Knowledge Goals Homework Booklet (Autumn 2)

Year 9 and 10

Name: _____

Settlebeck School

Respect | Responsibility | Aspiration

Subject Index

Suggested Homework Schedule
(30 minutes of independent study per subject each week)

	Subjects to Revise	
Monday	Science	Option 2
Tuesday	Mathematics	Option 2
Wednesday	Science	Tier 2 Vocab
Thursday	English	Option 3
Friday	Option 3	Mathematics
Saturday	Option 1	English
Sunday	Option 1	Mathematics

To help you get organised, we have planned out your weekly homework slot for each subject.

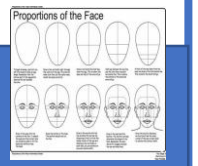
Subject Homework Frequency Information

Subject	Homework
Art	Fortnightly
Computer Science	Fortnightly
Design and Technology	Fortnightly
Drama	One per half term
English	Weekly
Food Technology	Weekly
French	Weekly
Geography	Fortnightly
History	Fortnightly
Mathematics	Weekly
Music	Once per half term
PSHE	Once per half term
Physical Education	One per half term
Religious Studies	Weekly
Science	Weekly

HOW TO SELF TEST

Mind mapping

- Mind mapping is simply a diagram to visually represent or outline information.
- Use information gathered from your Knowledge Goals booklet to create mind maps, make sure to use colour and images and keep writing to the bare minimum.



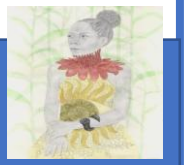
HOW TO MIND MAP VIDEO

Parent information on knowledge retrieval:

Flash cards

Use your Knowledge Goals booklet to make flash cards. Write the questions on one side and on the other record the answer.

Test yourself or work with a friend to make sure you know all of the key information for each topic.



HOW TO FLASH CARD VIDEO

How should students use the Knowledge Goals booklets?

Your **Knowledge Goals** booklet provide the essential knowledge that you need to learn in each subject this half term.

You are expected to spend **30 minutes per subject per week** 'learning' the content.

You will be assessed during lessons using 'low stake' quizzing.

Your teacher may choose to set you additional homework.

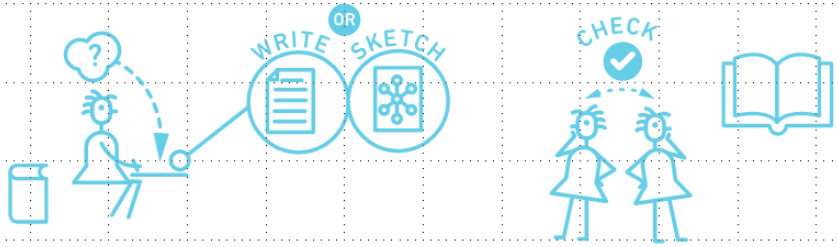
How can parents support?

- Read through the booklet with your child – if you don't understand the content then ask them to explain it to you – 'teaching' you helps them to reinforce their learning.
- Test them regularly on the spellings of key words until they are perfect. Get them to make a glossary (list) of key words with definitions or a list of formulae.
- Read sections out to them, missing out key words or phrases that they have to fill in. Miss out more and more until they are word perfect.

Retrieval Practice

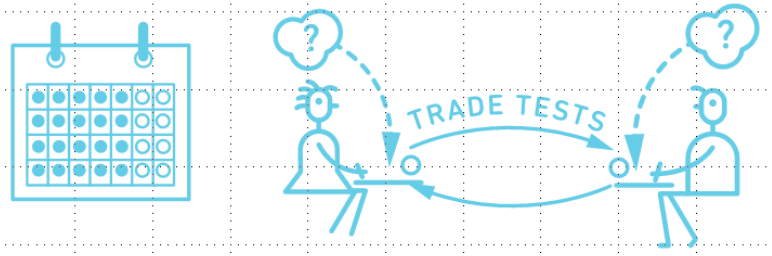
HOW TO DO IT

Put away your class materials, and write or sketch everything you know. Be as thorough as possible. Then, check your class materials for accuracy and important points you missed.



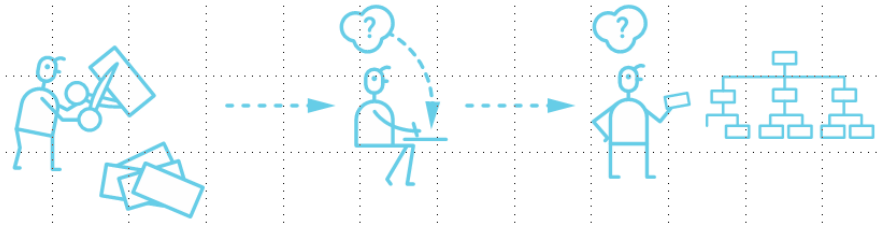
HOW TO DO IT

Take as many practice tests as you can get your hands on. If you don't have ready-made tests, try making your own and trading with a friend who has done the same.



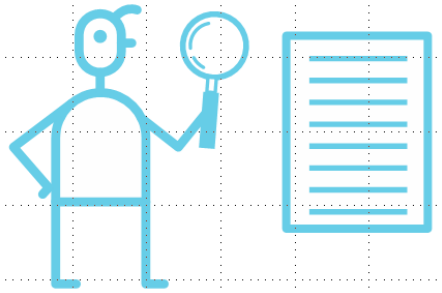
HOW TO DO IT

You can also make flashcards. Just make sure you practice recalling the information on them, and go beyond definitions by thinking of links between ideas.



HOLD ON!

Retrieval practice works best when you go back to check your class materials for accuracy afterward.

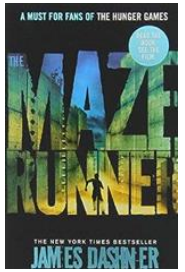


Literacy: Tier 2 Vocabulary

Tier 2 Vocabulary		
	Key word	Definition
1	deteriorate	To make or become worse or inferior in condition, character, quality, value, etc.
2	hamper	To hold back; hinder; impede.
3	shift	To put (something) aside and replace it by another or others; change or exchange.
4	pledge	A solemn promise or agreement to do or refrain from doing something
5	sparse	Thinly scattered or distributed.
6	teeming	Abounding or swarming with something, as with people.

These words are all tier 2 words; in other words, they are seen as 'academic vocabulary' and if you know them, can understand them and use them, you will do better in your exams and be able to communicate more precisely and effectively in life.

DEAL Year 9 (Autumn Term)

Book Title	Author	Genre	Overview	Image
Maze Runner	James Dashner	Science Fiction (Dystopian Adventure)	The first three books in the pulse pounding Maze Runner series! When the doors of the lift crank open, the only thing Thomas remembers is his first name. But he's not alone. He's surrounded by boys who welcome him to the Glade - a walled encampment at the centre of a bizarre and terrible stone maze. But the maze is just the beginning ...	
British Values	Tolerance	Individual Liberty	Rule of Law	Democracy	Mutual respect
Touching the Void	Joe Simpson	Non-fiction Adventure	Touching the Void is a heart stopping, true account of Joe Simpson's terrifying adventure in the Peruvian Andes. He and his climbing partner, Simon, reached the summit of the remote peak, Siula Grande. A few days later, Simon staggered into base camp, exhausted and frost-bitten, with news that Joe was dead. What really happened to Joe makes not only an epic of survival but a compelling testament of friendship.	
British Values	Tolerance	Individual Liberty	Rule of Law	Democracy	Mutual respect

DEAL Year 10 (Autumn Term)

Book Title	Author	Genre	Overview	Image
All Quiet on the Western Front	Erich Maria Remarque	War Novel	In 1914 a room full of German schoolboys, fresh-faced and idealistic, are goaded by their schoolmaster to troop off to the 'glorious war'. With the fire and patriotism of youth they sign up. What follows is the moving story of a young 'unknown soldier' experiencing the horror and disillusionment of life in the trenches.	
British Values	Tolerance	Individual Liberty	Rule of Law	Democracy	Mutual respect
The Woman in Black	Susan Hill	Gothic Horror Novel (Ghost Story)	The Woman in Black is a horror story about a young lawyer who encounters a vengeful ghost. Arthur Kipps is sent to a remote village in England to sort out the affairs of a deceased woman, but he soon discovers that her house is haunted by a mysterious woman in black. The ghost terrorizes the villagers and kills their children, and Arthur must find a way to stop her before she claims his own son.	
British Values	Tolerance	Individual Liberty	Rule of Law	Democracy	Mutual respect

British Values

British Values: What They Mean for Us

British values are the important ideas that help make the UK a fair, safe, and respectful place for everyone. These values shape how we live together and treat each other. Here's a simple breakdown of the key British values:

Democracy

- Democracy is all about having a voice. In the UK, we get to vote in elections to choose our leaders and decide on important issues. Everyone's opinion matters!
- At school, this means having the chance to express your views, take part in decisions, and have your voice heard.

The Rule of Law

- The rule of law means that everyone must follow the law, no matter who they are. Laws help keep us safe and ensure that everyone is treated fairly.
- At school, we follow rules that help keep our environment respectful and safe for everyone.

Individual Liberty

- Individual liberty is about having the freedom to make your own choices, as long as they don't harm others. It's about having the freedom to think for yourself, express your opinions, and be who you are.
- At school, you can express yourself, pursue your interests, and have the freedom to make choices about your learning.

Mutual Respect and Tolerance

- Mutual respect means valuing other people's opinions, feelings, and beliefs, even if they're different from your own. Tolerance is about accepting people for who they are and being open to different cultures, ideas, and traditions.
- At school, we show respect by listening to each other, understanding differences, and creating a welcoming and friendly environment for everyone.

Equality

- Equality means treating everyone fairly, no matter their background, gender, race, or beliefs. Everyone should have the same opportunities to succeed.
- At school, we support equality by making sure everyone has the same chances and is treated with respect, regardless of who they are.

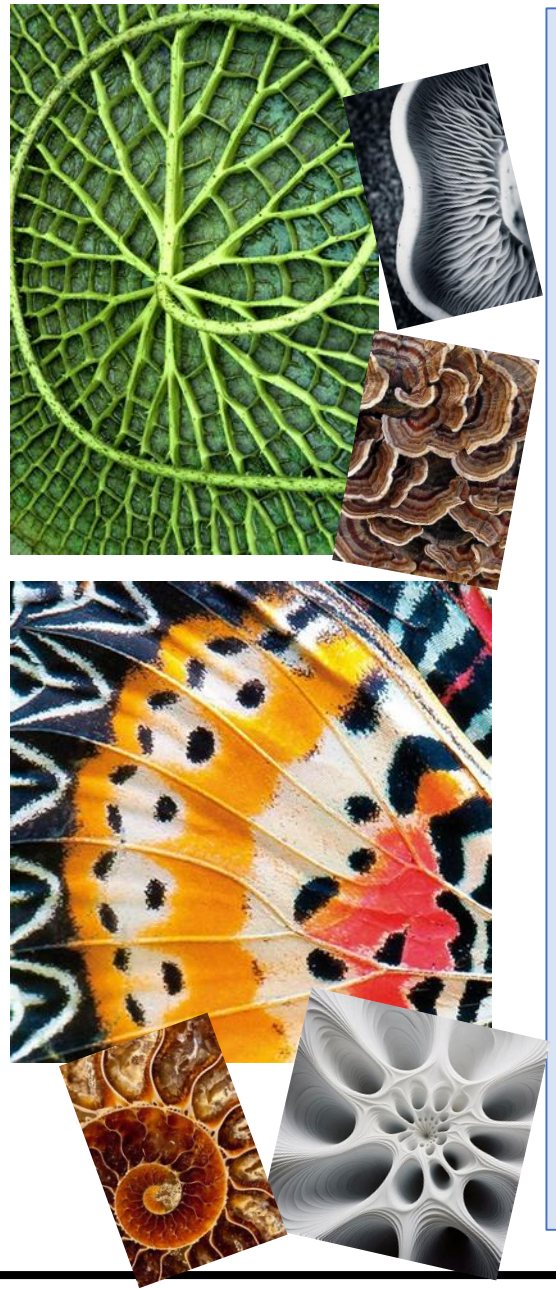
How British Values Apply to Us at Settlebeck

At Settlebeck, we bring British values to life by encouraging respect for each other, celebrating diversity, and working together to create a positive school community. These values help us create a safe and supportive space where we can all learn and grow, respecting each other's differences and making sure everyone feels included. By living these values, we can all contribute to making Settlebeck a great place to learn, where everyone has the chance to thrive!

Year 9 and 10 Knowledge Goals: ART Natural Forms

Natural Forms in Art
Natural forms are shapes, patterns, and structures found in the natural world — for example, plants, flowers, trees, shells, rocks, water, animals, and the human body. In art, studying natural forms helps students observe, record, and interpret the world around them creatively.

10 Artists Who Use Natural Forms
1. **Georgia O'Keeffe (1887–1986)** – Famous for close-up paintings of flowers and plants, exploring colour, shape, and detail.
2. **Ernst Haeckel (1834–1919)** – Scientific illustrations of plants, sea creatures, and microscopic organisms, highlighting intricate patterns.
3. **William Morris (1834–1896)** – Textile and wallpaper designer inspired by flowers, leaves, and other natural motifs.
4. **Andy Goldsworthy (b. 1956)** – Environmental artist creating temporary sculptures and land art from leaves, stones, ice, and wood.
5. **Henri Rousseau (1844–1910)** – Painted lush jungles and plants, often using imaginative and stylised forms.
6. **Claude Monet (1840–1926)** – Impressionist painter known for his water lilies and gardens, capturing light and natural forms.
7. **Ernst Ludwig Kirchner (1880–1938)** – German Expressionist who included organic and forest forms in expressive, abstracted ways.
8. **Ansel Adams (1902–1984)** – Photographer focusing on natural landscapes, patterns, and textures in the environment.
9. **Toni Grand (1935–2005)** – Sculptor who worked with stones, wood, and other natural materials to emphasise form and texture.
10. **Henri Matisse (1869–1954)** – Used plant and flower motifs in his cut-outs and paintings, often simplifying natural forms into bold shapes and colours.



Tier 3 Vocabulary – Natural Forms
1. **Organic Shapes** – Shapes that are irregular, flowing, and often found in nature, like leaves or shells.
2. **Pattern** – Repeating visual elements such as shapes, lines, or colours found in natural forms (e.g., veins of a leaf).
3. **Texture** – The surface quality of an object, which can be actual (tactile) or implied (visual).
4. **Form** – A three-dimensional object or the illusion of three dimensions in drawing and painting.
5. **Composition** – The arrangement of elements (shapes, lines, colour, texture) within an artwork.
6. **Botanical Illustration** – Detailed, accurate drawings of plants used for study or scientific purposes.
7. **Symmetry** – Balanced proportions in shapes or patterns, often found in flowers, leaves, and shells.
8. **Abstraction** – Simplifying or exaggerating natural forms to create a non-literal representation.
9. **Observation** – Carefully looking at and recording details from real-life natural forms in drawings or studies.
10. **Scale** – The size of an object or form in relation to other objects or to life size.
11. **Contour** – The outline or edge of a natural form, often drawn to capture shape and proportion.
12. **Motif** – A recurring element, shape, or pattern, often inspired by nature, used in artwork or design.
13. **Negative Space** – The empty space around or between natural forms that helps define the composition.
14. **Naturalistic** – Artwork that represents natural forms realistically, with attention to accurate detail.
15. **Stylisation** – Altering natural forms to create a decorative or simplified effect rather than realistic representation.

Year 9 and 10 Knowledge Goals: ART Natural Forms

Top Tips for Drawing Natural Forms (Pencil & Pen)

1. Observe Carefully
- Look closely at your subject. Notice shapes, patterns, textures, and proportions.
- Use a magnifying glass if needed to see small details like leaf veins or shell ridges.

2. Start Lightly
- Begin with **light, loose lines** to sketch the basic shape and structure.
- Don't worry about mistakes — you can refine or darken lines later.

3. Focus on Shapes and Contours
- Break down complex forms into **simple shapes** (circles, ovals, triangles).
- Draw the **contour lines** to capture the edges of your natural form.

4. Add Texture
- Use **hatching, cross-hatching, stippling, or scribbling** to show surface texture.
- Think about how rough, smooth, soft, or spiky the object feels.

5. Pay Attention to Light & Shadow
- Observe where the light hits the form and where shadows fall.
- Use shading with pencils or varying pen lines (thin vs thick) to show depth.

6. Look for Patterns
- Many natural forms have **repeating patterns** (leaf veins, petals, shells).
- Focus on these patterns to make your drawing more detailed and realistic.

7. Experiment with Line Quality
- Change line thickness or style to show depth or emphasis.
- Pen drawings rely on **line variation** instead of shading.

8. Use Negative Space
- Pay attention to the **empty spaces** around the object — they help define shapes.

9. Take Your Time
- Natural forms often have intricate details. Don't rush; slow observation improves accuracy.

10. Combine Pencil & Pen
- Start with pencil for light structure and shading.
- Add pen over the top for final lines, contrast, and detail.

[Natural Forms Artists to Use in the Art Classroom - The Arty Teacher]

[140 Natural Forms (art GCSE) ideas | natural form art, art, art inspiration]

[Nature on our doorstep: the art of British natural history | Natural History Museum]

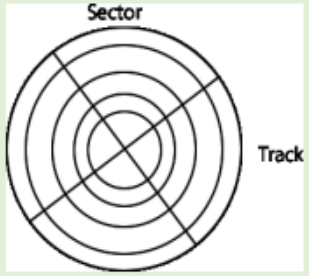
Year 9 and 10 Knowledge Goals: Computer science (Computer Systems)

Secondary Storage

Secondary storage is necessary for saving files long and software including the operating system. Even when the computer is turned off, the data remain unchanged, and can be accessed again once the power supply has been turned on.

Magnetic Hard Disk

- Tracks on the disk platters contain tiny magnets, each holding 1 bit of data.
- The polarity (negative or positive) of the magnets determines whether the bits are 0 or 1.
- The write head modifies the polarity of the magnet as appropriate.
- The read head identifies whether each magnet is negative or positive.
- The tracks are laid out as a series of concentric rings.



Advantages

- Cheap form of storage

Disadvantages

- Less reliable because it contains moving parts that can break
- Electromagnetic surge can corrupt the data held
- Slow speed of read/write access

Optical Disks

- Tracks on the disk contain pits and lands.
- The track is a spiral.
- A laser is emitted and the laser light is reflected when it hits the lands, but is scattered when it hits the pits.
- Depending on whether the light is scattered light is encoded as a binary value of 0 and reflected light is encoded as a 1.
- The sensor is able to detect light reflected, but not scattered.
- Example: Blue-Ray (25 Gb) DVD (4.7 Gb), CD (700 Mb).

Advantages

- Can transfer easily between computers

Disadvantages

- Can scratch easily
- Not much storage compared with other methods.
- No unlimited writes to the hard disk

Solid state Drive

- Use millions of switches called floating gate transistors on microchips to store data.
- Electrons are stored in gates and this is encoded as 0 when there is an electron present and encoded a 1 when there is no electron present.
- The electros remain trapped even when there is no flow of electricity.
- Contain no moving parts and are therefore more robust that optical and magnetic storage.

