

YEAR 7

*Knowledge*

# ORGANISER

2025 - 26

SEMESTER 2



# WHO CAN I GET *support* FROM?

You can also speak to your check-in tutor, all your subject teachers, your PD teacher and all your pastoral staff: Miss Leonard, Miss Howe, Mr Sykes. If you are unable to speak to any member of staff, please contact: [studentsupport@bentonpark.mlt.co.uk](mailto:studentsupport@bentonpark.mlt.co.uk)



**My Year 7 Leader**  
Miss Downing



**KEY STAGE LEADER**  
Mrs Collins



**MY SLT LINK**  
Mr Coltman

## OTHER YEAR LEADERS



**Year 8 – Miss Bannister**



**Year 9 – Miss Charlton**



**Year 10 – Mrs Sykes**



**Designated  
Safeguarding Lead /  
Assistant Headteacher**  
Mrs Howard



**KS3 Safeguarding  
Officer**  
Miss Fox



**SENCo /  
Assistant Headteacher**  
Miss Tyldsley



**Key Stage 4 Leader**  
Miss Dobby



# MY Attendance RECORD

## ATTENDANCE %

Year so far:

Attendance Targets:

DATE	WEEKLY %	YEAR TO DATE %
Week 1		
Week 2		
Week 3		
Week 4		
Week 5		
Week 6		
Week 7		
Week 8		
Week 9		
Week 10		
Week 11		
Week 12		
Week 13		
Week 14		
Week 15		
Week 16		
Week 17		
Week 18		
Week 19		

# HOME *Learning*

In addition to your online home learning with SPARX and EDUCAKE, some subjects will give you homework based on your Knowledge Organiser. The next page gives you further information...

## HOW DOES HOME LEARNING WORK?

The main way you will complete homework will be via 2 online platforms: SPARX and EDUCAKE. These online platforms will quiz you on your learning in lesson. It's a great way to test yourself and developing your memory retrieval and retention skills. As well as home learning quizzes, these platforms allow you to prepare for assessments and revise key content.

## HOW DO I ACCESS THESE?

PLATFORM	WEB ADDRESS	SUBJECTS
SPARX	<a href="http://www.sparx.com">www.sparx.com</a>	Maths and Science
EDUCAKE	<a href="http://www.educake.co.uk">www.educake.co.uk</a>	English, Geography, History, Languages, and Computer Science

## HOMEWORK PLAN

SUBJECT	FREQUENCY
English / Science / Maths	Weekly
Geography / History / Languages / Computer Science	Fortnightly

## IN THE LIBRARY YOU CAN:

- Access books and resources
- Use the internet to complete any online home learning
- See staff who can give you any advice and guidance you may need
- Study independently in a quiet place

# HOME Learning

## HOME LEARNING AND REVISION PRACTISE

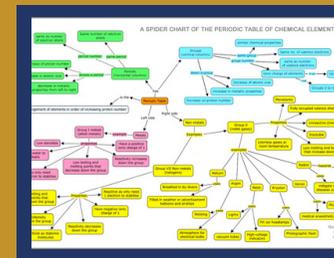
For subjects that do not use an online learning platform for home learning, you will receive homework that is based on your Knowledge Organiser.

You complete this homework on paper that you hand in to your subject teachers.

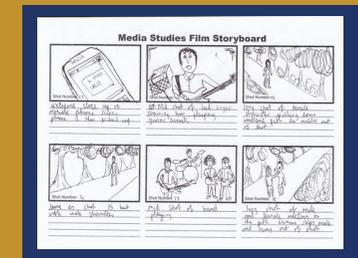
The purpose of this is to help you know and remember more content over time, by developing your memory recall and supporting your revision practise.

## ADDITIONAL HOME LEARNING AND REVISION PRACTISE METHODS:

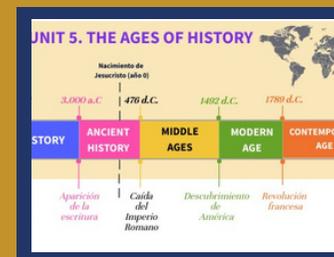
- Using the Word Revolution words – checking spellings are 100% accurate and that you know the definitions
- Producing a mind map or a spider diagram with the key learning content
- Making a storyboard of key events or draw out key images
- Making a timeline of events
- Copying out a diagram and practising labelling it accurately
- Practising writing out some sentences or phrases in the language you are studying
- Retrieving and finding information from what you have read



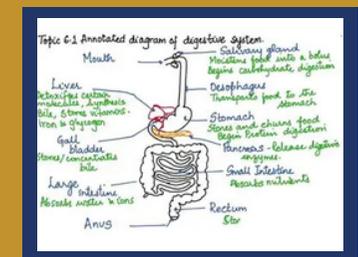
MIND MAP/SPIDER DIAGRAM



STORYBOARD



TIMELINE



DIAGRAM



# STUDENT *Loyalty* CARD

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40

**COLLECT A STAMP EACH TIME YOU ATTEND A LUNCH AND AFTER SCHOOL EXTRA-CURRICULAR ACTIVITY. WHEN YOU'VE REACHED 10, 20, 30 AND 40 STAMPS YOU WILL RECEIVE A REWARD!**



**WORD REVOLUTION**

<b>Tone</b>	The writer’s attitude toward the subject; can shift from calm to
<b>Bias</b>	A one-sided viewpoint that influences the way events are
<b>Reporting</b>	The act of narrating or telling events, sometimes like a journalist
<b>Deduction</b>	Logical reasoning used to solve a mystery
<b>Perspective</b>	The point of view from which the story is told
<b>Foreboding</b>	A sense of something bad about to happen
<b>Significance</b>	The importance of a word, image, or event in shaping meaning
<b>Unconventional</b>	Going against norms or expectations
<b>Impartiality</b>	Being neutral and fair; the opposite of bias
<b>Sexism</b>	Prejudice based on gender, often explored or challenged in literature
<b>Stereotypes</b>	Oversimplified ideas about groups of people
<b>Subversion</b>	Undermining or overturning expectations or norms
<b>Characterisation</b>	How a character is presented and developed
<b>Implies</b>	Suggests something without saying it directly

**What will I study in this topic?**

You will be studying a range of texts within the Crime and Punishment and Mystery genres. This will include *Sherlock Holmes* by Arthur Conan Doyle and *Tales from the Unexpected* by Roald Dahl.

**What will I be able to do by the end of this topic?**

Understand that texts are structured for effect, using techniques to create mystery and tension. Consider and be able to explain an opinion of a text. Understand that context is important in our understanding of a text and therefore how we comment on it.

**Understanding Society and Attitudes**

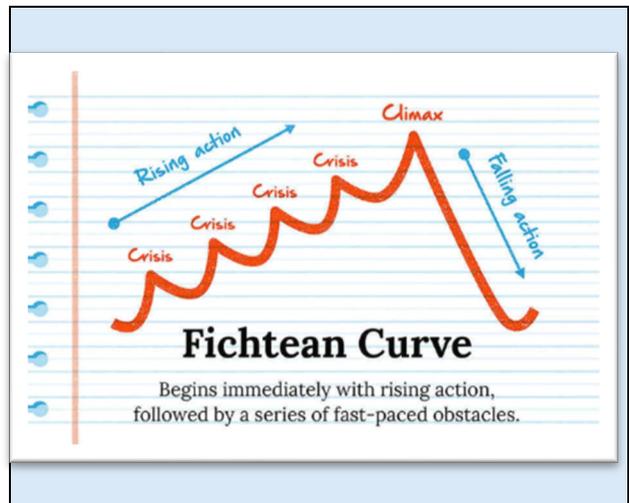
In this unit of work, we will explore Gender Roles and sexism within the 1950’s and explore how this is presented within the story of “The Lamb to the Slaughter” written by Roald Dahl. This will lead into assessing how stereotypes are presented in stories and how this may shape the narrative. We will also explore **impartiality** and **subversion**.

**People and Relationships**

This unit of work will allow you to explore marital roles as well as male friendships through our study of *Sherlock Holmes*. We will also explore how the **femme fatale** or dangerous females are presented in literary texts and why powerful female voices are important in society.

**Form, Structure and Narrative**

During this unit of work, we will look at the structure of a mystery or detective novel. We will be exploring how **perspective** can adjust the course of a story, and therefore whether or not a narrative voice can be trusted. We will study how foreshadowing and suspense are used in detective novels to engage readers, and therefore be able to identify turning points in narrative. The picture to the right shows an image of a narrative structure called the **Fichtean Curve** that is used in detective novels.





Key Questions:	How does literature explore the gender stereotypes of this time period? What are the conventions of a crime or detective story? How do writers use language to create tension, mystery and suspense?
Curriculum Connections:	This unit of work will allow you to begin to explore stereotypes and moral responsibility within literature which you will come back to in more detail in Year 10 with your study of An Inspector Calls. The introduction of <b>subversion</b> is also an important concept at this point to prepare you for your study of heroes and villains and later Gender and Identity in Y8.

**Extract from “A good housewife guide” 1955: Example of outdated stereotyping to link to Roald Dahl!**

<p>“Don’t complain if he is late for dinner, even if he stays out all night.”</p> <p>“During the cooler months of the year, you should prepare and light a fire for your husband”</p> <p>“Don’t ask him questions about his actions...remember, he is the master of the house...you have no right to question him.”</p>	<p>“Listen to him. You may have a dozen important things to tell him, but the moment of his arrival is not the time. Let him talk first – remember, his topics of conversation are more important than yours.”</p>
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**Writing a Newspaper Article**

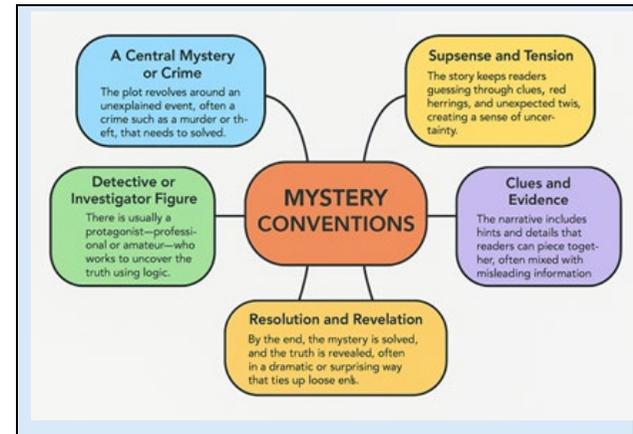
**Title:** (Write a clear heading about the topic)

**Introduction:** State the purpose of the report and outline what it will cover.

**Main Sections with Subheadings:** Background / What Happened, Findings / Observations, Any Data or Evidence.

**Conclusion:** Summarise key points and add recommendations if needed.

**Style Tips:** Use formal language, write in third person, organise information clearly with paragraphs or bullet points.



**SUBJECT: ENGLISH**

**TOPIC: Crime and Punishment**

**YEAR: 7**

**SEMESTER: 2**



How will I be assessed?

At the end of the unit of work, you will produce a report based on the knowledge you have gathered, this will likely be a report of "The Adventures of the Speckled Band" Sherlock Holmes story.

### Conventions (Tropes) of a mystery story

#### **A Central Mystery or Crime**

The plot revolves around an unexplained event, often a crime such as a murder or theft, that needs to be solved.

#### **Suspense and Tension**

The story keeps readers guessing through clues, red herrings, and unexpected twists, creating a sense of uncertainty.

#### **Detective or Investigator Figure**

There is usually a protagonist—professional or amateur—who works to uncover the truth using logic, observation, and deduction.

#### **Clues and Evidence**

The narrative includes hints and details that readers can piece together, often mixed with misleading information to maintain intrigue.

