect to live in a particular country.
- Literacy Rate – the percentage of adults who can read and write in a country.
- Middle East –a collection of countries located where the continents of Africa, Europe and Asia meet.
- Migrant- a person who has moved to another country, for example to work, study or join family members.
- Quality of life – access to basic happiness (e.g. family, food, water, shelter, health, learning, etc.).
- Rebels- people who want the president to step down and are fighting against government forces.
- Refugee- when a person has officially been granted asylum (safety) in a country, they're legally a refugee.
- Standard of living - The amount of money or wealth you have and the things this allows you to buy (e.g. house, electricity, transport).
- Terrain- the physical features of an area of land.

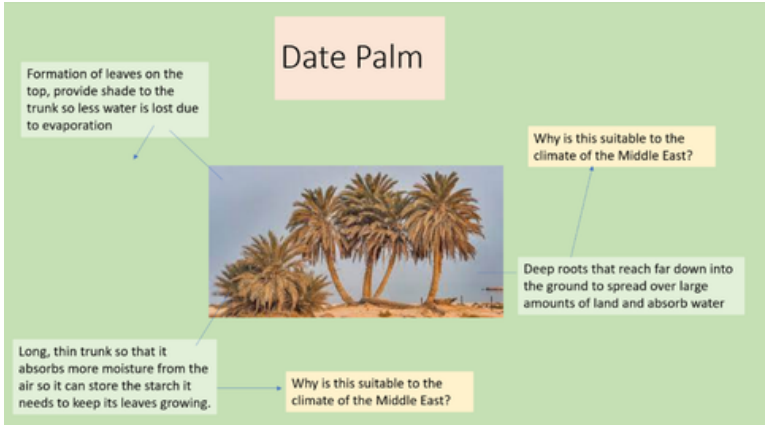
Previous Knowledge

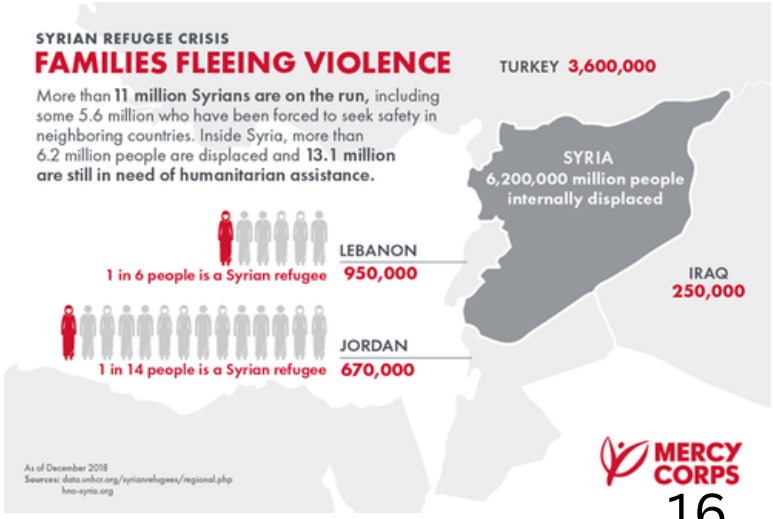
This unit allows us to develop a deeper understanding of the physical and human geography of the Middle East, to gain an understanding of global affairs and empathy for different perspectives. We will explore how conflict can affect a country's development and how this influences the causes, types and consequences of migration. We will link with prior learning on development and India from year 7, as well as globalisation from year 8. As a very sophisticated topic, it will help you to better understand global politics and economics, covered in GCSE Geography. This may also link into your future learning in GCSE History, RE, Sociology and English, in addition to wider subjects such as politics, economics, environmental science and classics.

GEOGRAPHY – UNIT 1 – Conflict









HISTORY- UNIT 1 - Why was there a second world war?

Core Knowledge

By the end of this unit you will know ...

- Chronology: 1 September 1939 (Germany invades Poland), 1940 (Battle of Britain and Dunkirk), June 1941 (Operation Barbarossa), 7 December 1941 (Pearl Harbor), 6 June 1944 (D-Day), 8 May 1945 (VE Day), August 1945 (Hiroshima and Nagasaki), 15 August 1945 (VJ Day).
- Causes of War: How the Treaty of Versailles, Hitler's foreign policy, appeasement, the failure of the League of Nations and the Nazi-Soviet Pact contributed to the outbreak of the Second World War.
- Blitzkrieg: How Germany's use of tanks (Panzers), aircraft (Luftwaffe) and fast-moving infantry led to rapid victories across Europe.
- Key Events: Dunkirk, the Battle of Britain, Operation Barbarossa, Pearl Harbor, D-Day, the Battle of the Atlantic, VE Day and VJ Day.
- Turning Points: Why historians identify events such as Stalingrad, D-Day and the entry of the USA into the war as major turning points.
- Home Front: How the Blitz affected Britain and why historians debate whether the Blitz Spirit was reality or propaganda.
- Technology: The importance of radar, Enigma codebreaking, Hobart's Funnies, Mulberry Harbours, Operation PLUTO and the atomic bomb in influencing the outcome of the war.
- The Pacific War: Why the USA dropped atomic bombs on Hiroshima and Nagasaki, and why historians continue to debate whether this decision was justified.
- Historical Skills: How to analyse sources, compare historical interpretations, make historical inferences, explain cause and consequence, evaluate historical significance, and construct supported historical judgements using evidence.

Think Deeper

Historians know that the Second World War did not begin, change direction or end because of one single reason. They compare different causes, turning points and consequences before deciding which factors were most important. By the end of this unit, you should be able to explain why the war began, judge which events turned the war in the Allies' favour, and use historical evidence to support your conclusions.

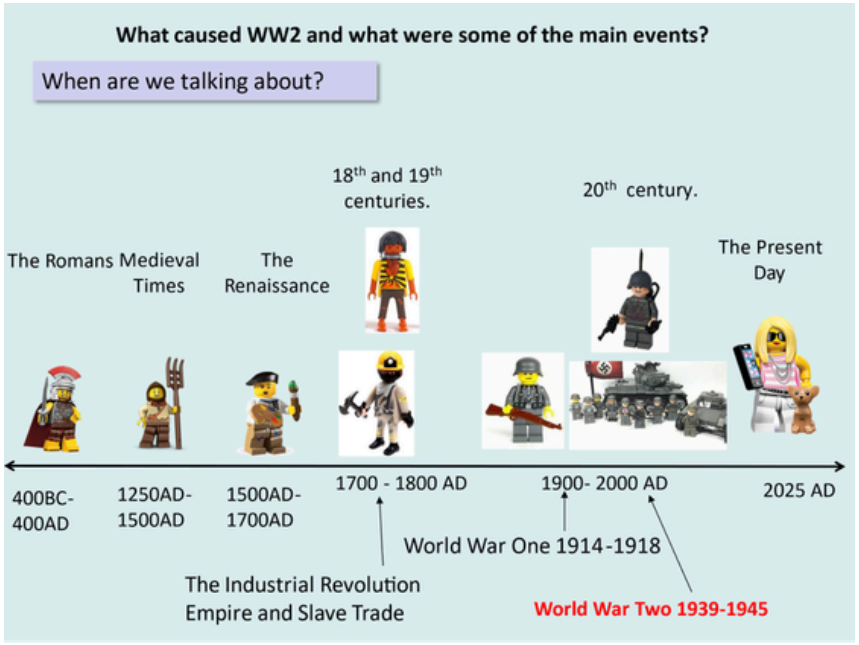
Keywords

- **Appeasement –** A policy of giving in to Hitler's demands to try to avoid war.
- **Treaty of Versailles –** The peace treaty that ended the First World War and placed harsh punishments on Germany.
- **Blitzkrieg –** A fast style of warfare using tanks, aircraft and infantry to quickly defeat the enemy.
- **Luftwaffe –** The German Air Force during the Second World War.
- **Panzers –** German tanks used during Blitzkrieg attacks.
- **Allies –** The countries that fought against Germany, including Britain, the USA and the Soviet Union.
- **Axis Powers –** The countries that fought together during the Second World War, including Germany, Italy and Japan.
- **D-Day –** The Allied invasion of Nazi-occupied France on 6 June 1994.
- **Operation Overlord –** The codename for the Allied invasion of Normandy (D-Day).
- **Pearl Harbour** - The American naval base attacked by Japan on 7 December 1941, bringing the USA into the war.
- **The Blitz –** The German bombing campaign against Britian between 1940 and 1941.
- **Blitz Spritz –** The idea that British people stayed brave and united during the Blitz.
- **Atomic Bomb –** A powerful nuclear weapon used by the USA against Hiroshima and Nagasaki in 1945.