Advantages

- Much faster that other means of storage
- More reliable than other means if you are only reading
- Quiet

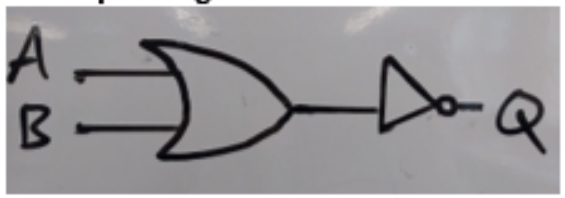
Disadvantages

- More expensive per volume of storage
- Reliability might be an issue if you do a lot of writing

Year 9 and 10 Knowledge Goals: Computer science (Computer Systems)

Logical operations

Example Logic Circuit



OR gate followed by NOT gate to make a NOR gate

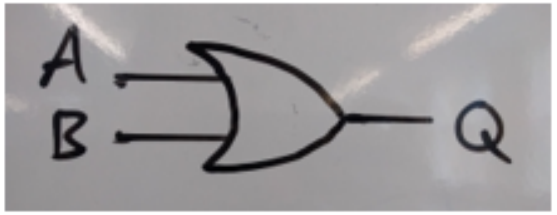
The fundamental logical operations are:

- not (inversion)
- and (conjunction)
- or (disjunction)

Hardware components are built from **logic gates** which have been connected together into **logic circuits**.

OR

Gate



Truth table

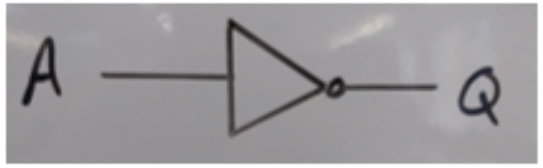
A	B	Q
0	0	0
1	0	1
0	1	1
1	1	1

Boolean expression

$$Q = A + B$$

NOT

Gate



Truth table

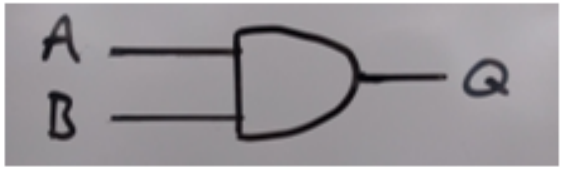
Input (A)	Output (Q)
0	1
1	0

Boolean expression

$$Q = \overline{A}$$

AND

Gate



Truth table

A	B	Q
0	0	0
1	0	0
0	1	0
1	1	1

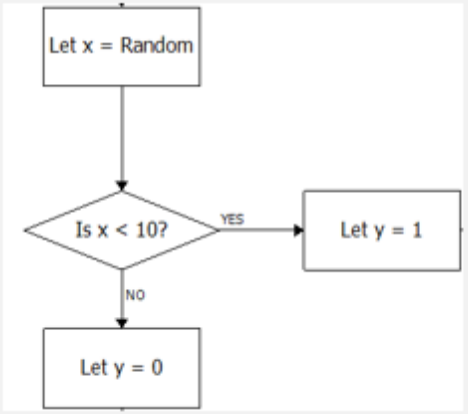
Boolean expression

$$Q = A.B$$

Year 9 and 10 Knowledge Goals: Computer science (Programming)

Selection represents a decision in the code according to some condition. The condition is met then the block of code is executed otherwise it is not. Often alternative blocks of code are executed according to some condition.

```
x=RANDOM_INT()
IF  x < 10 THEN
 y=1
ELSE
 y=0
ENDIF
```



IF ...	IF i > 2 THEN
	  j ← 10
	ENDIF
		if i > 2:
		  j=10

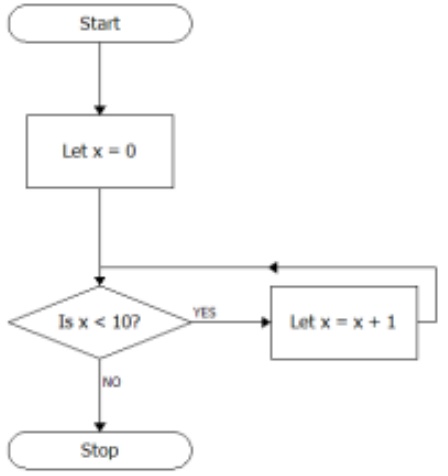
IF ... ELSE ...	IF i > 2 THEN
	  j ← 10
	ELSE
	  j ← 3
	ENDIF
		if i > 2:
		  j=10
		else:
		  j=3

IF ... ELSE IF ... ELSE	IF i ==2 THEN
	  j ← 10
	ELSE IF i==3
	  j ← 3
	ELSE
	  j ← 1
	ENDIF
		if i ==2:
		  j=10
		elif i==3:
		  j=3
		else:
		  j=1

Iteration Sometimes we wish the code to repeat a set of instructions

`WHILE` loops are used when the we do not know beforehand the number of iterations needed and this varies according to some condition.

```
x = 0
while (x < 10):
      x = x + 1
```



`while True:`
`  print("Hello World")`
	`WHILE TRUE`
	`  OUTPUT "Hello World"`
	`ENDWHILE`

`a=0`
`while a<4:`
`  print(a)`
`  a=a+3`
	`a ← 0`
	`WHILE a < 4`
	`  OUTPUT a`
	`  a ← a + 3`
	`ENDWHILE`

`FOR` loops are used when we know before hand the number of iterations we wish to make.

`for a in range(3):`
`  print(a)`
	`FOR a ← 0 TO 3`
	`  OUTPUT a`
	`ENDFOR`

Nested structures - Use constructs (e.g. `WHILE`, `FOR`, `IF`) inside another.

use a nested FOR loop to print out a grid	`for i in range (10):`
	`  for i in range (10):`
	`  print ("x ",end="")`
	`  print()`

Use a nested while and if to print out only even numbers	`i=0`
	`while i<51:`
	`  if (i%2==0):`
	`  print(i)`
	`  i=i+1`

Debugging

Syntax errors – Errors in the code that mean the program will not even run at all. Normally this is things like missing brackets, spelling mistakes and other typos.

Runtime errors – Errors during the running of the program. This might be because the program is writing to a memory location that does not exist for instance. eg. An array index value that does not exist.

Logical errors - The program runs to termination, but the output is not what is expected. Often these are arithmetic errors.

Test data

Code needs to be tested with a range of different input data to ensure that it works as expected under all situations. Data entered need to be checked to ensure that the input values are:

- within a certain range
- in correct format
- the correct length
- The correct data type (eg float, integer, string)

The program is tested using normal, erroneous or boundary data.

Year 9 and 10 Knowledge Goals: Computer Science

Tier 3 Vocabulary		
Key word		Definition
1	secondary storage	The part of the computer that stores data long term that is not currently being used by the processor
2	I/O (Input / Output)	Refers to input, any method of getting information into the computer, and output, any method of getting data out of the computer.
3	logical operator	The name of a logic circuit (AND, OR, NOT)
4	logical expression	A text based method of describing a logic circuit
5	truth table	A way of describing the output of a logic circuit for all possible inputs
6	logic gate	A physical device which performs a logical operation
7	logic circuit	Two or more logic gates connected together to solve a problem or perform a task
8	data type	The kind of information we are dealing with. Data can be integer, float (which is a kind of real number), string, chart, or boolean.
9	boolean	A kind of data than can only be True or False.
10	iteration	Repetition, looping.
11	variable	A container for information. This is how we tell Python to remember data. Variables can change.

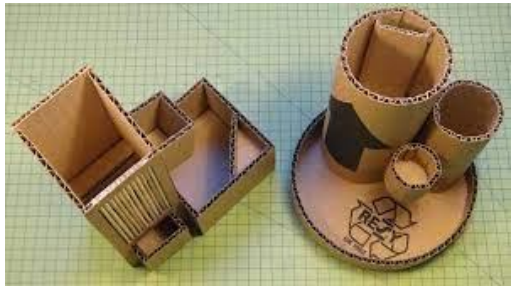
Notes:

Year 9 and 10 Knowledge Goals: Design and Technology

CAD/CAM Desk Tidy

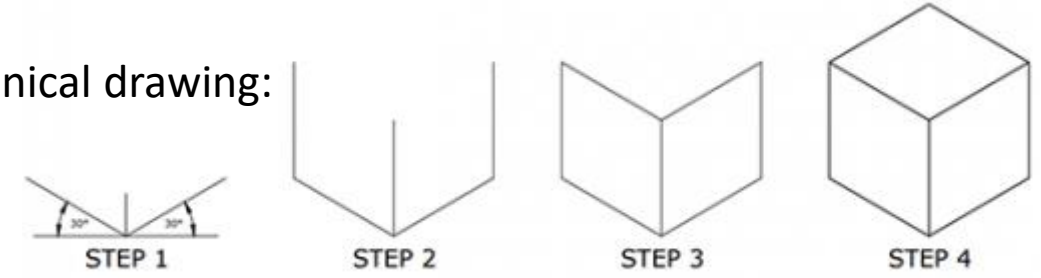
Design and make a desk tidy in the style of the Memphis movement or Alessi.

Inspiration helps you generate new ideas and develop fresh and unique solutions to design problems. You can create unique designs that capture attention by exploring new ideas and perspectives.



Card modelling, create and test a prototype. Use card and masking tape.

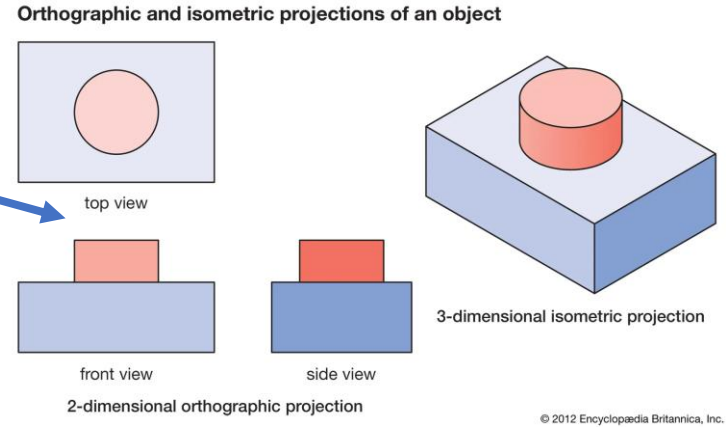
Types of technical drawing:



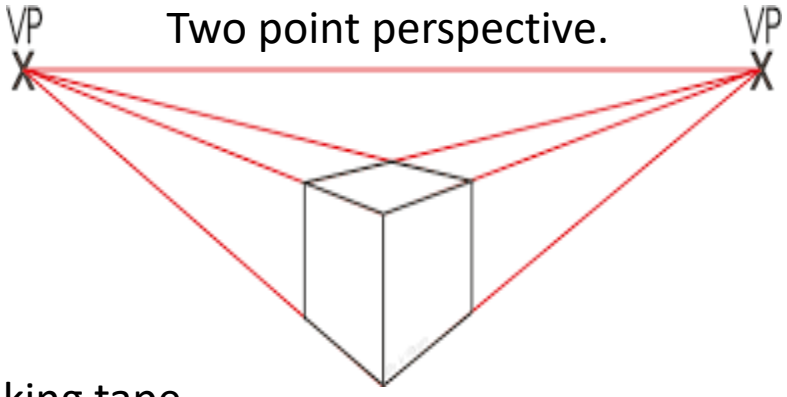
Isometric.

Orthographic

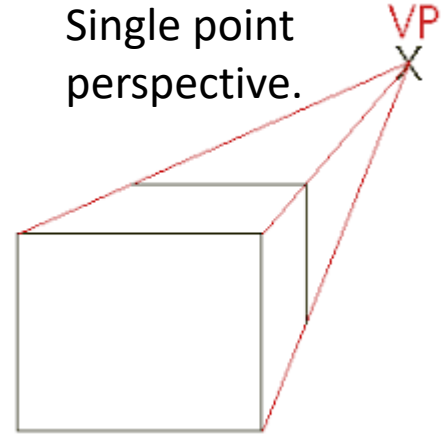
Isometric Grid



Two point perspective.



Single point perspective.



Year 9 and 10 Knowledge Goals: Design and Technology

Tier 3 Vocabulary		
Key word		Definition
1	modelling	The activity of making three-dimensional models.
2	prototype	A prototype is an early sample or model to test a concept or process.
3	isometric	Visually representing three-dimensional objects in two dimensions in technical and engineering drawings.
4	orthographic	A drawing in which a three dimensional object is represented in two dimensions.
5	perspective	The representation of three-dimensional objects or spaces in two dimensional artworks.
6	technical drawing	A detailed, precise diagram or plan that conveys information about how an object functions or is constructed.
7	design movement	Movement in art and design where a group represents a certain style.
8	inspiration	The process of being mentally stimulated to do or feel something, especially to do something creative.
9	memphis	A 1980s design aesthetic characterised by scattered, brightly coloured shapes and lines.
10	alessi	A design company that produces items by famous, well known designers who apply their own style and experience to each piece.

Notes:

Year 10 Knowledge Goals: Drama (Musical Theatre)

Musicals - Facts

1. Musicals use singing, dancing, and talking to tell stories. They are meant to be entertaining and are usually lighter and funnier than opera. They have easy melodies – audiences could sing along.

2. Early musicals were influenced by jazz and swing music while lots of musicals from the 1970s onwards used rock music.

3. The types of musicals that are around today began in the 1920s and developed into the 21st Century.

4. The genre started out on Broadway, a famous theatre street in New York. Later ones were shown in London's West End.

Types of Musicals

Book Musical

Musical numbers and dances are fully integrated into a proper narrative with defined dramatic goals. A book musical is normally made up of three major elements; music, lyrics and script (book).

Jukebox Musical

Created using pre-existing songs. These songs are put together to create a story. The songs may all be by the same artist or group, but a jukebox musical can also be created by blending music by different artists. The songs can be sung in their original state; however the lyrics or the music can be adapted slightly to make them fit in better with the story. E.g We Will Rock You or Mamma Mia.

Revue

Combines singing, dancing, music and sketches. The contents of a revue are normally linked together by a common theme. Although a revue can have a storyline, this is usually weak and is normally considered to be secondary to the content of individual pieces and performances within the revue.

Concept Musicals

A theme, metaphor or concept is just as important as the overarching plot and the featured songs. The concept musical became particularly popular during the 1960's when directors and playwrights sought to throw traditional theatrical structures out in favour of experimentation and freedom of expression. Directors and playwrights will often use their concept to make some sort of social commentary. E.g Avenue Q.

Rock Musical / Rock Opera

Rock musicals or rock operas are productions which use more modern styles of music to tell a story. Although the music is usually original for the production, it may be influenced by or written by famous rock musicians. The use of rock-style tunes also helps to make an 18th Century story seem more relatable to modern day audiences.

Year 10 Knowledge Goals: Drama (Musical Theatre)

Tier 3 Vocabulary		
Key word		Definition
1	chorus	A group of performers
2	libretto	the words and lyrics to a musical
3	dance break	included in a song for a dance routine
4	triple threat	someone who can sing, dance and act
5	narrative	the story of the dance
6	phrase	a short sequence of linked movements
7	transitions	movements linking phrases or sections
8	choreography	the sequence of steps and movements in dance
9	dynamics	the qualities of movement based upon variations in speed, strength and flow

Notes:

Year 9 and 10 Knowledge Goals: English (Racism and Injustice)

‘Just Mercy’ (Bryan Stevenson)

Bryan Stevenson is an American lawyer and the founder and executive director of the Equal Justice Initiative, fighting poverty and challenging racial discrimination in the criminal justice system.

Lawyer Bryan Stevenson gives a first-person account of his decades helping marginalized Americans who have been unfairly and harshly punished by the U.S. criminal justice system, which disproportionately targets people of color and poor people. At the heart of Just Mercy is the story of Walter McMillian, a Black man who was framed for the murder of a girl named Ronda Morrison, convicted, and sent to death row.

- He has challenged bias against the poor and minorities in the criminal justice system, especially children.
- He has helped achieve United States Supreme Court decisions that prohibit sentencing children under 18 to death or to life imprisonment without parole.
- He has assisted in cases that have saved dozens of prisoners from the death penalty, has advocated for the poor, and developed community-based reform litigation aimed at improving the criminal justice system.

TED Talk

‘To kill a Mockingbird’ (Harper Lee)

Harper Lee, writer of “To Kill a Mockingbird”

- Nelle Harper Lee (April 28, 1926 – February 19, 2016) an American novelist who wrote the 1960 novel *To Kill a Mockingbird*.
- Her second novel, *Go Set a Watchman*, is an earlier draft but not published until July 2015.

The plot and characters of *To Kill a Mockingbird* are loosely based on Lee's observations of her family and neighbours in Alabama, as well as a childhood event that occurred near her hometown in 1936. The novel deals with racist attitudes, the irrationality of adult attitudes towards race and class in the Deep South of the 1930s, as depicted through the eyes of two children.

Her book “To Kill a Mockingbird” is set in small-town Alabama, and is a bildungsroman, or coming-of-age story. It tells of the childhood of Scout and Jem Finch at a time when their father, Atticus, is defending a black man falsely accused of rape. Scout and Jem are mocked by classmates for this. Unfortunately, the innocent black man is convicted by an all-white jury.

Video Clip

Year 9 and 10 Knowledge Goals: English (Racism and Injustice)

'I Know Why the Caged Bird Sings' (Maya Angelou)

***I Know Why the Caged Bird Sings* is an autobiography by Maya Angelou that was first published in 1969**. Beautiful, brutal, and frequently banned—this modern classic gives an unflinching view of a childhood rooted in pain that flowers into a tale of redemption and hope. *I Know Why the Caged Bird Sings* captures the longing of lonely children, the brute insult of bigotry, and the wonder of words that can make the world right. Maya Angelou's debut memoir is a modern American classic beloved worldwide.

Key Quotes:

"If growing up is painful for the Southern Black girl, being aware of her displacement is the rust on the razor that threatens the throat. It is an unnecessary insult".

"A light shade had been pulled down between the Black community and all things white, but one could see through it enough to develop a fear-admiration-contempt for the white "things"—white folks' cars and white glistening houses and their children and their women. But above all, their wealth that allowed them to waste was the most enviable".

"My race groaned. It was our people falling. It was another lynching, yet another Black man hanging on a tree. One more woman ambushed and raped. . . . This might be the end of the world. If Joe lost we were back in slavery and beyond help. It would all be true, the accusations that we were lower types of human beings. Only a little higher than the apes".

'Extract from Martin Luther King's Speech' (Martin Luther King)

I have a dream that one day on the red hills of Georgia the sons of former slaves and the sons of former slaveowners will be able to sit down together at the table of brotherhood. I have a dream that one day even the state of Mississippi, a state sweltering with the heat of oppression, will be transformed into an oasis of freedom and justice. I have a dream that my four little children one day will live in a nation where they will not be judged by the color of their skin, but the content of their character. I have a dream that one day every valley shall be exalted, every hill and mountain shall be made low. The rough places will be made plain and the crooked places will be made straight. This is the faith that I go back to the South with. With this faith we will be able to hew out of the mountains of despair the stone of hope. With this faith we will be able to work together, to pray together, to struggle together, to go to jail together, to stand up for freedom together, knowing we will be free one day.