### Language methods

**First-person narration:** Often used by the detective or protagonist to give a personal view of the investigation (e.g., hard-boiled detective stories)

**Suspenseful and tense tone:** Builds anticipation and uncertainty.

**Descriptive settings:** Gritty urban streets, dimly lit rooms, or isolated mansions

**Interrogative dialogue:** Questions and evasive answers during interviews

**Symbolism:** Objects like weapons, clocks, or shadows symbolizing danger or time running out

**Foreshadowing:** Hints about future events or the culprit

### Understanding impartiality

**Definition of impartiality - fair treatment of others, without bias.**

**Bias** is when a story is only presented from **one viewpoint** without considering the other side of the story. A **balanced or impartial** story would include various viewpoints and angles, offering the complete picture so you can make your own judgements.

Whether it's a positive or negative bias, reports can often miss out important details, which makes them unreliable.

### Further Reading and Other Resources

*The Adventures of Sherlock Holmes* series by Arthur Conan Doyle

*Lockwood & Co* series by Jonathan Stroud

*Skulduggery Pleasant* by Derek Landy

*The Midnight Game* by Cynthia Murphy

*Murder Most Unladylike* by Robin Stevens

*Enola Holmes* by Nancy Springer

*Scarlet and Ivy* by Sophie Cleverly

*A Series of Unfortunate Events* by Lemony Snicket

*The London Eye Mystery* by Siobhan Dowds

### Recall Questions

1. What type of narrative is used for a detective novel?
2. Why is foreshadowing important in a detective novel?
3. What is definition of impartiality?
4. Name two conventions of a mystery story.
5. What gender stereotypes were prevalent in 1950's literature?
6. What is subversion?
7. What is the Fichtean Curve?
8. What is a femme fatale?



**WORD REVOLUTION**

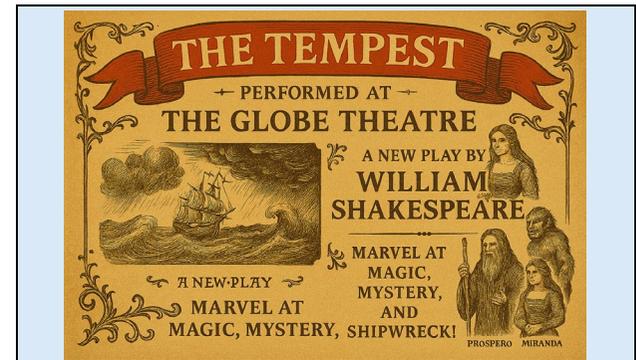
<b>Protagonist</b>	The main character
<b>Antagonist</b>	An opposing force or character
<b>Soliloquy</b>	A speech where a character speaks their thoughts aloud
<b>Aside</b>	A brief remark to the audience, unheard by other characters
<b>Monologue</b>	A long speech by one character
<b>Dialogue</b>	Conversation between characters
<b>Stage directions</b>	Instructions in the script (e.g., "Enter Ariel, invisible")
<b>Dramatic irony</b>	When the audience knows more than the characters
<b>Foreshadowing</b>	Hints of what is to come
<b>Symbolism</b>	Objects or events representing deeper
<b>Allegory</b>	A story with a deeper political, moral, or spiritual meaning
<b>Motif</b>	A recurring theme, image, or idea
<b>Colonialism</b>	Explored through Prospero's control of the island.
<b>Connotation</b>	An idea or feeling that a word invokes in a person in addition to its literal meaning.

What will I study in this topic?	This will be your first study of a Shakespeare play at Benton Park School. You will explore how life during this time period influenced Shakespeare. You will explore the language of Shakespeare and start to analyse what the language means.
What will I be able to do by the end of this topic?	By the end of this topic, you will be able to recall the key moments of the play, the characters name and the purpose they serve within the story. You will be able to comment on the language used by the characters and the intentions and message of Shakespeare.

**Understanding Society and Attitudes**  
 During this unit of work we will explore **slavery and colonialism** as well as life during the 1600s **Jacobean** era which is the time period in which *The Tempest* was written. We will look at how oppression was used during this time period to enslave people and therefore why freedom is such a prominent theme in the play. Plays during this time period were performed at the Globe, so we will explore this as well.

**Power and relationships**  
 During our study of *The Tempest* we will be explore Father/daughter relationships through the study of Prospero and Miranda. Through the study of Prospero and Caliban we will analyse the power struggle between the two characters and look at how Caliban reacts to his adversity. This will also allow us to reflect on the hierarchy and power struggle between them as well.

**Form, Structure and Language**  
 Studying a play comes with its own challenges as it's not written like a story. We will explore how stage directions are used to create meaning and direct actors and how monologues and soliloquies are used to explore the innermost thoughts of a character on stage. We will also explore how Shakespeare creates humour within the play through dialogue and **physical comedy**.



**SUBJECT:** English

**YEAR:** 7

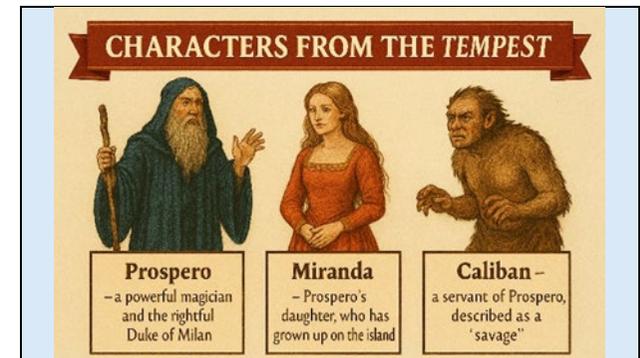
**TOPIC:** The Tempest

**SEMESTER:** 2

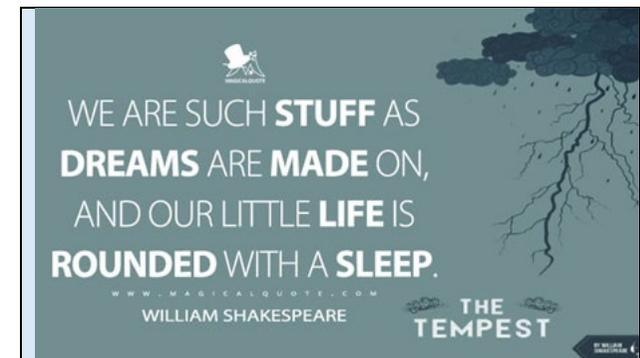


Key Questions:	What is colonialism, and how is it reflected in <i>The Tempest</i> ? How does Shakespeare present Prospero (the protagonist) in the opening of <i>The Tempest</i> ? How is Caliban treated in the start of Act 2? Is Caliban justified in wanting to kill Prospero? What does Prospero's treatment of Ariel reveal?
Curriculum Connections:	At the beginning of Year 7 during our study of <i>A Christmas Carol</i> we explored the themes of <b>morality</b> and <b>class structures</b> , which are also prevalent in <i>The Tempest</i> . Through our introductory unit "Why We Tell Stories", we also looked at the importance of storytelling and how stories can reflect the life of people during that time period. <i>The Tempest</i> is a reflection of how power and class influenced the lives of everyone in society and this was also true during our exploration of biographies.

- Key characters**
- Prospero** – The rightful Duke of Milan, now a powerful magician living on an isolated island. He uses magic to control events and seek justice.
  - Miranda** – Prospero's innocent and compassionate daughter, who has grown up on the island.
  - Ariel** – A spirit servant bound to Prospero, who longs for freedom and helps carry out his magical commands.
  - Caliban** – The island's original inhabitant, portrayed as brutish and resentful of Prospero's control.
  - Sebastian** – Alonso's scheming brother, who plots murder during the play.
  - Gonzalo** – A kind and loyal counselor who aided Prospero during his exile.
  - Stephano and Trinculo** – Comic relief characters; a drunken butler and jester who plot foolish schemes with Caliban.



- Key quotes**
- "We are such stuff as dreams are made on, and our little life is rounded with a sleep."
  - "Hell is empty and all the devils are here."
  - "This thing of darkness I acknowledge mine."
  - "Be not afeard; the isle is full of noises, sounds, and sweet airs..."
  - "You taught me language, and my profit on't is, I know how to curse."
  - "I'll drown my book."
  - "This thing of darkness, I acknowledge mine"
  - "Thought is free"



**SUBJECT:** English

**YEAR:** 7

**TOPIC:** The Tempest

**SEMESTER:** 2



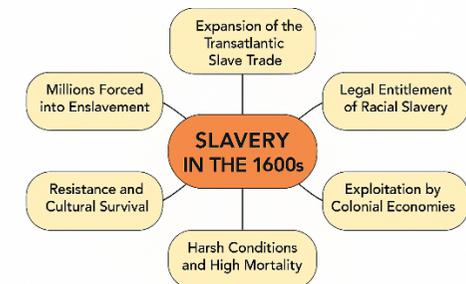
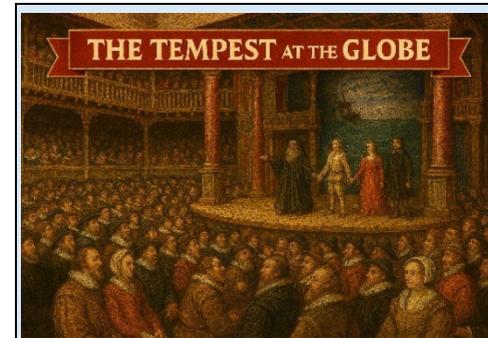
### Slavery in the 1600s

Slavery in the 1600s was a brutal and expanding institution that shaped global economies and societies. During this century, European powers—particularly Spain, Portugal, England, France, and the Netherlands—intensified the transatlantic slave trade. Millions of Africans were forcibly taken from their homelands, transported across the Atlantic under horrific conditions, and sold into lifelong servitude in the Americas. Initially, some colonies relied on them as servants, but by mid-century, racial slavery became entrenched, with laws codifying Africans as property rather than people. The Caribbean and American plantations demanded labour for sugar, tobacco, and later cotton, fuelling immense wealth for European nations while devastating African communities.

Slave ships were overcrowded, disease-ridden, and deadly, with mortality rates often exceeding 15%. Enslaved individuals endured relentless physical abuse, family separation, and cultural erasure. Resistance persisted through rebellions, escapes, and the preservation of African traditions, but the system grew stronger as colonial economies depended on it. By 1700, slavery was deeply institutionalized, laying the foundation for centuries of racial inequality and exploitation.

### Sentence starters to use in analysis of The Tempest

- Perhaps Shakespeare wanted his audience to feel....
- The use of the word “.....” highlights to the audience...
- Prospero’s monologue at the end of the plays implies that...
- Caliban is a representation of..... in his opening scene he states that...
- The relationship between Miranda and Prospero shows...
- Audiences at the time would respond to this scene.....
- The use of ..... in his/her speech in Act... Scene..... conveys....



### Framework for analysis

- Point:** The writer focuses on ...
- Evidence:** Use a well-chosen quotation here.
- Analyse:**
  - What methods/language does the writer use?
  - What effect does this have? What impression does it create for the reader?
- Link:**
  - Does this link to another quotation?
  - Does this link to the context?
  - Does this link back to the writer’s intention?



**SUBJECT: English**

**YEAR: 7**

**TOPIC: The Tempest**

**SEMESTER: 2**



How will I be assessed?

At the end of unit of work, you will complete an oral presentation on the treatment of Caliban in the play. The final Semester Two Assessment will be a language analysis on an extract from *The Tempest* looking at a specific theme that is explored throughout the play.

### Life in Shakespearean times (Jacobean era)

Life in the Jacobean era (1603–1625) was marked by **stark contrasts** between wealth and poverty, elegance and hardship. Society was **deeply hierarchical**, with rigid class divisions shaping daily existence. The wealthy enjoyed lavish banquets, ornate clothing, and grand homes, while the poor struggled with overcrowded housing and limited food. Religion dominated life, as tensions between Protestants and Catholics simmered beneath the surface. London thrived as a cultural hub, with theatres showcasing works by Shakespeare and his contemporaries. Yet, plague outbreaks and harsh punishments for crime were constant threats. Despite challenges, the era brimmed with artistic innovation and political intrigue, influencing literature, architecture, and drama for generations.

