

# Knowledge Goals Homework Booklet 2 (Autumn Term 2023)

Year 9 and 10

Name: \_\_\_\_\_



Subject	Page Number
Art and Design	<a href="#">7</a>
Computer Science	<a href="#">9</a>
Design and Technology	<a href="#">13</a>
Drama	<a href="#">15</a>
English	<a href="#">17</a>
Food Nutrition and Preparation	<a href="#">22</a>
French	<a href="#">25</a>
Geography	<a href="#">27</a>
History	<a href="#">29</a>
Mathematics	<a href="#">31</a>
Media	<a href="#">37</a>
Music	<a href="#">39</a>
Physical Education	<a href="#">41</a>
PSHE	<a href="#">45</a>
Religious Studies	<a href="#">47</a>
Science	<a href="#">49</a>
Sport Science	<a href="#">54</a>
6 Tier 2 words	<a href="#">56</a>

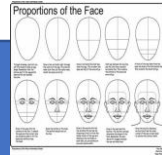
**Suggested Homework Schedule**  
(30 minutes of independent study per subject each week)

	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.

## 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

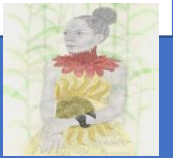
Parent information on knowledge retrieval:



## 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.

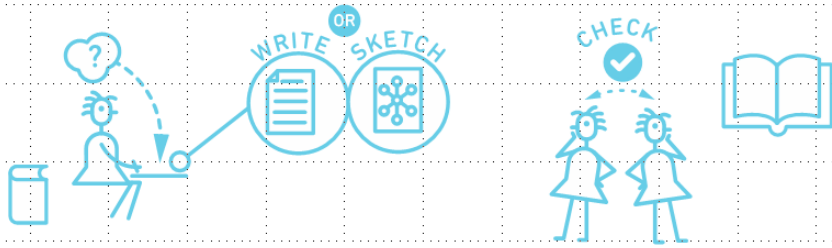
**Your teacher may choose to set you additional homework.**

### 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.

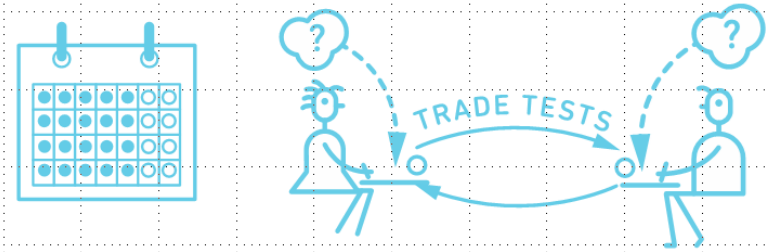
## HOW TO DO IT

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.



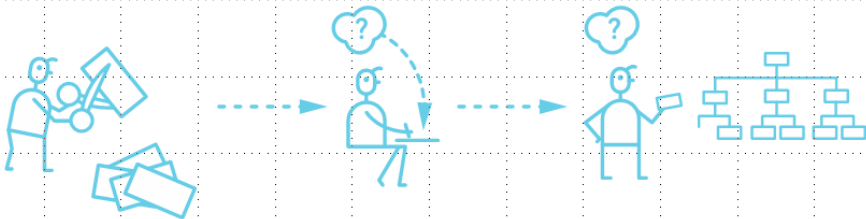
## HOW TO DO IT

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.



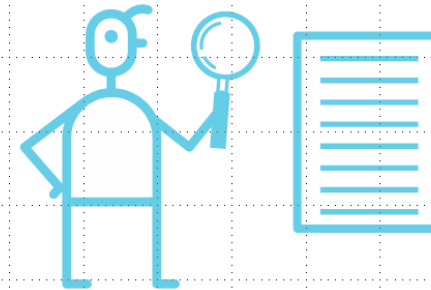
## HOW TO DO IT

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	Turbulent	To be in a state of agitation or tumult; disturbed.
2	Valid	To be sound; just; well-founded.
3	Buoyant	Cheering or invigorating.
4	Altruistic	Showing selflessness and concern for the well-being of others, often placing their needs before one's own.
5	Exuberant	Extremely joyful and vigorous.
6	Pithy	Brief, forceful, and meaningful in expression.

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.

definition	synonyms
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**Synonyms** are words with the same or similar meaning:

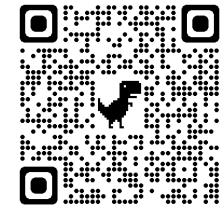
- words such as happy, cheerful and merry.
- words such as sad, miserable and heartbroken.

**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).

**Still life** is a broad term in art that can include many subjects. Anything that doesn't move on its own - any inanimate object - can be used in still life art. Artists have been inspired by still life throughout history and it is still a popular theme today.

Drawing lines, shapes and details accurately shows an understanding of the subject. By observing objects carefully you will start to notice how our eyes make sense of:

- perspective
- lines
- 2D shapes
- 3D shapes
- light and dark

Observational drawings should clearly show what you see.

[Search | National Gallery, London](#)

[Still Life Painting And How It's Survived Thousands Of Years \(mymodernmet.com\)](#)



Van Gogh –  
Sunflowers

Georges  
Braque –  
Violin &  
Candlestick



### To set up your own still life:

Think about how to choose, set up and arrange objects for a still life. Here are some ideas to help:

- use an odd number of items
- include objects of different shapes, sizes and textures
- use objects that have things in common
- overlap objects
- consider a balance of pattern and colour
- think about what the viewer's eye will look at first and how it will move around the picture



**Giorgio Morandi**  
(July 20, 1890 – June 18, 1964) was an Italian painter and printmaker he focused on still life. His paintings are noted for their tonal subtlety in depicting simple subjects, mainly vases, bottles, bowls, flowers.

[Still life - Observational drawing - AQA - GCSE Art and Design Revision - AQA - BBC Bitesize](#)

[Still life | Tate](#)



### Still life, pitcher and fruit

[Paul Cezanne](#)

- Date: 1894
- Style: [Post-Impressionism](#)
- Period: Final period
- Genre: [still life](#)
- Media: oil canvas
- Location: Private Collection
- Dimensions: 43.2 x 62.8 cm

**TOP TIP!** Try creating observational drawings in stages. Start by focusing on the shape then check the proportions, lightly draw the details then finally start to add shading. After each stage of drawing, compare it to the subject. Make small changes at each stage to improve the work.



### Still life with white bowl

[Paul Gauguin](#)

- Date: 1886; France
- Style: [Post-Impressionism](#)
- Period: Breton period
- Genre: [still life](#)
- Media: oil, canvas
- Location: Kunsthau Zürich, Zürich, Switzerland
- Dimensions: 59.5 x 72 cm

### Tier 3 Vocabulary

Key word		Definition
1	<b>Scale</b>	The size of the objects in a still life arrangement. Composition refers to how each of the objects are brought together and arranged
2	<b>Post Impressionism</b>	The work or style of a varied group of late 19th-century and early 20th-century artists including Van Gogh, Gauguin, and Cézanne. They reacted against the naturalism of the impressionists to explore colour, line, and form, and the emotional response of the artist.
3	<b>Cubism</b>	An early 20th-century style and movement in art, especially painting, in which perspective with a single viewpoint was abandoned and use was made of simple geometric shapes, interlocking planes, and, later, collage.
4	<b>Symbolist</b>	A late nineteenth-century movement that advocated the expression of an idea over the realistic description of the natural world.
5	<b>Fauvist</b>	Style of painting that flourished in France around the turn of the 20th century. Fauve artists used pure, brilliant colour aggressively applied straight from the paint tubes to create a sense of an explosion on the canvas.
6	<b>Composition</b>	Composition is the arrangement of elements within a work of art
7	<b>Ellipse</b>	An ellipse in art is an oval, but the term generally refers to an oval used to represent a titled circle that adds to the impression of depth
8	<b>Observational drawing</b>	Look at the subjects directly in front of your eyes and depict them accurately within a drawing.

Famous Still Life Artists	Art Movement
Van Gogh	Post-Impressionist
Paul Cezanne	Post-Impressionist
Giorgio Morandi	Metaphysical art
Georges Braque	Cubism
Pablo Picasso	Cubism
Paul Gauguin	Symbolist
Henri Matisse	Fauvist

### Quiz QR Code



### Quiz Link

[Quiz Link](#)

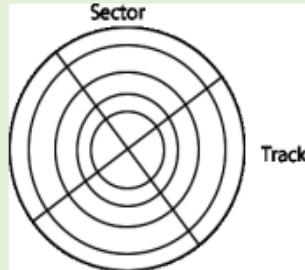


## Secondary Storage

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 electrons remain trapped even when there is no flow of electricity.
- Contain no moving parts and are therefore more robust than optical and magnetic storage.

### Advantages

- Much faster than 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



## Logical operations

## Example Logic Circuit



OR gate followed by NOT gate to make a NOR gate

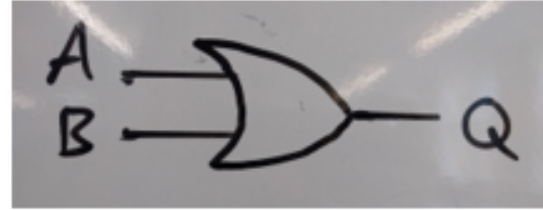
The fundamental logical operations are:

- 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

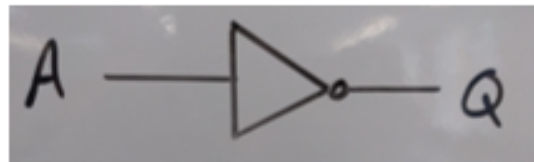
A	B	Q
0	0	0
1	0	1
0	1	1
1	1	1

## 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

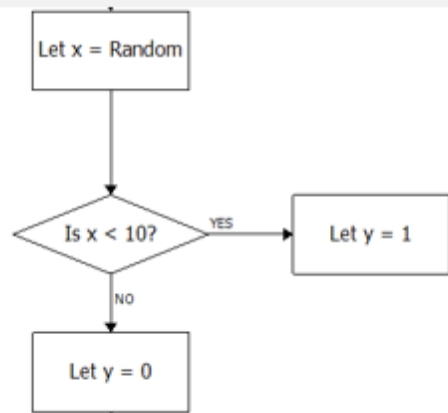
A	B	Q
0	0	0
1	0	0
0	1	0
1	1	1

## Boolean expression

$$Q = A \cdot B$$

**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
```

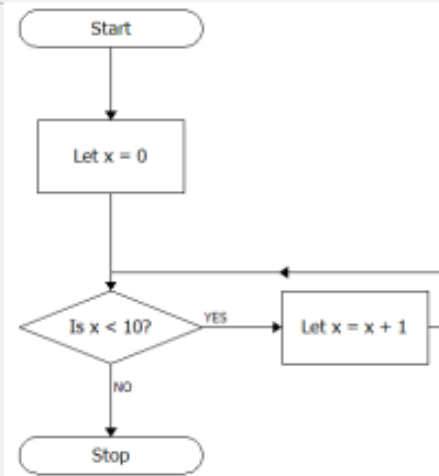


IF ...	IF i > 2 THEN j ← 10 ENDIF	if i > 2: j=10
IF ... ELSE ...	IF i > 2 THEN j ← 10 ELSE j ← 3 ENDIF	if i > 2: j=10 else: j=3
IF ... ELSE IF ... ELSE	IF i ==2 THEN j ← 10 ELSE IF i==3 j ← 3 ELSE j ← 1 ENDIF	if i ==2: j=10 elif i==3: j=3 else: j=1

**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.

### 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:

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Quiz QR Code



Quiz Link

[QUIZ LINK](#)

## CAD/CAM Desk Tidy



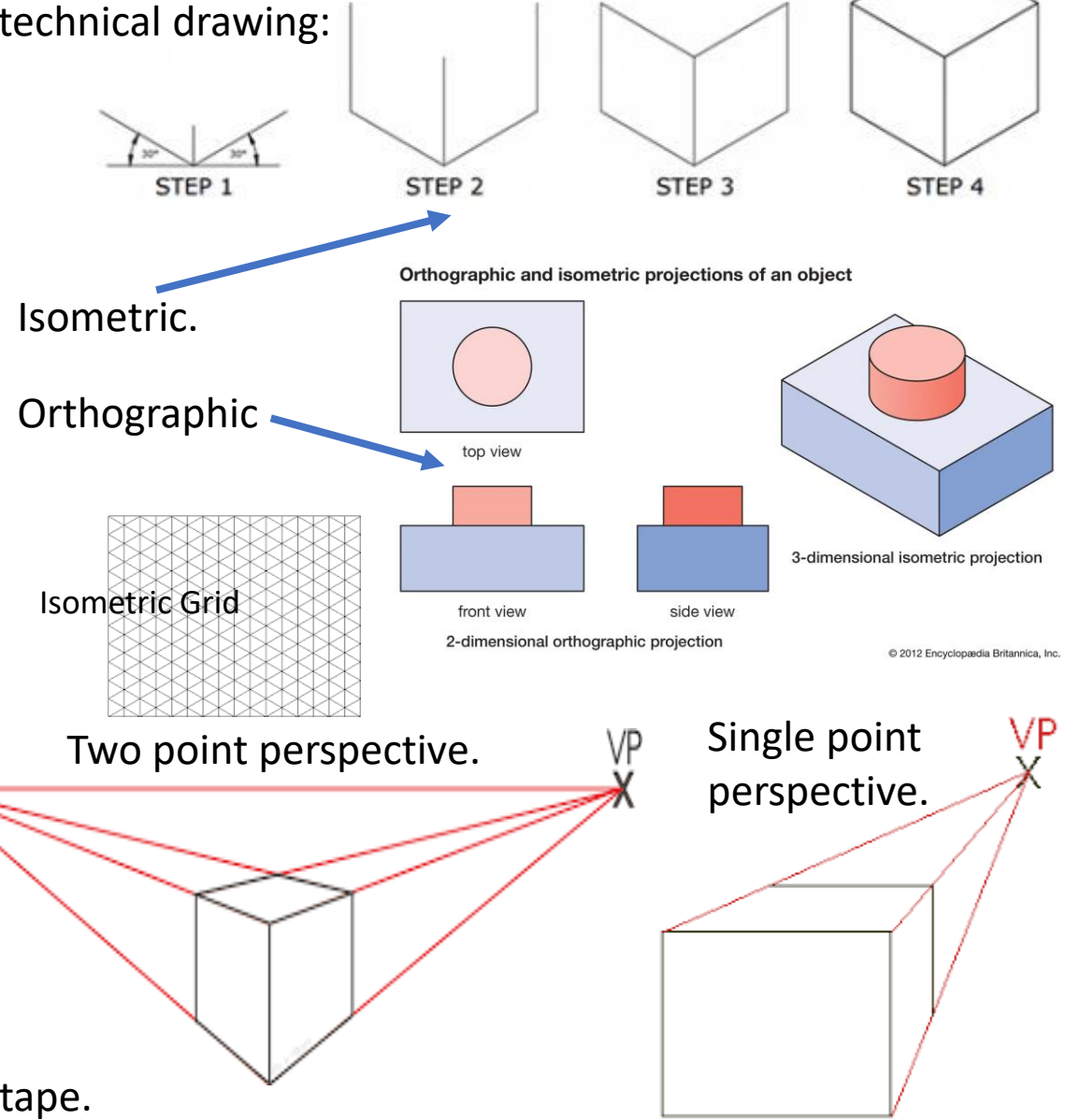
Design and make a desk tidy in the style of the Memphis movement or Alessi.

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:



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### 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.

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Quiz QR Code



Quiz Link

[Quiz Link](#)

## What is devising?

Devising is creating your own ideas in a theatrical performance. During this you will develop the ability to:

- Carry out research – independently learn more about the subject of your devised work.
- Develop your own ideas – create original ideas for your devised work based on your research findings.
- Collaborate with others – Combine ideas in your devised work with others where appropriate.
- Rehearse and improve your work - make changes in your practical work where needed.
- Perform to an audience.
- Analyse and evaluate it – discuss how to improve your work.

## A breakdown of devising:

### Devising Practical

Create a devised piece from a stimulus. Work as a group to develop the work. Create and communicate meaning. Perform the final piece.

## Devising written work

### 1 - Response to a stimulus.

Look at different stimuli.

Research.

Develop your own ideas.

### 2 – Development and Collaboration.

Work as a group.

Rehearse, refine and amend the work in progress.

### 3 – Analysis and evaluation.

Analyse and evaluate the whole devising process as well as the performance.

## Additional Resources

[GCSE Drama - AQA - BBC Bitesize](#)

### Tier 3 Vocabulary

	Key word	Definition
1	Physical Skills	Drama techniques that use your body or face.
2	Facial Expressions	A way to show emotions and feelings using your face.
3	Body Language	A way to show emotions and feelings using your body.
4	Gait	The way you walk
5	Stance	The way you stand using your legs and feet.
6	Posture	The way you stand using your body.
7	Vocal Skills	Drama techniques that use your voice.
8	Volume	How loud or quiet your voice is.
9	Pitch	How high or low your voice is.
10	Tone	A way to show emotion using your voice.
11	Intonation	The rise and fall of words and sounds in your voice.
12	Projection	How far you can carry your voice.
13	Stimulus	A starting point.
14	Devising	Creating something from scratch.

Notes:

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Quiz QR Code



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## 'Just Mercy' (Bryan Stevenson)

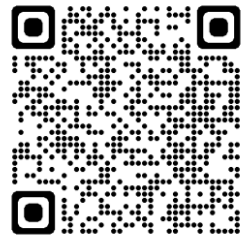
Bryan Stevenson is an American lawyer and the founder and executive director of the Equal Justice Initiative, fighting poverty and challenging racial discrimination in the criminal justice system.



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](#)

### **'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.***

*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 terrorise arbitrary Lynching Civil Rights movement Baptist minister

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 live. 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.

**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

Key Themes:

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

[A Christmas Carol - GCSE English Literature Revision - Edexcel - BBC Bitesize](#)



### 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:

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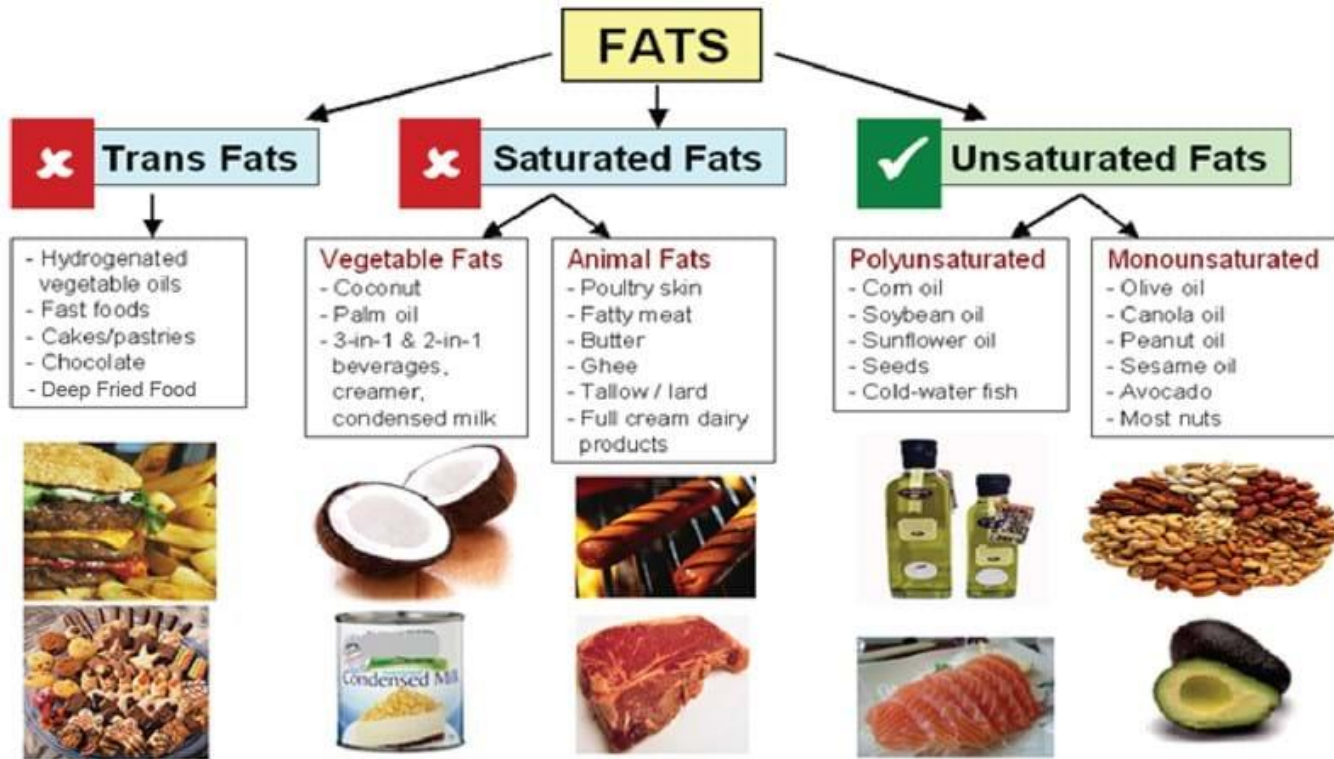
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- How to reduce fat intake**
- Check food labels and choose lower fat products
  - Choose lean cuts of meat and cut off any visible fat
  - Grill, bake, poach or steam rather than frying or roasting – you won't need to add any extra fat
  - Add extra 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**.

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# TYPES OF YOGURT



Set yogurt



Stirred yogurt



Drinking yogurt



Greek yogurt



Frozen yogurt



Flavoured yogurt

## Foods That Are Made Using Microorganisms Bacteria, Yeast and Mould



**R** Food Research Lab  
Your Innovation Starts Here!

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**

## 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 <a href="#">fermented foods</a> . Simply defined, starter cultures consist of microorganisms that are inoculated directly into <a href="#">food</a> materials in order to bring about desired and predictable changes in the finished product. These changes may include enhanced preservation, improved <a href="#">nutritional value</a> , modified <a href="#">sensory qualities</a> , and increased economic value.
3	Yeast	<b>A type of fungus that is used in making <a href="#">alcoholic drinks</a> such as <a href="#">beer</a> and <a href="#">wine</a>, and for making <a href="#">bread swell</a> and <a href="#">become light</a></b>
4	Mould	A wide variety of moulds (i.e. Penicillium chrysogenum and Penicillium nalgiovense) are used to ripen <b>surfaces</b> of sausages
5	Saturated fat	Saturated fat is a type of <a href="#">dietary fat</a> . It is one of the unhealthy fats, along with <a href="#">trans fat</a> . 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 <b>a type of healthy fat that includes omega-3 and omega-6 fatty acids</b> , which are essential for brain function
12	Monounsaturated fat	Monounsaturated fat is a type of <a href="#">dietary fat</a> . It is one of the healthy fats, along with <a href="#">polyunsaturated fat</a> . Monounsaturated fats are liquid at room temperature but start to harden when chilled



L'année dernière je suis allé(e) en/au + country

Normalement je vais en/au + country

L'année prochaine je vais aller en/au + country

J'adore – J'aime – Je n'aime pas – Je déteste rester dans ...