Year 9 and 10 Knowledge Goals: English (Vocabulary)

Find the meanings of these words and write the words and meanings in your exercise book

Words used in the text about the Kaba case	Words used in texts related to Bryan Stevenson's "Just Mercy"	Words used in texts about the Ku Klux Klan, Harper's "To kill a Mockingbird" and Angelou's "I know why the Caged Bird Sings" and King's "I have a dream"
The Crown Prosecution Service (CPS) A Metropolitan Police Officer. fatally Magistrates Court homicide Independent Office for Police Conduct (IOPC) police custody inquest prosecution manslaughter perjury misconduct in public office acquittals verdict scrutiny accountability	activist bias prejudice minorities Death Row prohibit parole advocated death penalty reform litigation	convicted the KKK terrrorise arbitrary Lynching Civil Rights movement Baptist minister

Year 9 and 10 Knowledge Goals: English

Characters

1.Ebenezer Scrooge: Miserly, mean, bitter, materialistic, unsympathetic, indifferent, cold, selfish, isolated, cynical, charitable, value driven, generous, happy, sociable, transformed.

2. Marley's Ghost: Materialistic, self-centred, terrifying, haunting, exhausted, direct, reformed, regretful, hopeful, selfless, wise

3. Bob Cratchit: Uncomplaining, tolerant, courteous, deferential, patient, civil, eager, pleasurable, good-humoured, playful, caring, tender, cheerful, loving, forgiving.

4. Fred: Warm-hearted, empathetic, cheerful, optimistic, even-tempered, insightful, determined, generous, forgiving, jovial, enthusiastic, caring

5. Ghost of Christmas Past: Contradictory, strong, gentle, quiet, forceful, questioning, mysterious

6. Ghost of Christmas Present: Compassionate, abundant, generous, cheerful, jolly, friendly, severe, sympathetic

7. Ghost of Christmas Future : Mysterious, silent, ominous, intimidating, frightening, resolute

8. Tiny Tim: Frail, ill, good, religious

Stave One

1. Introduced to Ebenezer Scrooge on Christmas Eve. He is a lonely miser obsessed with money. He won't pay to heat the office properly – meaning Bob Cratchit is very cold.
2. We learn Jacob Marley, Scrooge's business partner, died exactly 7 years earlier.
3. Scrooge is irritated that Christmas Day seems to be interrupting his business.
4. Scrooge is visited by his nephew Fred, who invites his uncle to Christmas dinner. Scrooge refuses.
5. Scrooge is visited by two charity workers, asking for donations. Scrooge refuses and exclaims he wants to be left alone.
6. Scrooge allows Bob to have Christmas Day off.
7. Scrooge, when he is home, is visited by the Ghost of Jacob Marley – warning him he will be visited by three more ghosts to help him change his ways.

Stave Two

1. Scrooge is visited by the Ghost of Christmas Past who takes him to witness his past.
2. Scrooge is taken first to his schoolboy years and he is reminded how his friends would go home from Christmas while he was left at school.
3. We see him with his sister, who one year took him home for the holidays.
4. Next we are shown Scrooge as a young apprentice, working for Fezziwig. Dickens describes the Christmas ball Fezziwig organised for his employees.
5. Finally, Scrooge is taken to see his ex-fiancée, Belle. We see the scene when they break up, as money has taken over Scrooge's life.
6. Scrooge cannot bear to see any more and struggles with the spirit.

Stave Three

1. Scrooge is then visited by the Ghost of Christmas Present.
2. The spirit shows Scrooge how the Cratchit family celebrate Christmas. Scrooge asked if Tiny Tim will life. The spirit explain unless there are changes, he will die. The spirit reminds Scrooge of his earlier words: 'If he is to die, he had better do it, and decrease the surplus population'
3. Scrooge is then taken to see how others celebrate Christmas: miners, lighthouse workers, sailors on a ship.
4. He is then taken to Fred's house at Christmas, where they are playing games.
5. The spirit then begins to age, and see under the spirit's robes two children: Want and Ignorance.
6. The Ghost of Christmas Future then appears.

Stave Four

1. The Ghost of Christmas Future is described.
2. The spirit takes Scrooge to see a group of businessmen discussing someone who has died.
3. Scrooge is then taken to see Old Joe, where he is in the process of buying property of the dead man – which have been stolen.
4. Scrooge then returns to Bob Cratchit's house, where it is revealed Tiny Tim has died.
5. Scrooge is then taken to the graveyard and is shown a grave stone and realises this is for him.
6. Scrooge falls to his knees and begs that he will change his ways.

Stave Five

1. Scrooge wakes up in his own bed.
2. Scrooge wonders how much time has passed and calls to a boy. He then sends the boy to the poulterer for the prize turkey to give to Bob Cratchit,
3. Scrooge meets one of the charity collectors from earlier and whispers to him that he will give a large donation.
4. Scrooge then goes to Fred's house and is welcomed in. He enjoys the dinner and party.
5. On Boxing Day, Scrooge arrives early to work, and plays a trick on Bob. Scrooge then tells him he is going to raise his salary and promises to help Bob's struggling family.
6. Scrooge is described to have completely changed and becomes a 'second father' to Tiny Tim – 'who did not die.'

Characters

1.Ebenezer Scrooge: Miserly, mean, bitter, materialistic, unsympathetic, indifferent, cold, selfish, isolated, cynical, charitable, value driven, generous, happy, sociable, transformed.

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Key Themes:

-Christmas Spirit
-Redemption
-Poverty
-Social responsibility
-Supernatural
-Family
-Loneliness and isolation
-Time
-Education

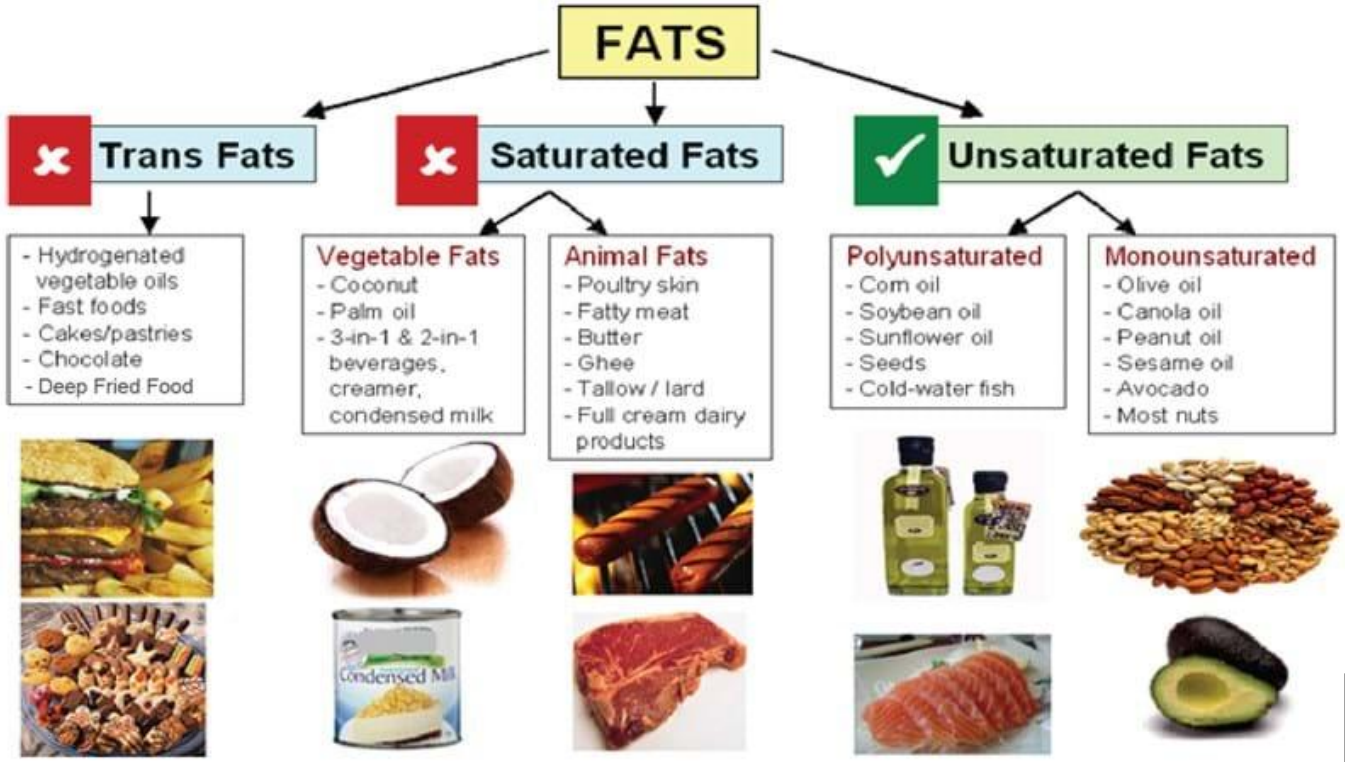
A Christmas Carol - GCSE English Literature Revision - Edexcel - BBC Bitesize

Year 9 and 10 Knowledge Goals: English

Tier 3 Vocabulary		
Key word		Definition
1	flashback	A device taking a novel back in time.
2	hyperbole	Exaggerated language used for effect.
3	intrusive narrator	A narrator who comments on the action.
4	metaphor	An image created by writing about something as if it were something else.
5	motif	An image or idea which recurs throughout the story.
6	pathetic fallacy	Giving nature human qualities or using the description of surroundings to reflect the mood of a character.
7	personification	Writing about an idea or object as if it were human.
8	simile	An image created by comparing one thing to another using as or like.
9	staves	Similar to a stanza or chapter.
10	symbol	An object used to represent an idea.

Notes:

Year 9 and 10 Knowledge Goals: Food



How to reduce fat intake

- Check food labels and choose lower fat products
- Choose lean cuts of meat and cut off any visible fat
- Grill, bake, poach or steam rather than frying or roasting – you won't need to add any extra fat
- Add extra vegetables, beans or pulses to meals – you can use less meat and it's cheaper too
- Use cooking oils and spreads sparingly
- Use high fat products less often examples
- Using a light version mayonnaise or salad cream means you may not need to add butter or spread
- Switch to low fat spreads that are easier to use straight from the fridge
- Choose lower fat dairy food like semi-skimmed, 1% or skimmed milk, reduced fat yoghurt or low-fat cheese
- Try grating your cheese or using a stronger flavoured cheese as you tend to use less

- men should eat no more than 30g of saturated fat a day, which is 270 calories
- women should eat no more than 20g of saturated fat a day, which is 180 calories

Too much fat

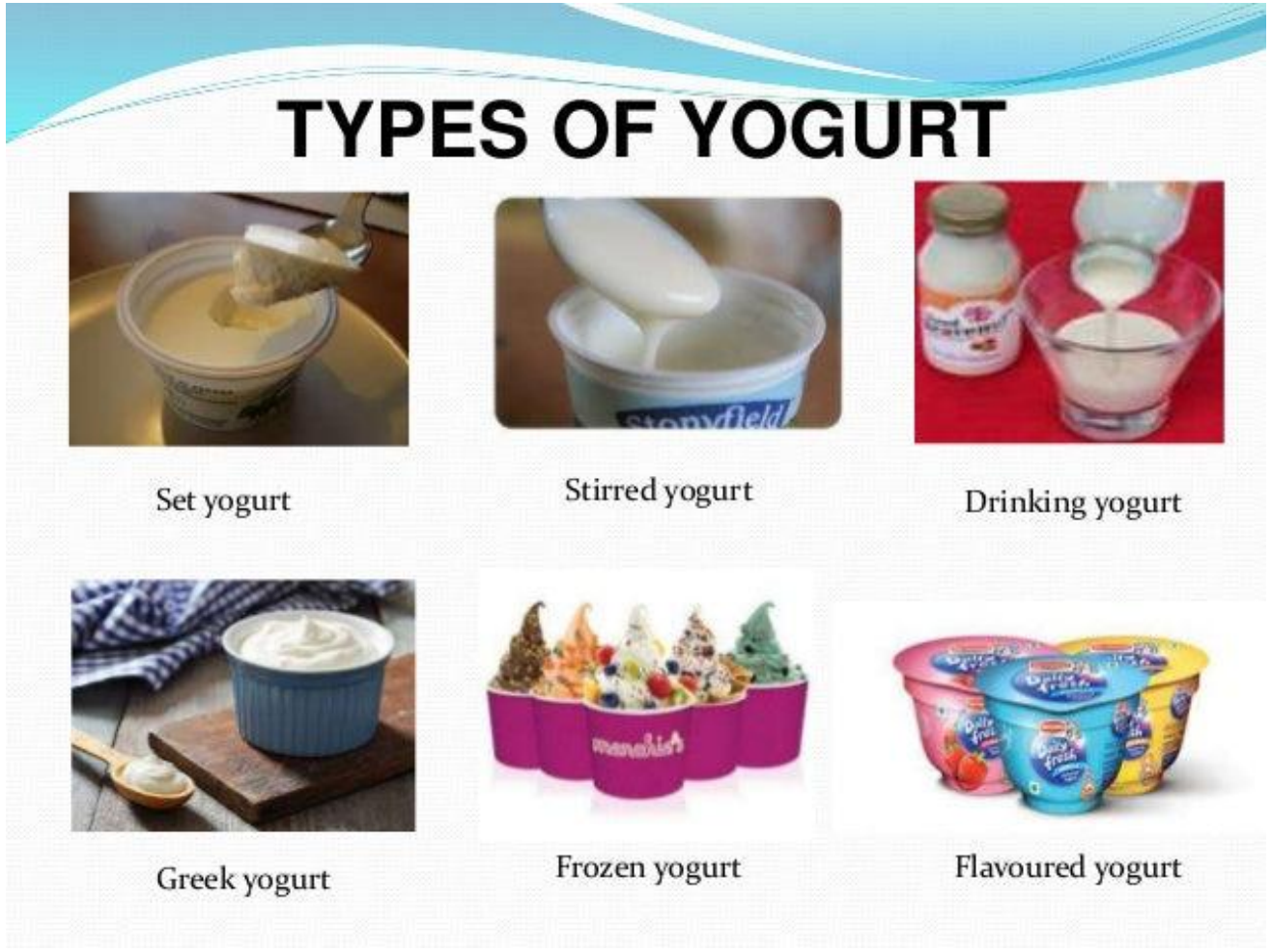
Fat is a high energy source providing twice the amount of energy than carbohydrates. If not used it will be stored as fat and lead to weight gain.
Increased risk of a stroke
Increased risk of high cholesterol and heart disease.
Increased risk of cancer, diabetes, obesity and bone problems

Too little fat

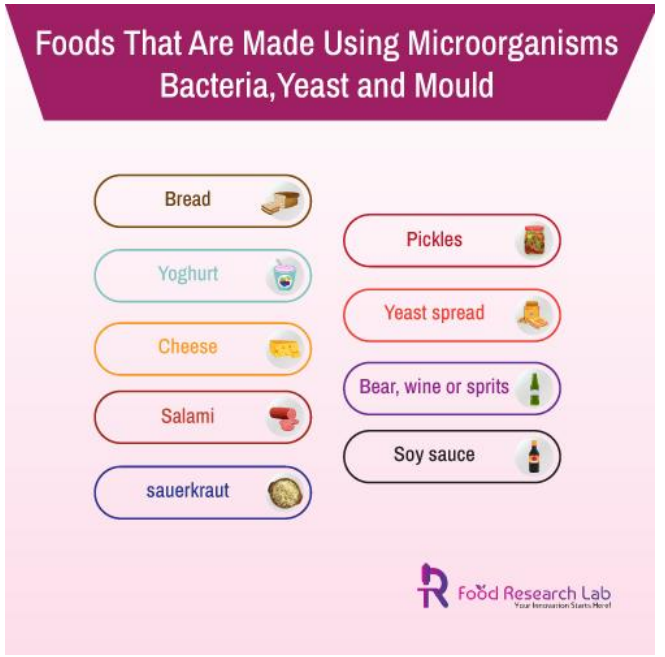
Some fatty acids are essential for the correct growth and functioning of the body. Too little in children and babies will affect growth. We may become weaker and colder.

Quiz QR Code	Quiz Link
	Quiz Link

Year 9 and 10 Knowledge Goals: Food



https://www.nhs.uk/live-well/eat-well/food-types/different-fats-nutrition/



Watch this to find out more about how yoghurt is made

Lactic acid is a good bacteria and added to milk to make yoghurt

Yoghurt is a good source of:

- HBV Protein.
- Fat (but you can get low/no fat versions)
- Calcium
- Carbohydrates in the form of lactose
- Vitamins A, B and E
- Water

Year 9 and 10 Knowledge Goals: Food

Tier 3 Vocabulary		
Key word		Definition
1	lactic acid	Lactic acid is an organic acid that forms when certain foods go through the process of fermentation. It's often found in pickled foods, fermented soy products, salami, yogurt, and more
2	starter culture	An essential component of nearly all commercially produced fermented foods. Simply defined, starter cultures consist of microorganisms that are inoculated directly into food materials in order to bring about desired and predictable changes in the finished product. These changes may include enhanced preservation, improved nutritional value, modified sensory qualities, and increased economic value.
3	yeast	**A type of fungus that is used in making alcoholic drinks such as beer and wine, and for making bread swell and become light**
4	mould	A wide variety of moulds (i.e. Penicillium chrysogenum and Penicillium nalgiovense) are used to ripen **surfaces** of sausages
5	saturated fat	Saturated fat is a type of dietary fat. It is one of the unhealthy fats, along with trans fat. These fats are most often solid at room temperature. Foods like butter, palm and coconut oils, cheese, and red meat have high amounts of saturated fat.
6	unsaturated fat	Unsaturated fats contain one or more double or triple bonds between the molecules. These fats are liquid at room temperature in oil form. They also occur in solid foods. This group breaks down further into two categories, called monounsaturated fats and polyunsaturated fats.
7	transfats	Trans fat is a type of dietary fat. Of all the fats, trans fat is the worst for your health. Too much trans fat in your diet increases your risk for heart disease and other health problems. Trans fats are made when liquid oils are turned into solid fats, like shortening or margarine.
8	cholesterol	Cholesterol is a substance that helps your body in many ways. It's a building block of your cell membranes. It also helps your body create bile, hormones and vitamin D. You need cholesterol. But too much of it in your blood can raise your heart disease risk
9	calories	The amount of energy in food or drink is measured in calories.
10	obesity	abnormal or excessive fat accumulation that may impair health
11	polyunsaturated fat	Polyunsaturated fats are **a type of healthy fat that includes omega-3 and omega-6 fatty acids**, which are essential for brain function
12	monounsaturated fat	Monounsaturated fat is a type of dietary fat. It is one of the healthy fats, along with polyunsaturated fat. Monounsaturated fats are liquid at room temperature but start to harden when chilled

Year 9 and 10 Knowledge Goals: French

Media and technology

Practice these questions from the topic as we cover them in class

1. et la télé, tu aimes regarder à la télé ?
2. Il y a une émission que tu préfères ?
3. Quelles sortes de films aimes-tu ?
4. Tu vas souvent au cinéma ?
5. et la musique quelle sorte de musique aimes-tu ?
6. Tu as un chanteur ou un groupe préféré ?
7. Tu télécharges la musique ?
8. Tu as déjà allé au concert ?
9. La technologie, tu utilises les réseaux sociaux ?
10. Quels sont les avantages est les inconvénients des réseaux sociaux ?
11. Qu'est-ce que tu penses de ton portable?
12. Parle-moi un peu de la technologie à la maison ?