### Key Shakespearean words:

Anon	Soon	Thou	You
Art	Are	Thee	You
Ay	Yes	Thy	Your
Fain	Gladly	Thine	Yours
Hark	Listen	Hie	Go quickly
Wherefore	Why	Methinks	I think

### Other worlds events happening during the time *The Tempest* was written (1610-1613)

**1610:** King Henry IV of France is assassinated; his young son Louis XIII becomes king, with his mother Marie de' Medici as regent.  
**1611:** The King James Version of the Bible is published in England, a landmark literary event  
**1613:** English courtier Thomas Roe sets out for India, eventually securing trading rights with the Mughal Emperor

### Further Reading and Other Resources

**A Midsummer Night's Dream** by William Shakespeare  
**The Chronicles of Narnia** by C.S. Lewis  
**Percy Jackson and the Olympians** by Rick Riordan  
**Harry Potter and the Philosopher's Stone** by J.K. Rowling  
**The Hobbit** by J.R.R. Tolkien  
**A Wrinkle in Time** by Madeleine L'Engle

<https://www.youtube.com/watch?v=ovTnjFz3eNM> Shakespeare in Shorts: The Tempest. A short ten minute video of the whole play.

### Recall Questions

1. What is Caliban a representation of?
  2. What year was slavery abolished?
  3. What years were the Jacobean era?
  4. What significant literary event happened in 1611?
  5. Name three characters from the play.
  6. How does Prospero control events?
- Fill in the missing words in these quotations:
1. "Hell is ..... and all the devils are here"
  2. "We are such stuff as ..... are made on"



**WORD REVOLUTION**

<b>Numerator</b>	The number above the line on a fraction. Represents how many equal parts of the whole are taken.
<b>Denominator</b>	The number below the line on a fraction. Represents how many equal parts the whole is divided into.
<b>Improper Fraction</b>	An improper fraction has a numerator which is greater than or equal to the denominator.
<b>Mixed Number</b>	A mixed number is made up of an integer (whole number) and a proper fraction.
<b>Equivalence</b>	Two fractions are equivalent if one is a multiple of the other

is the same as...

$$\frac{1}{5} = \frac{2}{10} = \frac{3}{15} = \frac{4}{20}$$

Each of these circles represents the same fraction as the first one, showing that 1/5 is equivalent to 2/10, 3/15, and 4/20.

Simplifying Fractions:  
Divide the **numerator** & **denominator** by the same **factor**.

$$\frac{8}{12} \xrightarrow{\div 4} \frac{2}{3}$$

What will I study in this topic?

What will I be able to do by the end of this topic?

- Find fractions of shapes
- Construct and compare fractions
- Find equivalent fractions
- Simplify Fractions
- Ordering Fractions
- Convert between mixed numbers and improper fractions.
- Add and subtract fractions
- Add and subtract mixed numbers
- Multiply Fractions
- Divide Fractions
- Solving complex fluency and reasoning problems
- Solving cross-topic questions involving measures, time and probability
- Be able to order a list of improper fractions and mixed numbers.

**Adding Fractions**

$$+ \quad \boxed{\frac{3}{5} + \frac{2}{7}} \quad \frac{3}{5} + \frac{2}{7}$$

Make the denominators the same

$$\frac{21}{35} + \frac{10}{35} = \frac{31}{35}$$

*(Note: Red arrows point from 3/5 to 21/35 with 'x7' and from 2/7 to 10/35 with 'x5')*

**Subtracting Fractions**

$$- \quad \boxed{\frac{3}{5} - \frac{2}{7}} \quad \frac{3}{5} - \frac{2}{7}$$

Make the denominators the same

$$\frac{21}{35} - \frac{10}{35} = \frac{11}{35}$$

*(Note: Red arrows point from 3/5 to 21/35 with 'x7' and from 2/7 to 10/35 with 'x5')*

**Multiply Fractions**

$$\times \quad \boxed{\frac{3}{5} \times \frac{2}{7}} \quad \text{multiply the numerators and the denominators}$$

$$= \frac{3 \times 2}{5 \times 7} = \frac{6}{35}$$

**Divide Fractions**

$$\div \quad \boxed{\frac{3}{5} \div \frac{2}{7}} \quad \text{Multiply the first fraction by the reciprocal of the second}$$

$$\frac{3}{5} \times \frac{7}{2} = \frac{21}{10}$$



**WORD REVOLUTION**

<b>Convert</b>	This means to change a value or expression from one form to another.
<b>Proportion</b>	Refers to the relationship between two quantities, often expressed as fractions, decimals or percentages.
<b>Equivalence</b>	The relationship between two quantities that have the same value.
<b>Simplify</b>	To reduce the values in simpler forms for example $\frac{12}{24}$ can be simplified to $\frac{1}{2}$

What will I study in this topic?

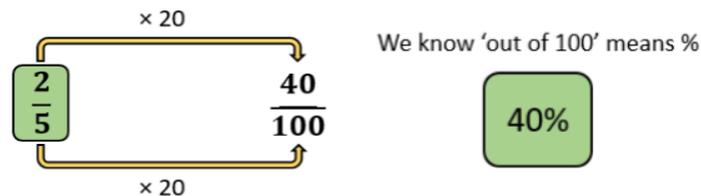
- Reciprocals
- Multiply with mixed numbers
- Divide with mixed numbers
- Fractions of amounts without calculator
- Fractions of amounts with calculator
- Convert between fractions, decimals and percentages
- Order fractions, decimals and percentages
- Write numbers as percentages of other numbers

What will I be able to do by the end of the topic?

- Solve area questions by multiplying fractions or mixed numbers.
- Identify a student's mistake in dividing fractions working.
- Solve complex fluency and reasoning problems.
- Perform calculations involving a mixture of fractions and decimals.
- Convert percentages greater than 100%

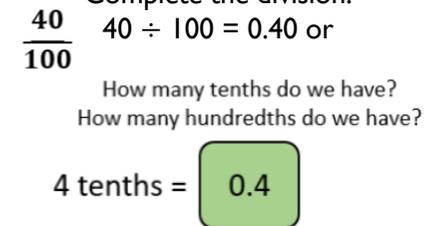
**Fraction to Percentage**

You could convert the fraction to 100 total parts



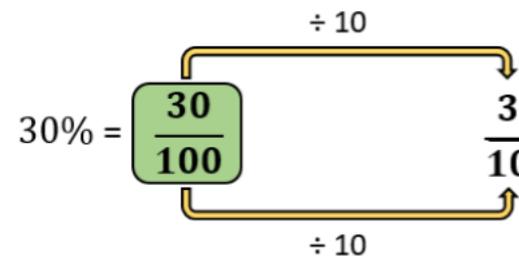
**Fraction to Decimal**

Complete the division.



**Percentage to Fraction**

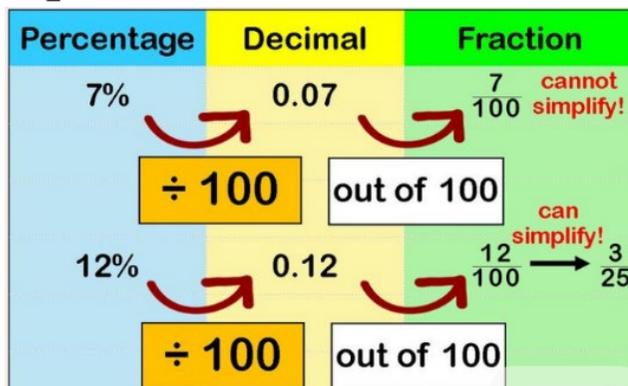
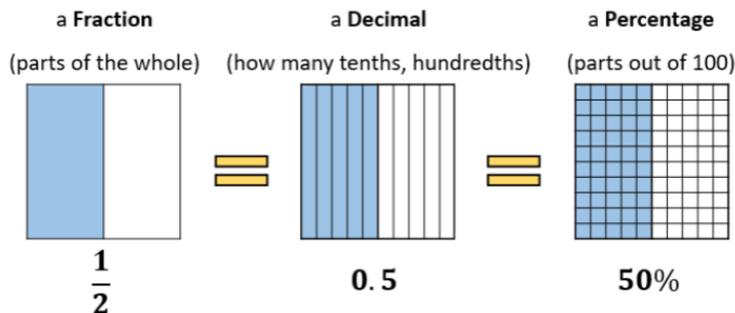
Convert the percentage to fraction with 100 total parts (denominator)



**Percentage to Decimal**

30% :

To convert % to decimal just divide the % by 100.





**WORD REVOLUTION**

<b>Expand</b>	Multiply a bracket by a term to produce an equivalent expression that does not have brackets.
<b>Factorise</b>	Write an equivalent expression that has a common factor multiplying a single bracket. (Essentially the opposite of expanding brackets)
<b>Distributive Law</b>	The ability to partition or simplify a sum or expression using equivalent calculations.
<b>Simplify Expressions</b>	Write an expression in the simplest way it can be by collecting terms that are the same type as each other.
<b>Term</b>	A single part of an algebraic expression that may include multiplication, e.g. $3x$ , $-y$ , $+6$

What will I study in this topic?

You will learn how to write equivalent algebraic expressions by either expanding brackets to produce an expression with the same value but without brackets, or by factorising an expression without brackets to write an equivalent expression that does have brackets.

What will I be able to do by the end of this topic?

- Use the distributive law to carry out calculations by partitioning first, or by writing a simpler version of the sum.
- Expand a single bracket by multiplying all terms inside by a single term.
- Expand a single bracket that includes more than one variable.
- Expand and simplify expressions that include one or more single bracket and collecting like terms.
- Factorising expressions using common factors of terms.

**Distributive Law**

Using  $a \times (b + c) = a \times b + a \times c$  to carry out a calculation by first partitioning. E.g.:

Use the distributive law to calculate  $23 \times 104$ :

$$\begin{aligned}
 23 \times 104 &= 23 \times (100 + 4) \\
 &= 23 \times 100 + 23 \times 4 \\
 &= 2300 + 92 \\
 &= 2392
 \end{aligned}$$

Using  $a \times b + a \times c = a \times (b + c)$  to simplify and carry out a calculation. E.g.:

Use the distributive law to calculate  $71 \times 36 - 71 \times 32$ :

$$\begin{aligned}
 71 \times 36 - 71 \times 32 &= 71 \times (36 - 32) \\
 &= 71 \times 4 \\
 &= 284
 \end{aligned}$$

**Expand a single bracket**

Multiply a single term over a bracket by multiplying each term inside the bracket by the one outside. E.g.:

Expand  $8(x + 5)$

$$\begin{aligned}
 &8(x + 5) \\
 &= 8 \times x + 8 \times 5 \\
 &= 8x + 40
 \end{aligned}$$

Expand  $9f(f + 8)$

$$\begin{aligned}
 &9f(f + 8) \\
 &= 9f \times f + 9f \times 8 \\
 &= 9f^2 + 72f
 \end{aligned}$$

**Factorising**

Find the highest common factor of each term, write this on the outside of the bracket, then divide each term by the HCF to write down the terms inside the bracket. E.g.:

Factorise  $28x + 21$

$$\begin{aligned}
 28 &= 1 \times 28 & 21 &= 1 \times 21 \\
 28 &= 2 \times 14 & 21 &= 3 \times 7 \\
 28 &= 4 \times 7 & & \\
 \text{Factors of 28: } &1, 2, 3, 4, 7, 14, 28 \\
 \text{Factors of 21: } &1, 3, 7, 21 \\
 \text{HCF of 28 and 21} &= 7 \\
 28x + 21 &= 7(bx + 3)
 \end{aligned}$$

Fully factorise  $x^2 + 13x$

$$\begin{aligned}
 \text{HCF of } 1 \text{ and } 13 &= 1 \\
 \text{Common variable} &= x \\
 x^2 + 13x &= x(x + 13)
 \end{aligned}$$

**Expand and simplify**

Expand any single brackets in the expression, then simplify by collecting all like terms. E.g.: Expand and fully simplify  $8(x - 6) + 11(3x + 5)$

$$\begin{aligned}
 &8(x - 6) + 11(3x + 5) \\
 &= 8 \times x + 8 \times -6 + 11 \times 3x + 11 \times 5 \\
 &= 8x - 48 + 33x + 55 \\
 &= 41x + 8
 \end{aligned}$$

**Factorising (more than one common factor)**

As before, but find all common factors to write outside of the bracket. E.g.:

Fully factorise  $18n^2 - 45n$

HCF of 18 and 45 = 9

Common variable = n

$$18n^2 - 45n = 9n(2n - 5)$$



**WORD REVOLUTION**

<b>Angle</b>	An angle measures the size of a turn
<b>Acute angle</b>	Is less than $90^\circ$
<b>Right angle</b>	Is exactly $90^\circ$
<b>Obtuse angle</b>	Is greater than $90^\circ$ but less than $180^\circ$
<b>Reflex angle</b>	Is greater than $180^\circ$
<b>Vertically Opposite</b>	Vertically opposite angles are equal
<b>Angles on a straight line</b>	Angles on one side of a straight line always add to $180^\circ$
<b>Angles around a point</b>	Angles around a point will always add to $360^\circ$
<b>Angles in triangles</b>	Angles in triangles add to $180^\circ$

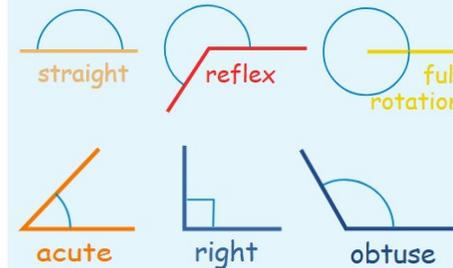
What will I study in this topic?