une caravane – un hôtel – une gîte – une auberge de jeunesse – un apartment – une tente

Car c'est

Bruyant – proper – cher – bon marché - confortable

En / Au + country ...

Il y a ... - il n'y a pas de ... – il y a beaucoup de ...

Restaurants – magasins – plages – terrains de sport - festivals

Quand il y a du soleil / Quand il pleut ...

on peut ...

nager dans la mer – faire de la planche à voile – voyager en bus touristique – faire du vélo

Look at the  
Holidays  
based  
sentences.  
Work out  
what they mean

### 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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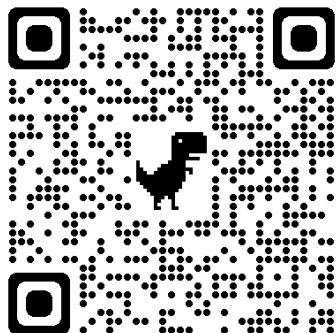
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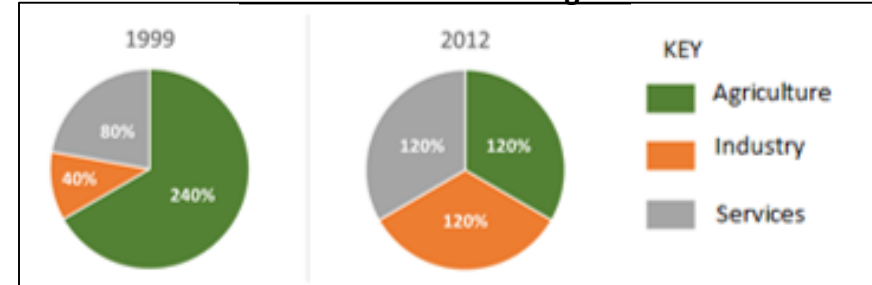
### Global Importance of Nigeria

Nigeria is a Newly Emerging Economy (NEE). In 2014 Nigeria became the world's 21<sup>st</sup> 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 12<sup>th</sup> 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

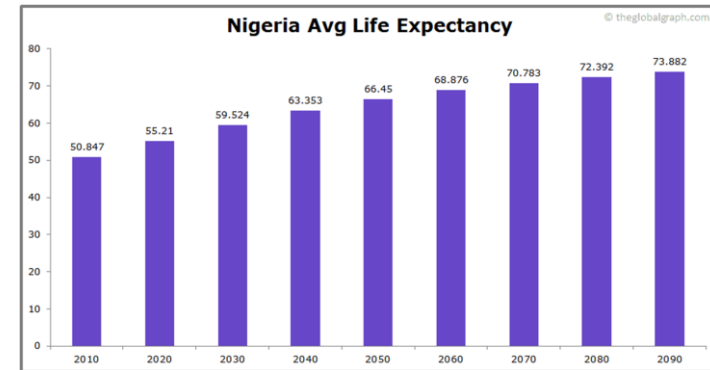
### Advantages of TNC to the host country

Companies provide employment and the development of new skills.  
Local workers are sometimes poorly paid.  
Management jobs often go to foreign employees.  
Valuable export revenues are earned.

### Disadvantages of TNCs to the host country

Investment by companies in local infrastructure and education.  
Working conditions are sometimes very poor.  
Other local companies benefit from increased orders.  
Much of the profit goes abroad.

### Nigeria Avg Life Expectancy



### 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.

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1	Hitler became chancellor in 1933. the Nazi party grew in popularity. There were factors that led to the Hitler becoming Chancellor in 1933.
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### Key factors

2	<b>The Great Depression</b>	The Great Depression was an economic downturn started with the Wall Street Crash in the USA in 1929. this caused a huge economic difficulties in Germany. There was mass unemployment with 6 million people unemployed. Businesses lost their savings, business and investments. Farmer sales and profits dropped this resulted in bankruptcy.
3	<b>Hitler's oratory skills</b>	Hitler was a very influential public speaker who was able to use his oratory skills to whip up the German public with passionate speeches. He told the German people what they wanted to hear after years of hardship.
4	<b>Fear of Communism</b>	Businesses, factory owners and farmers did not want the Communist party in power because business and agriculture would become state owned. The church were also worried because Communists did not believe in religion. Hitler gained support from the middle and upper classes because he promised to deal with the communist threats. Hitler sent the SA to fight communist gangs.

5	<b>Nazi Tactics</b>	The SA used violent tactics to disrupt other political parties. The SA were also used to protect the Nazi Party and distribute propaganda. <b>Propaganda</b> was used to persuade the German people to support the Nazi Party. Nazis used newspapers, radios, loudspeakers and posters to increase support. Organisation of Nazi Party was another way the Nazis gained support. They were funded by industrialists and the upper classes. Nazi Party offices were set up over Germany to recruit loyal followers. <b>Role of Hitler was important</b> . He was decisive and charismatic., and appealed to the German people because he was a WW1 veteran, worker and was seen as a savior for Germany. Hitler was a great speaker and was able to draw in large crowds. During his speeches he would attack the Treaty of Versailles, Jews and Weimar government. Nazis made many <b>promises</b> such as to solve unemployment, destroy the Treaty of Versailles and communism. The Nazis also promised "work and bread " and to make Germany strong again.
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### Key events

6	During the <b>July 1932 election</b> the Nazis won 12 million votes and now had 230 seats in the Reichstag.
7	Political deal although the Nazis remained the most popular party, Hindenburg would not give Hitler the position of Chancellor. He instead gave it Von Schleicher, although he had little support in the Reichstag. A new Chancellor was appointed, von Papen, again he had little support in the Reichstag. Hitler was appointed Chancellor because Von Papen and Hindenburg thought that they could control him.

### Half Term 2:

This half term our focus is on the Nazi rise to power. Starting off with the creation of the German Workers Party, moving on to Hitler taking control over the party from Anton Drexler, before the ill-fated Munich Putsch, which leads to Hitler's trial and imprisonment. Later we look at the revival of the Nazis in the late 1920's leading to Hitler becoming Chancellor in 1933.

Tier 3 Vocabulary		
	Key word	Definition
1	Propaganda	A way of controlling public attitudes using posters, newspapers and radio to influence people.
2	Nationalism	A political outlook in which all policies are organised to make a nation stronger and more independent.
3	Socialism	A political outlook which stresses that a country's land, industries and wealth should all belong to the workers of that country.
4	Paramilitary	A private army run like a military force.
5	Putsch	A violent uprising intended to overthrow existing leaders.
6	Sturmabteilung (SA)	The paramilitary wing of the Nazi party.
7	Mein Kampf	Book written by Hitler about his beliefs.
8	Aryan	Hitler believed this was the German race of people, a master race.
9	Totalitarianism	No democracy, when a person is in complete control.
10	Schutzstaffel (SS)	Hitler's loyal bodyguards.

Notes:

Use the information on the other side of this sheet to focus your home learning. This is a guide to the unit that we are currently studying in school. If you miss any lessons, or feel that you didn't understand any of the topics on here, then you can see more for more guidance, or use this as a basis for more independent learning.

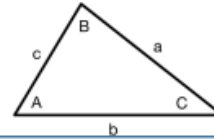
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The following rules are all used with non-right angled triangles. You label these triangles with 3 letters for the sides and angles. A side needs to match up with the angle opposite it. Example ->



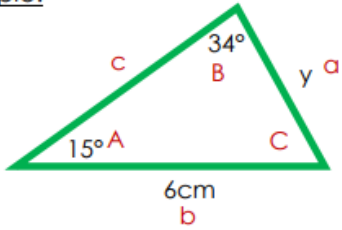
### Sine Rule

You use the sine rule when:

- You are looking for a side and have 2 angles and a side.
- You are looking for an angle and have an angle and 2 sides.

$$\text{Sine Rule: } \frac{a}{\sin(A)} = \frac{b}{\sin(B)} = \frac{c}{\sin(C)}$$