Previous Knowledge

In Years 7 and 8, you learned about chronology, cause and consequence, historical sources and interpretations, as well as the First World War and the Treaty of Versailles. During this unit, you will build on this knowledge by investigating why the Second World War began, how Germany achieved early victories, and why the war eventually turned in favour of the Allies. You will study key events including Dunkirk, the Battle of Britain, Pearl Harbor, D-Day, the Blitz and the atomic bomb. Along the way, you will develop your skills as a historian by analysing sources, comparing interpretations, evaluating significance and using evidence to support historical judgements.

HISTORY – UNIT 1 – Why was there a second world war?



First-hand accounts, photographs, artefacts and articles about every aspect of the Second World War.

Real historical documents, photographs and enquiry activities for students.

Explore remembrance, VE Day, VJ Day and the experiences of those who served.

Learn how Alan Turing and the codebreakers helped the Allies win the Battle of the Atlantic and shorten the war.

Discover how Winston Churchill and the British government directed the war from underground headquarters.

FRENCH – UNIT 1 – Free Time (Tu as du temps à perdre?)

Core Knowledge

By the end of this unit you will know ...

- Perfect Tense – what has happened.
- Near Future tense – what is going to happen.
- Use the 4 key irregular verbs to be, to do, to go and to have with I and You pronouns.
- To use à and de with masculine / feminine / plural nouns when talking about what you do or play.
- Give and justify positive/negative opinions on activities you do in your free time.
- Use -er and -ir verbs in the singular form with the pronouns I, you, he/she
- Say what activities you do on line, how often and why
- Say if you do/don't have an active life and why
- Ask/Answer 5 different questions about TV habits: what, when, why, where and how
- Use the near future tense to say 'I am going to' with different infinitives (unchanged verbs)

Keywords

- What do you like? **Qu'est-ce que tu aimes?**
- What do you do on line? **Que fais-tu en ligne?**
- Do you have an active life? **Est-ce que tu as une vie active?**
- What do you like to watch? **Qu'est-ce que tu aimes regarder?**
- What are you going to do? **Qu'est-ce que tu vas faire?**
- Regular/Irregular verbs - **The pattern/or not verbs take with pronouns**
- Present/Perfect/Near Future - **What happens/has happened/is going to happen**

Think Deeper

Vary pronouns with:

- present tense -er / -ir verbs
- irregular verbs in the present
- near future tense
- perfect tense

Previous Knowledge

In this unit you will deepen your knowledge of the perfect and near future tenses studied in Year 8 and you will develop the sophistication of your language when talking about what you like/dislike doing in your free time.

Activehub Pearson

FRENCH – UNIT 1 – Free Time (Tu as du temps à perdre?)

Present tense of avoir

J' ai
tu as
il/elle/on a
nous avons
vous avez
Ils/elles ont

How is the perfect tense formed?

\+

Past participle of verb

regarder	regardé
finir	fini
entendre	entendu

perfect tense

J'ai fait	I did
J'ai écouté	I listened
J'ai pris	I took
J'ai marché	I walked
J'ai bu	I drank
J'ai joué	I played
Je suis allé(e)	I went

I listen	J'écoute
I share	Je partage
I speak	Je parle
I download	Je télécharge
I search	Je cherche
I play	Je joue
I watch	Je regarde
I buy	J'achète

*je **n'**ai **rien** acheté*	I haven't bought anything
*on **n'**a **rien** vu*	we haven't seen anything

j'aime	je n'aime pas	j'adore	je déteste
❤	😕	❤❤	😕😕

Je fais (de)... I do...

du vélo

de la boxe

de l'athlétisme

de

Je joue (à)... I play...

à

au foot

au tennis

au basket

aux cartes

Qui...?	Who?
Où...?	Where?
Quand...?	When?
Pourquoi...?	Why?
Quoi?!	What?!
Combien...?	How much?
Quel....?	What...?
Comment...?	How?
Est-ce que...?	Do...?
Qu'est-ce que...?	What...?

Le weekend dernier - Last weekend
La semaine dernière - Last week
L'année dernière – Last year

Je suis / Tu es...? I am / You are..?
Je fais / Tu fais...? I do / You do...?
J'ai / Tu as...? I have / You have...?
Je vais / Tu vas...? I go / You go...?

je vais	
tu vas	
il/elle/on va	
nous allons	
vous allez	
ils/elles vont	

verbs

jouer – to play
faire – to do
regarder – to watch
aller – to go
avoir – to have
manger – to eat

SPANISH – UNIT 1 – Free Time (¡Diviértete!)

Core Knowledge

By the end of this unit you will know ...

- Different nationalities (see link to vocab list)
- Present tense for regular verbs ending in -ar, -er and -ir
- Present tense for irregular verbs (jugar, preferir, poder, querer)
- Phonics – pronunciation of c, ñ, ll, h, g, j
- Remember how to change the pronoun: me, te, le, nos, os, les
- 'Tener que' is a phrase that means to have to or must.
- Know the meaning of advanced phrases: 'si tengo tiempo' and 'me ayuda a' (see link to vocab list)
- Use the near future tense to say 'I am going to' with different infinitives
- Use 'quiero + infinitive' and 'puedo + infinitive'

Keywords

- What do you normally do on your phone? **¿Qué haces en tu móvil?**
- What sports do you do? **¿Qué deportes haces?**
- What activities do you like to do in your free time? **¿Qué actividades te gusta hacer en tu tiempo libre?**
- What are you going to do this weekend? **¿Qué vas a hacer este fin de semana?**
- What did you do last weekend? **¿Qué hiciste el fin de semana pasado?**
- Describe an awful day. What happened? **Describe un día fatal. ¿Qué pasó?**

Think Deeper

Using the plural form of:

- Present tense -are/-er/-ir verbs
- Irregular verbs in present tense
- Verbs in near future tense
- Vary pronouns for: gustar, encantar, interesar

Previous Knowledge

In this unit you will deepen your knowledge of the present, preterite and near future tenses studied in Year 8 and you will develop the sophistication of your language when talking about what you like/dislike doing in your free time.

SPANISH – UNIT 1 – Free Time (¡Diviértete!)

In Spanish, there are five vowel sounds and the sound of each vowel is always pronounced the same way. Listen and repeat the sounds and words. Pay attention to the vowel sounds.