You will learn about different types of angle, estimating angles and accurately measuring and drawing angles. You will learn and use angle facts to find missing angles on a lines and triangles.

What will I be able to do by the end of this topic?

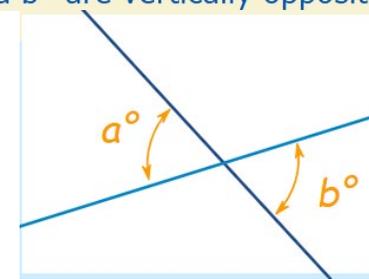
- Know the different types of angles
- Estimate the sizes of different angles
- Accurately measure and draw an angle
- Find missing angles on straight lines
- Find missing angles around a point
- Identify vertically opposite angles
- Find missing angles in triangles

**Types of Angles**



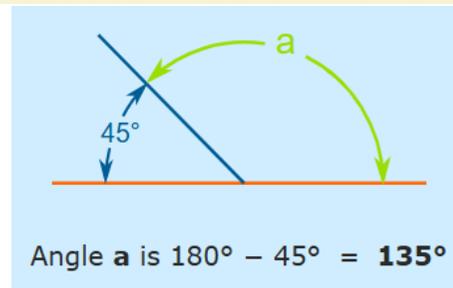
**Vertically Opposite**

$a^\circ$  and  $b^\circ$  are vertically opposite angles.

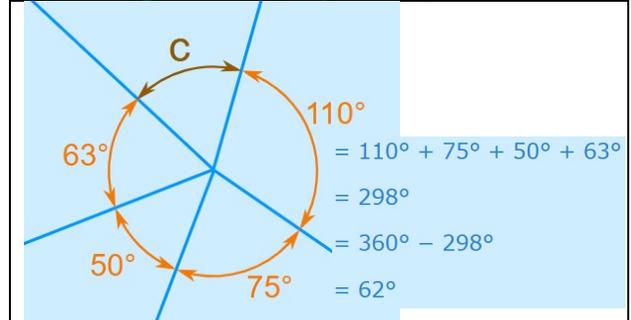


**Angles on a straight line equal  $180^\circ$**

We know one angle is  $45^\circ$ , what is the other angle "a" ?



**Angles around a point equal  $360^\circ$**



	<b>Equilateral Triangle</b> Three equal sides Three equal angles, always $60^\circ$		<b>Scalene Triangle</b> No equal sides No equal angles
	<b>Isosceles Triangle</b> Two equal sides Two equal angles		<b>Right Triangle</b> Has a right angle ( $90^\circ$ )



**WORD REVOLUTION**

<b>Average</b>	A number expressing the central or typical value in a data set. Averages are Mean, Mode and Median.
<b>Range</b>	A measure of how spread out the data is. Found by subtracting the smallest value from the largest.
<b>Bar-Chart</b>	A diagram where the numerical value of the frequency is represented by the height of the bars.
<b>Pictogram</b>	A diagram where the frequency is represented by a picture.
<b>Frequency Table</b>	A table displaying how often something occurs, eg the number of pupils who have particular hair colours.

What will I study in this topic?

You will learn how to calculate the averages and range from a data set and how to put data and information into a chart that is visual and easy for someone to read. You will also extract information from these charts, such as finding frequencies and averages.

What will I be able to do by the end of this topic?

- Calculate the mean, mode and median from a data set.
- Calculate the range from a data set.
- Draw and interpret bar-charts, pictograms and two-way tables.
- Calculate the mean and range from a frequency table.

Averages and Range

3 5 3 6 5 9 2 3 9

**Mean:** Add the values together and divide by how many there are –  $3+5+3+6+5+9+2+3+9 = 45$      $45 \div 9 = 5$

**Mode:** Most common value. Here the mode is 3

**Median:** Middle value when the numbers are in order of size: 2 3 3 3 5 5 6 9 9 - here this is 5  
(If you have two middle values, the median is halfway between them)

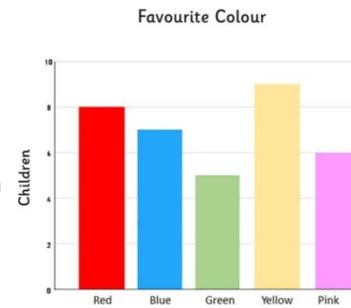
**Range:** Difference between the largest and smallest value:  
 $9 - 2 = 7$

A two-way table gives information in two-ways. Here we can see how many medals a country won, but also how many of each medal was given out. Eg Finland won 37 medals in total (first column), 26 bronze medals were won in total (first row).

	Finland	Poland
Bronze	9	17
Silver	21	13
Gold	7	5

**Bar-Charts**

A bar-chart shows how often things occur by reading the height of the bars. Here there are 8 children with a favourite colour of red. There are 35 pupils in total.



**Pictograms**



In the pictogram above, showing how pupils get to school, a full circle represents 4 people (note the key). So 6 pupils get the bus (a full circle and then half a circle). The number of pupils that cycle to school is  $4 + 4 + 4 + 1 = 13$ .

**Frequency Tables**

The table below shows how many bicycles were owned by families. Eg 13 families have 3 bicycles.

Number of bicycles	Frequency
1	15
2	9
3	13
4	5
5	2

**Mean from a Frequency Table**

To find the mean, we need to know how many bicycles there are in total and divide by the total number of families. You need to multiply across to find the number of bicycles.

$1 \times 15 + 2 \times 9 + 3 \times 13 + 4 \times 5 + 5 \times 2 = 102$  bicycles  
 $15 + 9 + 13 + 5 + 2 = 44$  families in total

$102 \div 44 = 2.32$  (to 2dp) bicycles per family



**WORD REVOLUTION**

<b>Unitary Method</b>	A technique to solve problems by first finding the value of a single unit
<b>Proportion</b>	A comparison between two numbers
<b>Product</b>	The result of multiplying two or more numbers
<b>Constant</b>	A value that remains fixed and unchanging
<b>Reciprocal</b>	The number you multiply by to get an answer of one

What will I study in this topic?

How to solve proportion problems using the unitary method and identifying the multiplier. You will investigate the relationship between numbers in practical context.

What will I be able to do by the end of this topic?

- Use multiplication and division to find an amount when given a unitary proportional relationship.
- Use multiplication and division to find an amount in a proportional relationship
- Interpret recipes and other contextual proportional relationships
- Solve proportion problems

**Unitary Method**

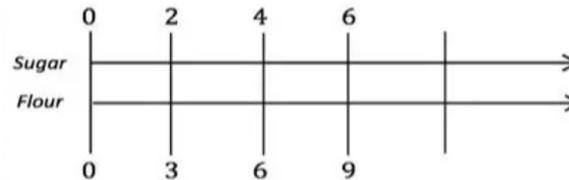
The cost of 7 chocolates is £84. What is the cost of 9 chocolates?

$$\begin{array}{r}
 7 \text{ Chocolates} = \text{£}84 \\
 \div 7 \downarrow \qquad \qquad \downarrow \div 7 \\
 1 \text{ Chocolate} = \text{£}12 \\
 \times 9 \downarrow \qquad \qquad \downarrow \times 9 \\
 9 \text{ chocolates} = \text{£}108
 \end{array}$$

Firstly, we divide by 7 to find the cost of 1 chocolate (this is the unit cost), then we multiply by 9 to find the cost of 9 chocolates.

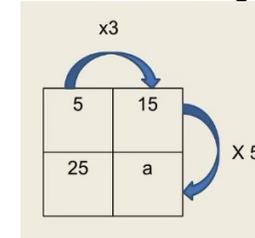
**Double Number Line**

A double number line can set out the problem and show the relationship clearly

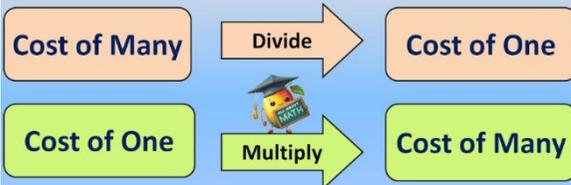


**Proportion Box**

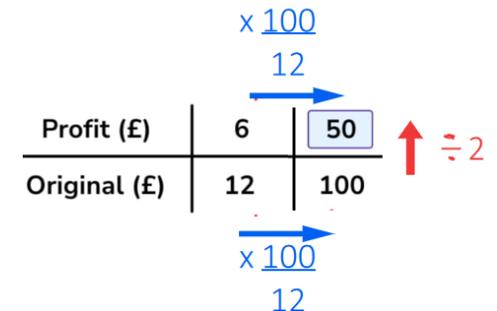
Using a box can highlight the different multipliers you can use to find the missing value



**Unitary Method**



**Finding the multiplier (Non Unitary method)**

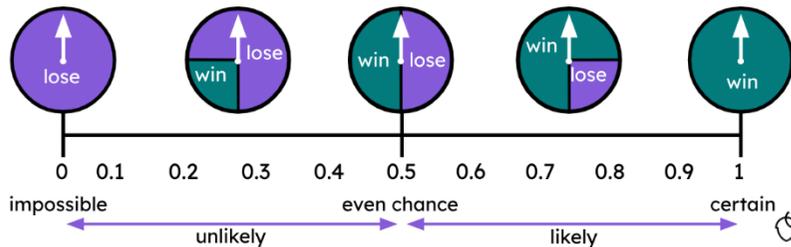




WORD REVOLUTION	
<b>Experiment</b>	An activity with observed results (e.g., flipping a coin).
<b>Trial</b>	Each repetition of an experiment
<b>Outcome</b>	A single possible result of a trial (e.g., heads).
<b>Sample Space</b>	The set of <i>all</i> possible outcomes (e.g., {Heads, Tails}).
<b>An Event</b>	An outcome or a collection of outcomes (e.g., rolling an even number).

What will I study in this topic?	<ul style="list-style-type: none"> <li>Using probability phrases</li> <li>Writing probabilities as fractions</li> <li>Writing probabilities as fractions, decimals and percentages</li> <li>Probabilities of mutually exclusive events</li> <li>Sample space diagrams</li> </ul>
What will I be able to do by the end of this topic?	<ul style="list-style-type: none"> <li>How to describe the probability of an event happening: impossible, unlikely, evens, likely, certain</li> <li>Know how to calculate the probability of an event and represent their answer as a fraction, a decimal, or a percentage.</li> <li>Generate sample spaces for single events</li> <li>Know that the sum of probabilities of all possible outcomes total one</li> </ul>

The probability scale



Some possible outcomes when rolling a fair 6 sided dice:

	Event	Description	Probability
A	Rolling a 7	Impossible	0
B	Rolling a 3	Unlikely	$\frac{1}{6}$
C	Rolling an odd number	Even chance	$\frac{3}{6} = \frac{1}{2}$
D	Rolling a number 3 or greater	Likely	$\frac{4}{6}$
E	Rolling a number less than 7	Certain	1

Theoretical Probability	
1	Determine the frequency of the event occurring
2	Determine the total frequency of all possible outcomes
3	Substitute these values into the formula. Write your answer as a fraction, decimal or percentage.