Year 9 and 10 Knowledge Goals: French

Tier 3 Vocabulary		
Key word		Definition
1	cognates	A word that looks like the English
2	infinitive	A word before it has been put into a sentence e.g. to go, to play
3	masculine word	A word that has been assigned as a masculine word
4	feminine word	A word that has been assigned as a feminine word
5	plural	More than one
6	opinion	To express likes or dislikes

Notes:

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_____Media and Technology

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Year 9 and 10 Knowledge Goals: Geography – Nigeria: A Newly Emerging Econom

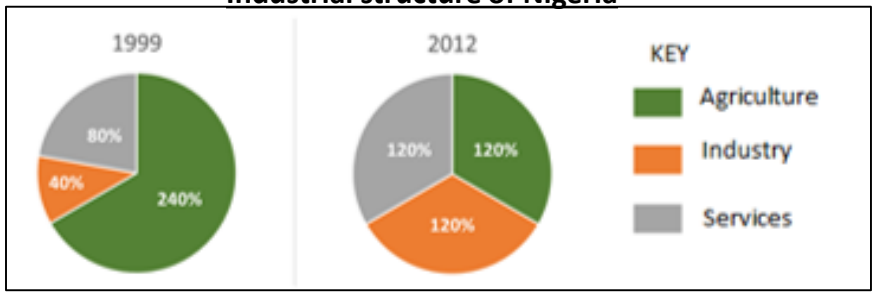
Global Importance of Nigeria

Nigeria is a Newly Emerging Economy (NEE). In 2014 Nigeria became the world's 21st largest economy and it is predicted that by 2050 it will be in the top 20. It is predicted to have the highest GDP growth for 2010-15. It is the 12th largest producer of oil in the world and much of the recent economic growth is based on the money made from oil. The economy is now becoming more diverse and money is made from a number of different types of businesses including telecoms and financial services (banking). It ranks as the fifth largest contributor to UN peacekeeping around the world

Regional Importance of Nigeria

In 2014 it had the highest GDP in the continent of Africa and the third largest manufacturing sector. It has the largest population of any African country at 182 million. There are issues over land ownership, but still it has the largest farm output in Africa and 70% of the population are employed in this industry. Nigeria has 19 million cattle, the largest of any African country. Despite issues with internal corruption, a lack of infrastructure and regular power cuts the country has huge potential to help lead the way in the development of the whole continent.

Industrial structure of Nigeria



Types of Aid					
Short – Term	**Bilateral**	**Voluntary**	**Long-term**	**Tied**	**Multilateral**
Emergency help, usually in response to a natural disaster.	Aid from one country to another (which is often tied)	Money donated by the general public in richer countries and distributed by NGOs.	Sustainable aid that seeks to improve resilience. For example wells to reduce the effects of drought.	Aid may be given with certain conditions – money must be spend on the donor country's products	Richer governments give money to an international organisation, such as the World Bank, who then redistribute it.

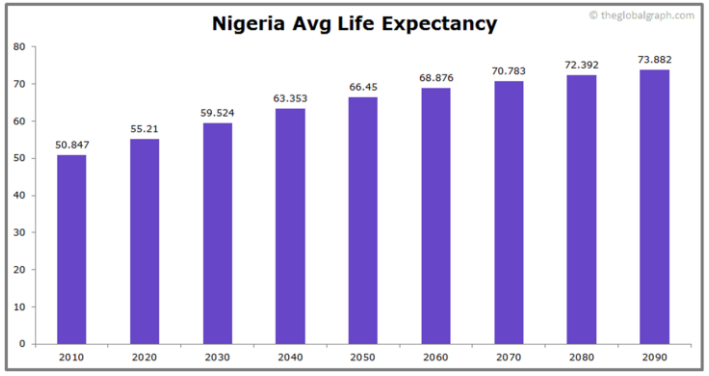
Crude oil

Crude oil dominated Nigeria's exports

Until recently, the greatest demand for Nigerian oil was from the USA

India is now Nigeria's biggest customer

Advantages of TNC to the host country	Disadvantages of TNCs to the host country
Companies provide employment and the development of new skills.	Investment by companies in local infrastructure and education.
Local workers are sometimes poorly paid.	Working conditions are sometimes very poor.
Management jobs often go to foreign employees.	Other local companies benefit from increased orders.
Valuable export revenues are earned.	Much of the profit goes abroad.



Year 9 and 10 Knowledge Goals : Geography – Nigeria: A Newly Emerging Econor

Tier 3 Vocabulary		
Key word		Definition
1	TNC	Transnational Corporation. A large company that operates across multiple countries.
2	tied aid	Aid may be given with certain conditions – money must be spend on the donor country's products.
3	long-term aid	Sustainable aid that seeks to improve resilience. For example wells to reduce the effects of drought.
4	multilateral Aid	Richer governments give money to an international organisation, such as the World Bank, who then redistribute it.
5	poverty cycle	A self-perpetuating pattern in which individuals , groups or countries experience poverty and find it difficult to escape from it.
6	multiplier effect	Where initial investment leads to further development in a positive self-perpetuating cycle.
7	industrial development	Industry such as manufacturing or oil refining is given investment in the hope that it will lead to further development in other industries.
8	employment sector	The types of jobs, their skills and incomes, these are often categorized by income or skill levels.
9	tertiary job sector	High income, highly skilled jobs. These include teachers, doctors, nurses and telecommunications.
10	secondary Job Sector	Middle income lower skilled jobs. These include factory workers, the construction industry and transport.
11	primary Job sector	Low income low skill jobs. These include farm workers and the mining industries.
12	HDI	Human development index. A development indicator that demonstrates the standard of living in a country. It takes into account, health, wealth and education of the population.

Notes:

Quiz QR Code	Quiz Link
	Quiz Link

Year 9 and 10 Knowledge Goals: History

GCSE History Knowledge Organiser: The Weimar Republic 19181929

1918 Kaiser Wilhelm II abdicates

1919 Treaty of Versailles; Spartacist Uprising; Weimar Constitution finalised

1920 Kapp Putsch

1921

1922

1923 Hyperinflation; French occupation of the Ruhr

1924 The Dawes Plan

1925 The Locarno Pact

1926 Germany joins the League of Nations

1927

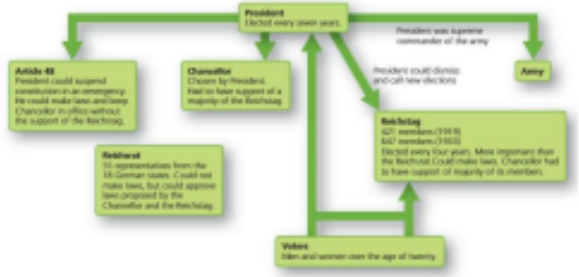
1928 Kellogg-Briand Pact

1929 The Young Plan

Aftermath of WWI

After WWI a new government was established in Germany, which was accountable to the **Reichstag** rather than the **Kaiser.** In order to establish peace after WWI the USA insisted that the Kaiser was removed from power. On the 9th November, Kaiser Wilhelm **abdicated**.
The new government was led by **Chancellor** Friedrich **Ebert** and agreed to **Armistice**based on America's **Fourteen Points.**

The Weimar Constitution



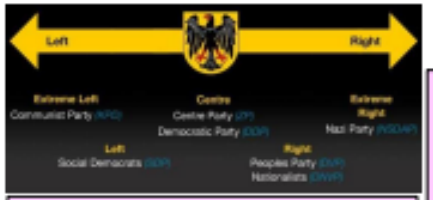
In January 1919 an election took place but no party had a direct majority. They had to form a **coalition** which Ebert (of the **Social Democratic Party –SPD)** became President of. They joined with the Catholic **Centre Party (ZP)** and the **German Democratic Party (DDP).** A coalition meant that there were some weaknesses to the government.

The Treaty of Versailles

The Treaty of Versailles was harsh on Germany and forced them to sign the **War Guilt Clause,** lose land, army, equipment and pay back £6.6 billion in **reparations**.

Opposition

The German people felt the government had stabbed them in the back **(Dolchstoss).** They called the government the **November Criminals.**



2.. The **Kapp Putsch** (right-wing) was attempted in March 1920. Ebert wanted to disband the **Freikorps** so they joined with the Reichswehr in Berlin. Led by Wolfgang Kapp they seized Berlin. Ebert asked **Trade Unionists** & **Civil Servants** not to support it, and the Putsch collapsed.

1. The **Spartacists**, in January 1919, inspired by the left-wing **Bolshevik** revolution in Russia, set up the Communist Party and tried to overthrow the government. This was put down by the **Reichswehr** & the **Berlin Freikorps**

Problems of 1923

When Germany couldn't pay their reparations, the French moved into the **Ruhr** to take goods for themselves. The Germans went on strike & sabotaged their work, setting factories alight and breaking pumps. This meant that production from the **Rhineland** was very slow, making Germany poorer.

The government printed more money to pay the strikers and their reparations which, coupled with the slow production in the Ruhr, led to **hyperinflation** where the currency became virtually worthless.

Economic Recovery

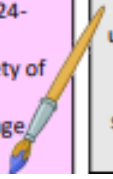
In 1923 Gustav **Stresseman** was **Chancellor** and is largely credited with the economic recovery of Germany.
The Dawes Plan changed the reparations schedule to something which was more manageable. It also meant that French troops would leave the Ruhr.
The Rentenmark was the new currency, issued in limited amounts. Once it worked for a year, it was converted to the **Reichsmark,** based on gold reserves.
The Young Plan was developed by US banker, Young. He reduced the reparations figure and extended the time the Germans had to pay it.

Foreign Recovery

The Locarno Pact helped German relations with France, Britain, Belgium & Italy by agreeing borders.
The League of Nations agreed to admit Germany in 1926.
The Kellogg-Briand Pact was signed in 1928, along with 64 other countries. It said they could have armies for self-defence and would resolve disagreements peacefully.

Changes in Society

Wages had increased by over 10% by 1928. Although this helped the working class, the middle classes had been bankrupted by hyperinflation. Unemployment amongst the middle class increased.
More **houses** were being built: 2million + between 1924-1931, which reduced homelessness.
Women were given the vote and could work in a variety of areas: teaching, civil service etc.
Art, architecture, literature and theatre began to change and become more rich & diverse.



Historiography

F. Reynoldson *Weimar & Nazi Germany* 1996
"From 1924 – 1929 the Weimar Republic was much stronger than it had been just after the war. Led by Stressemann in the Reichstag, the different parties managed to work together. The extreme parties such as the Nazis gained fewer seats in the elections. The German people were better off and more contented. The Weimar Republic looked safe."

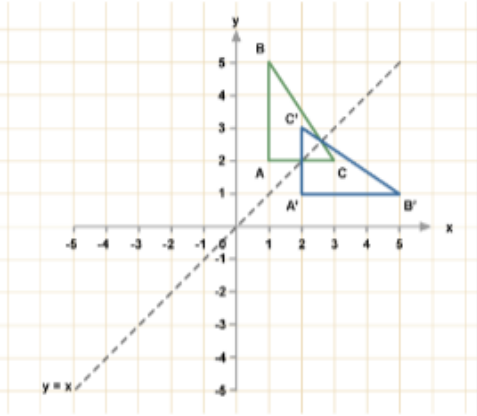
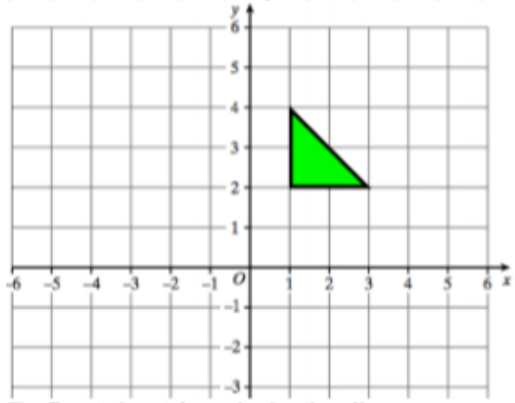
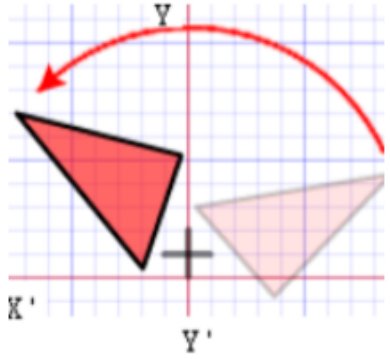
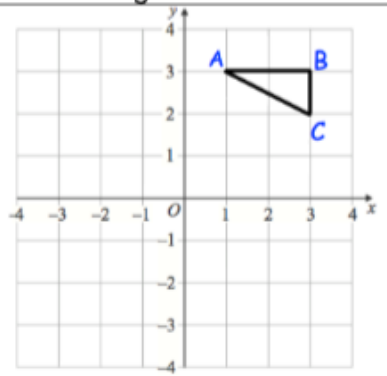
E. Wimlott *Weimar & Nazi Germany* 1997
"German prosperity was built on quicksand foundations. The Weimar economy was dependent upon high-interest American loans, which usually had to be repaid or renewed within three months. In times of depression, US money lenders could demand rapid repayment. Moreover, unemployment never fell below 1.3 million. Although big business grew in the 1920s, small firms struggled and many went bankrupt.

Year 9 and 10 Knowledge Goals: History

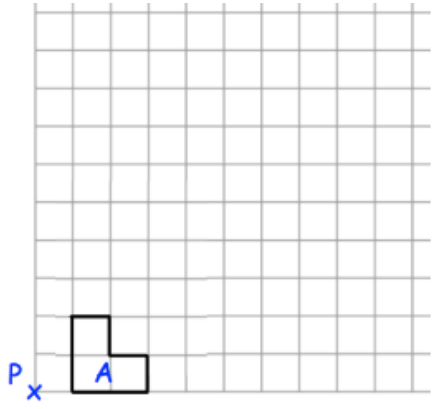
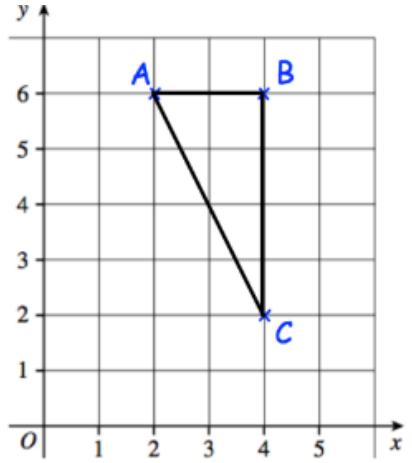
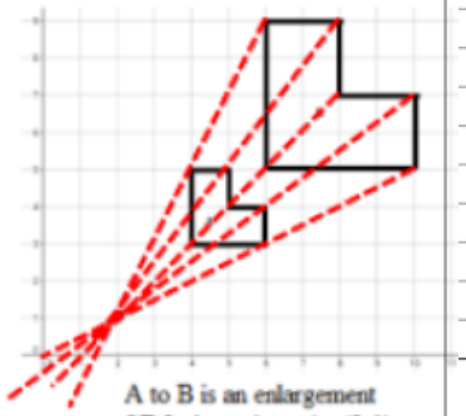
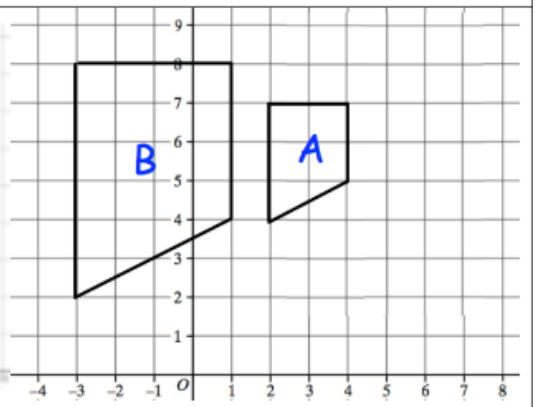
Tier 3 Vocabulary		
Key word		Definition
1	democracy	A system of government where people vote for their leaders.
2	republic	A nation without a monarchy.
3	uprising	An attempt to take power by force.
4	putsch	An attempt to take power by force.
5	hyperinflation	When prices start to rise rapidly.
6	constitution	The rules of how a country should be governed.
7	proportional representation	A voting system where every vote is counted equally.
8	Kaiser	The German King.
9	coalition	When a government is made up of a number of different parties.
10	conservative	People who oppose change and want to continue with old traditions.

Notes:

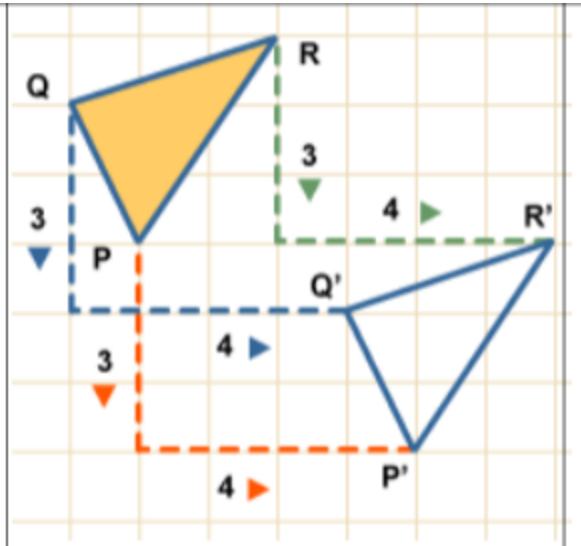
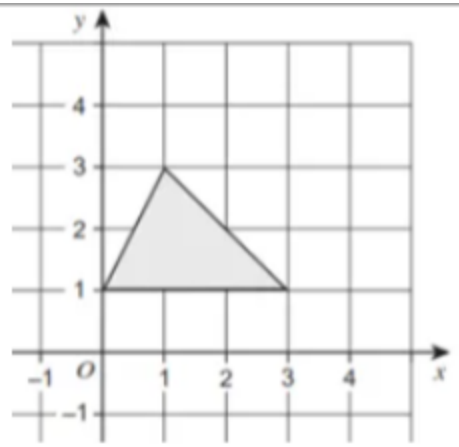
Year 9 and 10 Knowledge Goals: Foundation – Transformations

Topic/Skill	Definition/Tips	Example	Your Turn
Reflection	The size does not change, but the shape is **'flipped'** like in a **mirror**. To describe a reflection you need to give the **equation** of the **mirror line** Line is a **vertical line**. Line is a **horizontal line**. Line is a **diagonal line**.	Reflect shape C in the line 	  Reflect the triangle in the line
Rotation	The size does not change, but the **shape is turned around a point**. Use tracing paper. To describe a rotation you need to give: the direction (clockwise or anti-clockwise) the angle the centre of rotation (coordinate)	Rotate shape A 90° anti-clockwise about (0,1) 	 Rotate triangle ABC 90° clockwise about centre (0, 0)

Year 9 and 10 Knowledge Goals: Higher – Circles, Arcs, Sectors

Enlargement	The shape will get **bigger or smaller**. Multiply each side by the **scale factor**.	Enlarge Shape A by scale factor 3, from point P.	Enlarge triangle ABC with scale factor ½ and centre (0,0)
	specific **point** or **centre.** Scale factor 3 means '3 times larger = **multiply all the lengths by 3'** Scale factor **½ means 'half the size = divide all lengths by 2'**		
Finding the Centre of Enlargement	Draw **straight lines** through **corresponding corners** of the two shapes. The centre of enlargement is the point **where all the lines cross over**. Be careful with negative enlargements as the corresponding corners will be the other way around.		 Describe fully the single transformation that maps shape A onto shape B.