'a' → n**a**tación, pr**á**ctic**a**
'e' → t**e**nis, interesant**e**
'i' → cicl**i**smo, div**e**rtido
'o' → balonc**e**st**o**, tranquil**o**
'u' → f**ú**tbol, seg**u**ro

When a word contains two vowels, you usually pronounce each one separately:
nataci**ón**, bu**e**na

siempre / a menudo / a veces / de vez en cuando / casi nunca / nunca

Use **time phrases** and **sequencers** to help structure your text.

por la mañana	*primero*
por la tarde	*luego*
por la noche	*más tarde*
	finalmente

Use complex structures such as ***si*** (if) clauses and ***hay que*** (you must) + infinitive.
Si *te gusta el ruido,* ***hay que*** *ir a …*
If you like noise, **you must** go to …

¿Qué fue ***lo mejor/peor*** *de tu visita?*
Lo + **adjective** means 'the … thing'.

Lo bueno/malo	The good/bad thing
Lo mejor/peor	The best/worst thing

Remember that ***j***, ***ge*** and ***gi*** are pronounced like a stronger version of the English 'h'.
However, the Spanish ***h*** is silent.

Adjectives need to agree with the noun they describe.

*divertid**o***	*divertid**a***	*divertid**os***	*divertid**as***
*interesant**e***	*interesant**e***	*interesant**es***	*interesant**es***
social	*social*	*social**es***	*social**es***

*El fútbol es divertid**o**.* *La natación es divertid**a**.*
*Los deportes de equipo son interesant**es**.*

Remember that ***ll*** has a similar sound to 'y' in English.
Listen and repeat the words.
***ll**evan* *las Fa**ll**as* *orgu**ll**oso*

To say that you have just done something, use the present tense of ***acabar de*** + infinitive.

Acabo de volver *de España.*
I have just returned from Spain.

Acabamos de visitar *Sevilla.*
We have just visited Seville.

Remember how the **present tense** works. Take the infinitive (verb ending in **-ar**, **-er** or **-ir**, which is **not** conjugated). Remove **-ar**, **-er** or **-ir** and add these endings:

	usar (to use)	**leer** (to read)	**subir** (to upload / to get on / to go up)
(yo)	**uso**	**leo**	**subo**
(tú)	**usas**	**lees**	**subes**
(él/ella/usted)	**usa**	**lee**	**sube**
(nosotros/as)	**usamos**	**leemos**	**subimos**
(vosotros/as)	**usáis**	**leéis**	**subís**
(ellos/ellas/ustedes)	**usan**	**leen**	**suben**

Look out for verbs with an irregular 'I' form only:
hacer (to do/make): **hago**, haces, hace, hacemos, hacéis, hacen
salir (to go out): **salgo**, sales, sale, salimos, salís, salen
ver (to see/watch): **veo**, ves, ve, vemos, veis, ven
dar (to give): **doy**, das, da, damos, dais, dan
saber (to know): **sé**, sabes, sabe, sabemos, sabéis, saben

u/o → ue

jugar → juego	**poder** → puedo
j**ue**gas	p**ue**des
j**ue**ga	p**ue**de
jugamos	podemos
jugáis	podéis
j**ue**gan	p**ue**den

e → ie

preferir → prefiero	**querer** → quiero
prefieres	quieres
prefiere	quiere
preferimos	queremos
preferís	queréis
prefieren	quieren

Use the **superlative** to talk about the biggest, the most popular, the best etc.
el/la/los/las + noun + ***más/menos*** + adjective
Sometimes the noun is omitted:

el *[plato]* ***más*** *rico*	the **tastiest** [dish]
las *[fiestas]* ***menos*** *populares*	the **least** popular [festivals]

Note these irregular superlatives:

el/la/los/las	*mejor(es)*	*peor(es)*	*mayor(es)*	*menor(es)*
the	best	worst	biggest	smallest

PE – UNIT 1 – Netball

Core Knowledge

- Students need to understand how tactical awareness and decision-making improve individual and team performance in netball.
- Creating width, depth and support helps teams maintain possession and create attacking opportunities.
- Effective movement around the shooting circle creates space for attackers and limits scoring opportunities for defenders.
- Good footwork and pivoting protect possession, create new passing lanes and improve decision-making under pressure.
- Defenders can dictate attacking play by denying space, forcing attackers into less dangerous areas and anticipating passes.
- Successful shooting depends on movement, timing, shot selection and composure when under defensive pressure.
- Structured centre pass strategies allow teams to gain an attacking advantage immediately after a restart.
- Successful teams constantly communicate, adapt their tactics and make decisions based on the position of teammates, opponents and available space.

Unit Overview

In this unit, students develop their understanding of tactics and strategies to improve performance in competitive netball. They will learn how to create and exploit space, move effectively around the shooting circle, use footwork to protect possession, defend by dictating attacking play, shoot under pressure, and apply structured centre pass strategies.

By the end of the unit, students will confidently select and apply the most effective tactical decisions during competitive game situations.

Keywords

Word	Definition
Spatial Awareness	Understanding where players and space are on the court.
Width	Using the full width of the court to stretch the defence.
Depth	Supporting behind and ahead of the ball to maintain possession.
Passing Lane	The space available for a successful pass.
Pivot	Rotating on the landing foot to create new passing options.
Dictate	Forcing an opponent to make a particular decision or movement.
Deny	Preventing an opponent from receiving the ball or using space.
Anticipation	Predicting what will happen next to gain an advantage.
Shot Selection	Choosing the best opportunity to shoot.
Centre Pass	The restart used after each goal is scored.

Previous Knowledge

Students should already know:

- How to perform core netball skills accurately at speed.
- How to use different leads to create space.
- How to apply the footwork rule under pressure.
- How to defend effectively using quick footwork and recovery.
- How to shoot with speed and accuracy.
- The roles and responsibilities of each playing position.

PE – UNIT 1 – Netball

Netball player positions and playing area

Netball scoring, rules and officials

PE – UNIT 1 – Rugby

Core Knowledge

- Students need to understand how tactical and strategic decisions influence attacking and defensive performance in rugby.
- Rugby is an invasion game where successful teams adapt their tactics to create space, maintain possession, apply defensive pressure, and exploit weaknesses in the opposition.
- Players need to understand how attacking structures, defensive tactics, transitions, and set-piece variations influence the outcome of a game.
- Attacking success comes from recognising space, maintaining continuity through support play, creating overloads, and making effective decisions under pressure.
- Defensive success comes from selecting appropriate defensive tactics, controlled line speed, and contesting possession effectively at the breakdown.
- Players must understand when and why to use different tactical approaches depending on the phase of play, the position on the pitch, and the strengths and weaknesses of the opposition.

Keywords

- **'C' ball –** Where a player runs in behind a player making a hard line to receive the ball out the back.
- **'A' ball –** Where a player runs a hard line and receives the ball.
- **Transition –** The moment a team changes from attack to defence or defence to attack.
- **Blitz Defence –** An aggressive defensive system where defenders move forward quickly to pressure attackers and reduce time on the ball.
- **Drift Defence –** A defensive strategy where defenders move laterally to force attackers towards the touchline while maintaining defensive shape.
- **Defensive Structure –** The organisation and positioning of defenders to prevent attacking opportunities.
- **Attacking Shape –** The positioning and movement of attacking players to create space and support options.
- **Game Management –** Making tactical decisions throughout a match to maximise attacking opportunities and minimise risk.
- **Truck –** A hard carry from a forward pack to gain ground.
- **Hot** – A ball that goes out to the backs to shift the ball wide.

Think Deeper

- How different defensive systems (blitz and drift) are used to counter different attacking strategies.
- Why transition moments often provide the greatest opportunities to attack or regain possession.
- How structured attacking play and set-piece variation create space and exploit defensive weaknesses.
- How effective breakdown decisions influence possession, momentum and territory.
- Why successful teams adapt their tactics throughout a game in response to changing situations and opposition strategies.