Sample Space diagrams	
A sample space diagram is a visual representation of all possible outcomes of an experiment or event. We can write a list or create a table. Example: Two fair spinners are spun and the scores added together. The scores are recorded in the Table below.....	

Probability Scale	
Below shows the events from the table on the left on a probability scale	

Sample Space Diagram																	
The table can then be used to calculate the probability of particular events happening. This diagram illustrates P(Total score is prime)=																	
$\frac{3}{9} = \frac{1}{3}$																	
<table border="1"> <thead> <tr> <th>+</th> <th>2</th> <th>5</th> <th>7</th> </tr> </thead> <tbody> <tr> <th>1</th> <td style="border: 2px solid red;">3</td> <td>6</td> <td>8</td> </tr> <tr> <th>2</th> <td>4</td> <td style="border: 2px solid red;">7</td> <td>9</td> </tr> <tr> <th>3</th> <td style="border: 2px solid red;">5</td> <td>8</td> <td>10</td> </tr> </tbody> </table>		+	2	5	7	1	3	6	8	2	4	7	9	3	5	8	10
+	2	5	7														
1	3	6	8														
2	4	7	9														
3	5	8	10														



**WORD REVOLUTION**

<b>Fertilisation</b>	The fusion of the sperm and the egg during sexual reproduction.
<b>Zygote</b>	The first cell produced when the sperm fertilises the egg.
<b>Menstrual Cycle</b>	A monthly event where the body prepares the lining of the uterus in case it receives a fertilised egg. The uterus lining then breaks down if the egg has not been fertilised.
<b>Ovulation</b>	The part of the menstrual cycle where the egg is released from the ovary.
<b>Sperm</b>	The male sex cell (gamete) that contains the male's genetic material.
<b>Egg</b>	The female sex cell (gamete) that contains the female's genetic material.
<b>Foetus</b>	The name for a human being or animal before birth, after the organs have started to develop.
<b>Embryo</b>	The initial stage of development of a human being or animal, before organs have started to develop.
<b>Gamete</b>	Sex cells- can be male (sperm/pollen) or female (egg)

What will I study in this topic?	During this topic you will study how the human skeleton and muscles work. You will then look in detail at the process of reproduction in humans, how the human foetus develops and how sperm and egg cells are adapted for their function. We will finish the topic looking at how to stay healthy during pregnancy.
What will I be able to do by the end of this topic?	<ul style="list-style-type: none"> <li>• State the structure and function of parts of the male and female reproductive systems.</li> <li>• Describe the process of fertilisation.</li> <li>• Describe the adaptations of the sperm and egg.</li> <li>• Describe the development of the foetus.</li> <li>• State the 4 stages of the menstrual cycle.</li> </ul>

**Male Reproductive System**

Penis- allows sperm and semen to pass out of the male's body.  
 Testis- Produces sperm cells.  
 Urethra- A tube that carries urine and semen.  
 Scrotum- A bag of skin that contains the testes.  
 Gland- Produces fluids that mix with sperm to make semen.  
 Sperm Duct- Carries sperm from the testes to the urethra.

**Female Reproductive System**

Vagina- A muscular tube that leads from the cervix to outside the body.  
 Cervix- A ring of muscle at the lower end of the uterus. Keeps the foetus in place during pregnancy.  
 Ovary- Releases egg cells.  
 Uterus- Where the foetus develops during pregnancy.  
 Oviduct- Carries egg cells from the ovaries to the uterus.



Key Questions:	How are sperm and egg cells adapted for fertilisation? What are the stages of sexual reproduction? What are the stages of the menstrual cycle?
Curriculum Connections:	To understand that energy stores are the foundation for describing energy in different scenarios from Year 7 to 11 and is the cornerstone of understanding the conservation of energy.

**Adaptations of the Sperm and Egg cell**

<p>The head is covered with an acrosome, which releases enzymes to digest the egg cell membrane.</p>	<p>The midpiece contains many mitochondria to release energy for movement.</p>	<p>The cell membrane changes after fertilisation so no more sperm cells can enter the egg.</p>	<p>The cytoplasm contains nutrients to support the developing embryo after fertilisation.</p>
<p>The nucleus contains genetic information from the father. The sperm cell carries half the genetic information that will be received by the offspring.</p>	<p>The sperm cell has a tail (flagellum) to allow it to move towards the egg cell to fertilise it.</p>	<p>The nucleus contains genetic information from the mother. The egg cell carries half the genetic information that will be received by the offspring.</p>	<p>The large size of the egg cell increases the chance of it being fertilised and allows more space for nutrients to be stored.</p>

**Adaptations of the Sperm and Egg cell**

		<ol style="list-style-type: none"> <li>1. During sexual intercourse semen containing sperm cells is ejaculated from the penis into the vagina.</li> <li>2. Sperm cells travel through the female reproductive system to meet an egg cell in the oviduct.</li> <li>3. One sperm cell penetrates the egg cell membrane. The nucleus of the sperm cell fuses with the nucleus of the egg cell. This is called fertilisation.</li> </ol>
<ol style="list-style-type: none"> <li>4. The resulting zygote divides several times to form a ball of cells called an embryo, which implants in the uterus lining</li> </ol>		

**The Menstrual Cycle**

Day 1-5- The uterus lining breaks down and passes out of the vagina. This is known as menstruation or 'having a period.'

5-14- The uterus lining starts to build up again. An egg cell starts to mature in the ovary.

14- An egg cell is released from the ovary. This is called ovulation.

14-28- The uterus lining remains thick. During this time, the egg may be fertilised by a sperm cell.

28- If the egg cell is not fertilised by a sperm cell, the uterus lining begins to break down and the cycle begins.

**Effect of Maternal Lifestyle**

Oxygen and nutrients, such as glucose, can pass from the mother's blood into the foetus across the placenta. The placenta is attached to the foetus by the umbilical cord.

Smoking cigarettes during pregnancy can increase the risk of miscarriage, stillbirth or sudden infant death syndrome (SIDS) Babies are more likely to be premature, have a low birthweight and have problems with brain development.

Drinking alcohol during pregnancy can increase the chance of miscarriage, stillbirth, premature birth, low birthweight and foetal alcohol syndrome.



**WORD REVOLUTION**

<b>Atom</b>	A small piece of matter
<b>Element</b>	Substances made up of one type of atom
<b>Compound</b>	Two or more elements chemically joined together
<b>Properties</b>	Features of an object
<b>Metals</b>	Elements that are typically shiny, conduct electricity, and can be shaped or stretched.
<b>Non-Metals</b>	Elements that are usually dull, brittle, and poor conductors.
<b>Acid</b>	Substances that have a pH below 7.
<b>Alkali</b>	Substances that have a pH above 7.
<b>Salt</b>	A compound formed from the reaction of an acid and an alkali
<b>Indicator</b>	A substance that changes colour in response to changes in pH
<b>Neutralisation</b>	A reaction where an acid and alkali are reacted to create a neutral substance
<b>pH scale</b>	Measures acidity/alkalinity from 0 to 14 based on the concentration of hydrogen
<b>Reactants</b>	The starting materials in a chemical reaction
<b>Products</b>	The substances made during a chemical reaction.

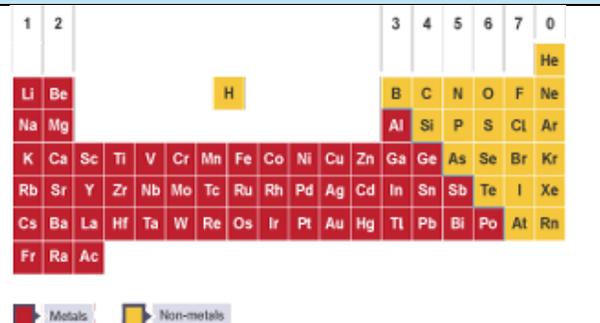
What will I study in this topic?

Differences between atoms, elements and compounds  
 Periodic table and the history of it  
 Investigating properties of elements and compounds  
 Naming compounds and word equations  
 What are acids and alkalis  
 What is neutralisation  
 pH scale and indicators

What will I be able to do by the end of this topic?

Identify atoms, elements and compounds by their particle diagrams  
 Name compounds ending in -ide and -ate  
 Develop observation skills  
 Identify common acids, alkalis and indicators  
 Write basic word equations

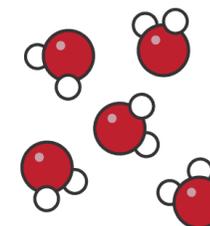
**Periodic Table**



**Compounds**

There are very many different compounds.

For example, water is a compound of hydrogen and oxygen, chemically joined together.



Each of its molecules contains two hydrogen atoms and one oxygen atom.

**Naming Compounds**

**Rule 1:** Metal + Non-metal = -ide

1. Metal name goes first. It does not change.
2. Non-metal name goes second. The ending changes to **ide**.

Examples:



**Rule 2:** Metal + Non-metal + Oxygen = -ate

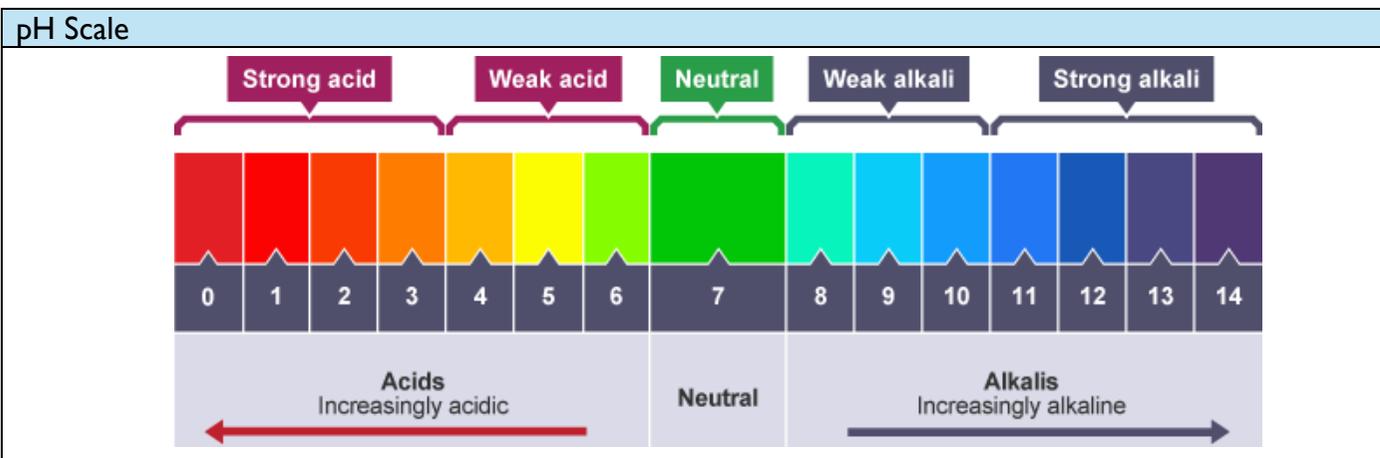
1. Metal name goes first. It does not change.
2. Non-metal name goes second. Change the ending to **ate**.

Examples:





Key Questions:	What did Mendeleev do in his periodic table that was different to other scientist's? What observations could you make during a neutralisation reaction? How do you recognise an acid and alkali by name?
Curriculum Connections:	At primary school, the idea of irreversible changes to make new materials was explored. These topics build on that idea to introduce the world of elements, compounds and chemical reactions. Starting with acids and alkalis.



Litmus is another example of an indicator

**Neutralisation**

A neutral solution (pH 7) is formed when an acid and alkali are added together.