### Example:



Always label your triangle first

$$\frac{y}{\sin(15^\circ)} = \frac{6}{\sin(34^\circ)}$$

$$y = \frac{6}{\sin(34^\circ)} \times \sin(15^\circ)$$

$$y = 2.7770626 = 2.8\text{cm (1d.p.)}$$

### Cosine Rule

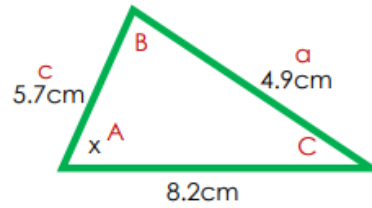
You use the cosine rule when:

- You are looking for an angle and have 3 sides.
- You are looking for a side and have an angle and 2 sides.

$$\text{Cosine Rule: } a^2 = b^2 + c^2 - 2bc\cos(A)$$

(You will sometimes need to rearrange this formula. If you need help with rearranging equations you can look back at **Working Above Unit 2b - Rearranging Equations**)

### Example:



Substitute values into the formula

$$4.9^2 = 8.2^2 + 5.7^2 - (2 \times 8.2 \times 5.7 \times \cos(A))$$

$$24.01 = 99.73 - 93.48 \times \cos(A) \quad \text{Then make } \cos(A) \text{ the subject of the equation}$$

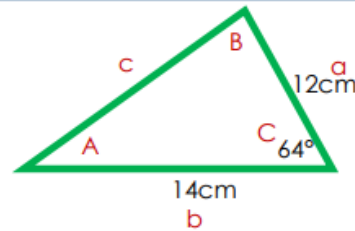
$$\cos(A) = \frac{99.73 - 24.01}{93.48} = 0.81 \text{ (2d.p.)}$$

$$\cos^{-1}(0.81) = 35.9^\circ \quad x = 35.9^\circ$$

### Area of a Triangle

$$\text{Area of a triangle: } \frac{1}{2}ab\sin(C)$$

This is used for finding the area of non-right angled triangles.

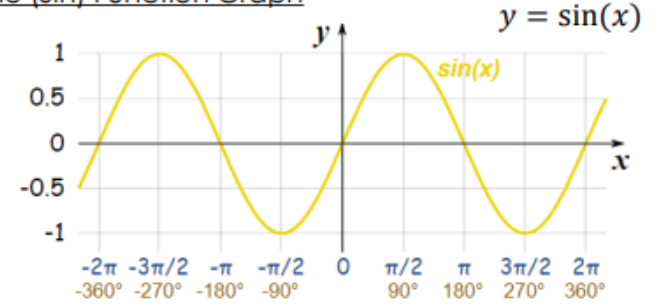


$$\text{Area} = \frac{1}{2}ab\sin(C)$$

$$\text{Area} = \frac{1}{2} \times 12 \times 14 \times \sin(64^\circ)$$

$$\text{Area} = 76.13\text{cm}^2$$

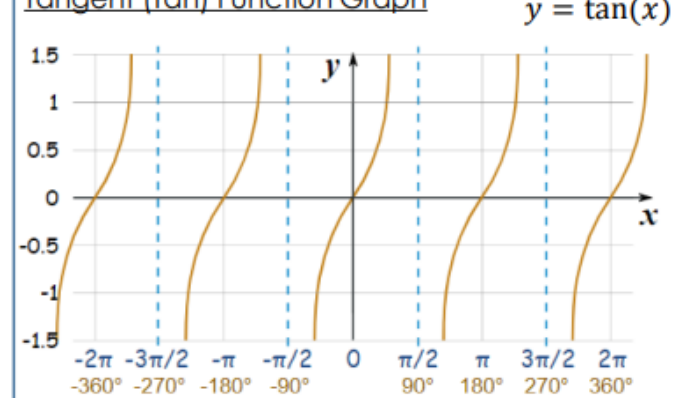
### Sine (Sin) Function Graph



The sine graph repeats every 360° in both directions of the graph.

The graph goes through the origin and has a maximum y-value of 1 and a minimum y-value of -1.

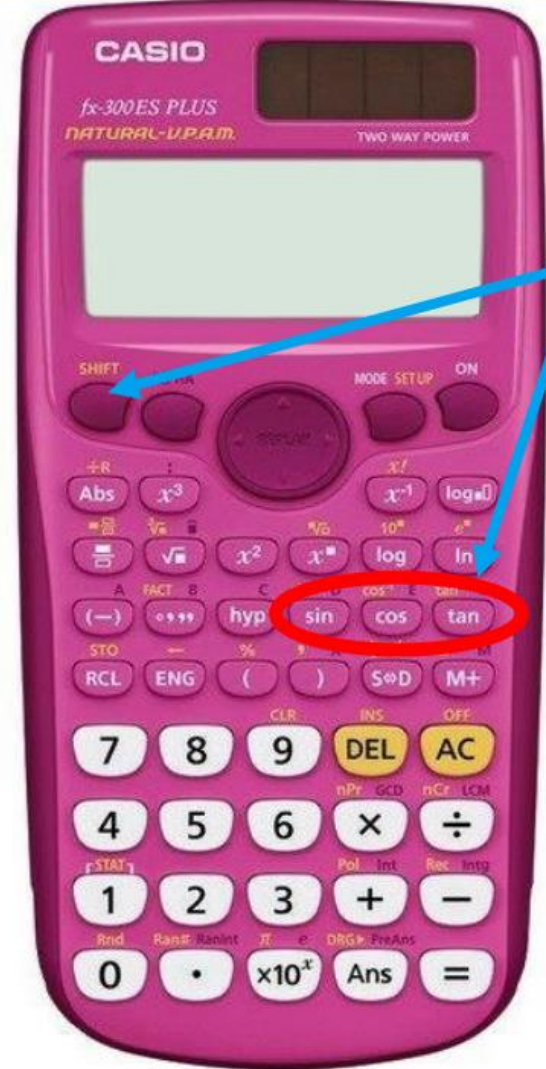
### Tangent (Tan) Function Graph



The tan graph goes between positive and negative infinity, crossing the x-axis at 0 every 180°.

The graph goes through the origin.

Every 90° ( $\frac{\pi}{2}$  radians) and 270° ( $\frac{3\pi}{2}$  radians) the function is 'undefined'.

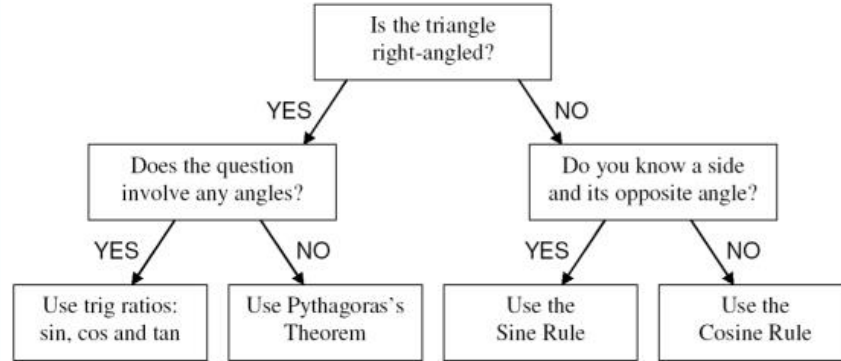


Calculator Help

Here are the **trig functions** on your calculator. You use these ones when you are finding a length.

To get the **inverse trig functions** you need to press the SHIFT button first before you press the function you need. You use these ones when you are finding an angle.

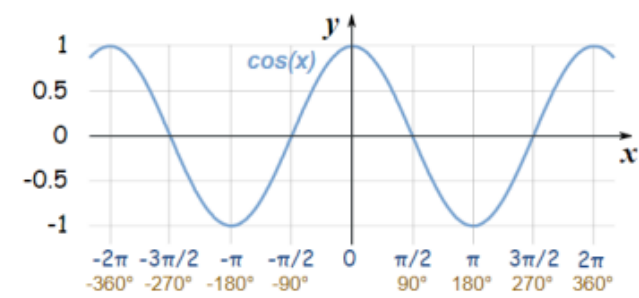
Which Rule to use



**Exam Tip:**

The sin, cos & area of a triangle formulas will sometimes need to be rearranged. You need to be able to decide which rule to use and when you will need to rearrange it. You also need to learn these rules as you will not get them in the exam!

Cosine (Cos) Function Graph

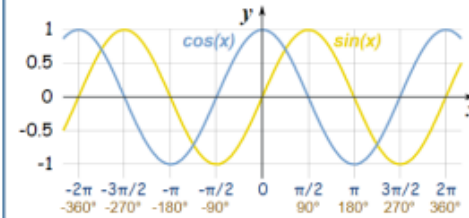


$y = \cos(x)$

The cosine graph repeats every  $360^\circ$  in both directions of the graph.

The graph cuts the y axis at 1. It has a maximum y-value of 1 and a minimum y-value of -1.

Sin & Cos Graph



The sin and cos graph are the exact same shape and are exactly  $90^\circ$  ( $\frac{\pi}{2}$  radians) apart.

Exact Trig Values

	$0^\circ$	$30^\circ$	$45^\circ$	$60^\circ$	$90^\circ$
Sin $\theta$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1
Cos $\theta$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0
Tan $\theta$	0	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$	Undefined



### Tier 3 Vocabulary

Key word		Definition
1	Trigonometry	The study of triangles: their lengths, angles and more.
2	Hypotenuse	The longest side of a right-angled triangle.
3	Adjacent	The side next to the marked angle.
4	Opposite	The side opposite the marked angle.
5	Sin/Sine	The ratio of the length of the opposite side to the length of the hypotenuse.
6	Cos/Cosine	The ratio of the length of the adjacent side to the length of the hypotenuse.
7	Tan/Tangent	The ratio of the length of the opposite side to the length of the adjacent side.
8	Transformations	A change in position or size.
9	Plane	A flat Surface
10	Amplitude	The height of the centre line (x-axis) to the top (or bottom) of a graph.

Notes:

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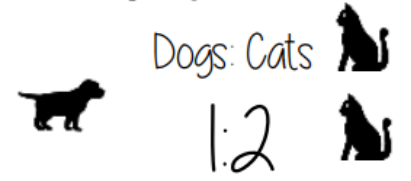


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## Compare with ratio R

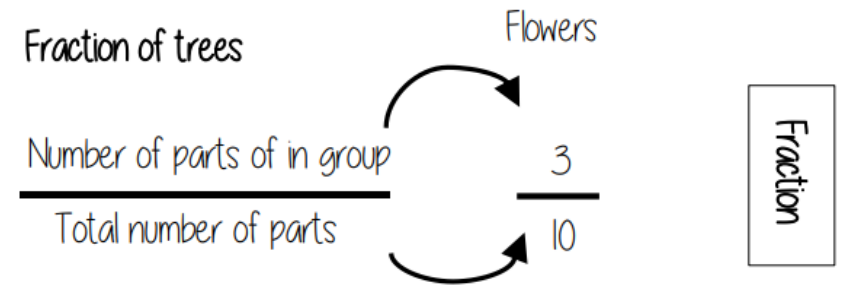
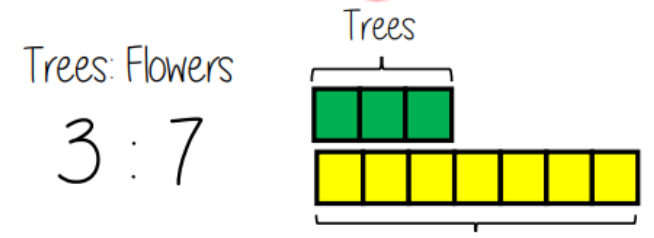
"For every dog there are 2 cats"



Units have the be of the same value to compare ratios

The ratio has to be written in the same order as the information is given.  
e.g. 2:1 would represent 2 dogs for every 1 cat.

## Ratios and fraction R

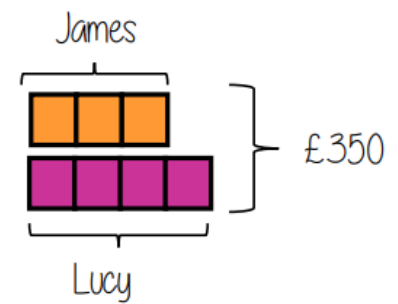


## Sharing a whole into a given ratio R

James and Lucy share £350 in the ratio 3:4.  
Work out how much each person earns

Model the Question

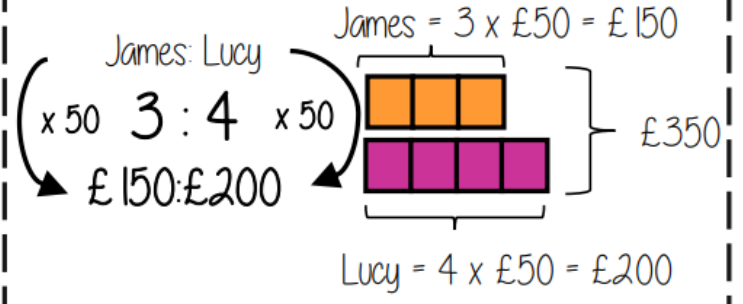
James: Lucy  
3:4



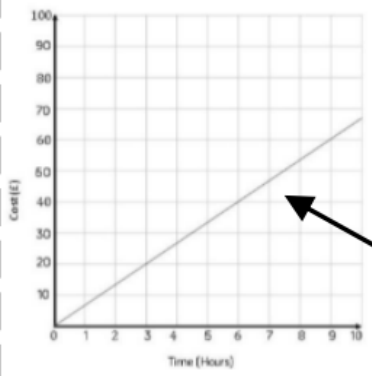
Find the value of one part

Whole: £350  
7 parts to share between (3 James, 4 Lucy)  
 $\square = \text{one part} = \text{£}50$

Put back into the question



## Ratio and graphs R



Graphs with a constant ratio are directly proportional

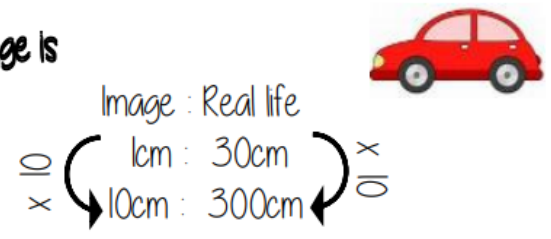
- Form a straight line
- Pass through (0,0)

The gradient is the constant ratio

## Ratio and scale R

A picture of a car is drawn with a scale of 1:30

The car image is 10cm

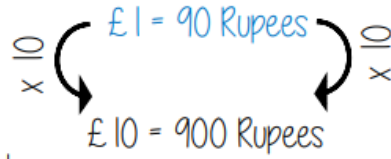


## Conversion between currencies

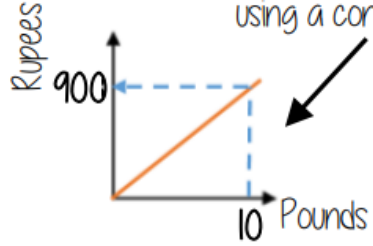


£1 = 90 Rupees ← Currency is directly proportional

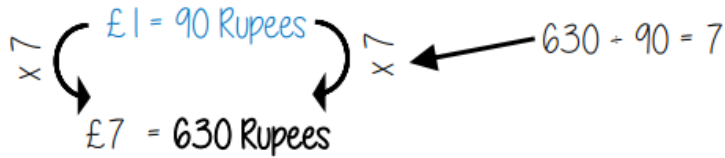
For every £1 I have 90 Rupees



Currency can be converted using a conversion graph



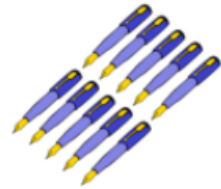
Convert 630 Rupees into Pounds



## Best buys



4 pens costs £2.60



10 pens costs £6.00

"1 pen costs..."

$$£2.60 \div 4 = \underline{£0.65}$$

$$£6.00 \div 10 = \underline{£0.60}$$

"1-pound buys..."

$$4 \div 2.60 = \underline{1.54 \text{ pens}}$$

$$10 \div 6 = \underline{1.67 \text{ pens}}$$

You could work out how much 40 pens are and then compare

Compare the solution in the context of the question

The best value has the lowest cost "per pen"

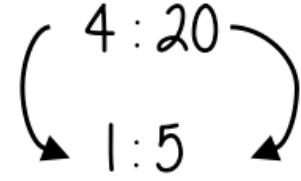
The best value means £1 buys you more pens

## Ratios in 1:n and n:1

This is asking you to cancel down until the part indicated represents 1

Show the ratio 4:20 in the ratio of 1:n

The question states that this part has to be 1 unit. Therefore Divide by 4

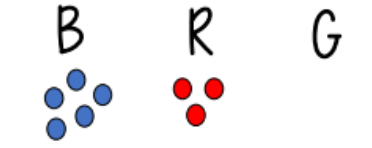


This side has to be divided by 4 too – to keep in proportion

the n part does not have to be an integer for this type of question

## Combining ratios

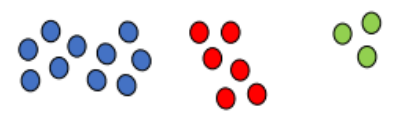
The ratio of Blue counters to Red counters is 5:3



The ratio of Red counters to Green counters is 2:1



Ratio of Blue to Red to Green



10 : 6 : 3