Previous Knowledge

Students should already be able to:

- Apply core rugby skills effectively under pressure and at speed.
- Use width, depth and support play to maintain possession.
- Organise attacking and defensive structures during conditioned games.
- Perform safe tackling and compete effectively at the breakdown.
- Communicate effectively and make decisions during competitive game situations.
- Apply invasion game principles in full-sided and conditioned matches.

PE – UNIT 1 – Rugby

Attacking formation

Line out Move

Scrum tactic

U14 – Rugby Rules

Tactics in Rugby

LIFESKILLS– UNIT 1 – Relationships

Core Knowledge

By the end of this unit you will know ...

- What choice, freedom and capacity mean, how to recognise, respect and communicate consent and boundaries,
- How to identify healthy, unhealthy and abusive relationship behaviours, including domestic abuse,
- Why sexual harassment and sexual violence are unacceptable, unlawful and never the victim's fault.

Think Deeper

- what choice, freedom and capacity mean, how to recognise and communicate consent and boundaries, factors people may consider before sexual activity,
- how to identify healthy, unhealthy and abusive relationship behaviours, including domestic abuse, and
- why sexual harassment and sexual violence are unacceptable, unlawful, and never the victim's fault.

Keywords

Essential:

- Choice,
- Freedom,
- Capacity,
- Healthy Relationships,
- Unhealthy Relationships,
- Abusive Relationships,
- Sexual Harassment,
- Sexual Violence,
- Sexual Assault.

Desirable:

- Shared Interests,
- Generosity,
- Boundaries,
- Tolerance,
- Privacy,
- Control,
- Coercive Behaviour,
- Upskirting,
- Intimate Images,
- Unsolicited Content.

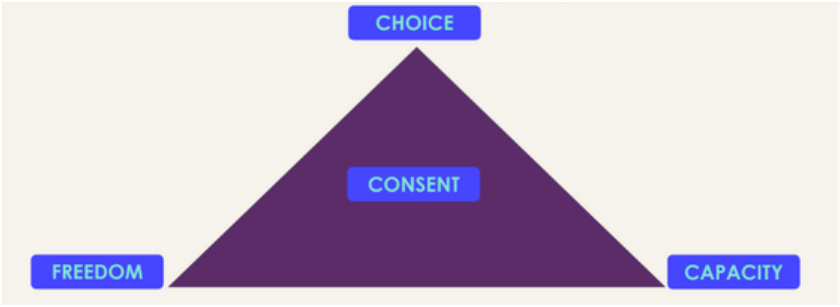
Previous Knowledge

- That positive relationships are based on consent, trust, respect and honesty;
- That people have personal boundaries which should be recognised and respected;
- That some relationship behaviours can be harmful or controlling and may require support from trusted adults or services.

LIFESKILLS – UNIT 1 – Relationships

Independent Learning Lessons

Consent



Healthy Relationships

Unhealthy Relationships

STEAM – UNIT 1 – Automata

Core Knowledge

By the end of this unit you will know ...

- Name motion types and explain linkages
- Isometric Drawing
- Explain how cams convert motion
- Manufacture a wooden frame accurately and safely
- Build and test a crank mechanism
- Develop ideas through prototyping
- Shape and refine a wooden component
- Evaluate a product and process

Keywords

Motion	Rotary	Linear	Oscillating	Reciprocating
Linkage	Pivot	Lever	Cam	Follower
Crank	Axle	Mechanism	Prototype	Design
Manufacture	Measure	Marking	Cut	Drill
Sanding	Shape	Refine	Assemble	Test
Evaluate	Accuracy	Safety	Function	Improvement

Think Deeper

Build a reverse motion linkage and move the fixed pivot point in your model? Explain how this changes the range and type of motion produced.
Think of a real mechanism (a toy, a tool, a machine) that uses a linkage or pivot similar to yours. Describe or sketch how it works and explain what type of motion it produces.
Why is it important to reduce friction in a mechanical system? Name TWO methods you could use to reduce friction in your automata.
Describe ONE problem you found when testing your automata. Explain what caused it and what you did (or will do) to fix it.
Create an additional model of your design, then make one improvement and explain your change.

Previous Knowledge

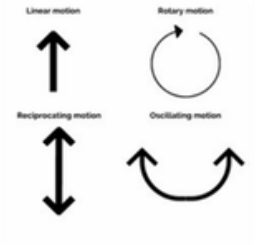
- Workshop safety,
- Use of saws, bench hooks, steel rulers and carpenters squares,
- Half Lap joints,
- Material families and their properties – Wood, Metals, Plastics.

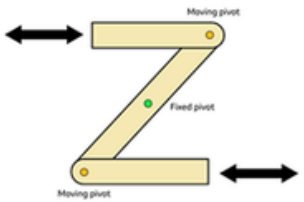
Why this Project?

This scheme of work develops practical design, making and evaluation skills in line with the National Curriculum. It helps students design, make and test products while applying technical knowledge and problem-solving skills.

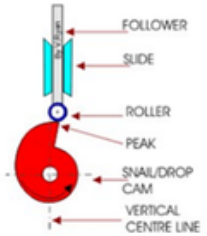
STEAM – UNIT 1 – Automata

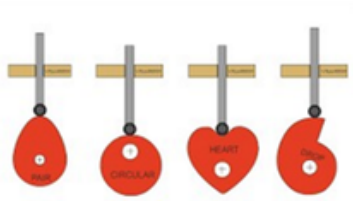
Name motion types and explain linkages





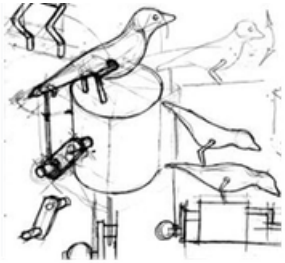
Explain how cams convert motion





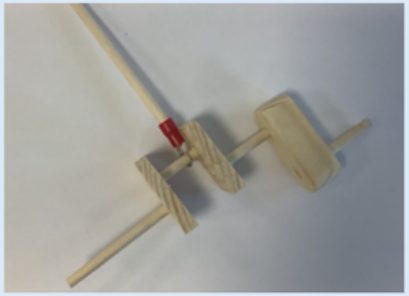
Evaluate a product and process

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



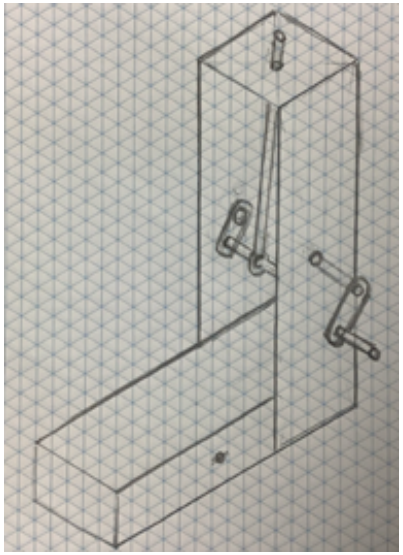
Develop ideas through prototyping

Build and test a crank mechanism



Manufacture a wooden frame accurately and safely.

Shape and refine a wooden component.



Isometric Drawing

STEAM – UNIT 1 – Cybersecurity

Core Knowledge

By the end of this unit you will know ...