Year 9 and 10 Knowledge Goals: Foundation – Transformations

Translation Column Vector	**Translate** means to **move a shape**. The shape does not change **size** or **orientation**. In a column vector, the **top** number moves **left (-) or right (+)** and the **bottom** number moves **up (+) or down (-)** means '2 right, 3 up' means '1 left, 5 down'	 This shape has been translated by vector	 Translate by $\binom{2}{1}$
Describing Transformations	Give the following information when describing each transformation: Look at the number of marks in the question for a hint of how many pieces of information are needed. If you are asked to describe a 'transformation', you need to say the **name of the type of transformation** as well as the other details.	**- Translation: Vector** **- Rotation: Direction, Angle, Centre** **- Reflection: Equation of mirror line** **- Enlargement: Scale factor, Centre of enlargement**	

Year 9 and 10 Knowledge Goals: Foundation/Higher – Straight Line Graphs

What do I need to be able to do?

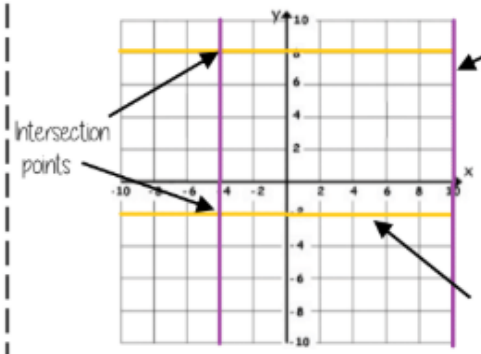
By the end of this unit you should be able to:

- Compare gradients
- Compare intercepts
- Understand and use y= mx + c
- Find the equation of a line from a graph
- Interpret gradient and intercepts of real-life graphs

Keywords

Gradient: the steepness of a line
Intercept: where two lines cross. The y-intercept: where the line meets the y-axis.
Parallel: two lines that never meet with the same gradient
Co-ordinate: a set of values that show an exact position on a graph
Linear: linear graphs (straight line) – linear common difference by addition/ subtraction
Asymptote: a straight line that a graph will never meet
Reciprocal: a pair of numbers that multiply together to give 1
Perpendicular: two lines that meet at a right angle.

Lines parallel to the axes (R)



All the points on this line have a x coordinate of 10

'a' can be ANY positive or negative value including 0

Lines parallel to the **y axis** take the form **x = a** and are **vertical**

Lines parallel to the **x axis** take the form **y = a** and are **horizontal**

All the points on this line have a y coordinate of -2

e.g (3, -2) (7, -2) (-2, -2) all lay on this line because the y coordinate is -2

Plotting y = mx + c graphs (R)

$y = 3x - 1$ → 3 x the x coordinate then – 1

x	-3	0	3
y	-10	-1	8

Draw a table to display this information

This represents a coordinate pair (-3, -10)

You only need two points to form a straight line

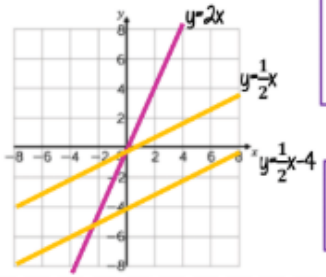
Plotting more points helps you decide if your calculations are correct (if they do make a straight line)

Remember to join the points to make a line

Compare Gradients

$y = mx + c$

The **coefficient** of x (the number in front of x) tells us the gradient of the line



The **greater** the gradient – the **steeper** the line

Positive gradients

Negative gradients

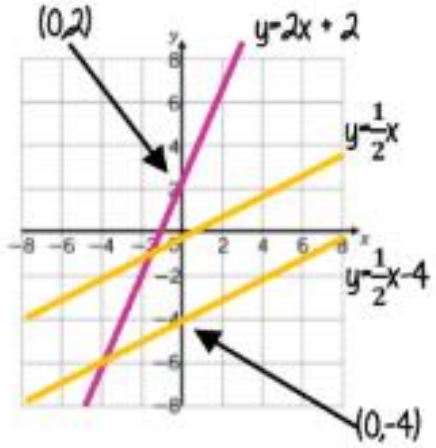
Parallel lines have the **same** gradient

Notes:

Year 9 and 10 Knowledge Goals: Foundation – Straight Line Graphs

Compare Intercepts

$y = mx + c$ ← The value of **c** is the point at which the line crosses the y-axis **Y intercept**



The coordinate of a y intercept will always be (0,c)

Lines with the **same** y-intercept cross in the **same** place

y = mx + c

The **coefficient** of x (the number in front of x) tells us the gradient of the line

$y = mx + c$ ← The value of **c** is the point at which the line crosses the y-axis **Y intercept**

y and x are **coordinates**

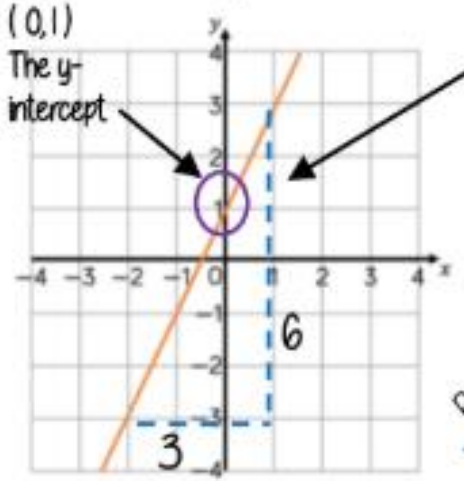
The equation of a line can be rearranged. E.g.

$y = c + mx$

$c = y - mx$

Identify which coefficient you are identifying or comparing

Find the equation from a graph



$y = 2x + 1$

The direction of the line indicates a positive gradient

Positive gradients

Negative gradients

Real life graphs

A plumber charges a £25 callout fee, and then £12.50 for every hour. Complete the table of values to show the cost of hiring the plumber.

Time (h)	0	1	2	3	8
Cost (£)	£25				£125

The y-intercept shows the minimum charge. The gradient represents the price per mile

In real life graphs like this values will always be positive because they measure distances or objects which cannot be negative

Direct Proportion graphs To represent direct proportion the graph must start at the origin

When you have 0 pens this has 0 cost. The gradient shows the price per pen

A box of pens costs £2.30

Complete the table of values to show the cost of buying boxes of pens.

Boxes	0	1	2	3	8
Cost (£)		£2.30			

Year 9 and 10 Knowledge Goals: Higher – Interpret and Represent Data

What do I need to be able to do?

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

- Construct and interpret frequency tables and polygon, two-way tables, line, bar, & pie charts
- Find and interpret averages from a list and a table
- Construct and interpret time series graphs, stem and leaf diagrams and scatter graphs

Keywords

Population: the whole group that is being studied
Sample: a selection taken from the population that will let you find out information about the larger group
Representative: a sample group that accurately represents the population
Random sample: a group completely chosen by change. No predictability to who it will include
Bias: a built-in error that makes all values wrong by a certain amount
Primary data: data collected from an original source for a purpose.
Secondary data: data taken from an external location. Not collected directly
Outlier: a value that stands apart from the data set

Stem and leaf

A way to represent data and use to find averages

This stem and leaf diagram shows the age of people in a line at the supermarket

0	7 9
1	4 5 6 8 8
2	1 3
3	0

Key: 1|4 Means 14 years old

Stem and leaf diagrams:
Must include a key to explain what it represents
The information in the diagram should be ordered

Back to back stem and leaf diagrams

Girls		Boys
5	14	
7, 5, 5, 5, 4	15	3, 8, 9
8, 4, 2, 1, 0	16	2, 5, 7, 7, 7, 8, 8, 9
9, 8, 7, 6, 6, 4, 2, 1, 1, 0, 0	17	0, 2, 3, 6, 6, 7, 7
	18	0, 1, 4, 5

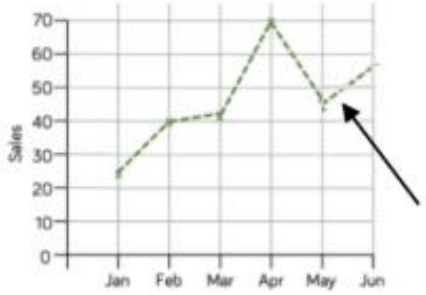
15 | 3
Means 153 cm tall

Back to back stem and leaf diagrams:
Allow comparisons of similar groups
Allow representations of two sets of data

Time-Series

R

This time-series graph shows the total number of car sales in £1000 over time



Look for general trends in the data. Some data shows a clear increase or a clear decrease over time.

Readings in-between points are estimates (on the dotted lines). You can use them to make assumptions

Comparing distributions

Comparisons should include a statement of average and central tendency, as well as a statement about spread and consistency

Mean, mode, median – allows for a comparison about more or less average.
Range – allows for a comparison about reliability and consistency of data

Notes:

Year 9 and 10 Knowledge Goals: Higher – Collect and Interpret Data

Draw and interpret a scatter graph

R

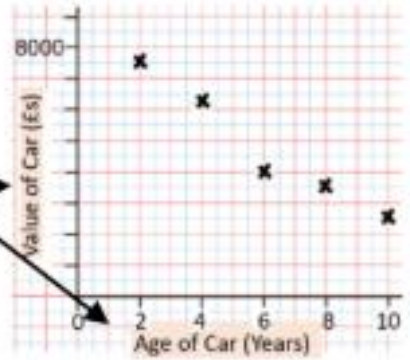
Age of Car (Years)	2	4	6	8	10
Value of Car (£s)	7500	6250	4000	3500	2500

- This data may not be given in size order
- The data forms information pairs for the scatter graph
- Not all data has a relationship

"This scatter graph shows as the age of a car increases the value decreases"

The link between the data can be explained verbally

All axes should be labelled



The axes should fit all the values on and be equally spread out

Linear Correlation

R

Positive Correlation

As one variable increases so does the other variable

Negative Correlation

As one variable increases the other variable decreases

No Correlation

There is no relationship between the two variables

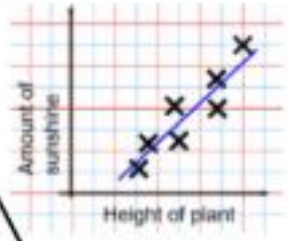
The line of best fit

R

The Line of best fit is used to make estimates about the information in your scatter graph

Things to know:

- The line of best fit **DOES NOT** need to go through the origin (The point the axes cross)
- There should be approximately the same number of points above and below the line (It may not go through any points)
- The line extends across the whole graph



It is only an estimate because the line is designed to be an average representation of the data

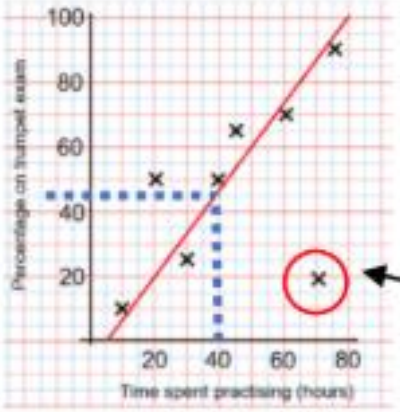
It is always a **straight line**

Using a line of best fit

R

Interpolation is using the line of best fit to estimate values inside our data point

e.g. 40 hours revising predicts a percentage of 45



Extrapolation is where we use our line of best fit to predict information outside of our data

This is not always useful – in this example you cannot score more that 100% So revising for longer can not be estimated

This point is an "**outlier**"

It is an outlier because it doesn't fit this model and stands apart from the data

Year 9 and 10 Knowledge Goals: Higher – Collect and Interpret Data

Two way tables (R)

60 people visited the zoo one Saturday morning
26 of them were adults. 13 of the adult's favourite animal was an elephant. 24 of the children's favourite animal was an elephant.

Extract information to input to the two-way table.

Subgroups each have their own heading

	Adult	Child	Total
Elephant	13	24	37
Other	13	10	23
Total	26	34	60

Needs subgroup totals

Overall total

Draw and interpret Pie Charts (R)

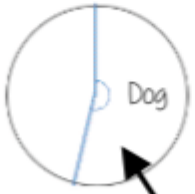
Type of pet	Dog	Cat	Hamster
Frequency	32	25	3

There were 60 people asked in this survey (Total frequency)

$\frac{32}{60}$ "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°

Multiple method
Os 60 goes into 360 – 6 times.
Each frequency can be multiplied by 6 to find the degrees (proportion of 360)

Comparing Pie Charts:
You NEED the overall frequency to make any comparisons

Averages from a table (R)

Non-grouped data

Number of Siblings	0	1	2
Frequency	6	8	6
Subtotal	0	8	12

Overall Frequency: 20

Total number of siblings: 20

The data in a list: 0,0,0,0,0,0,1,1,1,1,1,1,1,1,2,2,2,2,2,2

Mean: $\frac{\text{total number of siblings}}{\text{Total frequency}} = 1$

Grouped data

x Weight(g)	Frequency	Mid Point	MP x Freq
$40 < x \leq 50$	1	45	45
$50 < x \leq 60$	3	55	195
$60 < x \leq 70$	5	65	325

Overall Frequency: 9

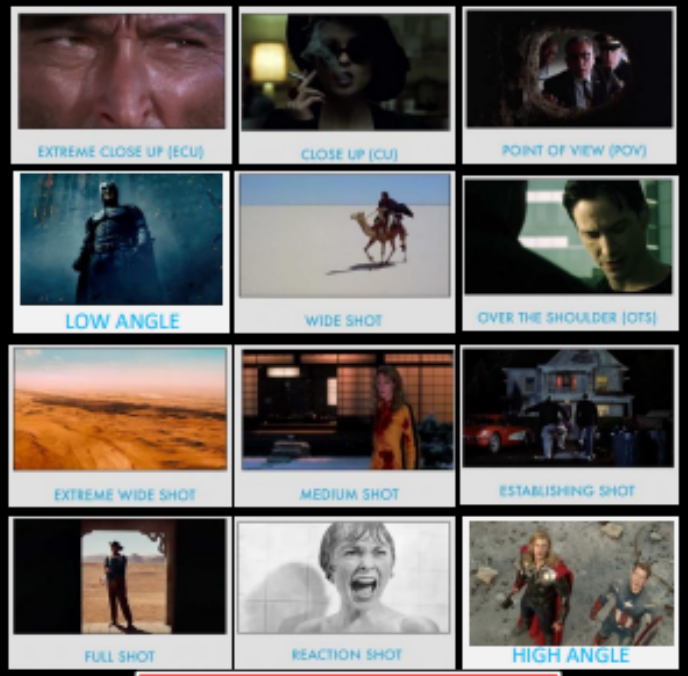
Overall Total : 565

Mean: 62.8g

The data in a list: 45, 55, 55, 55, 65, 65, 65, 65, 65

Year 9 and 10 Knowledge Goals: Introduction to Media Studies

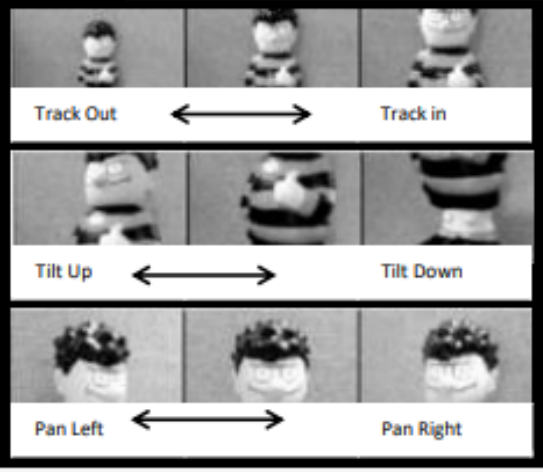
CAMERA SHOTS



Match on action

*A technique **used** to smooth the transition between shots and break one action up into more than one action.*

CAMERA MOVEMENT



OTHER CAMERA TERMS

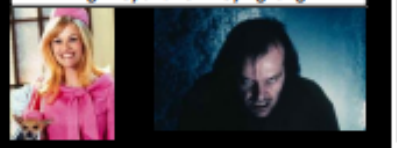
Camera Movement	Camera Angles & shots
Crane	High angle
Hand-held	Low angle
Zoom in	Worms eye view
Zoom out	Canted angle
Shaky cam	Wide-shot
	Aerial-shot

MISE EN SCENE

Mise-en-scène is a French term and originates in the theatre. It means, literally, "put in the scene."

Elements of Mise En Scene
Location
Setting
Costume
Props
Lighting/colour

High Key and **Low Key Lighting**



SOUND

How is sound/music used to create a mood or atmosphere?

Diegetic
Non-diegetic
Theme tune
Voice over
Ambient sound
Sound bridge
Dialogue

EDITING

Continuity editing	Parallel editing
Non-continuity editing	Cutaway
Shot/reverse shot	Dissolve
Eyeline match	Fade-in/out
Graphic match	Wipe
Jump cut	Slow motion
Crosscutting	Visual effects

C OSTUMES — *The costumes the characters are wearing communicates with the audience what type of role they have in the narrative.*

L IGHTING — *The lighting can tell the audience the type of genre or the mood and theme of the media product.*

A CTING — *The casting of the characters can say a lot about them. Also the facial expressions, body language & gesture codes tells the audience about the characters and their roles.*

M AKE-UP & HAIR — *The make up and hair can tell the audience the type of genre or the role of the character.*

P ROPS — *The props and objects could indicate the genre. It could also connote action or be iconic to the genre.*

S ETTINGS — *The settings could indicate the genre. The settings could also help communicate the narrative and themes.*

WATERSHED = the time when TV programmes, which might be unsuitable for children, can be broadcast. Begins at 9pm and material unsuitable for children should not be shown before 9pm or after 5.30am. Unsuitable material is everything from sexual content to violence, graphic or distressing imagery and swearing.