Use equivalent ratios to allow comparison of the group that is common to both statements

Lowest common multiple of the ratio both statements share

**Tier 3 Vocabulary**

	Key word	Definition
1	Ratio	A statement of how two numbers compare.
2	Equivalent	Of equal value.
3	Proportion	A statement that links two ratios.
4	Integer	A whole number. Positive, negative and zero.
5	Fraction	Represents how many parts of a whole.
6	Denominator	This represents the total number of parts in a whole.
7	Numerator	This represents how many parts are taken.
8	Origin	(0, 0) on a graph. The point where the two axes cross.
9	Gradient	The steepness of a line.

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Quiz QR Code



Quiz Link

[QUIZ LINK](#)

BACKGROUND INFORMATION: **Sweeny Todd is the cockney rhyming slang for “flying squad”** (a division of the police who dealt with serious, violent crime).

**Produced by Talkback Thames.**

Main star is **John Thaw as Regan**; this show established him as a television star.

First broadcast 1975-1978 in the 9pm timeslot.

#### MEETING JACK REGAN: (Hero)

Medium close up –close to him –focus. Implies he is important.

**Closeness creates personal connection.**

Introduced in a ‘personal’ location suggesting that personal life may be a relevant aspect in the narrative

Haggard –**hungover –on a work night!!!! Hints to a rebellious lifestyle perhaps? Heavy drinker –issues?**

In **lady’s dressing gown** –adds an element of humour and suggests he doesn’t take himself to seriously, might be a bit of a ‘character’ – particularly given the era and the overtly **masculine stereotypes** of men.

#### MEETING CARTER: (Helper/side-kick)

Long shot –allows us to see the smartly dressed professional man. Clean cut, smart – good attitude, pride.

**Lighter coloured** suit/coat implies he is the **good guy** links to hero character.

Introduced in a professional setting suggesting he takes his work seriously.

#### MEETING KEMBLE: (Villain)

Mid shot/over the shoulder - allows us to see him in his ‘lair’.

**Setting** –red connotes danger.

**Opulent** –ornate mirrors, leather wingback chair, suggests wealth.

**Costume** –Suit clearly connotes authority figure/incharge, anchored by the two henchmen who sit listening to him, trying to impress him.

His patterned silky tie a reference to his wealth as opposed to the plain ‘work’ wear of the police.

**Props** –Pipe is reflective of the era, plans/maps suggestive of his ‘cunning’ attitude.

**STYLE:** The **Sweeney was produced in the 1970’s** and looks very dated; this is due to both the production values and the costumes & props. The production is grainy, poor quality image in comparison to today’s high-definition digital film, this is also reflected in the sound quality. The costumes and styling is from the 70’s and looks very dated, **the props such as phone boxes, cameras and typewriters reflect the lack of technology at the time.** These reflect the **historical context** of the time in which the production was made.

**CONTEXT:** **Genders were less equal in the 1970s;** there were very few females in the police. This is clearly reflected in The Sweeney. The only female in the episode is not involved in the investigation and is sent to look after Regan’s girlfriend, Jenny, who has been threatened by Kemble’s men. Women are stereotypically passive.

The men are stereotypically masculine: patriarchal, drinking, objectifying women.

**Minority groups weren’t reflected** or were misrepresented in The Sweeney. **This contrasts significantly with representations of gender & ethnicity in Luther.**

Created by THAMES for ITV –a commercial channel

#### Social & Cultural Context

An oil crisis, a manufacturing crisis and miner strikes, postal worker strikes, ambulance personnel - which marked the turbulent times of the 1970’s.

There were also electricity shortages which meant tele went off at 10.30pm.

**Urban Britain lacked order in the 1970’s and this is reflected in The Sweeney.**

Shot on **16mm film** so cameras were lighter and could be taken to various locations – allowed for action shots, car chases and generally a **more realistic** experience for the audience. Gives a **sense of being there** amongst the action.

Genre: Drama

Sub-genres:

- Crime
- Action
- Police procedural

#### SIMILARITIES WITH LUTHER:

- Troubled male lead, aided by faithful, professional side-kick.
- Maverick cop. Believes his illegal methods are necessary.
- Gritty London settings, filmed on location to create verisimilitude.
- Genre iconography
- Opening title sequence –grainy editing & silhouettes

PRIVATE/COMMERCIAL - FUNDED BY TV & ONLINE ADVERTISING



No ‘tourist imagery’ like there is in Sherlock Holmes– London represented as violent and crime is a problem.

Based on the real ‘Flying Squad’, part of the Met. They dealt with serious and violent crime. In 1970 some high-ranking officers from the squad were jailed for taking bribes. This type of corruption is hinted at in The Sweeney.

### Tier 3 Vocabulary

	Key word	Definition
1	Maverick	Non-conformist, individual
2	Patriarchal	A system of society controlled/governed by men
3	Police procedural	A sub-genre that focuses on the way the police work to solve a crime. Gives audience a behind the scenes view
4	Non-diegetic sound	Sound only the audience can hear
5	Passive	Accepting what happens without an active response
6	Protagonist	The leading character
7	Dialogue	A conversation between 2 or more people
8	Narrative	How event in the story are ordered and told
9	Stereotype	An oversimplified idea of a type of person or thing
10	Objectify	Degrade someone to the status of a mere object. Dehumanise
11	Drama	Exciting, emotional or unexpected event or circumstance
12	Red herring	A clue or piece of information that is misleading and/or distracting

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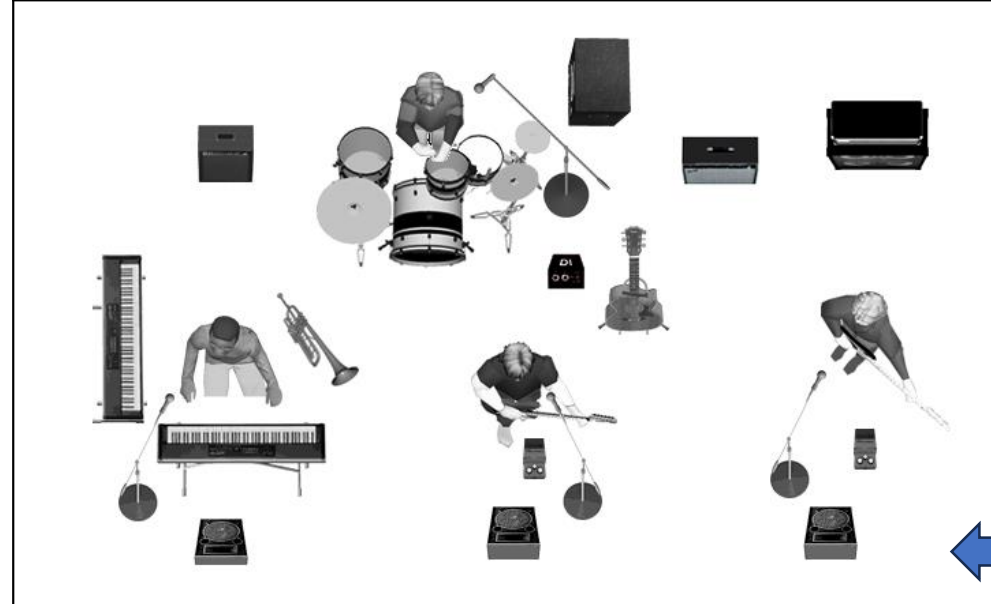
[Quiz Link](#)

## Rehearsal and Performance

Step by step guide to a successful performance:

1. Research the material you want to perform. Check it is within your ability level.
2. Learn your parts individually ready for a group/ensemble performance.
3. Decide on any aims or goals you want to achieve in the group rehearsal.
4. Start rehearsal process with others. Bring your ideas to the group. Communication and time management are key.
5. Analyse and evaluate your progress. Identify weaker areas and work out how to improve them. How will this be a performance instead of simply playing a piece of music?
6. Repeat steps 3-6.
7. Perform your music to an audience.
8. Evaluate your performance including responding to feedback. Be aware of how to improve it next time.