- Cybersecurity protects devices, networks and data from unauthorised access, damage or theft — and is one of the UK's fastest-growing career sectors.
- The Computer Misuse Act 1990 makes unauthorised access, access with intent, and unauthorised modification of computer systems illegal.
- Malware (viruses, trojans, spyware, ransomware) and social engineering (phishing, smishing, pharming) both exploit weaknesses — one technical, one human.
- Strong passwords are long and unique; 2FA adds a second layer using something you know, have, or are.
- Every device has a unique IP address similar to a mobile phone number.
- Web addresses get looked up in a system like a phone book called the DNS. The DNS identifies the IP for a given web address.
- Encryption scrambles data with a key, hashing checks integrity, and ciphers such as Caesar and Vigenère encode messages.

Think Deeper

- Malware that has not previously been discovered is called a zero-day attack. As soon as it happens specialists fight back by recording it's signature so they can spot it again.
- A public IP address reveals an approximate location, but never an exact one, only the police can track a precise location.
- Penetration Testers (aka ethical hacker, white hat) use the same techniques as malicious hackers, but with permission, to find and fix security flaws.

Keywords

Cybersecurity	Malware	Computer Misuse Act	Social Engineering
Phishing	Pharming	Smishing	Password
2FA	IP Address	DNS	DHCP
Encryption	Cipher	Hashing	Geolocation

Previous Knowledge

In Y7/Y8 you covered basic e-safety and used Office 365 for digital work — this unit builds on that with the laws, threats and defences behind cybersecurity.

Why this Project?

Cybersecurity protects the systems, money and safety of everyone — from hospitals to your own accounts online — and is one of the UK's fastest-growing career sectors.

STEAM – UNIT 1 – Cybersecurity

The Law & Malware

Mal = Bad
Software = computer program
Malware = bad program

The Computer Misuse Act makes these three actions illegal. **Malware** — viruses, trojans, spyware, ransomware — exploits the same systems.

Passwords & 2FA

Know the password

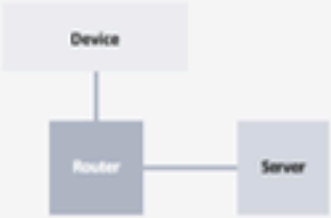
Have the device

Are the person you say

2FA combines something you know, have, and are — far stronger than a password alone.

2 Factor Authentication

Networking & IP



Every device has a unique IP address. DNS translates a web address into the IP address that lets devices find each other.

Staying Safe Online

Combining strong passwords, 2FA, safe Wi-Fi use and trusted payment systems keeps your accounts and devices secure.

Social Engineering

phishing • smishing • pharming

All three trick a person into clicking a link or sharing details — often using urgency or false trust.

Encryption & Ciphers

plain: HELLO

cipher: KHOOR

Caesar shift = 3

Encryption and ciphers scramble data so only someone with the correct key can read it. A Caesar cipher shifts each letter by a fixed number.

STEAM – UNIT 1 – Python Programming

Core Knowledge

By the end of this unit you will know ...

- a variable is a named place in memory that stores a value which can change while a program runs, and must be given a value before it is used.
- a for loop repeats a block of indented code a set number of times, using its counter (e.g. i) to calculate a different position each repeat.
- a nested loop (a loop inside a loop) produces a grid, and the modulo operator (%) finds a remainder, used to test if a number is odd or even.
- a function is a named, reusable block of code that can accept parameters, so the same code can produce different results.
- a list stores several values in order, each with a numbered index from 0, and can grow using .append(); random.choice() picks one at random.
- there are three types of programming error — syntax, runtime and logic — and the error message shows the type and the line it occurred on.

Think Deeper

- Write your own function with two or more parameters and call it with different values.
- Combine a for loop, a list and random.choice() into a working quiz bot.
- Use the modulo operator to stagger a grid pattern, like the stars on a flag.
- Read an unfamiliar error message and identify the type and cause yourself.

Keywords

Variable	Loop	Function	Parameter
Nested loop	Modulo	Index	List
append()	random.choice()	while loop	if/elif/else
Syntax error	Runtime error	Logic error	Debug

Previous Knowledge

In Year 7 and 8 you used block-based programming (Scratch) and simple micro:bit control. This unit moves to Python — a text-based language where you type exact instructions yourself.

Why this Project?

You'll learn to write real Python code — using variables, loops and functions to solve drawing problems and build the American flag — before combining everything to build your own interactive chatbot.

STEAM – UNIT 1 – Python Programming

Variables

A variable is a labelled box that holds a value — and that value can change.

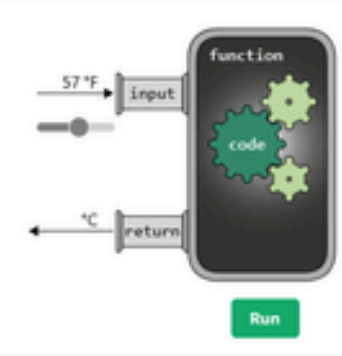
Loops

Repeating a function.

Definite (5 times)

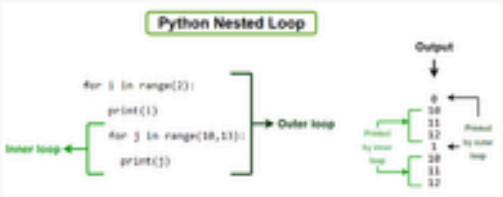
Indefinite (while emperature is more than 30 degrees)

Functions



A function takes in parameters and produces the same output every time it's called.

Nested Loops & Modulo



A nested loop draws a grid; % (modulo) tests odd/even rows to stagger them.

Lists & Randomness

A list stores items by index (from 0); random.choice() picks one at random.

Debugging

Read the error type and line number first — that's where the fix usually is.

STEAM – UNIT 1 – Engineering

Core Knowledge

By the end of this unit you will know ...

- Different Engineering disciplines and how people who work in them are qualified and trained
- Forces acting on structures and the names of structural elements
- How to analyse basic trusses
- Orthographic drawing conventions and symbols
- Advanced Solidworks tools (Loft, Sweep, Revolve, constraints)
- Know what an aerofoil is and how it generates lift
- How we generate electricity from the wind, basic elements of a generator and how it works

Why this Project?

In this set of lessons you will be learning more about engineering as a career path. You will also be gaining knowledge and skill in the use of CAD, structures, renewable energy production and aerodynamics.

Previous Knowledge

- You have used different drawing conventions across year 7 and 8, and used different design tools at a basic level. In this unit you will be developing more advanced skills and knowledge which will allow you to solve more complex problems as an engineer.
- You know about STEAM career paths but this unit will specifically focus on Engineering roles and how you could become trained and qualified in that area.