PUBLIC -FUNDED BY TV LICENSE

Year 9 and 10 Knowledge Goals: Introduction to Media Studies

Tier 3 Vocabulary		
Key word		**Definition**
1	denotation	The literal meaning of a sign, symbol or image.
2	connotation	The associations of a sign, symbol or image.
3	narrative	How the events in a story are ordered and told.
4	genre	A specific type of media form or product.
5	conventions	Elements that we would expect to see in a particular genre.
6	representation	The way aspects of society, such as gender, age or ethnicity, are presented to audiences in media texts.
7	mise-en-scene	The visual codes or elements in a media product – costumes, lighting, acting, make-up, props and setting. In French it means 'to put in the scene'
8	camera shots	How much space the audience sees in a particular frame.
9	camera angles	The position at which the camera is pointed at the subject of the shot.
10	camera movement	How the camera moves as it is capturing a shot.
11	diegetic sound	Diegetic sound is anything the characters can hear within a film (dialogue, ambient sound).
12	non diegetic sound	Non-diegetic sound is any sound that only the audience can hear (soundtrack, theme tune).

Notes:

Quiz QR Code	Quiz Link
	QUIZ LINK

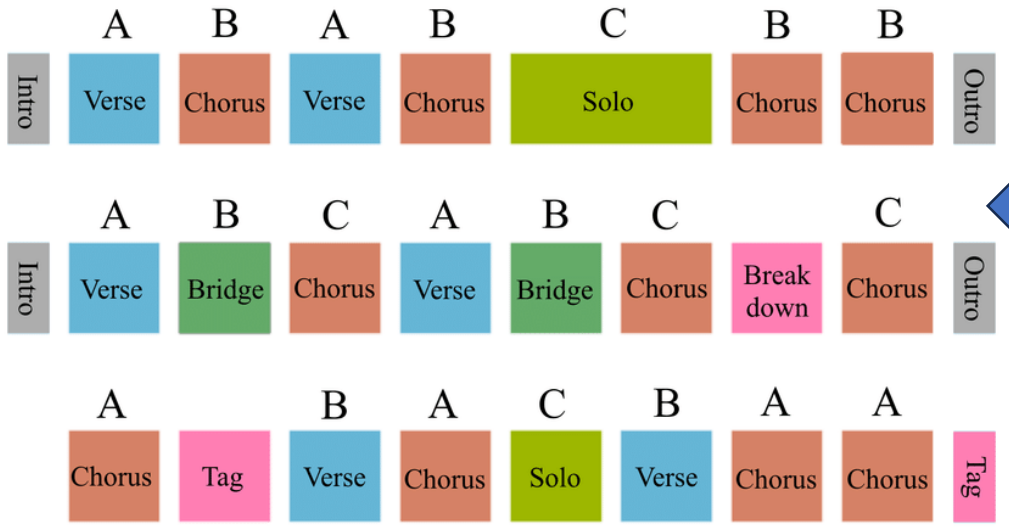
Year 9 and 10 Knowledge Goals: Music

Music Analysis

Musical analysis is a way to study a piece of music to try and understand it and make sense of the following:

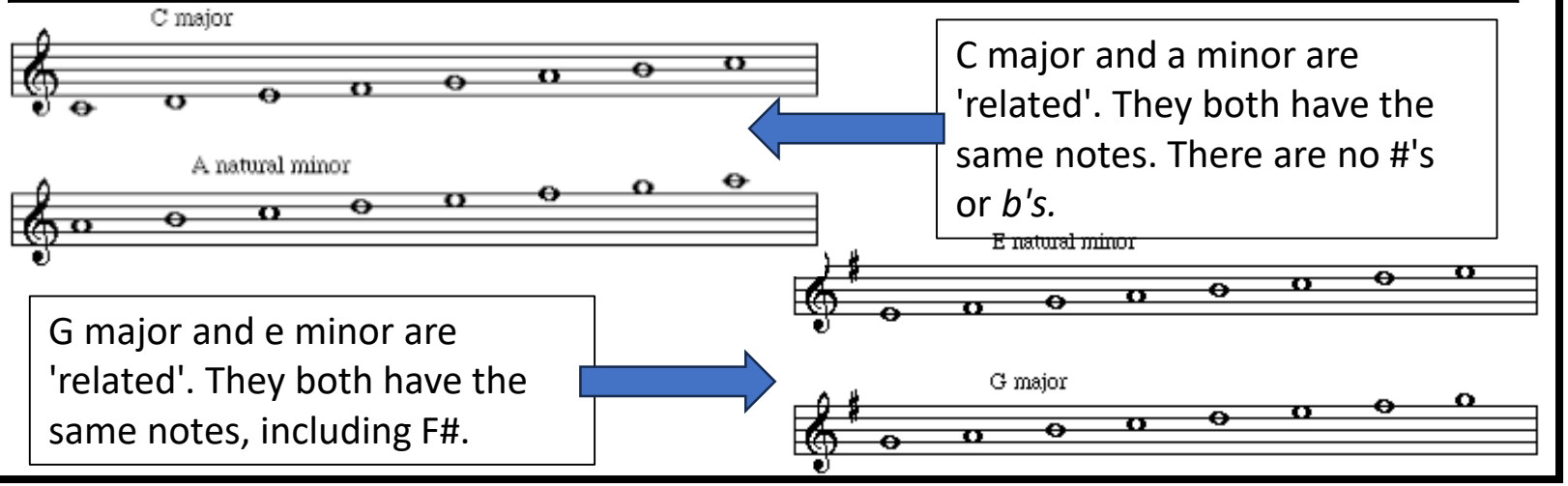
1. The structure
2. The time signature
3. The key signature
4. The instrumentation
5. The tempo
6. The harmony of the music (the chords used)
7. The melody of the music (the tune)
8. The lyrical content and meaning (if any).
9. The style/genre
10. The social/political/cultural impact on the music.
11. The effects the music on social/political/cultural

Song Structure Examples



Examples of some common song structures in popular music.

Example of (relative) major and minor key signatures



C major and a minor are 'related'. They both have the same notes. There are no #'s or *b's.*

G major and e minor are 'related'. They both have the same notes, including F#.

Year 9 and 10 Knowledge Goals: Music

Tier 3 Vocabulary		
Key word		Definition
1	tempo	The speed of the music.
2	dynamics	The volume of the music.
3	chord	3 or more notes played at the same time.
4	melody	1 note played at a time to make a tune.
5	structure	Playing all strings at the same time.
6	key signature	The notes used in the music.
7	time signature	The number of beats in a bar.
8	major	Refers to the 3rd note of the scale being a major 3rd above the root. 'Happy'
9	minor	Refers to the 3rd note of the scale being a minor 3rd above the root. 'Sad'
10	common time	4/4 time.
11	compound time	E.g. 6/8, 12/8 time signature.
12	circle of 5ths	Shows the relationship between 12 musical keys.

Notes:

Physical Education (Knowledge Goals- Cross-Country)

Cross-country running

- A sport in which teams and individuals run a race on open-air courses over natural terrain such as dirt or grass.
- The course, typically 3–12 kilometres (1.9–7.5 mi) long, may include surfaces of grass and earth, pass through woodlands and open country, and include hill, flat ground and sometimes gravel road and minor obstacles.
- Both men and women of all ages compete in cross country, which usually takes place during autumn and winter, and can include weather conditions of rain, sleet, snow or hail, and a wide range of temperatures.
- Cross country running is one of the disciplines under the umbrella sport of athletics and is a natural-terrain version of long-distance track and road running.
- Cross-country running requires a combination of several fitness components to perform well, as it involves both aerobic endurance and various physical and mental challenges.
- Cross-country running is mentally demanding, especially in long races or challenging conditions.
- Runners need mental toughness to push through fatigue, maintain pace, and stay motivated during tough sections of the course, such as hills or when competing against other athletes.
- Cross-country running demands a well-rounded fitness profile. The most critical component is aerobic endurance, but muscular endurance, strength, speed, agility, balance, and mental toughness also play important roles in a runner's overall performance. A well-trained cross-country runner combines these physical components with mental focus to navigate the often challenging conditions of the sport.

Running technique:

Scoring:

It is both an individual and a team sport; runners are judged on individual times and teams by a points-scoring method.
Team events: In team cross-country races, the finishing positions of the top runners from each team are added up to determine the team's score. The team with the lowest total score wins. Typically, the first five runners from each team are counted in the score. For example 1st= 1 point, 11th= 11 points and so on.

Components of fitness:	How it is used during X-Country
Cardiovascular Fitness:	Cross-country running is an endurance event that can last anywhere from 20 to 90 minutes (depending on the race distance). A high level of aerobic endurance is essential to maintain a steady pace and prevent fatigue over long distances.
Muscular Endurance:	Cross-country races involve running for long periods, often on varied terrain (such as hills, mud, and uneven ground), which requires sustained muscle function. The legs, particularly the quadriceps, hamstrings, calves, and hip flexors, need good muscular endurance to maintain form and prevent early fatigue.
Strength:	Although not as critical as aerobic endurance, strength is important for powering through uphill sections, improving stride efficiency, and maintaining proper posture throughout the race. Strong core muscles (abdominals, lower back) also contribute to better stability and running form, which is particularly useful in challenging terrains.

Physical Education (Knowledge Goals –Cross-Country)

	Key word/ Key term	Definition
1	**acceleration**	To go from still to moving as fast as possible.
2	**race Pace`**	The speed at which an athlete runs during a race, which is typically measured in minutes per mile or kilometers. It is influenced by the runner's endurance, training, and the difficulty of the course.
3	**interval training**	A type of training where runners alternate between high-intensity running and periods of rest or low-intensity running. Interval training helps improve speed, endurance, and cardiovascular fitness.
4	**stride**	The length and frequency of steps a runner takes while running.
5	**pacing**	The strategy used by a runner to manage their speed throughout a race.
6	**altitude**	The height above sea level at which a race is held.
7	**cardiovascular endurance**	The ability of the heart, lungs, and circulatory system to supply oxygen to the muscles during prolonged physical activity.
8	**muscular endurance**	The ability of muscles to perform repetitive contractions over an extended period without tiring
9	**strength**	The ability to exert force against resistance.
10	**mental toughness**	The ability to remain focused, motivated, and resilient, even when faced with physical or emotional challenges.

Notes:

Year 7 and 8 Knowledge Goals: PE- Cumberland and Westmorland Wrestling

CWWA-

1. The fascination of person-against-person combat with its simple rules and subtle mix of **speed, strength, agility,** skill and determination is there to see in the grass rings at sports meetings and agricultural shows throughout the Northern Counties of England and the Borders of Scotland.
2. The bout will commence once the referee has instructed the competitors to "wrestle".
3. The bout itself is judged by two judges and a referee. The judges decide who has won the bout, giving their decisions instantly without discussion. The referee is only consulted if they are unable to agree. The result is always a majority decision.
4. The aim of the bout is very simple - to put your opponent on the ground. The wrestler who touches the ground first with any part of his body above his ankle is the loser. Any wrestler who loses his grip before the bout is completed is the loser.
5. The attraction of the sport is that it can be spectacular and intense but with a good sense of **sportsmanship** about it. The competitors shake hands before and after every bout.
6. A strong part of the heritage is the traditional costume which is still worn to this day.
7. Up to the age of twelve wrestling classes are mixed. After that they are generally split by age for the boys and by weight for the men. Most events now have categories for female wrestlers. 2016 marked the introduction of two annual female world championships.

LINKS TO OTHER STYLES OF WRESTLING

Although called "Cumberland and Westmorland Wrestling" this style of wrestling is actually practiced all over the world. There are many variations of the sport practiced worldwide. Please click on the QR code to find out more.

CCWA website

Different moves in CWW:	How to conduct the moves:
Inside Click	
Back heel	
Outside Stroke	
Cross Buttock	
Inside Hype	
Cross Click	
Twist over the knee	

Year 7 and 8 Knowledge Goals: PE- Cumberland and Westmorland Wrestling

Settlebeck School
Respect | Responsibility | Aspiration

Tier 3 Vocabulary		
Key word		Definition
1	hipes	All the lifting throws or moves are called hipes
2	swinging hipe	Swing your opponent until their legs fly out from underneath them before bringing them down to the ground.
3	outside hipe	Knock the legs of your opponent out of the way with a foot or knee.
4	inside hipe	The hiper lifts not only with their arms but also with their knee between the opponent's legs. At the highest point of the manoeuvre, the knee becomes the pivot on which the person is turned in mid-air.
5	back heel	The opponent hacks a person's legs from under them from the outside.
6	inside click	Does the same as back heel but by hooking between an opponent's legs
7	hank	Where a wrestler twines their leg round an opponent's leg and the straightens it to pull them to the ground.
8	full buttock	This is a fall where one person moves ahead of the other and pulls them forward and down to the ground with a wrenching motion. The wrestler slips right under their opponent and brings him over his back.
9	cross-buttock	Knocks the legs back when this chip is played
10	leg-up buttock	This is where a leg is pushed up between the opponent's legs to act as a fulcrum.
11	cross click	Going across the body and using left leg to kick the back off their left leg, apply pressure and drive opponent backwards.
12	dog fall	When the judges are unable to declare a winner.

Notes:

Year 9 and 10 Knowledge Goals: PSHE

Muscular strength/endurance

Feelings

Support

Healthy diet

Hobbies/interests

Hygiene

Mood

Hearing

Self care

BMI

Positivity

Self image

Relationships with others

Hair

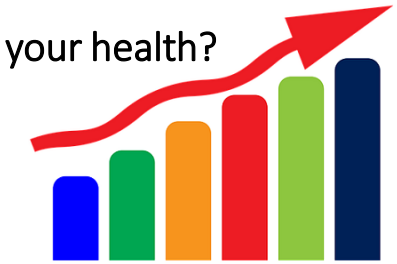
Oral health

Cardiovascular fitness

Sleep

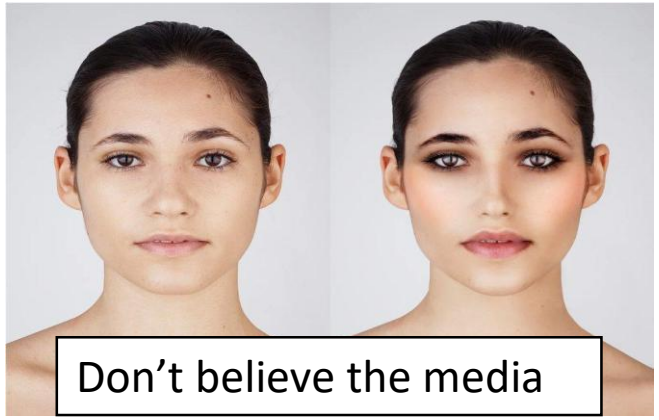
Emotions

How can you improve your health?



Eat a balanced diet
Exercise regularly
Don't smoke or abuse alcohol/drugs
Socialise
Reduce/manage stress

The Wellbeing Hub - Schools - Teen Tips



Don't believe the media

- Sleep is a really important part of a healthy lifestyle
- Sleep improves your memory
- Improves concentration
- improves your mood
- Improves performance
- Linked to longer life
- A minimum of eight to nine hours' good sleep on school nights is recommended for teens.

childline

ONLINE, ON THE PHONE, ANYTIME

childline.org.uk | 0800 1111

Year 9 and 10 Knowledge Goals: PSHE

Tier 3 Vocabulary		
Key word		Definition
1	BMI	The body mass index (BMI) is a measure that uses your height and weight to work out if your weight is healthy.
2	self Image	One's self-image is their view or concept of them self. Self-image is a fundamental aspect of someone's personality that can determine the success of relationships and a sense of general well-being.
3	cardiovascular fitness	Cardiovascular fitness is a measure of how well the heart, lungs, and blood vessels can transport oxygen to the muscles during exercise. It is an important component of overall fitness and has been linked to numerous health benefits
4	oral health	Oral health is multi-faceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow and convey a range of emotions through facial expressions with confidence and without pain, discomfort and disease.
5	self care	The ability of individuals, families, and communities to promote health, prevent disease, maintain health, and to cope with illness and disability with or without the support of a healthcare provider.
6	balanced diet	A balanced diet is the same as a complete diet because it has the right proportion of minerals, vitamins, other essential nutrients, and optimal calories for your body's makeup.
7	eat well guide	The Eat well Guide shows how much of what we eat overall should come from each food group to achieve a healthy, balanced diet.
8	concentration	The ability to give your attention or thought to a single object or activity : the ability to concentrate. the power of concentration.
9	resilience	Being able to return quickly to a previous good condition after problems.
10	endurance	The fact or power of enduring or bearing pain, hardships, etc. the ability or strength to continue or last, especially despite fatigue, stress, or other adverse conditions.

Year 9 and 10 Knowledge Goals: Religious Studies (Christian Beliefs)

- Jesus grew up in a Jewish family and community in Nazareth.
- Age 30, **Jesus was baptised by John the Baptist and began teaching** and performing **miracles**, such as **healing a blind man**. This is known as his ministry.
- He recruited his disciples and together they taught God's message to many people.
- Jesus demonstrated God's love and gave teachings throughout his life.
- One of his key teachings was the Parable of the Good Samaritan, which teaches Christians to love thy neighbour (Luke 10:30-37)

Salvation

God placed sins of world on **Jesus (God the Son)** at his crucifixion – this **sacrifice** meant humans could **reconcile** with God.

Through Law please God by following his teaching and carrying out good deeds (give to charity).

Through Grace -salvation doesn't need to be earned. Belief in God and Jesus enough.

Through Holy Spirit – helps Christians seek forgiveness for sin "turn to God in repentance" (Acts)

Sin separates humans from God.
Original Sin = the first sin, committed by Adam & Eve disobeying God in the Garden of Eden by eating from **The tree of Knowledge (**after being tempted by the **Devil).**

Stewardship and dominion Christians believe that God appointed **human beings to rule the world**, and to care for the world as responsible custodians. God said, 'Let them have dominion' (Genesis 1:26). This could suggest that humans have **dominion** over God's world and its resources, but it does not mean that humanity should exploit the Earth's resources. This teaching suggests that humanity's purpose is to look after the world that God has created. This is known as **stewardship**.

The nature of God and Jesus in Christianity
Almost all Christians believe in the ***Trinity*** - Father, Son and Holy Spirit, who were present at the creation and who each take on different roles:-
God the Father = creator
Jesus (God the Son) = teacher/saviour

Interpretations Christian beliefs differ depending on **denomination** but also on **personal** belief.
Literal = Interpret the creation stories in Genesis literally.
Inspirational = Bible was inspired by God; inconsistencies because it was written by humans. The bible is open to interpretation.
Metaphorical = Stories are metaphors or symbolic so may accept scientific theories, such as the Big Bang.

Most Christians believe that death is not the end. They believe in the resurrection of the body on the **Day of Judgement**, when they will be sent to Heaven or Hell **(Book of Revelation)**. **The Parable of the Sheep and Goats (Matthew)** explains the idea of judgement.
Some Christians **do not believe that Heaven and Hell** are necessarily **physical places**. **Roman Catholics** believe in a place called **Purgatory**, where sins are punished and where a person's soul undergoes purification before it can go to Heaven.
Many also argue that the existence of **Hell would contradict God's omnibenevolent** nature. These Christians believe that everyone will eventually repent and be forgiven.
Christians believe that **Jesus was resurrected**, and because of this, **Christians will be too**.