General word equation for the reaction is:  
**Acid + Alkali → Salt + Water**

Specific example:  
**Hydrochloric acid + Sodium hydroxide → Sodium chloride + Water**

We can see the change in pH in a neutralisation reaction by using an indicator such as universal indicator (look at the pH scale diagram for the colours it goes at different pHs)

Acids and Alkalis will have either one of these hazard symbols on their containers.

Caution must always be taken and guidance followed for safe handling and disposal



**WORD REVOLUTION**

<b>Speed</b>	How far you travel in a set amount of time
<b>Distance</b>	How far is between two points
<b>Constant</b>	unchanging
<b>Friction</b>	A resistive force, opposing motion.
<b>Air Resistance</b>	A kind of friction that happens when travelling through air.
<b>Extension</b>	Difference between original and final length.
<b>Force</b>	A push or pull when two objects interact.
<b>Moment</b>	A turning effect when a force acts on something that has a pivot.
<b>Unbalanced</b>	The overall forces on an object don't cancel out, bringing about a change.
<b>Weight</b>	How much force acts on a mass
<b>Pivot</b>	The point around which rotation happens
<b>Gravity</b>	A force that attracts all masses

What will I study in this topic?

You will be introduced to mathematical skills – speed calculations and graph interpretation skills. The identification of forces and application of that to motion of objects.

What will I be able to do by the end of this topic?

- Identify and label forces
- Use the equation for speed
- Describe a simple journey using a distance-time graph
- Investigate the speed of sound
- Describe how friction, drag and air resistance arise.
- Investigate the relationship between force and extension of an object.
- Explain the effects of having balanced and unbalanced forces and link to moments.

**Speed**

How far you travel in a set amount of time. Unit for speed = metres per second, m/s. Unit for distance is metres, m. Unit for time is seconds, s.

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

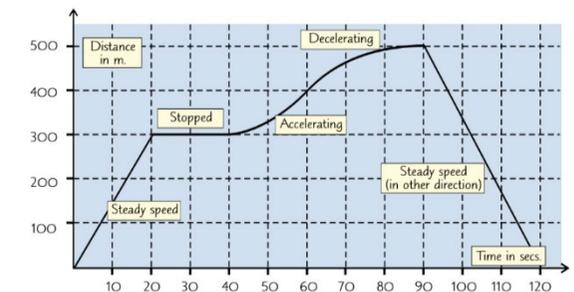
**Forces**

Forces are pushes and pulls that occur when two objects interact. Forces are measured in Newtons, N. They usually act in pairs. A newton meter is used to measure forces.

Balanced forces produce no change in movement.

Unbalanced forces change the speed and/or direction of moving objects.

**Distance-time graphs**



A moment is the turning effect on a force.

Moment = force x perpendicular distance  
 $M \text{ (Nm)} = F \text{ (N)} \times d \text{ (m)}$   
 Moments are balanced when the clockwise moment = anticlockwise moment.





**1. WORD REVOLUTION**

<b>Ecosystem</b>	A system of living and non-living things that are dependent on each other.
<b>Deciduous</b>	A plant that sheds/loses its leaves each year.
<b>Biome</b>	A large-scale ecosystem with specific animals, plants and climate, e.g. a desert.
<b>Adaptation</b>	Special features that allow a plant or animal to survive.
<b>Indigenous</b>	Local communities who have a unique and distinct culture.
<b>Climate</b>	The overall pattern of weather, generally an average over many years.
<b>Camouflage</b>	Using concealment to disguise/blend into the surroundings.
<b>Threat</b>	Something with the potential to cause damage or harm in some way.

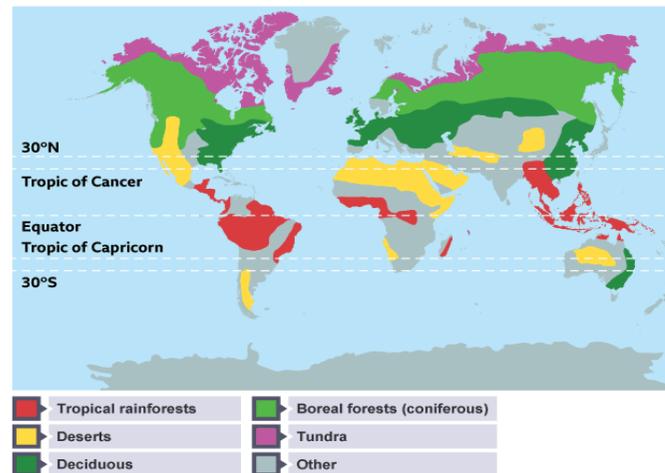
**4. ANIMAL ADAPTATIONS**



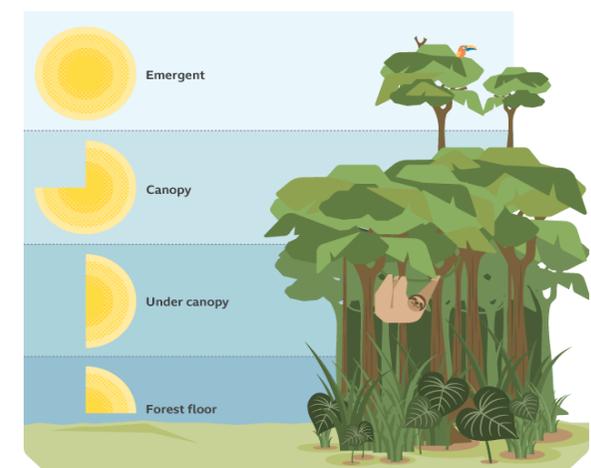
**Sloth**

- Brown, mottled fur camouflages the sloth making it less likely to be attacked by predators.
- Sloths move very slowly which preserves their energy so they have to eat less often.
- Their slow movement also means they are less likely to be seen by predators.

**2. GLOBAL BIOMES OF THE WORLD**



**3. LAYERS OF THE RAINFOREST**



**5. PLANT ADAPTATIONS**



**Drip tip leaves**  
Plants have leaves with pointy tips. This allows water to run off the leaves quickly.

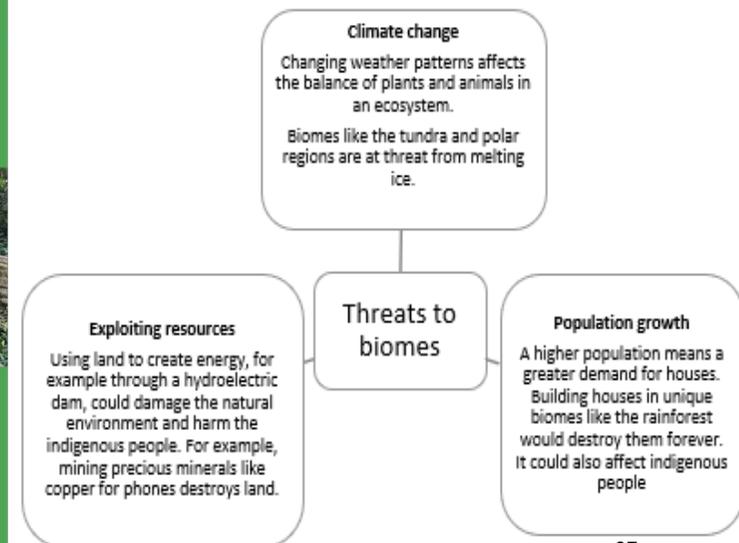


**Buttress roots**  
Large roots have ridges which create a large surface area that help to support large trees.



**Epiphytes**  
These plants live on tree branches. They get their nutrients from the air and water.

**6. FUTURE THREATS TO BIOMES**

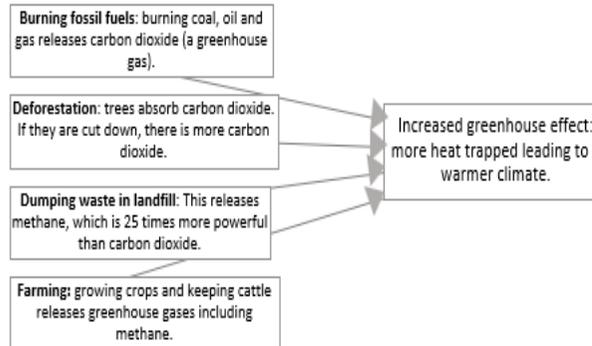




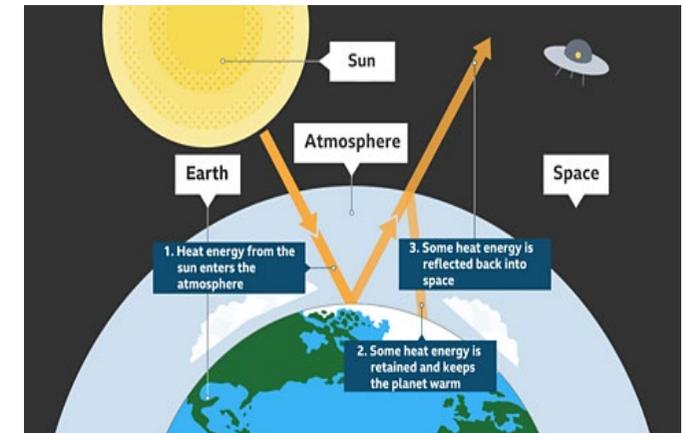
**1. WORD REVOLUTION**

<b>Atmosphere</b>	The layer of gases surrounding Earth, essential for life.
<b>Greenhouse Effect</b>	The natural effect that keeps the Earth warm enough to survive on.
<b>Global Warming</b>	The sustained rise in the planet's temperature due to human actions.
<b>Greenhouse gases</b>	Gases that trap heat in the Earth's atmosphere e.g. methane.
<b>Carbon footprint</b>	The amount of carbon emitted by a person or organisation over a period of time.
<b>Conference</b>	A meeting where a group of people meet to discuss a specific topic.
<b>Vegan</b>	A person who does not eat or use animal products.
<b>Response</b>	The actions taken by people, organisations or governments to deal with something.

**2. CAUSES OF CLIMATE CHANGE**



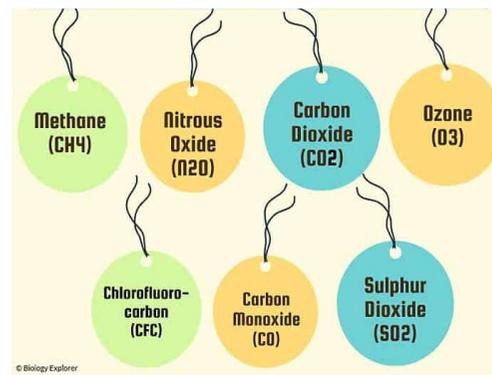
**3. THE GREENHOUSE EFFECT**



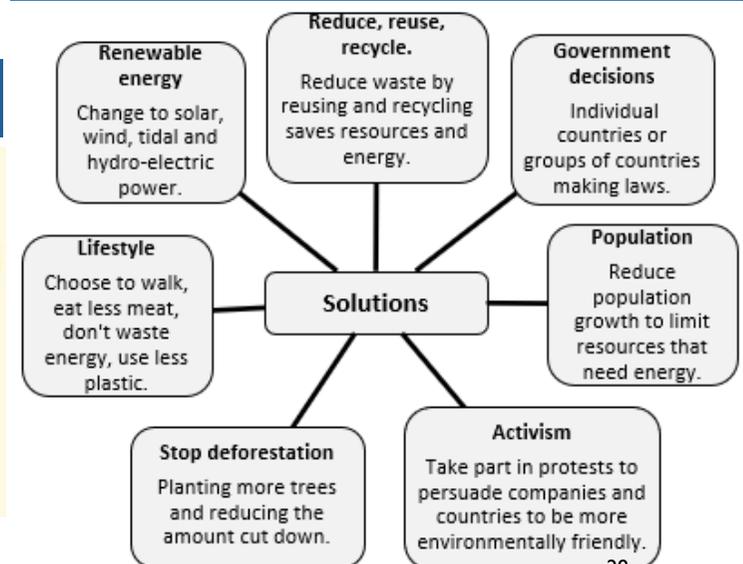
**4. EFFECTS OF CLIMATE CHANGE**

	Sea levels will rise by 70cm by 2100. Coastal and lowland areas of the UK will be flooded. Islands like the Maldives will be completely underwater.
	The Arctic Ocean will become ice free, leading to the extinction of animals like polar bears.
	Increased drought will lead to dust storms and food shortages.
	There will be more extreme weather events. Warm and dry temperatures will lead to increased chance of wildfires.