Keywords

Term	Meaning
Tension	Pulling force that stretches a material
Compression	Pushing or squeezing force that shortens a material
Torsion	Twisting force acting on an object
Shear	Force that causes parts of a material to slide past each other
Truss	Triangular framework used to support loads efficiently
Strut	Structural member designed mainly to resist compression
Weight	Force acting on an object due to gravity (measured in N)
Mass	Amount of matter in an object (measured in kg)
Load	Any force acting on a structure or component
Aerofoil	Wing-shaped profile designed to generate lift in moving air
Orthographic	2D technical drawing showing different views of a 3D object
Generator	Device that converts mechanical energy into electrical energy

Think Deeper

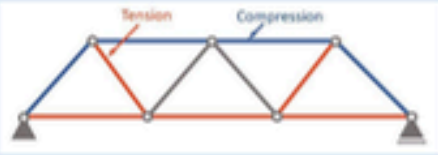
- Applying knowledge in increasingly complex situations requiring inference and exploration
- Simulation of the impact of applied forces in Solidworks
- Efficiency and stress calculations

STEAM – UNIT 1 – Engineering

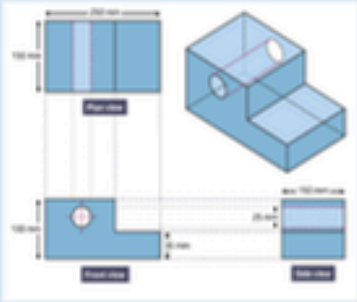
Engineering disciplines

Forces in engineering

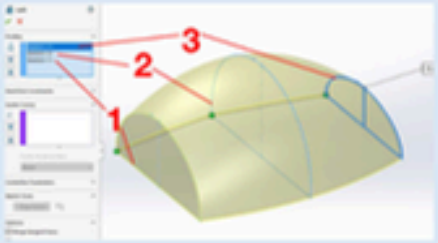
Analysing structures



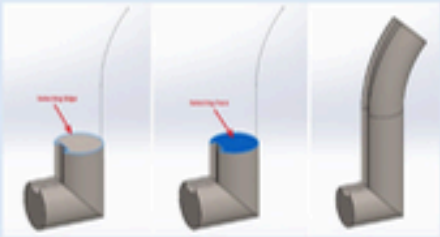
Orthographic drawing



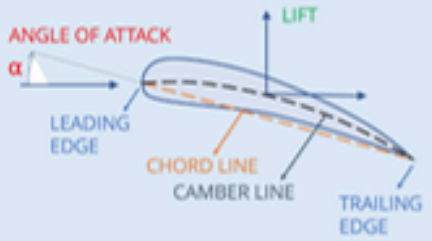
Lofting



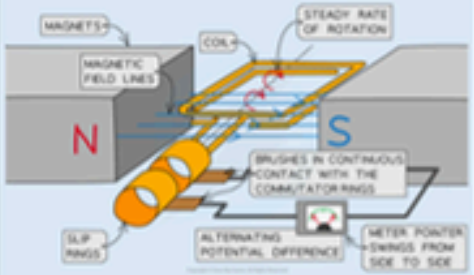
Sweeping



Aerofoils



Generating electricity



FOOD – UNIT 1 – Eat Well For Less

Core Knowledge

By the end of this unit you will know ...
Food choices are influenced by: Cost and rising food prices, availability of ingredients, religious beliefs, ethical and moral beliefs, cultural traditions, health and nutritional needs and personal preferences.
Ways to reduce food costs include: Planning meals before shopping, creating shopping lists, comparing prices, buying seasonal foods, using leftovers, storing food correctly and reducing food waste.
People may follow specialist diets for: Religious reasons (e.g. Halal, Kosher), ethical reasons (e.g. Vegetarian, Vegan) and medical reasons (e.g. allergies, intolerances).
When analysing a recipe consider: Nutritional value, cost of ingredients, sustainability, suitability for dietary needs and ways to reduce sugar, fat or salt.

Think Deeper

- Food prices can rise because of: Increased energy costs, transport costs, extreme weather affecting crops and global supply issues.
- Recipes can be adapted by: Using reduced-fat ingredients, replacing sugar with fruit, baking instead of frying, and increasing vegetables to improve nutrition.

BBC Bitesize Revision

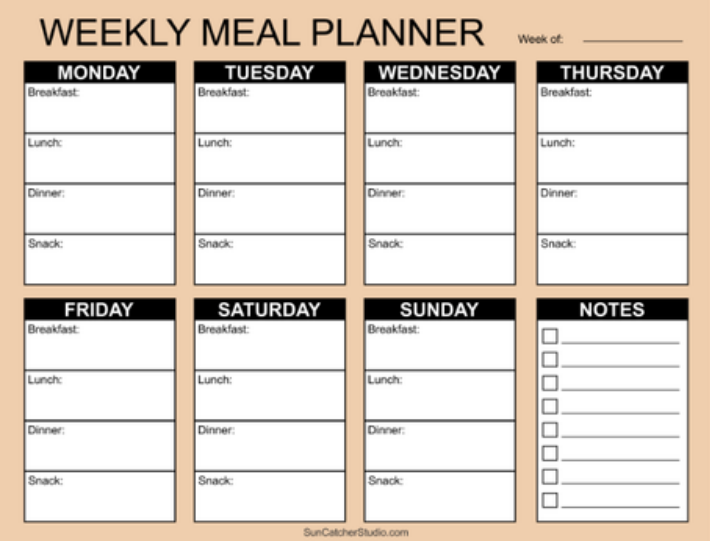
Keywords

- **Nutrients:** Substances in food needed for health and growth**.**
- **Specialist Diet:** A diet followed for health, ethical or religious reasons.
- **Ethical:** Relating to moral beliefs about food production and consumption.
- **Cultural:** Traditions and customs that influence food choices.
- **Consumer:** A person who buys goods and services.

Previous Knowledge

- Lifeskills- Budgeting.
- RE Religious Traditions and dietary requirements.
- Y7 Food Bread Making, Knife skills, Religious dietary requirements.
- The Eat Well For Less project will allow you to review our nutritional needs and the requirements for specific groups of people and specialist diets.
- You will analyse recipes and specific ingredients and develop skills in writing and planning your own recipes. This will include costing ingredients and considering the most ethical and cost effective means of buying your ingredients.
- You will explore ways to be a cost effective consumer, exploring ways to buy and store food to make it last longer and be more effective in recipes.

FOOD – UNIT 1 – Eat Well For Less



ART - UNIT 1 - Abstract Textile Art based on Music

Core Knowledge

By the end of this unit you will know ...

Abstract art communicates ideas through colour, line, shape, pattern and texture. Music can influence visual imagery. Textile techniques including applique, embroidery, printing, layering and fabric manipulation can be used to create expressive abstract outcomes.

- **Line** – stitched and drawn marks.
- **Colour** – fabric and media choices.
- **Shape** – applique and collage.
- **Pattern** – repeated motifs.
- **Texture** – embroidery, layering and printing.
- **Composition** – balance and contrast.
- **Music to Art** – transforming sound into visual and tactile outcomes.

Think Deeper

Explore how Kandinsky connected art and music.
Investigate how textile artists use stitch, fabric and layering to communicate movement, rhythm and emotion.

Keywords

Abstract Art, Synaesthesia, Rhythm, Tempo, Harmony, Composition, Texture, Mixed Media, Applique, Embroidery, Collage, Fabric Manipulation, Patter

Previous Knowledge

In Year 6 you built on the Elements of Art to explore abstract art, music, synesthesia and textile techniques. Inspired by Kandinsky, you creates personal responses using mixed media, fabric and stitch.

Revision Support

Recall key terms, analyse Kandinsky, explain links between music and art, identify textile techniques, and review colour theory and composition.

DRAMA – UNIT 1 – The process of devising

Core Knowledge

By the end of this unit you will know ...
What devising theatre is.

- How stimulus material inspires performance ideas.
- How to identify themes and dramatic conflict.
- How theatrical style influences storytelling.
- How to structure a devised performance.
- How physical theatre develops meaning.
- How rehearsal improves performance.
- How to evaluate drama using subject-specific terminology.
- How theatre-makers refine work through feedback.
- How to communicate meaning to an audience

Think Deeper

- Symbolism
- Non-linear storytelling
- Stylised performance
- Abstract movement
- Dramatic intention
- Practitioner influence
- Audience interpretation

BBC Bitesize – Drama

National Theatre Discover

Keyword	Definition
Stimulus	Something that inspires ideas for a performance.
Theme	The main message or idea explored in a play.
Conflict	A problem or struggle between characters or ideas.
Devising	Creating an original piece of theatre from ideas rather than a script.
Ensemble	A group of performers working together equally.
Physical Theatre	Storytelling using movement and the body.
Narration	Spoken words that explain events to the audience.
Blocking	Where actors move and stand on stage.
Evaluation	Reflecting on strengths and areas for improvement.
Audience Impact	The effect a performance has on the audience.