Genesis is the **first book of the Bible**. **Genesis 1** describes the creation of the heavens and the earth. **Genesis 2** focuses on the creation of the first humans, Adam and Eve

Omnipotence - God is all-powerful. The evidence includes creation of the world and the resurrection of Jesus.
Omnibenevolence - God is all-loving. God sacrificed his own son for humanity.
Just - God is fair to all and he forgives those who say sorry for. The Psalms say, God is fair and just (Psalm 25:8).
Omniscience - God knows everything; every person's inner thoughts as well as knowing all that has happened and all that will happen in the future.
Transcendence - God exists outside of our worldly constraints and physical laws. Complete understanding of God is beyond the human intellect.

MORAL EVIL = HUMAN MADE
NATURAL EVIL = NATURAL DISASTERS

Solutions to the problem of evil
The idea that evil can exist alongside an all-loving God produces a **problem** for Christians. They have developed a few different solutions to this problem:
•God gave humans free will. Any suffering humans experience is a result of choices they have made or consequences from the natural world.
•Experiencing bad things could be a test of faith. For example, in the **Bible**, **Job** is tested on many occasions but keeps his faith in God, ultimately receiving a reward.
•Humans need evil to appreciate good. Balance is essential.
•God is beyond human understanding.

Year 9 and 10 Knowledge Goals: Religious Studies (Christian Beliefs)

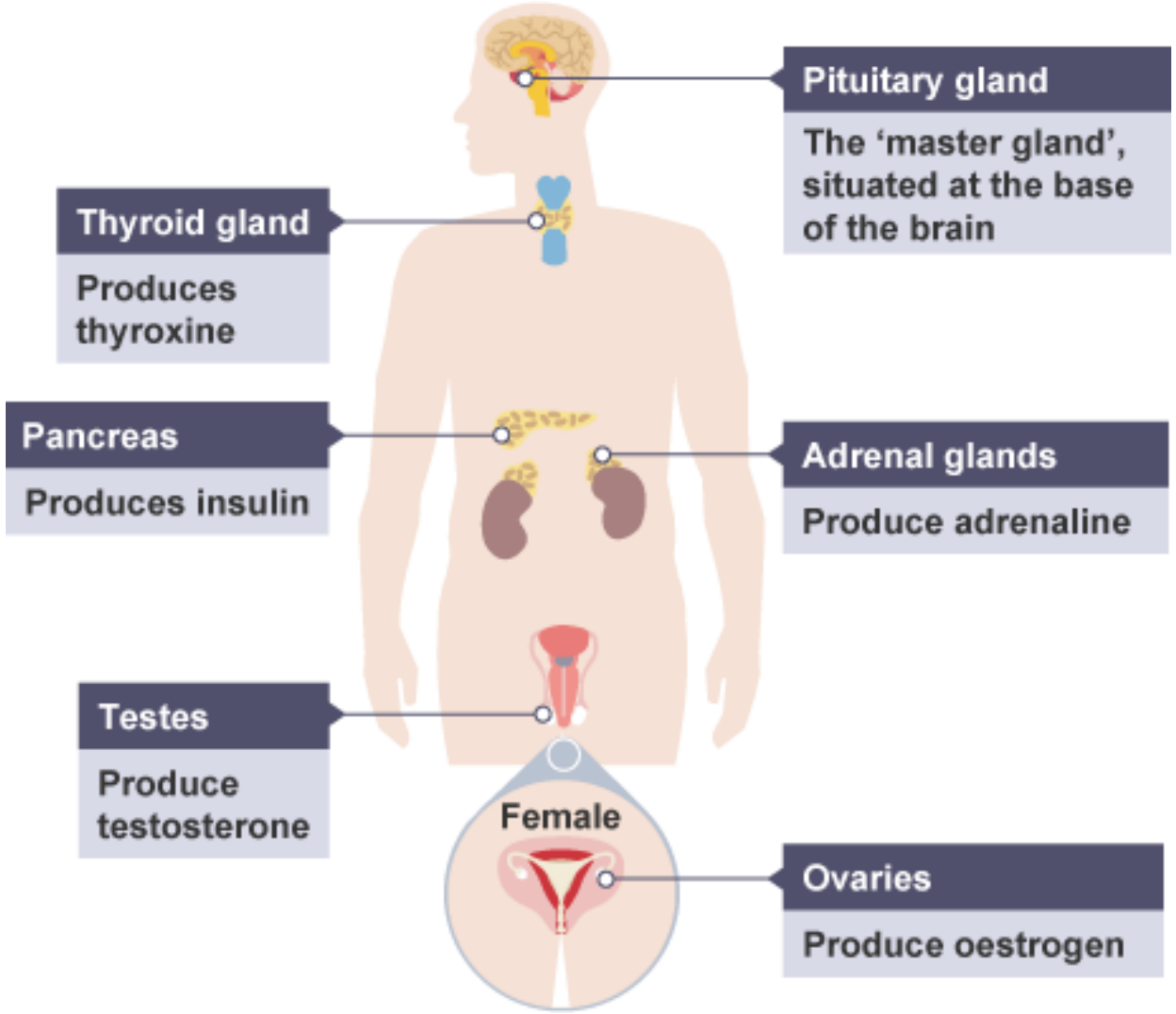
Tier 3 Vocabulary		
Key word		**Definition**
1	denomination	A branch of the Christian Church.
2	dominion	Control, leadership or sovereignty.
3	stewardship	Supervising or taking care of something.
4	original sin	The first sin created by Adam and Eve, inherited by humans.
5	salvation	Deliverance from harm, ruin or loss.
6	reconcile	Positively restore a relationship.
7	purgatory	A place where sins are purified before going to heaven.
8	omnipotent	All-powerful.
9	omnibenevolent	All-loving/good.
10	trinity	The father, the son and the holy spirit in one form.
11	resurrection	Coming back to life.
12	metaphor	An object or action that represents something else.

Notes:

Year 9 and 10 Knowledge Goals: Science (Homeostasis)

Homeostasis maintains optimal conditions for **enzyme** action throughout the body, as well as all cell functions. It controls blood glucose, body temperature and water levels.

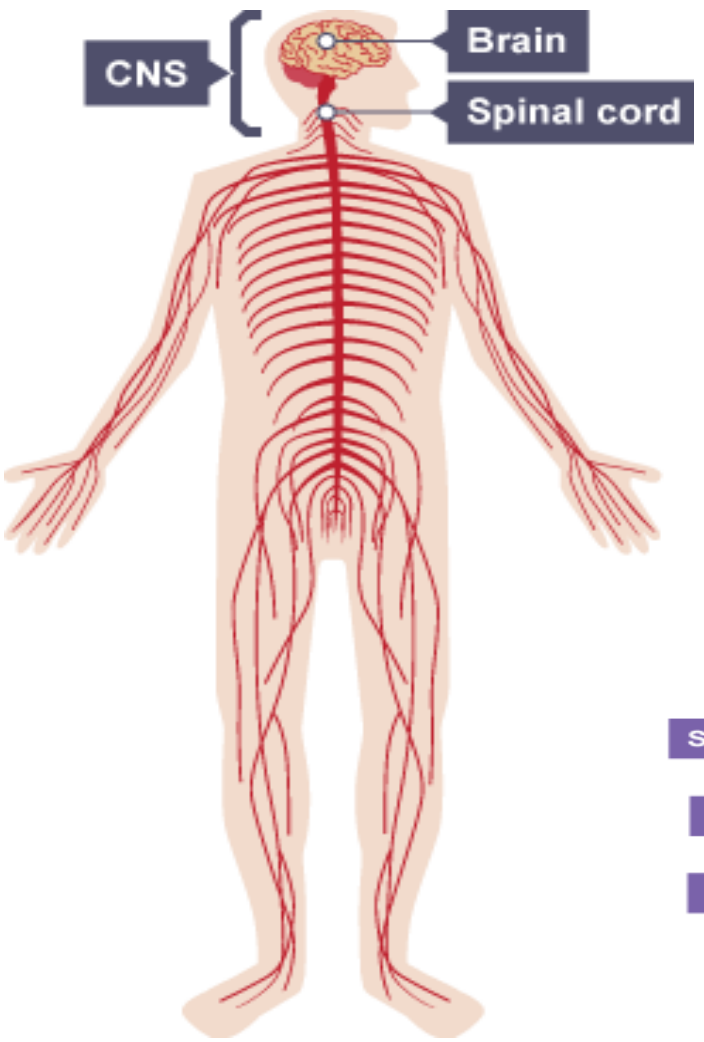
The endocrine system- Hormones



Hormone	Produced	Role
FSH (follicle stimulating hormone)	Pituitary gland	Causes an egg to mature in an ovary. Stimulates the ovaries to release oestrogen
Oestrogen	Ovaries	Stops FSH being produced (so that only one egg matures in a cycle). Repairs, thickens and maintains the uterus lining. Stimulates the pituitary gland to release LH.
LH (luteinising hormone)	Pituitary gland	Triggers ovulation (the release of a mature egg)
Progesterone	Ovaries	Maintains the lining of the uterus during the middle part of the menstrual cycle and during pregnancy.

Year 9 and 10 Knowledge Goals: Science (Homeostasis)

Homeostasis maintains optimal conditions for **enzyme** action throughout the body, as well as all cell functions. It controls blood glucose, body temperature and water levels.



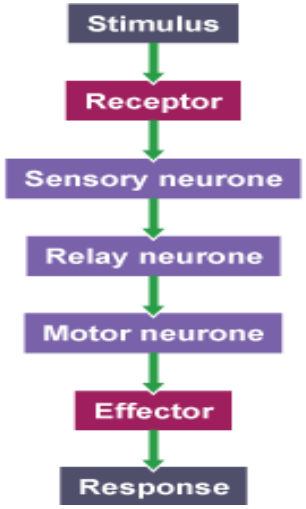
Nervous system

The human nervous system consists of:

- the **central nervous system** – the brain and spinal cord
- the **peripheral nervous system** – nerve cells that carry information to or from the CNS

Reflex actions:

This creates an **automatic** and **rapid** response to a stimulus, which **minimises any damage** to the body from potentially harmful conditions, such as touching something hot.



- **Receptor** in the skin detects a stimulus (the change in temperature).
- **Sensory neurone** sends electrical impulses to **relay neurone**, which are located in the spinal cord **CNS**. They connect sensory neurones to motor neurones.
- **Motor neurone** sends electrical impulses to an effector.
- **Effector** produces a response (muscle contracts to move hand away)

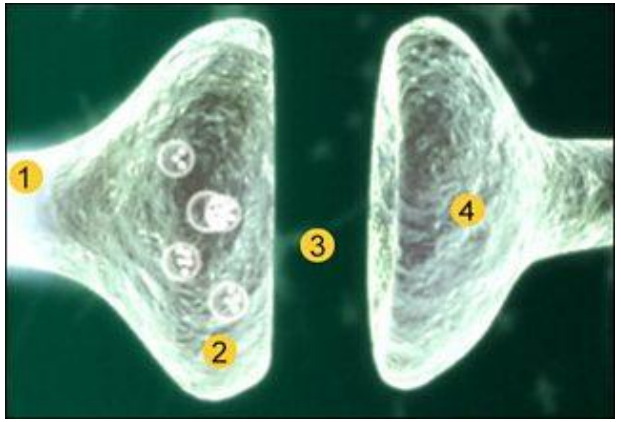
Negative feedback

In general this works by:

- if the level of something rises, control systems reduce it again
- if the level of something falls, control systems raise it again

1. An electrical impulse travels along the first axon.
2. This triggers the nerve-ending of a neurone to release **chemical messengers** called **neurotransmitters**.
3. These chemicals **diffuse** across the synapse (the gap) and bind with receptor molecules on the membrane of the second neurone.
4. The receptor molecules on the second neurone bind only to the **specific neurotransmitters** released from the first neurone. This **stimulates** the second neurone to transmit the electrical impulse.

Synapses: The gap between neurones



Year 9 and 10 Knowledge Goals: science (Homeostasis)

Tier 3 Vocabulary		
Key word		Definition
1	endocrine system	A messenger system in an organism comprising of hormones that are released by glands into the blood and that target organs.
2	synapse	A tiny gap at the junction between two nerve cells, which nerve signals must cross
3	negative feedback	Mechanism to lower raised levels of something, and to raise reduced levels of something
4	receptor	Organs which recognise and respond to stimuli.
5	auxin	Plant hormones that control cell elongation.
6	neurotransmitter	Chemical involved in passing nerve impulses from one nerve cell to the next across a synapse.
7	gland	An organ or tissue that makes a substance for release, such as a hormone
8	hypothalamus	The part of the brain that detects changes in blood temperature and water concentration
9	enzyme	The organ, tissue or cell that produces a response.
10	hormone	Chemical messenger produced in glands and carried by the blood to specific organs in the body.
11	contraception	Techniques to prevent pregnancy as a consequence of sexual intercourse.
12	reflex action	Automatic and rapid response to a stimulus

Notes:

BBC sounds lessons

Required practical

Quiz QR Code	Quiz Link
	Quiz Link

Year 9 and 10 Knowledge Goals: Science (Forces)

What is a force?

A push or pull caused by the interaction between two or more objects. Force affects the motion of the object. All forces are measured in Newtons.

Scalar or vector quantity?

*Forces are **vector** quantity, this means they have both a magnitude (size) and a direction, the direction is important.*

Scalar quantities only have a size.

Calculating resultant force – adding vector quantities.

The resultant force is the sum of all forces acting on an object. If adding more than one force, we need to ensure we include the direction.

Same direction

Opposite directions

Free body diagrams are used to represent the forces acting on an object.

Contact force are those where the objects need to be touching.

Contact	Non-contact
Friction	Magnetic force
Drag (air resistance)	Electrostatic force
Drag (water resistance	Weight (due to gravity)
Upthrust	
Tension (pull)	
Compression (push)	
Driving force (thrust)	
Lift	
Normal contact force	

A **non-contact** force does not require touch. There will be a **field** around the area exerting the force. The strength of the field decreases as the distance from the object exerting it increases.

Weight, mass and gravity

Weight is a non-contact force that acts on all objects with mass. It can be calculated using the equation:

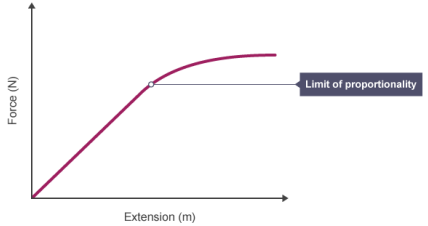
Weight (N) = mass (kg) x gravitational field strength (N/kg)

Forces can stretch, squash or bend an object. This is called a deformation and can be either **elastic,** where the object will return to its original shape when the force is removed, or **inelastic** where it will not return to its original shape.

Hooke's Law states that the extension of an elastic object is directly proportional to the force applied to it. This is shown by the equation:

Force = spring constant x extension

Spring constant is a measure of how stiff the elastic object is and is measured in N/m or N/cm.

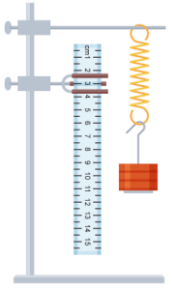


Overloading a spring would result in going past the limit of proportionality. This results in the relationship no longer being directly proportional.

The amount of energy stored when an elastic object is either stretched or compressed can be calculated by:

elastic potential energy = 0.5 × spring constant × (extension)2

Extension must be measured in metres for this to be accurate.

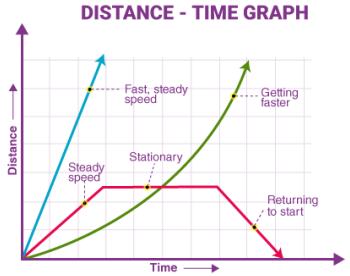


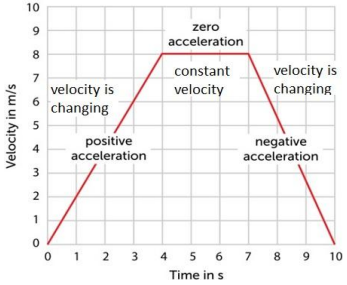
To investigate the relationship between force and extension you need to suspend the elastic object and then hang slotted masses to it, 100g = 1N of force.

Extension is calculated by subtracting the original length from the new length. It is important to measure the length accurately using a ruler.

Representing motion and Newton's Laws

Speed is the rate of change of distance. Velocity is speed in a given direction. Acceleration is the rate at which speed changes. Motion is often represented on a graph. It is important to read the axes carefully before beginning any calculations.





Terminal velocity is the constant velocity an object reaches when falling. There are three stages to it:

- the object accelerates downwards due to the force of gravity
- object's speed increases, frictional forces such as air resistance or drag increase
- at terminal velocity, the weight of the object due to gravity is balanced by the frictional forces, and the resultant force is zero so we reach a constant speed.

Opening a parachute would increase the surface area, increasing the force of air resistance and the jumper would decelerate to a lower terminal velocity.

Newton's laws of motion in physics	
LAW #1	A body at rest will remain at rest, and a body in motion will remain in motion unless it is acted upon by an external force.
LAW #2	The force acting on an object is equal to the mass of that object times its acceleration, F = ma.
LAW #3	For every action, there is an equal and opposite reaction.

Inertia is the tendency of an object to remain in its current state of motion e.g. stationary or a constant speed.

Momentum is a product of an objects mass and velocity. When a resultant force is applied, an objects velocity changes and so its momentum will also change.

The **stopping distance** of an object is the distance it travels from the moment the driver realises they need to stop, to the car being stationary. It is calculated with the equation:

thinking distance + braking distance = stopping distance

Thinking distance is how far the car travels whilst the driver realises they need to stop. It is decided by the reaction time of the driver and is affected by alcohol, tiredness, speed and distractions.

Braking distance is the distance the car travels once the brakes are applied. It is affected by friction between the brakes, tyres and road. Bold tyres, poor road conditions, worn break pads and speed would all increase the braking distance.

Year 9 and 10 Knowledge Goals: Science (Forces)

Tier 3 Vocabulary		
Key word		Definition
1	acceleration	The rate of change in an objects velocity
2	hooke's Law	Law that states the extension of an elastic object is directly proportional to the force applied to it
3	inertia	The tendency of an objects motion to remain unchanged
4	momentum	The product of an objects mass and velocity
5	non-contact force	A force that acts even if the touch objects are not touching each other. The object exerting the force will have a field around it.
6	resultant force	The sum of all forces acting on an object.
7	scalar	A quantity which has only a size e.g. mass or temperature.
8	spring constant	A measure of how much force is needed to extend an elastic object. 'How stiff the elastic object is'.
9	stopping distance	The distance travelled by a car, in metres, from the moment the driver realises they need to stop to becoming stationary. Affected by thinking distance and braking distance.
10	terminal velocity	The maximum velocity object can reach.
11	vector	A quantity that has both a size and a direction e.g. velocity and forces.

Further material

Investigating Hooke's Law

Hooke's Law - GCSE Science Required Practical – YouTube

Investigating Newton's 2nd Law of Motion

Newton's 2nd Law - GCSE Science Required Practical – YouTube

Stopping distances simulator

eChalk: Stopping distances

Interpreting a distance-time graph

GCSE Physics - Distance-Time Graphs #53 – YouTube

Newton's Laws of Motion

Newton's 3 Laws, with a bicycle - Joshua Manley - YouTube

KS4 Knowledge Goals: Careers

Why Thinking About Your Career and Education Is Important.