**5. GREENHOUSE GASES**



**6. RESPONSES TO CLIMATE CHANGE**





**1. WORD REVOLUTION**

Fieldwork	The process of investigating the world around us.
Enquiry question	A question about an area of geography that can be tested through fieldwork.
Hypothesis	A statement that can be tested through a fieldwork inquiry.
Primary data	Data you collect yourself.
Secondary data	Data collected by someone else.
Risk assessment	Process of working out the possible dangers, and how to avoid them

**3. CREATING AN ENQUIRY QUESTION**

- ✓ **Geographical:** to do with geography
- ✓ **Open ended:** not a yes/no question
- ✓ **Achievable:** not in a dangerous environment, possible to travel to

What will I learn?	What fieldwork is and how it works
What will I be able to do?	Take part in external fieldwork
How will I be assessed?	Progress check in class

**4. DATA COLLECTION**

Method	Purpose	Limitation
Field sketch	Record key features of the landscape	Hard to complete, not numerical
Questionnaire	Find out opinions about a place or issue	Members of the public might not want to answer
Measurements	Find numerical sizes/shapes/numbers	Making mistakes with measuring

**2. FIELDWORK ENQUIRY PROCESS**

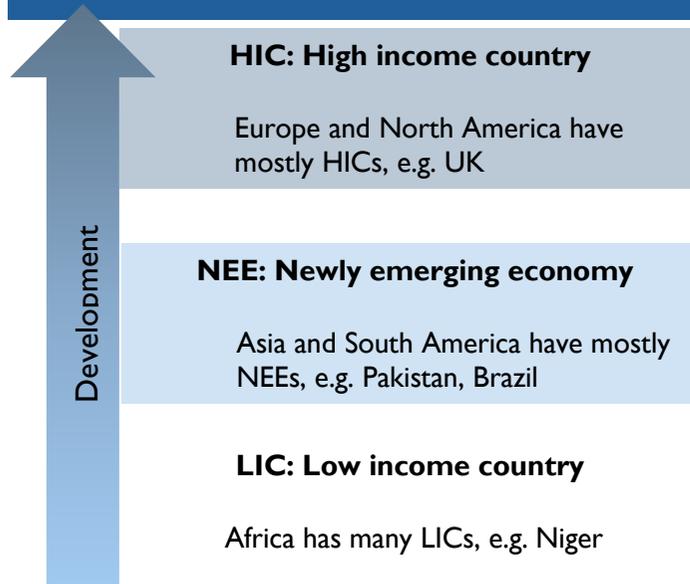




**1. WORD REVOLUTION**

<b>Development</b>	Process of a country or area improving
<b>Life expectancy</b>	Average age people live to in an area.
<b>Literacy rate</b>	Amount of people who can read and write in an area
<b>Erosion</b>	Wearing <b>away</b> of rock
<b>Weathering</b>	Weakening of rock <b>where it is</b>
<b>Weather</b>	Day to day changes in the atmosphere
<b>Climate</b>	Long term average weather conditions

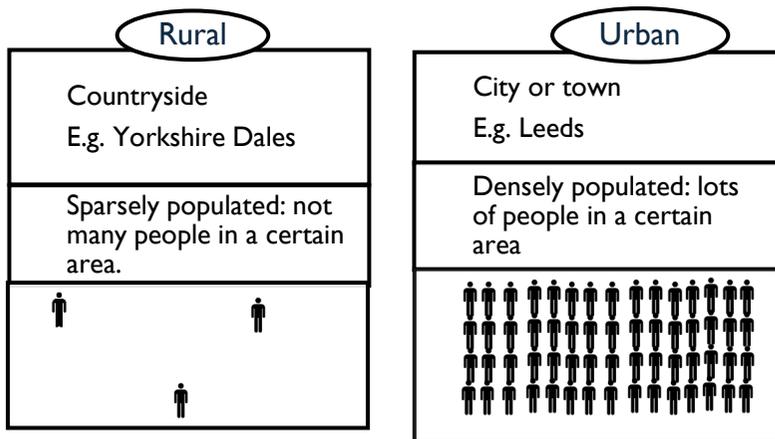
**2. DEVELOPMENT AROUND THE WORLD**



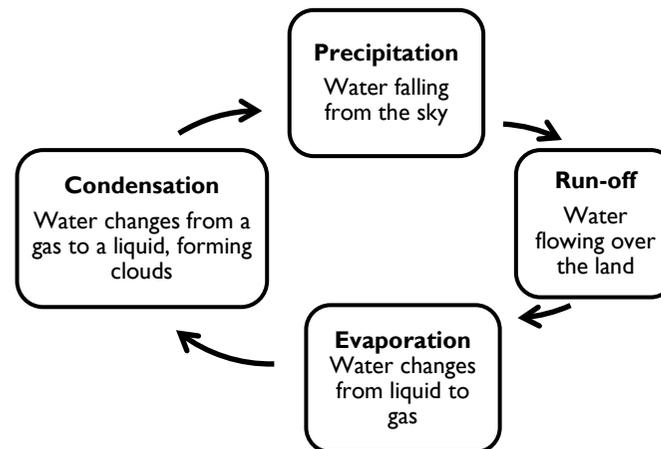
**3. JOB TYPES**

<b>Tertiary jobs</b> 	Providing a service, e.g. doctor, shop assistant, taxi driver
<b>Secondary jobs</b> 	Making raw materials into a product, e.g. in a factory
<b>Primary jobs</b> 	Extracting raw materials from nature, e.g. farmer, fisher, miner

**3. RURAL and URBAN AREAS**



**4. THE WATER CYCLE**



**5. WEATHERING**

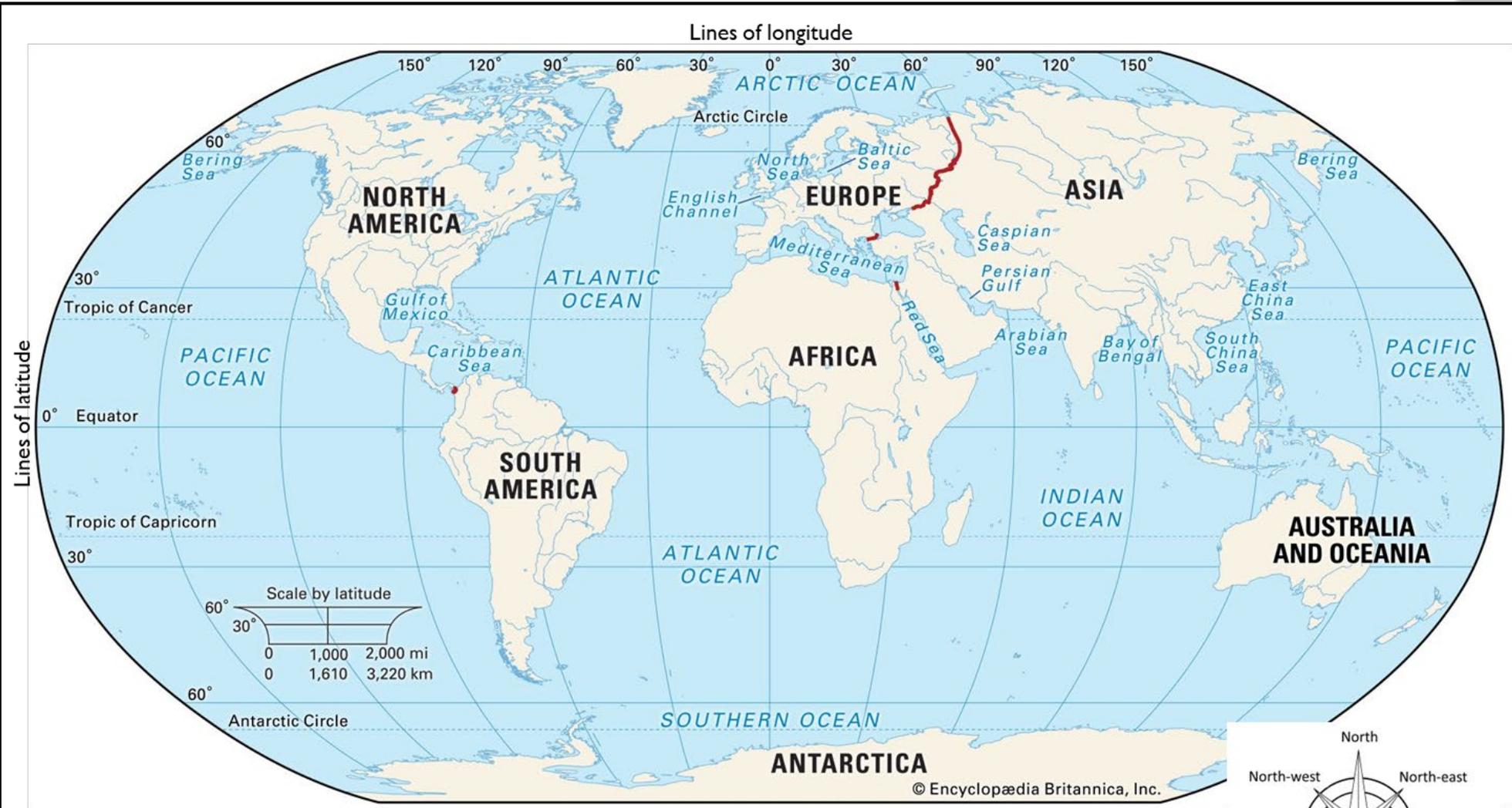
- Biological:** tree roots grow into rock, animals burrow into rock
- Chemical:** slightly acidic rainwater dissolves certain types of rock (e.g. limestone)
- Freeze-thaw:** water freezes and melts inside rock, expanding cracks

**SUBJECT: Geography**

**YEAR: 7**

**TOPIC: Locational basics**

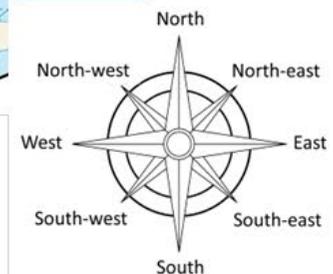
**SEMESTER: 2**



**Across the world there are:**

**7 continents: Europe, Asia, Africa, Oceania, Antarctica, South America, North America**

**5 oceans: Arctic, Southern, Pacific, Indian, Atlantic**





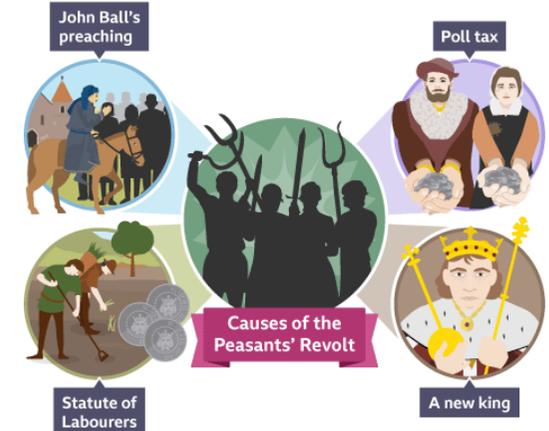
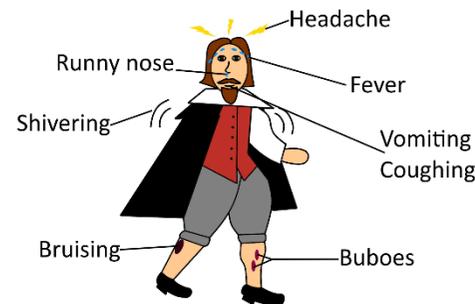
WORD REVOLUTION	
<b>Black Death</b>	a devastating pandemic of bubonic plague that swept through Europe, Asia, and North Africa in the mid-1300s
<b>Peasant</b>	a poor person of low social status who works on the land
<b>Revolt</b>	to take violent action against authority
<b>Tithe</b>	a tenth part of someone's produce or income that they give or pay as a tax to the Church
<b>Villein</b>	a class of serf tied to the land under the feudal system
<b>Buboes</b>	a symptom of bubonic plague and occur as painful swellings

**Black Death**

- Arrived in 1348 through trade routes.
- Spread rapidly through crowded towns and villages.
- Medieval people did not understand germs. Many believed it was a punishment from God or caused by bad air.