Previous Knowledge

In Years 7 and 8 you have explored:

- Characterisation
- Freeze Frames
- Narration
- Physical Theatre
- Ensemble Skills
- Storytelling
- Frantic Assembly techniques
- Rehearsal and Evaluation

This unit builds on these skills by creating your own original performance.

DRAMA – UNIT 1 – The process of devising

1 The Devising Process

- STIMULUS
- BRAINSTORM IDEAS
- CREATE CHARACTERS
- DEVELOP CONFLICT
- STRUCTURE SCENES
- REHEARSE
- PERFORM
- EVALUATE

2 What is a Stimulus?

Examples include:

- Image
- Music
- Newspaper Article
- Story
- Theme
- Quote

Questions to ask:

- What is happening?
- Who is involved?
- Why is it happening?
- What could happen next?
- What message could the audience learn?

3 Narrative Structure

- Opening
- Introduce characters
- Problem / Conflict
- Develop the story
- Climax
- Ending / Resolution

A good opening should:

- Introduce characters
- Show the setting
- Create curiosity
- Introduce conflict

4 Drama Techniques

Technique	Purpose
Freeze Frame	Shows an important moment
Narration	Explains the story
Physical Theatre	Uses movement to communicate ideas
Ensemble	Creates teamwork and focus
Transitions	Moves smoothly between scenes
Projection	Ensures everyone can hear

5 Successful Performance Checklist

VOICE

- Projection
- Pace
- Clear articulation
- Appropriate tone

MOVEMENT

- Strong body language
- Facial expressions
- Different levels
- Controlled movement

TEAMWORK

- Everyone involved
- Good timing
- Communication
- Focus

AUDIENCE

- Clear meaning
- Engaging opening
- Interesting staging
- Confident ending

6 Evaluation

WWW (What Went Well?)

- What was successful?
- Which drama techniques worked well?
- How did the audience respond?

EBI (Even Better If...)

- What could improve?
- Was my intention clear?
- Did we work effectively as an ensemble?
- How could we communicate meaning more clearly?

KEY UNIT QUESTION

"How do theatre-makers create original performances that communicate meaning to an audience?"

MUSIC – UNIT 1 – Evolution of Popular Music

Core Knowledge

By the end of this unit you will know ...
Popular music is music that lots of people enjoy, is easy to listen to and remember, and is usually made for a big audience in styles like pop, rock, hip-hop, dance, R&B, reggae, country, and electronic music.
To understand and demonstrate how the elements of music are used in Popular Music. To be able to perform in a band using Tonality, Melody, Harmony, Rhythm, Texture, Structure, and Instrumentation.

Think Deeper

Triad Chords - chords made up of three notes: the root, the third, and the fifth, played together to create harmony.
Sampling - is when part of an existing song is taken and reused in a new piece of music, often in music production or remixes to create new tracks.
Arrangement/Cover - is when a musician creates their own version of an existing song by changing things like the instruments, style, or structure.
Chord progression – a pattern of chords played one after another in a piece of music.
Extended Chords - chords with extra notes added to make them sound more interesting i.e. 7th chords.
Cadence is a chord change that sounds like a pause or full stop at the end of a phrase.
Sequence – when a musical idea or pattern is repeated at a higher or lower pitch.
Conjunct (moves by step) Disjunct (moves in leaps).
Inversions - when the notes of a chord are rearranged so a different note is the lowest (bass) note, instead of the root.
Fade-Out – music gradually gets quieter until it disappears.
Hook – a short, catchy musical idea or phrase designed to grab the listener's attention.

Keywords

- **Tonality** - the key or scale a piece of music uses (e.g. major or minor), which helps create its overall mood.
- **Harmony** - is when two or more notes are played or sung at the same time, often using chords and a bass line, to support the melody and create a richer, fuller sound.
- **Melody** - a catchy tune, often sung by the singer.
- **Texture** - how many layers of sound there are in music and how they fit together (e.g. melody, chords and bass).
- **Structure** - how a piece of music is organised into sections and put together i.e. verse-chorus.
- **Rhythm** - the pattern of long and short notes grouped together to create the "feel" of the music.
- **Instrumentation** - the choice of instruments used in a piece of music and how they are used together.
- **Chords** - three or more notes played together to create harmony and support melody i.e. C major chord (C, E, G).
- **Bass line** - the lowest part in a piece of music, usually made up of single notes, that supports the chords and harmony.
- **Riff** - a short, repeated musical pattern that is catchy and often forms a main idea in a piece of music.
- **Repetition** - is when a musical idea or section is played more than once to make it familiar, catchy, and help structure the piece.

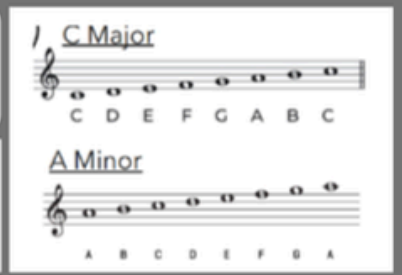
Previous Knowledge

Year 8 Unit 1 (Blues): Melody, Chords, Bass
Year 8 Unit 3: (Reggae): Simple Harmony, Chords & Bass Lines

MUSIC – UNIT 1 – Evolution of Popular Music

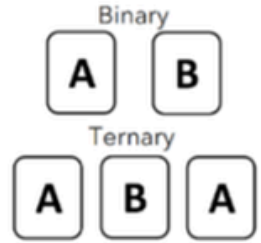
Tonality

The scale (group of notes) used in a piece of music



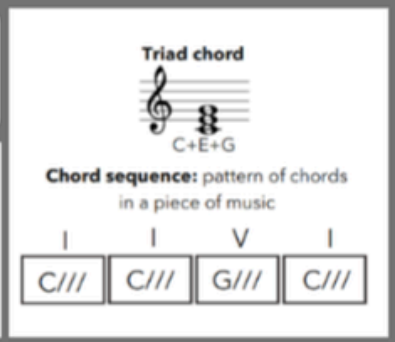
Structure

How a pair of music is organised



Harmony

When two or more notes are played together



Melody

A pattern of different note durations and pitches

Words to describe melody: Step, leap, rise and fall

Instrumentation

The instruments that are used in a piece of music and their role

Rhythm

A pattern of different note durations

= 4 beat rhythm

Scan for BBC Bitesize Revision Support

RE – UNIT 1 – 'Why don't Hindus want to be reincarnated and what do they do about it?'

Core Knowledge

By the end of this unit you will know ...

- Hinduism is an ancient collection of faiths which began in India.
- Hindus call the universal being Brahman and believe Brahman is represented in many different forms. Brahman lives inside every living thing as atman.
- Hindus believe that we are stuck in a cycle of Samsara. We are reincarnated many times, depending on our karma.
- Hindus want to break free from the cycle of Samsara and achieve Moksha.
- Hindus use texts such as The Bhagavad Gita and The Ramayana to teach them how to achieve Moksha.
- One way of gaining good karma is by doing your Varnashramadharma.
- Hindu beliefs about Samsara influence their thoughts, words and actions.
- Hindus follow The Four Paths of Yoga to lead them towards Moksha: Karma yoga, Bhakti yoga, Jnana yoga and Astanga yoga.
- Hindus follow The Four Aims to lead them towards Moksha: Dharma, Kama, Artha and Moksha.