1. It Helps You Make Informed Choices

In KS4, you start to make decisions that shape your future — such as what to study after Year 11. Thinking about your career early helps you understand what qualifications, subjects, or experiences you'll need for your next steps. For example, some college courses or apprenticeships require specific GCSEs, so planning ahead keeps your options open.

2. It Gives You Direction and Motivation

Knowing what you're working towards can make school feel more purposeful. When you have a goal — even a rough idea — you're more likely to stay focused, put in effort, and make the most of opportunities like work experience or volunteering.

3. It Builds Employability Skills

Exploring different careers helps you see which skills employers value, such as teamwork, communication, creativity, and problem-solving. KS4 is the perfect time to start developing these through lessons, clubs, part-time work, or community projects.

4. It Helps You Choose the Right Path After GCSEs

At the end of KS4, you'll choose whether to study **A-levels**, **BTECs**, **T Levels**, or begin an **apprenticeship**. Thinking about your career goals now makes it easier to choose the pathway that suits your strengths, interests, and learning style.

5. It Prepares You for the World of Work

The world of work is changing fast — with new technologies, industries, and opportunities appearing all the time. Learning about careers in KS4 helps you understand what's out there and what kinds of jobs might exist in the future.

6. It Builds Confidence in Making Decisions

Career thinking isn't about choosing one job for life — it's about getting to know yourself, exploring your options, and feeling confident about your choices. The more you understand your interests and strengths, the more independent and prepared you'll be for life after school.

Exploring Careers

You should look and explore a wide range of career areas. You can do this by:

•Using websites like **National Careers Service**, **BBC Bitesize Careers**, or **icould.com** to discover different job roles.

•https://nationalcareers.service.gov.uk/
•https://www.bbc.co.uk/bitesize/careers
•https://icould.com/

Skills for the Future

Employers value not just qualifications, but also transferable skills.
Skills you are already developing in school are:

- **Communication and Oracy**
- **Teamwork and Leadership**
- **Creativity and Problem-Solving**
- **Resilience and Self-Management**
- **Digital and Research Skills**

Keep a record of these achievements — they'll help when applying for college, apprenticeships, or jobs later.

Top 5 Skills Employers Want

1.Communication Skills. Being able to speak, listen, and write clearly. Explaining your ideas, giving feedback, and working well in teams.

2.Teamwork. Working well with others to achieve a goal. Sharing ideas, helping colleagues, and respecting different opinions.

3.Problem-Solving. Finding solutions when challenges or unexpected situations arise. Thinking creatively and logically to overcome obstacles.

4.Resilience & Adaptability. Staying positive and keeping going even when things are difficult. Being flexible when things change at work or school.

5.Organisation & Time Management. Planning your work and managing deadlines effectively. Prioritising tasks and being responsible for your own progress.

KS4 Knowledge Goals: Careers

Tier 3 Vocabulary

1.Apprenticeship – A paid job where you learn practical skills and gain a qualification while working for an employer.
2.Vocational – Education or training that focuses on learning skills for a specific job or career (for example, catering, construction, or childcare).
3.Entrepreneur – A person who starts and runs their own business, often taking risks to develop new ideas or products.
4.Industry – A group of businesses that make similar products or provide similar services (for example, the fashion industry or the technology industry).
5.Qualification – A certificate or award that shows you have successfully completed a course or passed an exam.
6.Employability – The skills, qualities, and attitudes that help you get and keep a job (such as teamwork, communication, and reliability).
7.Internship – A short-term work experience placement that helps you learn about a career and develop skills.
8.Networking – Building professional relationships and connections that can help you learn about job opportunities or career paths.
9.Portfolio – A collection of your best work or achievements that shows your skills and progress (often used in creative subjects like art or design).
10.Labour Market – The world of work, including all the jobs available, the skills employers need, and the trends in different industries.

Quiz: What career is right for me? - BBC Bitesize

The UCAS Careers Quiz – personalised career matches | UCAS

Home | Discover your skills and careers | National Careers Service

Career Quiz - Youth Employment UK

Your career, your choice! Know your options…

Sedbergh Senior - Sixth Form | Sedbergh School

Windermere School Sixth Form | IB World School

Kendal College | Home

Lancaster & Morecambe College

Welcome - Kirkbie Kendal School

The Queen Katherine - Sixth Form

Sixth Form - QES

Sixth Form – Kirkby Stephen Grammar School

Take some of these quizzes to help you plan your future career!

What Career Is For Me? | UK Career Quiz | Explore Careers UK

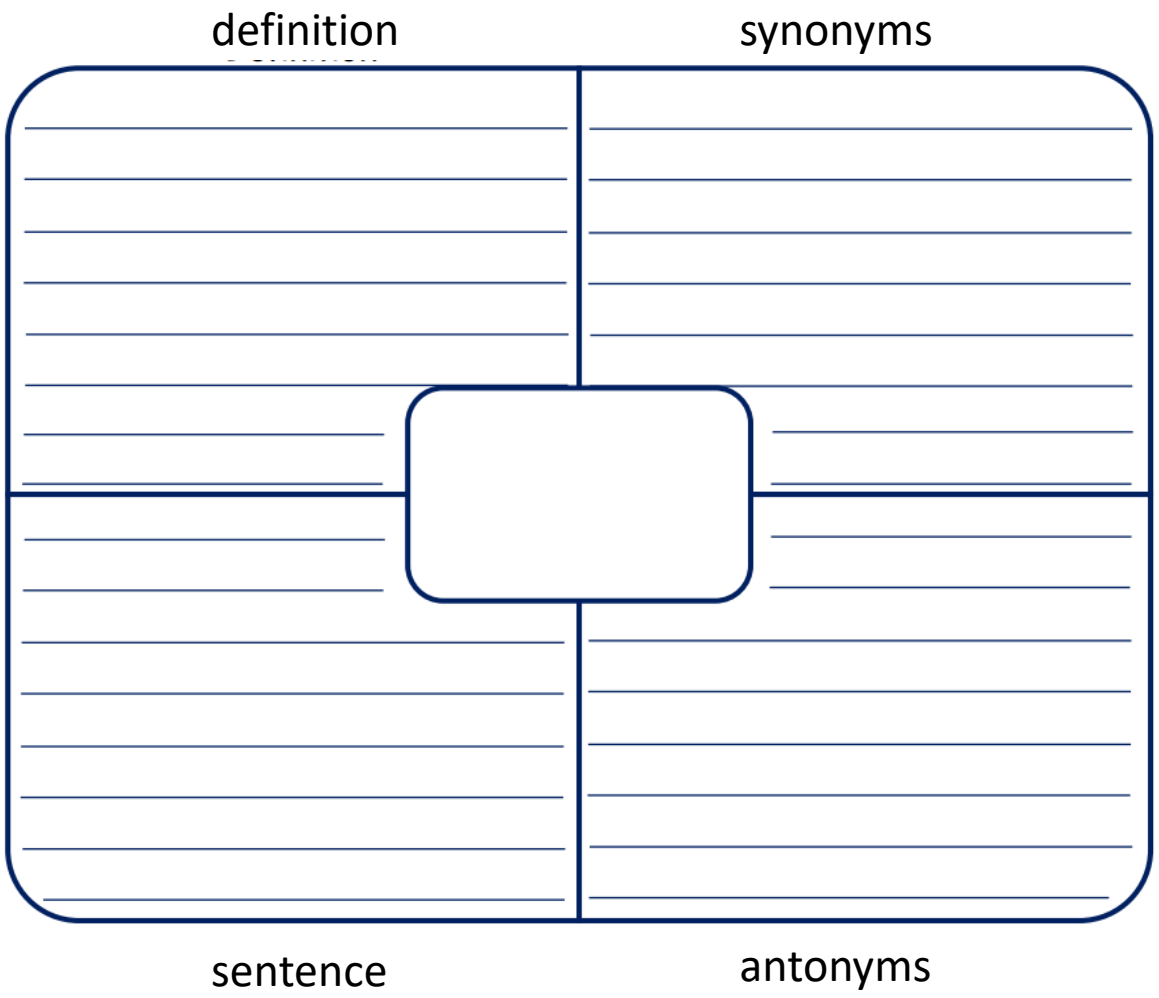
Tier 2 Vocabulary

ablution	abrasion	access
acquire	adapt	adequate
advocate	aggressive	albeit
alleviate	alter	altitude
ameliorate	analogous	analyse
behind	benign	beverage
bewitch	brawl	budge
calamity	calculate	callous
capacity	cause	central
challenge	chant	chirp
chore	circulate	claim
clear	collaborate	collude
command	committee	companion
compare	complex	confer
debate	decisive	decompose
define	delineate	deny
deteriorate	detrimental	dimension
disagree	discover	direct
eccentric	ecstasy	eloquent
emerge	emphasis	employ
encounter	epic	epitome
era	escalate	establish
evaluate	excavate	explore
farce	ferocious	flaw
flighty	formidable	function
ginormous	grapple	grizzly
hamper	harmful	harness
hierarchy	hitch	honour
hybrid	hypothesis	hysteria
identical	identify	ignorance
illusion	illustrate	immense

impeccable	imperative	impression
inevitable	innate	intense
interact	intercept	irreversible
jaunt	jubilant	justify
legacy	liberal	liberate
malicious	manipulate	match
measure	menace	meteoric
migrate	misconstrue	mitigate
native	network	notation
notice	notion	numeral
objective	observe	occupy
ointment	opaque	opponent
overall	overstate	overthrow
pallid	parallel	partition
persevere	persuade	pigment
pivot	pledge	ponder
pose	precedent	prepare
presume	previous	principal
radiant	raucous	ravage
rearrange	reckless	recline
refine	reflect	region
rejoice	relate	remote
replace	request	require
revise	rewrite	rhythm
salvation	scheme	sculpt
shift	shrewd	significant
slither	solar	sparse
specify	stability	state
supreme	surge	synonymous
tamper	technique	teeming
tentative	testament	transform

treaty	trivial	troublesome
underestimate	unscathed	update
validity	vanquish	verbose
verify	versatile	version
vibrant	victor	victory
virtuous	welfare	zealous

Literacy: Tier 2 Vocabulary – Frayer Model



Synonyms are words with the same or similar meaning:

- words such as happy, cheerful and merry.
- words such as sad, miserable and heartbroken.

Antonyms are words with opposite meanings:

- words such as angry and peaceful.
- words such as funny and serious.

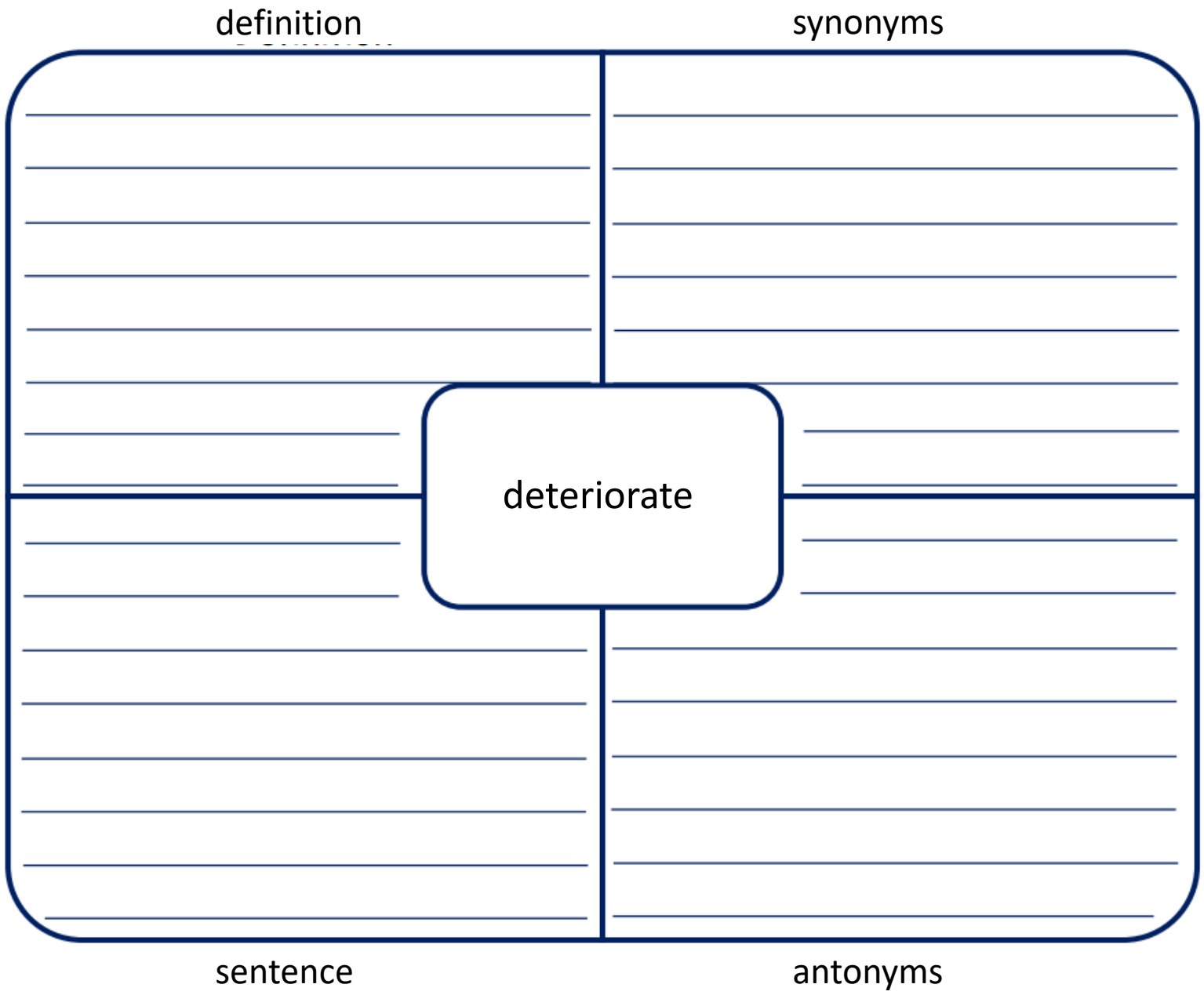
You can use a **thesaurus** to find **synonyms** and **antonyms** for words.

Scan to view thesaurus

click to view thesaurus

Have a go at creating a Frayer Model for each of the 6 tier 2 words from this term (blank templates are at the back of the booklet for you to complete this activity).

Frayer Model: Deteriorate



Complete a Frayer Model for the word **deteriorate**.

Scan to view thesaurus

click to view thesaurus

Frayer Model: Hamper

definition

synonyms

hamper

sentence

antonyms

Complete a Frayer Model for the word **hamper**.

Scan to view thesaurus

click to view thesaurus

Frayer Model: Shift

definition

synonyms

shift

sentence

antonyms

Complete a Frayer Model for the word **shift**.

Scan to view thesaurus

click to view thesaurus

Frayer Model: Pledge

definition

synonyms

pledge

sentence

antonyms

Complete a Frayer Model for the word **pledge**.

Scan to view thesaurus

click to view thesaurus

Frayer Model: Sparse

definition

synonyms

sparse

sentence

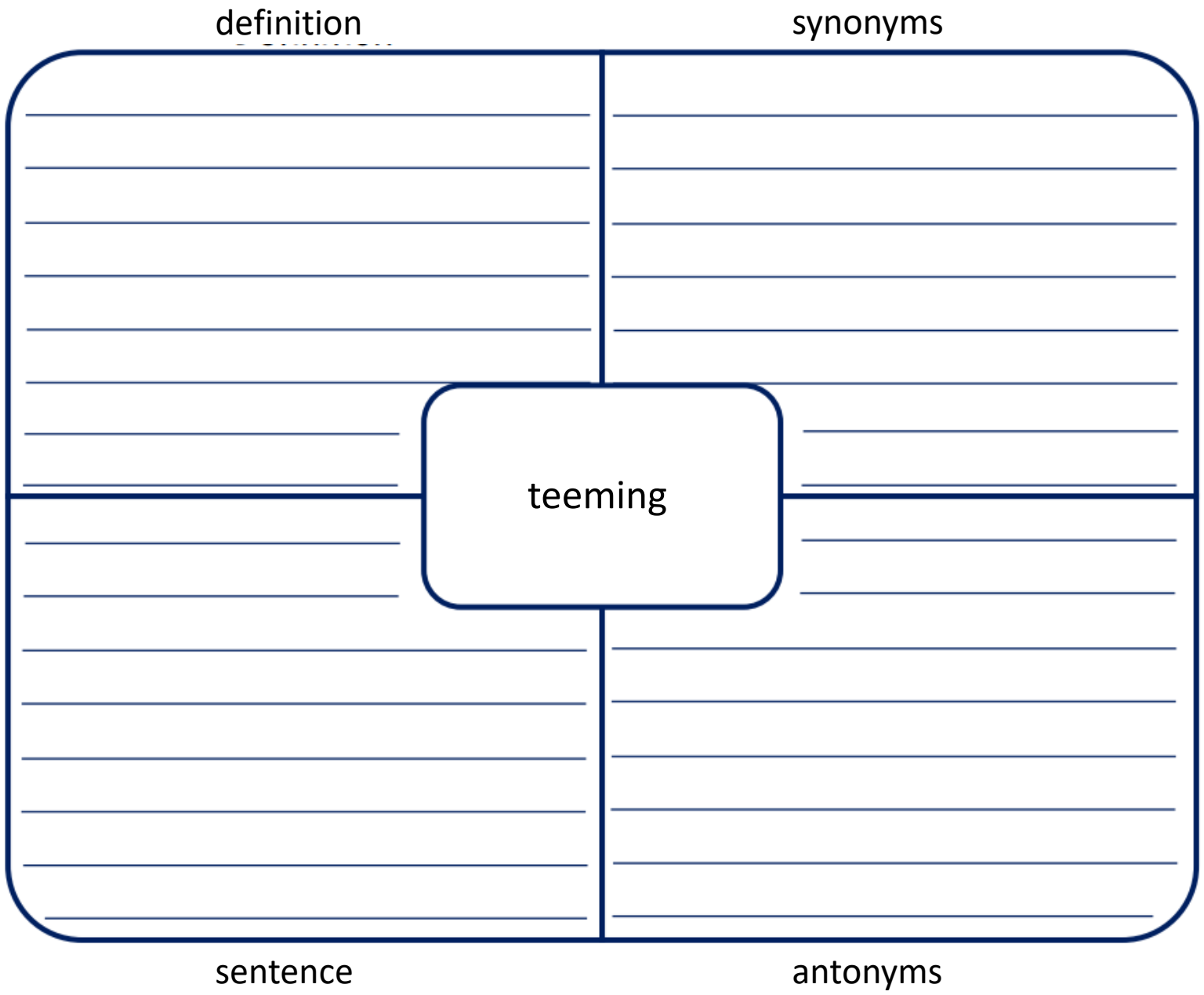
antonyms

Complete a Frayer Model for the word **sparse**.

Scan to view thesaurus

click to view thesaurus

Frayer Model: Teeming



Complete a Frayer Model for the word **teeming**.

Scan to view thesaurus

click to view thesaurus