## Rehearsal Space



Be mindful of your rehearsal space and set up. This can have a big impact on the quality of a rehearsal.

## Health, Safety and Maintenance

### Instrument and Equipment

- Holding instrument correctly
- Correct posture
- Pat tested electricals
- Replacing old/worn out parts
- Hygiene when sharing instruments

### Rehearsal/Performance Space

- Trip hazards
- Clear fire exits
- Room capacity limitations
- Pat tested equipment
- Noise levels

### 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	The layout of the music.
6	Key Signature	The notes used in the music.
7	Time Signature	The number of beats in a bar.
8	Rhythm	A group of note values forming a pattern.
9	Crescendo	Volume getting louder.
10	Diminuendo	Volume getting quieter.
11	Analyse	Examine your rehearsal and performance in detail.
12	Evaluate	Identify strengths, weaknesses and areas for improvement in your rehearsals and performance.

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## RUGBY

- **Origins in England:** Rugby originated in England in the early 19th century when a student at Rugby School, William Webb Ellis, is said to have picked up the ball during a soccer game and ran with it. This marked the birth of rugby football.
- **Two Main Codes:** Over time, rugby split into two main codes: Rugby Union and Rugby League. Rugby Union is the older and more widespread code, while Rugby League developed in the late 19th century as a professional version of the sport.
- **International Competitions:** The first international rugby match took place in 1871 between England and Scotland. This marked the beginning of international rugby competitions. The Rugby World Cup, inaugurated in 1987, is now the sport's premier global tournament.
- **Popularity and Variations:** Rugby is widely popular in countries like New Zealand, South Africa, England, and Australia. The game has also given rise to variations like Sevens Rugby, a shorter and faster version of the sport, which has become a popular form of the game, especially at the Olympic Games.
- **Amateur to Professional:** Historically, rugby was an amateur sport, but professionalism was introduced in Rugby Union in the 1990s, leading to a significant transformation in the sport. Rugby League, on the other hand, had been professional from its early days. This change in Rugby Union brought in sponsorship, increased competitiveness, and a broader global audience.



Quiz!

## Different moves in Rugby:

## How to conduct the moves:

Passing to a team mate

[Get POWER in your Rugby PASS In 4 Steps! - YouTube](#)

Tackling

[5 RUGBY TACKLE Mistakes & How To Fix Them - YouTube](#)

Scrum

[How to Scrum in Rugby - YouTube](#)

Rucking

[How to Ruck in Rugby - YouTube](#)

How to score

[#Rugby101: Scoring in Rugby - Try and Conversion \[Rugby for Beginners\] - YouTube](#)

Line out

[Pitch Demo: The line-out laws explained | Rugby Tonight - YouTube](#)

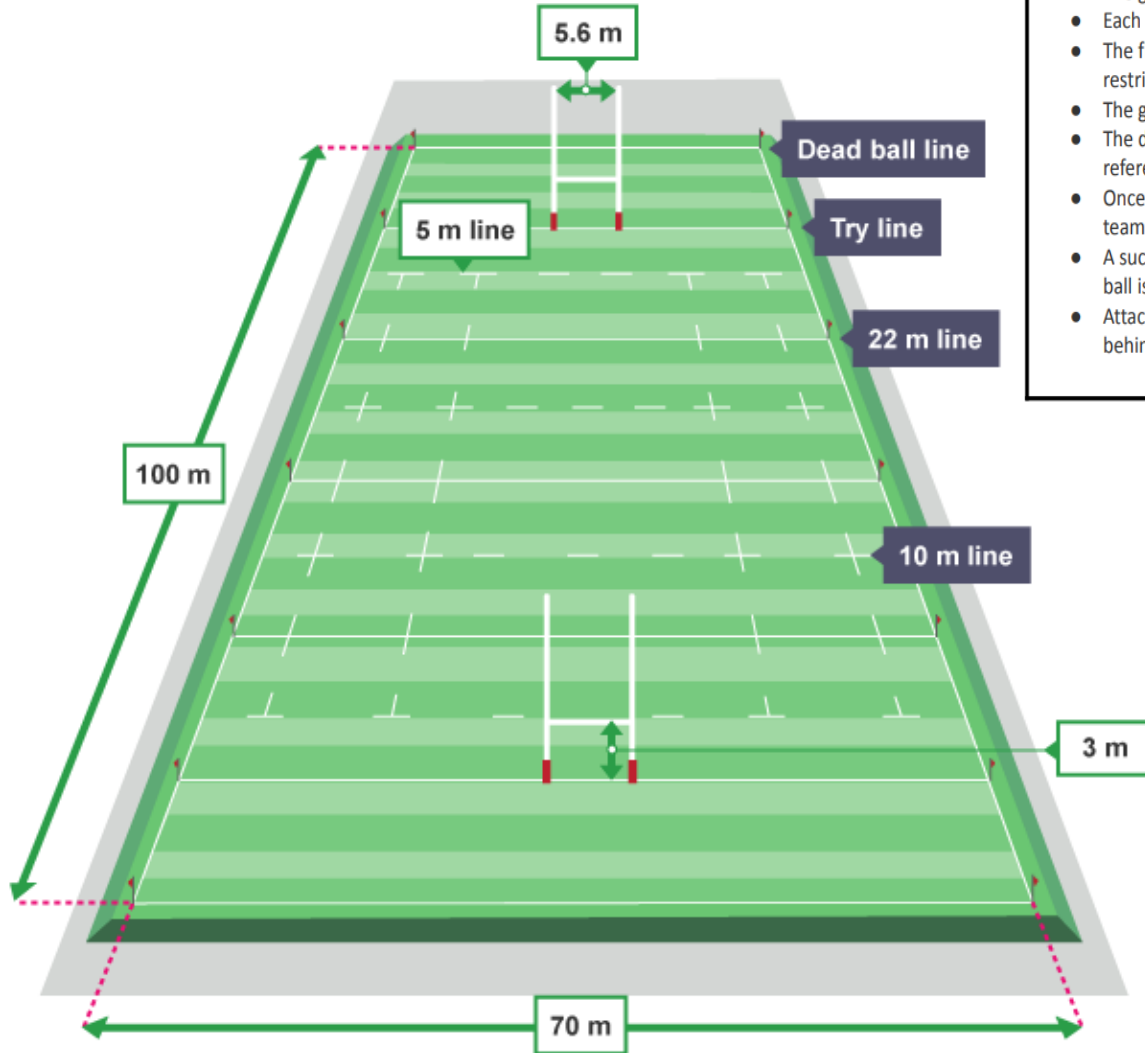
Conversion

[#Rugby101: Scoring in Rugby - Try and Conversion \[Rugby for Beginners\] - YouTube](#)

## WHAT IS THE DIFFERENCE BETWEEN UNION AND LEAGUE

What is the difference between Union and League?

Follow the link [The Difference between Rugby Union & Rugby League - EXPLAINED! - YouTube](#)



## Rugby rules

- The game is broken down into two 40 minute halves with a 10 minute rest period in between. The game carries no stoppage time and will end exactly on 80 minutes.
- Each team can start with 15 players and up to 7 substitutes. Players that have left the field are only allowed to return if they have been treated for an injury.
- The field must be roughly 100 metres long and 70 metres wide with a minimum of a 10 metre dead ball area. The H shaped goal needs to be 6 metres wide with no restrictions on height.
- The game will stop if a player is fouled, the ball goes out of play or a try or drop goal is scored.
- The defending team must tackle a player by grabbing a hold and pulling them to the floor. A tackle cannot be made above shoulder height and doing so will cause the referee to award a foul.
- Once the ball goes into touch a line out is called. Up to 7 players can enter a line out and any of these players can be lifted in order to catch the ball being thrown in. Both teams can compete to win the ball.
- A successful conversion, penalty or kick at goal only occurs when the player manages to kick the ball through the top section of the goal. If a player is unsuccessful the ball is still in play until it crosses one of the playing fields boundaries.
- Attacking players must remain behind the ball whilst active or run the risk of being called offside. Players not interfering with play can be in front of ball but must get back behind the ball before then again interfering with play.



## Player Positions



[England Rugby](#)

### Tier 3 Vocabulary

Key word		Definition
1	Attack	To try and score a try over your opponents tryline
2	Defend	To protect your tryline from your opponents
3	Invasion	This is the aim of the game - to attack the other team's territory to score a try.
4	Pass	To successfully send and receive the ball from a team mate.
5	Possession	When you or teammates have the ball.
6	Receive	Taking possession of the ball from a teammate. The W shape is very important here.
7	Send	Using your hands to push the ball to a teammate.
8	Try	To touch the ball down in your opponent's in-goal area - past the tryline
9	Ruck	A ruck is formed when a player is tackled to ground and the ball is contested for.
10	Maul	A Maul is formed when the attacking ball carrier is tackled and held up (not on the ground) this then forms a contest for the ball.
11	Side stepping	A skill used to avoid the tackler.

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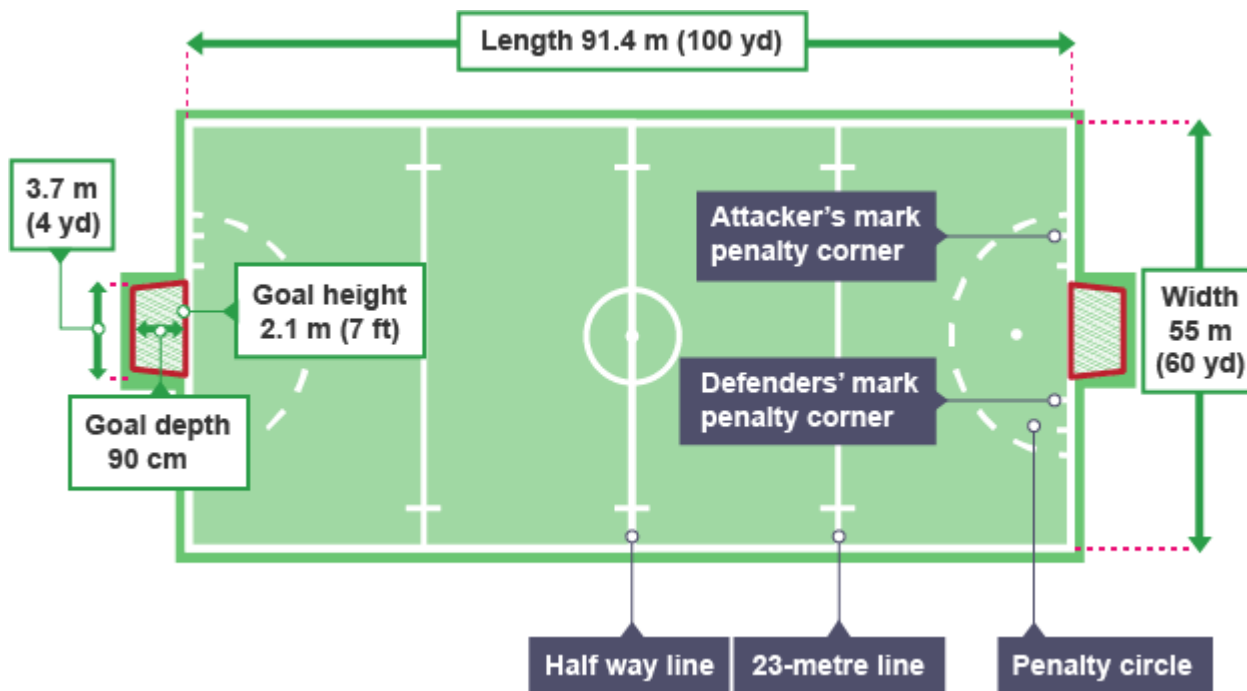


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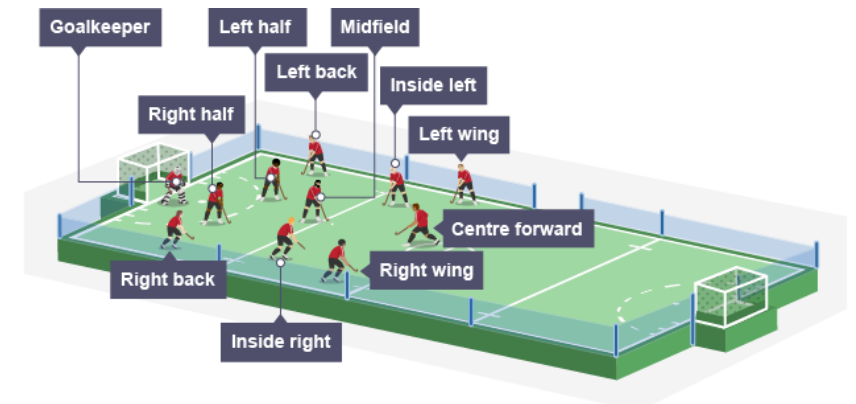
### Invasion games:

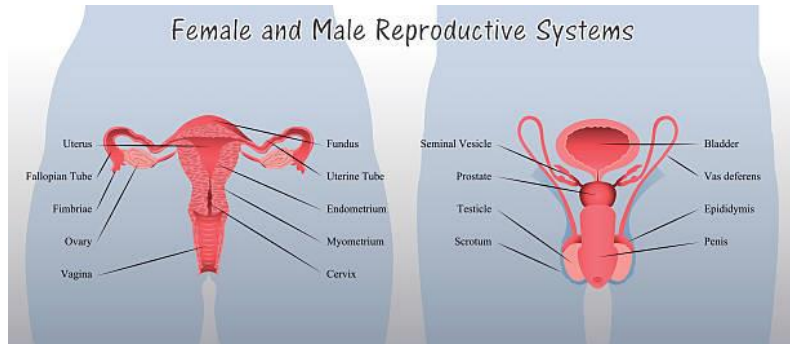
- Hockey is an invasion game that is played on a pitch between two teams of eleven players.
- Invasion games involve attacking an opponent's territory (zone) with the aim of scoring a goal or points.
- They focus on teamwork, keeping possession, attacking and defending.



### Rules

- A hockey team is made up of 11 players and six substitutes.
- All players on the pitch must have a hockey stick.
- Players may only use one side of the stick to hit the ball.
- The ball can only be passed or dribbled using the stick.
- A hockey player (goalkeeper excluded) cannot intentionally play the ball with other body parts.
- A foul is awarded to the opposition if a player purposely tries to hit the ball off another player with the intent of causing harm.