Keywords

- **Samsara –** The cycle of birth, life, death and rebirth
- **Caste/ Varna –** Social status from birth
- **Dharma –** Right conduct/duty
- **Karma –** Law of cause and effect
- **Moksha –** Final goal when your soul is freed from Samsara
- **Brahman –** The Hindu word for God or ultimate being
- **Deity –** A form of God
- **Ahimsa –** Non-violence
- **Ashrama –** Stage in life
- **Atman –** The inner spirit dwelling in every living being; part of Brahman
- **Varnashramadharma–** Dharma rules and customs for each stage of life and each Caste
- **Yoga–** A path to reaching the divine
- **Purusharthas –** 4 aims in a Hindu's life
- **Artha–** earning money honestly
- **Kama –** pleasure from the beauty of life

Think Deeper

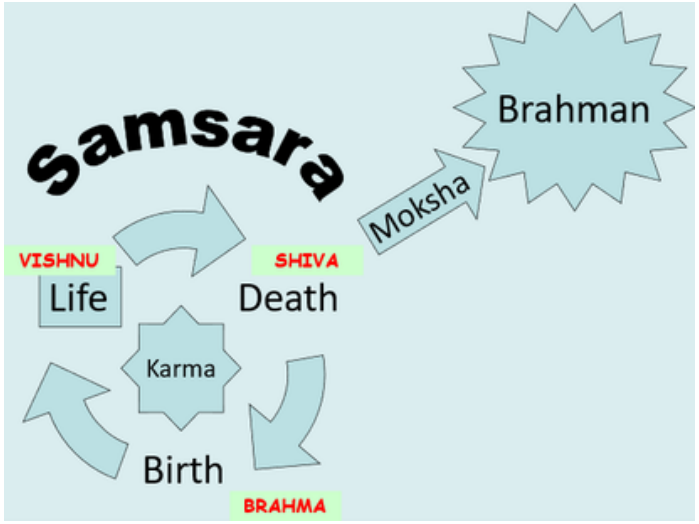
- Some Hindus don't like the term 'Hinduism' and prefer 'Santana Dharma', showing that they follow an eternal way of life, rather than a certain set of beliefs.
- Brahman is by nature impossible to describe, so 'God' is not an ideal translation; many Hindus see Brahman as more of a universal principle.
- Dharma means more than a duty you have to perform, rather it is about the inner essence of something.Eg, the dharma of sugar is to be sweet.
- Many modern Hindus challenge aspects of Varnashramadharma as they seek to reconcile traditional Hindu ideas and modern life.

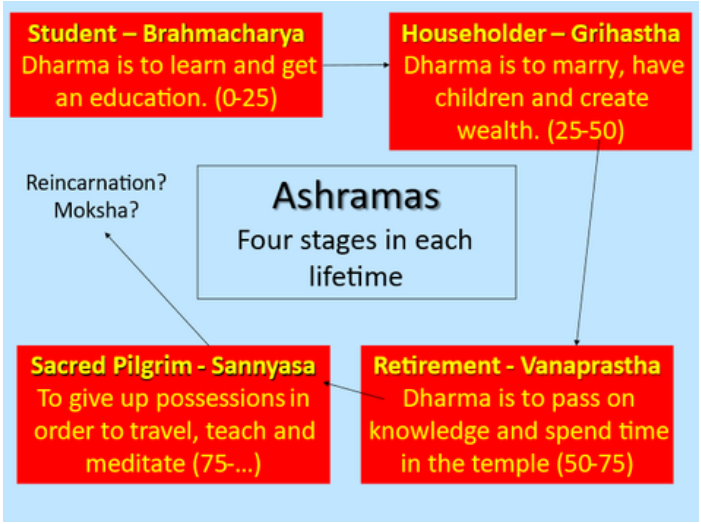
Previous Knowledge

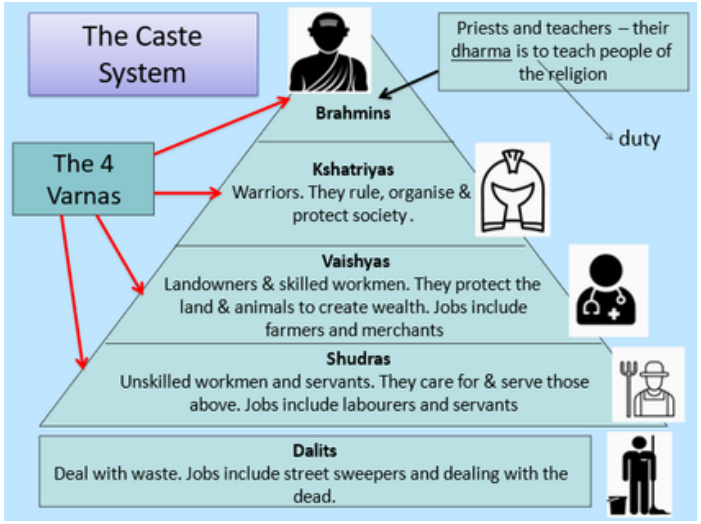
- We will be going deeper into some major Hindu philosophical questions. We will look at some of the central beliefs of Hindus and you will make links to other dharmic worldviews that you have studied in Year 7 (Buddhism) and Year 8 (Sikhism).
- You will be able to see how a religious or philosophical belief links to how people act and live their lives. This will be important as we go on to study our other Year 9 units- Human Rights and Crime and Punishment (Y9).

RE – UNIT 1 – 'Why don't Hindus want to be reincarnated and what do they do about it?'

The Om symbol which represents Brahman and the sound that started the universe. The main symbol of Hinduism







BBC Bitesize facts about Hinduism

Vidoes of young Hindus talking about their life and faith

A tour around the Hindu temple

Virtue	Explanation	Memory icon
Dharma	The religious duty of a Hindu	
Artha	To gain and use material wealth in a morally correct way	
Kama	To enjoy the pleasures in life	
Moksha	Liberation from rebirth (samsara)	

4 Paths of Yoga

Karma Yoga
Path of action

Jnana Yoga
Path of knowledge

Bhakti Yoga
Path of devotion

Raja Yoga
Path of discipline

PERIOD 4: PERSONAL DEVELOPMENT – Unit 1 – Living Values

Core Knowledge

By the end of this unit you will know ...

- How values are demonstrated through choices.
- Why seeking help is a sign of strength.
- The difference between hearing and active listening.
- How inclusion and exclusion affect belonging.
- The principles of British Values.
- Why liberty has limits in a fair society.
- How to set and review values-led goals.

Think Deeper

- A barrier to seeking help, and how to overcome it.
- Why listening is undervalued vs speaking.
- Should rules apply the same to everyone, always?

Go deeper through: your Finding My Voice whiteboard tasks and weekly reflections

Keywords

Analyse - Examine how parts relate.	**Empathy** - Sharing how someone else feels.
Inclusion - Making everyone feel they belong.	**Liberty** - Freedom within the law.
Democracy - Everyone's voice and vote matters.	**Justify** - Give reasons for a choice.
Authentic - Genuine; true to yourself.	

Previous Knowledge

Y8: values, stereotypes, discrimination.

We are reading

The Dark Lady by Akala
Themes: Family, Magic, Loneliness, Race and Class in Elizabethan England

In Life Skills: Relationships

- Understand consent, choice and boundaries.
- Recognise unhealthy and abusive behaviours.

Foundations for the Future

We are developing our skills in Showing Respect and Taking Responsibility

- Be Kind and Understanding
- Be Respectful
- Be responsible