- Players are not permitted to hit the ball with the rounded side of their hockey stick.
- Players must not raise the hockey stick above waist height.
- Players must not hit a hockey stick off an opponent to interfere with play





## Consent Is:

- Informed
- Freely-given
- Coherent
- Ongoing
- Sober
- Enthusiastic
- Clear
- Specific
- Essential
- Comfortable
- Active
- Reversible/Changeable
- Based on equal power
- Breaking away from gender "rules." Any partner might want to take it slow. And, it's not one partner's job to initiate the action all the time.



## Consent Is NOT:

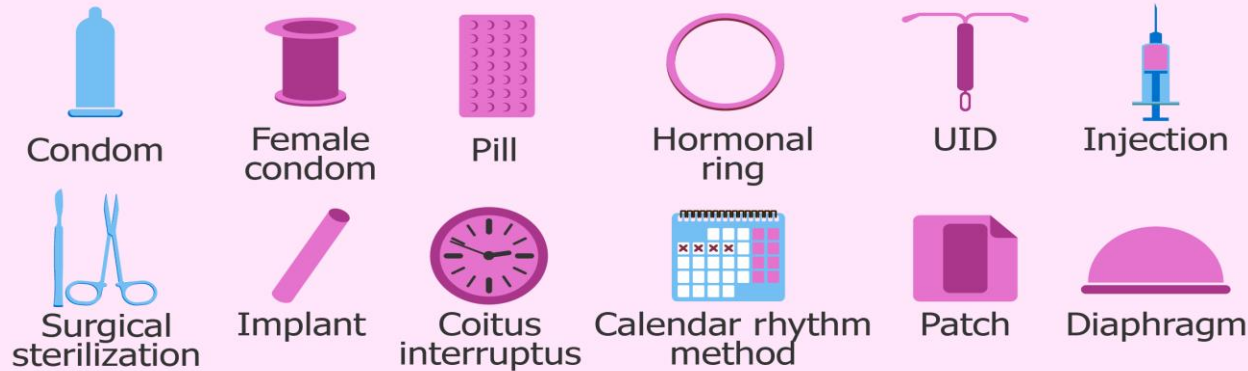
- Flirting
- Silence
- Dressing sexy
- The absence of "no"
- Being in a relationship
- Accepting a ride or a drink, etc.
- If you have to convince them
- Having had sex with the individual before
- Saying yes (or saying nothing) while under the influence of drugs or alcohol.
- Saying yes or giving in to something because you feel too pressured or too afraid to say no.
- Consent is not a free pass. Saying yes to one act doesn't mean you have to consent to other acts. Each requires its own consent.



<https://www.yoursexualhealthmatters.org.uk/further-sexual-health-support/parents>

<https://www.brook.org.uk/>

## Birth control methods



## Age of consent



12 years old	Chile , Malta, The Netherlands, Paraguay, Philippines
13 years old	Guyana , Korea, Spain, South Korea
14 years old	Austria, Canada, Colombia, Croatia, Germany, Hungary, Iceland, Portugal
15 years old	France, Poland, Thailand
16 years old	Cyprus, Czech Republic, Finland, Norway, Switzerland, UK, Uzbekistan
17 years old	Republic of Ireland
Various	Australia (ranges from 16-18 years, depending on

### Tier 3 Vocabulary

Key word		Definition
2	Intimate relationship	Physical intimacy can include being inside someone's personal space, holding hands, hugging, kissing, heavy petting, or... Emotional intimacy, particularly in sexual relationships, typically develops after a certain level of trust has been established
3	Masturbation	Masturbation is the act of touching your own genitals for sexual stimulation and it is perfectly normal, and can be a healthy way to learn about your body.
4	Orgasm	An orgasm is the height or peak of sexual arousal when the body releases sexual tension and pressure. It involves very intense feelings of pleasure in your genitals and throughout your body.
5	Bisexual	A person who is sexually or romantically attracted to people of their own gender and people of a different gender.
6	Heterosexual	An enduring pattern of emotional, romantic, and/or sexual attractions" to people of the opposite sex.
7	Homosexual	Homosexuality is romantic attraction, sexual attraction, or sexual behavior between members of the same sex or gender
8	Hymen	The hymen is a thin piece of mucosal tissue that surrounds or partially covers the vaginal opening.
9	Consent	Agreement to sexual activity, given by someone who is free to choose and able to choose (because of being old enough, being able to think or communicate clearly, etc.).
10	Legal age Consent	Consent means to say yes. So, the 'age of consent' is when the law says you're able to make the decision to say 'yes' to sex. In the UK, the age of consent is 16, and this is also the legal age for gay sex.
11	Sexual assault	The term sexual assault refers to sexual contact or behavior that occurs without explicit consent of the victim. Some forms of sexual assault include: Attempted rape; Fondling or unwanted sexual touching; Forcing a victim to perform sexual acts.

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Quiz QR Code



Quiz Link

[Quiz Link](#)

# 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)

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.

**Salvation**

**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.

**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.

**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**.

**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**.

### 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.

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Quiz QR Code



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### 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:

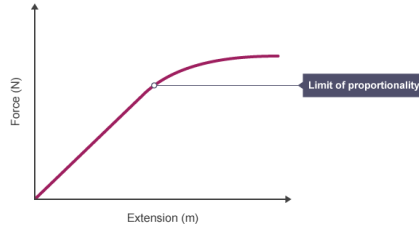
$$\text{Weight (N)} = \text{mass (kg)} \times \text{gravitational field strength (N/kg)}$$

**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:

$$\text{Force} = \text{spring constant} \times \text{extension}$$

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

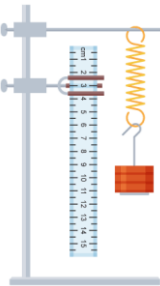


Overloading a spring would result in going past the limit of proportionality. This results in the relationship no longer being directly proportional.

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

$$\text{elastic potential energy} = 0.5 \times \text{spring constant} \times (\text{extension})^2$$

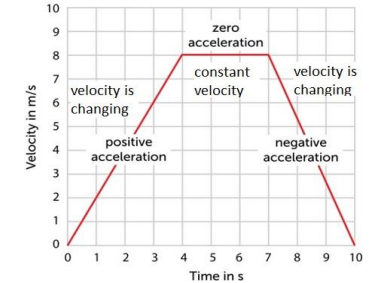
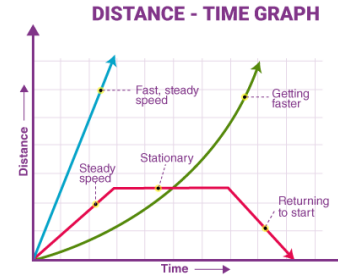
Extension must be measured in metres for this to be accurate.



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

<b>LAW #1</b>	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.
<b>LAW #2</b>	The force acting on an object is equal to the mass of that object times its acceleration, $F = ma$ .
<b>LAW #3</b>	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:

$$\text{thinking distance} + \text{braking distance} = \text{stopping distance}$$

**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.

## 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 2<sup>nd</sup> 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](#)

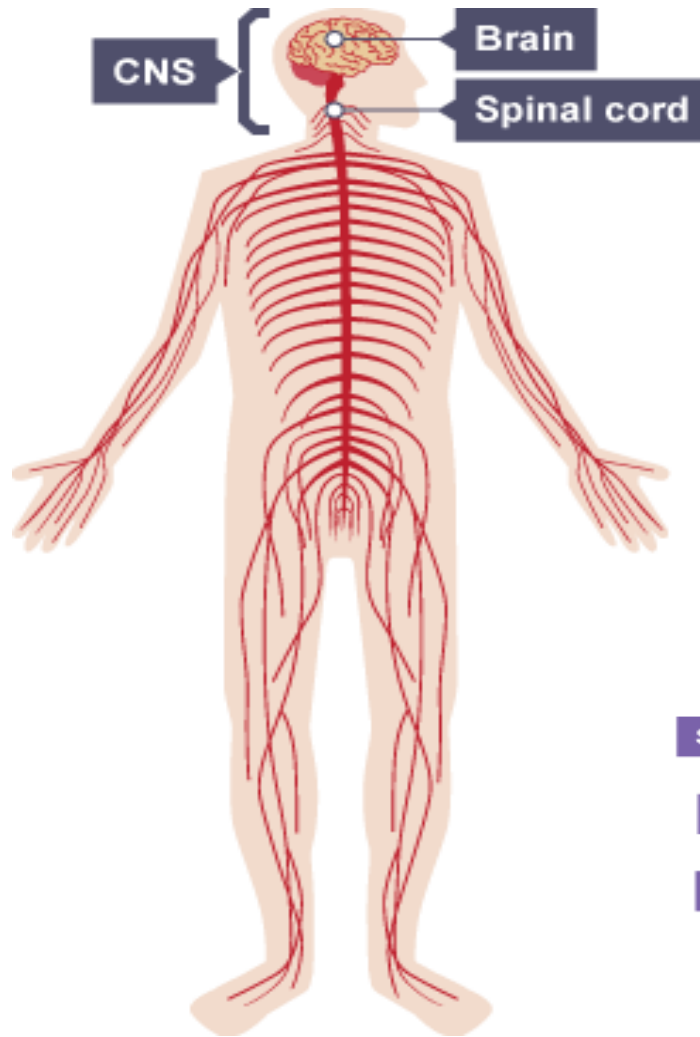


## Newton's Laws of Motion

[Newton's 3 Laws, with a bicycle - Joshua Manley - YouTube](#)



**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.



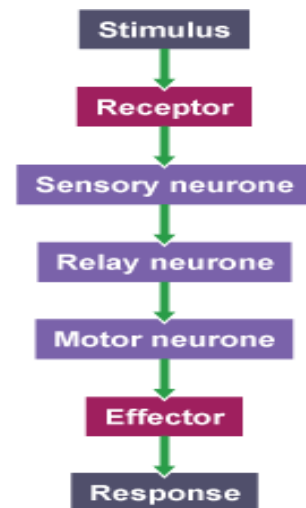
### Nervous system

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)

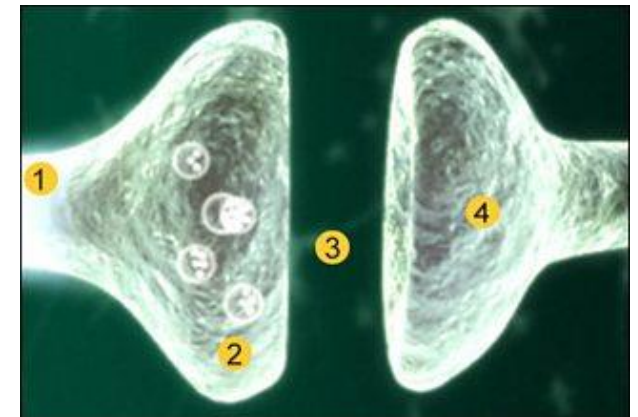
### Negative feedback

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

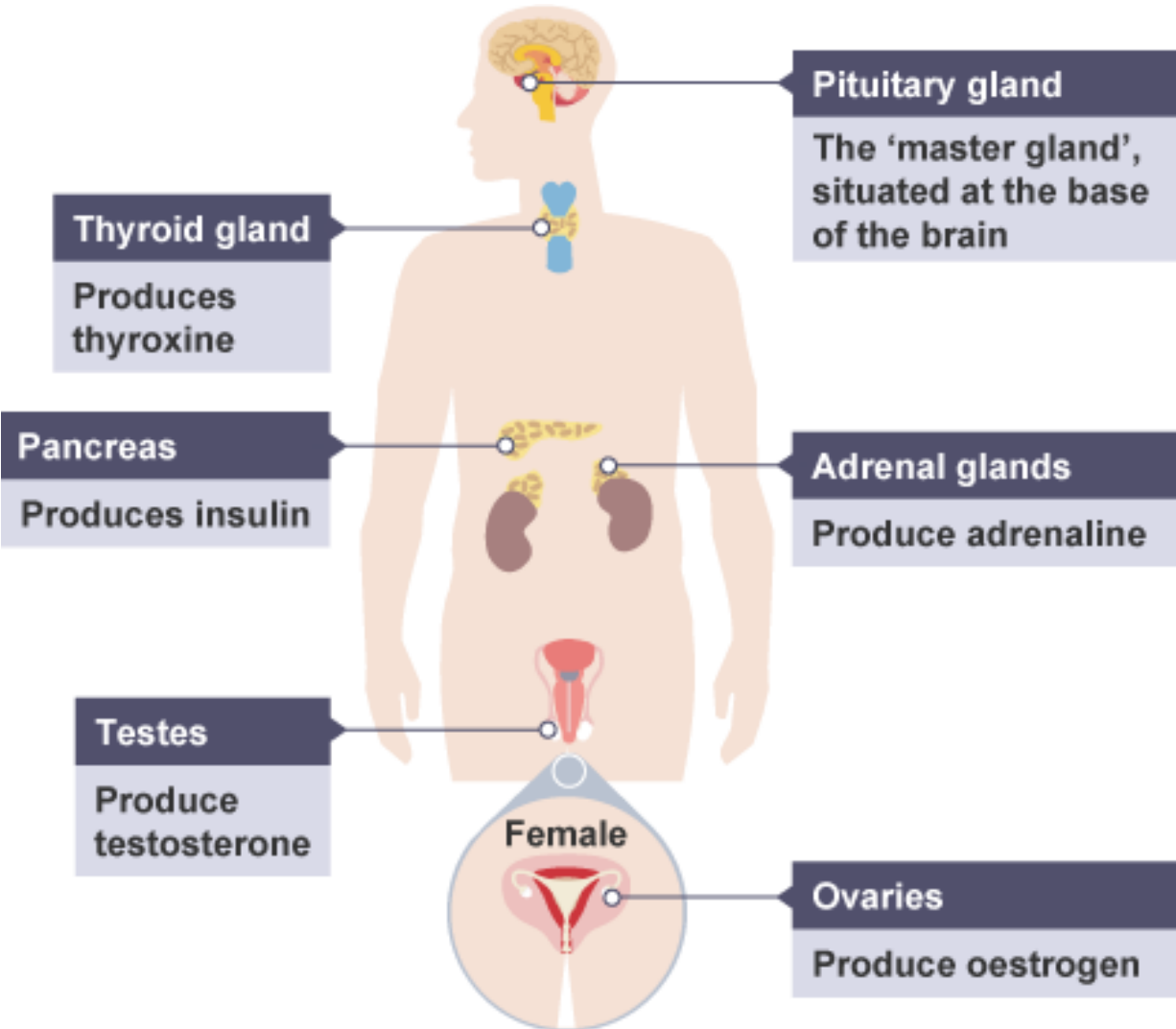
1. An electrical impulse travels along the first axon.
2. This triggers the nerve-ending of a neurone to release **chemical messengers** called **neurotransmitters**.
3. These chemicals **diffuse** across the synapse (the gap) and bind with receptor molecules on the membrane of the second neurone.
4.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



**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.

### 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:

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BBC sounds lessons



Required practical



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**For Topic area 2, you need to know:**

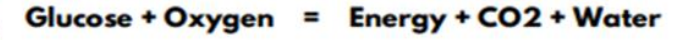
- Describe SPOR and FITT principles with relevant examples given for each aspect of your selected sporting activity.
- Describe SMART goals with relevant examples given for each aspect of your selected sporting activity.
- Analyse the benefits of applying the principles of training programme.
- Analyse your selected training methods including a comparison of aerobic and anaerobic exercises.

**FIIT Principle:**

- Frequency** → How often training takes place
- Intensity** → How 'hard' training is
- Time** → How long training lasts
- Type** → What type of training is used



**Aerobic Respiration:**



**Anaerobic Respiration:**



**TOPIC AREA 2**

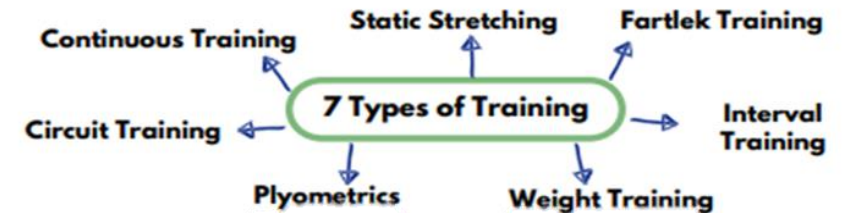


**Smart Goals**

- S - Specific**
- M - Measurable**
- A - Achievable**
- R - Realistic**
- T - Timed**

**Principles of Training:**

- SPOR**
- Specificity**
- Progression**
- Overload**
- Reversibility**



## TRAINING METHODS

Different sports require different training methods. As a result, sports performers must select training methods that are specific or can be adapted to their chosen activity.

<p><b>CONTINUOUS</b></p> <ul style="list-style-type: none"> <li>Long periods of moderate work, without rest.</li> <li>Improves cardiovascular fitness and muscle endurance.</li> <li>Suitable for distance runners and tri-athletes.</li> </ul>	<p><b>FLEXIBILITY/MOBILITY</b></p> <ul style="list-style-type: none"> <li>Stretching methods including static, dynamic and Proprioceptive Neuromuscular Facilitation (PNF).</li> <li>Improves range of movement, reducing the chance of injury.</li> <li>Beneficial for all sporting activities, in particular gymnastics and dance.</li> </ul>
<p><b>FARTLEK (SPEED PLAY)</b></p> <ul style="list-style-type: none"> <li>A continuous workout, involving changes in speed and/or terrain.</li> <li>Improves recovery time and both aerobic and anaerobic fitness.</li> <li>Suitable for cross country runners and team games involving changes in speed.</li> </ul>	<p><b>WEIGHT TRAINING</b></p> <ul style="list-style-type: none"> <li>A workout using weights as a form of resistance.</li> <li>Can be tailored to improve muscular endurance, power and strength.</li> <li>Suitable for all activities and general fitness/toning.</li> </ul>
<p><b>CIRCUIT</b></p> <ul style="list-style-type: none"> <li>A series of exercises performed in a circuit.</li> <li>Improves cardiovascular endurance and muscular endurance.</li> <li>Excellent for general fitness and can be structured to suit most sports.</li> </ul>	<p><b>PLYOMETRICS</b></p> <ul style="list-style-type: none"> <li>A series of explosive movements such as jumps, bounds, hops etc.</li> <li>Improves power.</li> <li>Excellent for activities that require explosive strength, e.g. long/high jump.</li> </ul>
<p><b>INTERVAL</b></p> <ul style="list-style-type: none"> <li>Involves alternating periods of work and rest.</li> <li>Can be used to improve speed, recovery time, and aerobic and anaerobic fitness.</li> <li>Suitable for team games involving short bursts of speed.</li> </ul>	<p><b>SAQ (SPEED, AGILITY, QUICKNESS)</b></p> <ul style="list-style-type: none"> <li>Exercises aimed at activating neural pathways.</li> <li>Improves speed, agility and quickness.</li> <li>Suitable for team games involving changes in direction.</li> </ul>

## PRINCIPLES OF TRAINING

Training should be matched to the individual needs of the performer. When designing a training programme, the Principles of Training should be applied.

<p><b>SPECIFICITY</b></p> <p>Training programmes must be specific to the chosen activity.</p> <p>Selecting training to the needs of performers will ensure that they train the correct muscles and body systems for their chosen activity. For example, the training needs of a marathon runner will be different from those of a weightlifter.</p>
<p><b>PROGRESSIVE OVERLOAD</b></p> <p>To improve and to continue to develop, a training programme must gradually be made more difficult.</p> <p>As a performer becomes fitter, the training programme needs to be made more difficult to ensure fitness gains continue.</p> <p>The increase in intensity must be gradual because increasing the intensity too quickly can increase the risk of injury.</p>
<p><b>FITT</b></p> <p>To become fitter, you must progressively work your body harder than normal. This can be achieved by applying the FITT principles.</p> <p>Frequency – how often you exercise Intensity – how hard you exercise Time – how long you exercise for Type – how your training matches your chosen activity</p>
<p><b>REVERSIBILITY</b></p> <p>Exercise improves fitness. If you stop exercising, your fitness levels drop.</p> <p>If you train, your muscles get bigger (hypertrophy). Alternatively, if you stop training, your muscles get smaller (atrophy).</p> <p>Although rest periods are an essential element of recovery, extended rest periods result in a reduction of physical fitness at a rate much higher than it was achieved - if you don't use it, you lose it!</p>

### Tier 3 Vocabulary

Key word		Definition
1	SMART	Acronym for Specific, measurable, achievable, realistic and time-bound.
2	SPOR	Principles of training: specificity, progression, overload and reversibility.
3	Specificity	Making training specific to the movements skills and muscles that are used in the activity.
4	Progression	Gradually making training harder as it becomes too easy.
5	Overload	Working harder than normal.
6	Reversibility	“Use it or lose it”. If you stop training, you will lose fitness.
7	FITT	Principles of overload, frequency, intensity, time and type.
8	Continuous training	Any activity or exercise that can be continuously repeated without suffering undue fatigue.
9	Interval training	Any training that involves periods of work and rest.
10	Circuit training	A series of exercises performed at work stations with periods of work and rests.
11	Fartlek training	“Speed Play” which generally involves running, combining continuous and interval training with varying speed and intensity.
12	Plyometric training	Repeated exercises such as bounding, hopping or jumping over hurdles which are designed to create fast, powerful movements.

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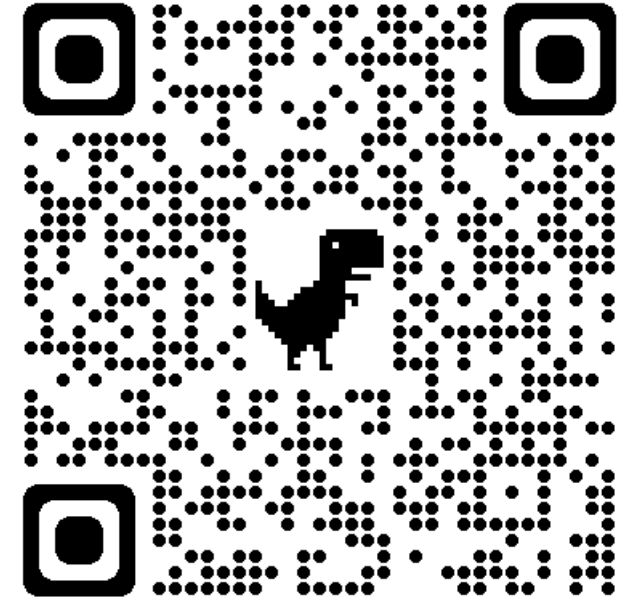




# Frayer Model: Altruistic

definition	synonyms
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<p>altruistic</p>	
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sentence	antonyms

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



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