**Consequences**

- Up to one-third of England's population died.
- Labour shortages meant peasants could demand higher wages. Social structure began to weaken.
- Some villeins escaped to cities for better opportunities.



**Peasants' Revolt (1381)**

- Rebels from Kent and Essex marched to London, led by Wat Tyler. Protesters attacked symbols of royal authority.
- They met the young King Richard II, demanding fairer treatment.
- During discussions, Wat Tyler was killed, and the revolt collapsed.

**Consequences**

- Royal promises were withdrawn.
- Rebel leaders were punished.
- Serfdom continued to decline, and peasants gained more freedom over time.

Medieval period					Renaissance		Industrial Period		Modern Period
1000-1100	1100-1200	1200-1300	1300-1400	1400-1500	1500-1600	1600-1750	1750-1800	1800-1900	1900-present



WORD REVOLUTION	
<b>Reformation</b>	a major 16th-century European movement aimed at reforming the Catholic Church, ultimately leading to the establishment of Protestantism
<b>Protestantism</b>	Christian religious movement that began in northern Europe in the early 16th century
<b>Dissolution</b>	The act of closing
<b>Heretic</b>	a person whose religious beliefs go against what is generally accepted
<b>Armada</b>	a fleet of warships
<b>Exploration</b>	the action of exploring an unfamiliar area

**English Reformation**

- Henry VIII wanted to divorce Catherine of Aragon so he could marry Anne Boleyn.
- The Pope refused to grant the divorce.
- In 1534, Henry VIII broke from Rome.
- England had become a Protestant country. Henry VIII declared himself Supreme Head of the Church of England.
- Monasteries like Kirkstall Abbey were dissolved.

**Protestant vs Catholic**



Monarch	Henry VIII	Edward VI	Mary I	Elizabeth I
<b>Reign</b>	1509-1547	1547-1553	1553-1558	1558-1603
<b>Religion</b>	Catholic then Protestant	Protestant (extreme)	Catholic	Protestant
<b>Famous for...</b>	6 wives and break from Rome	Short reign and radical Protestant reformation	Restoring Catholicism and being given the name 'Bloody Mary.'	Oversaw exploration and defeated the Spanish



Medieval period				Renaissance			Industrial Period		Modern Period
1000-1100	1100-1200	1200-1300	1300-1400	1400-1500	1500-1600	1600-1750	1750-1800	1800-1900	1900-present

**SUBJECT: History**

**YEAR: 7**

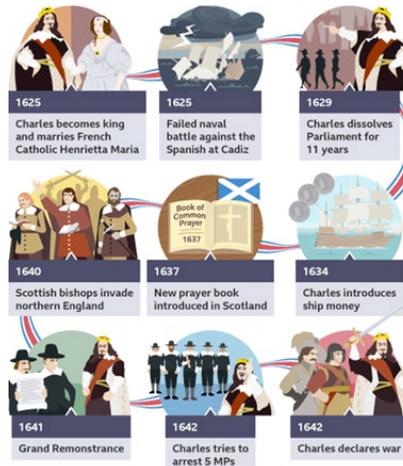
**TOPIC: English Civil War**

**SEMESTER: 2**



**WORD REVOLUTION**

<b>Civil War</b>	a war between people of the same country
<b>Divine Right of Kings</b>	the belief that the king's right to rule is from God
<b>Roundhead</b>	a supporter of Parliament during the English Civil War
<b>Cavalier</b>	a supporter of the King during the English Civil War
<b>New Model Army</b>	army formed in 1645 by the Parliamentarians
<b>Treason</b>	crime against the government or king



- Charles I argued with Parliament about money and power.
- These arguments led to the English Civil War between the king's supporters and Parliament's supporters.
- Parliament won, and Charles I was executed in 1649.
- Oliver Cromwell became the most powerful leader and ruled the country without a king.

<b>Roundheads</b>	<b>Cavaliers</b>
<ul style="list-style-type: none"> <li>• Supported Parliament</li> <li>• Oliver Cromwell</li> <li>• Mostly Puritan</li> <li>• New Model Army</li> <li>• Believed in democracy</li> </ul>	<ul style="list-style-type: none"> <li>• Supported the king</li> <li>• Charles I</li> <li>• Anglicans and Catholics                             <ul style="list-style-type: none"> <li>• Traditional army</li> <li>• Believed in 'divine right of kings'</li> </ul> </li> </ul>



Medieval period					Renaissance		Industrial Period		Modern Period
1000-1100	1100-1200	1200-1300	1300-1400	1400-1500	1500-1600	1600-1750	1750-1800	1800-1900	1900-present



**WORD REVOLUTION**

<b>Native</b>	a person who was born in a particular place
<b>Nomadic</b>	moving from one place to another rather than living in one place
<b>Tribes</b>	a group of people, often of related families
<b>Hunters</b>	a person that hunts
<b>Settlers</b>	a person who moves with a group of others to live in a new country or area

Native Americans were once called Indians because Christopher Columbus thought he had landed in India. Native Americans came from as far as Alaska and live in both South and North America. There exist roughly 200 tribes and languages.



Native American beliefs were about living in harmony with nature, respecting animals, and believing everything has a spirit.

**Native American life**

- Lived in teepees on the Plains because they were easy to move.
- Buffalo provided food, clothing, tools, and shelter materials.
- Many tribes moved often to follow animals and seasons.
- Others farmed maize, beans, and squash in settled villages.
- Clothing was made from animal skins and decorated with beads and feathers.
- Horses made travel and hunting quicker for Plains tribes.
- Believed in a strong connection to nature and held ceremonies and dances.



Medieval period					Renaissance		Industrial Period		Modern Period
1000-1100	1100-1200	1200-1300	1300-1400	1400-1500	1500-1600	1600-1750	1750-1800	1800-1900	1900-present



Religion	When It Began	Where It Began	Founder	Holy Book(s)	Place of Worship	Key Beliefs About God	Key Practices	Symbol(s)	Major Festivals	Beliefs About Afterlife
<b>Hinduism</b> (Hindus)	Around 4000 - 2000 BCE	Indian Subcontinent	Developed from the people of the Indus Valley	Vedas, Upanishads, Bhagavad Gita	Temple	Many gods (polytheistic), Brahman is supreme reality	Puja (worship) Festivals like Diwali		Diwali Holi	Rebirth (reincarnation) and Moksha (liberation from cycle of rebirth)
<b>Judaism</b> (Jews)	Around 2000 BCE	Ancient Israel	Abraham	Torah Tenakh	Synagogue	One God (Monotheistic) Yaweh/Elohim	Sabbath, Kosher Prayer Festivals		Passover Yom Kippur Hanukkah	Resurrection and Olam Ha-Ba (World to Come); focus on this life
<b>Buddhism</b> (Buddhists)	Around 5th Century BCE	India	Siddhartha Gautama (The Buddha)	Various scriptures (Tripitaka) (Pali Canon)	Temple	No creator God	Meditation Following the Eightfold Path Festivals		Vesak Paranirvana Day	Rebirth and Nirvana (end of suffering and cycle of rebirth)
<b>Christianity</b> (Christians)	Around 1st Century CE	Jerusalem (Middle East)	Jesus Christ	Bible (Old & New Testament)	Church	One God (Monotheistic), Trinity (Father, Son, Holy Spirit)	Prayer Worship Baptism Communion		Advent Christmas Lent Easter	Heaven and Hell; eternal life through faith in Jesus
<b>Islam</b> (Muslims)	7th Century CE	Mecca (Saudi Arabia)	Prophet Muhammad	Quran	Mosque	One God (Allah) Monotheistic	Five Pillars (Faith, Prayer, Fasting, Charity, Pilgrimage)		Eid al-Fitr, Eid al-Adha	Paradise (Jannah) and Hell (Jahannam) based on deeds
<b>Sikhism</b> (Sikhs)	Late 15th Century CE	Punjab (India/Pakistan)	Guru Nanak	Guru Granth Sahib	Gurdwara	One God (Waheguru), Monotheistic	Prayer Seva (service) Community (Langar)		Vaisakhi Guru Nanak's Birthday	Rebirth and union with God; emphasis on living a truthful, humble life



**WORD REVOLUTION**

<b>Allah</b>	The Arabic word used by Muslims for God
<b>Five Pillars</b>	The five practices that Muslims are expected to follow
<b>Hajj</b>	Pilgrimage to the holy city of Mecca
<b>Islamophobia</b>	Hostility to Muslims and Islam (which often leads to hate speech)
<b>Muslim</b>	A follower of Islam
<b>Muhammad</b>	The last messenger of God/Allah and the key prophet in Islam
<b>Pilgrimage</b>	A special journey made for religious / spiritual reasons
<b>Prejudice</b>	Pre-judging someone without knowing anything about them
<b>Prophet</b>	A messenger of God/Allah
<b>Ramadan</b>	Fasting during the month of Ramadan
<b>Salah</b>	Prayer five times a day
<b>Sawm</b>	Fasting (going without food or drink)
<b>Shahadah</b>	The declaration of Faith
<b>Zakat</b>	Donating to Charity

<b>What will I study in this topic?</b>	Islam is the second largest religion in the world (and the UK) after Christianity. You will learn about key Muslim beliefs and practices, including beliefs about God (Allah), the Qur'an and the Five Pillars of Islam. You will learn how religious belief influences daily life/religious practice and you will learn that understanding different faiths helps to promote respect, challenge prejudice and works towards building a more inclusive society.
<b>Curriculum Connections:</b>	The foundational knowledge you learn about Islam and its key ethical teachings (such as how to live a good life, how to treat others, how religious belief influences practical action) will be further explored and expanded on in Years 8 and 9 alongside other religious views on a variety of ethical and philosophical topics.

<b>Key Beliefs</b>
<ul style="list-style-type: none"> <li>• Muslims believe that there is <b>one God</b> called Allah. Allah is the <b>creator</b> and <b>ruler</b> of the Universe.</li> <li>• There are <b>99 names</b> for Allah in the <b>Quran</b>, each of these names tells Muslims what Allah is like e.g. loving, powerful, forgiving.</li> <li>• The holy book of Islam is The <b>Quran</b>, this contains the <b>words and teachings</b> of</li> </ul>

**The Five Pillars**

<b>Expressions of Belief</b>
<p><b>Muslim birth ceremonies</b></p> <ul style="list-style-type: none"> <li>• Father whispers the <b>Adhan</b> (the call to prayer) in the ear of the Baby as soon as it is born</li> <li>• When a Muslim child is born it is given one of the <b>99 names of Allah</b> in the hope that the child will grow up to have this quality.</li> <li>• A meal is shared to show <b>generosity and love</b>. Also a donation is made to charity to help those in need. The <b>first act of the Charity</b> of the baby.</li> <li>• Something <b>sweet</b> is put into the mouth of the baby (honey or a bit of date) as the parents want the baby to have a <b>sweet nature</b>.</li> </ul>





**The Five Pillars of Islam**

Shahadah	Salat/Salah	Zakat/Zakah	Sawm	Hajj
<ul style="list-style-type: none"> <li>The declaration of faith.</li> <li>"There is no God but Allah, and Muhammad is his messenger."</li> <li>To become a Muslim a person needs to recite (read out loud from memory) this statement three times in front of witnesses.</li> </ul> 	<ul style="list-style-type: none"> <li>Prayer.</li> <li>Prayers are performed five times each day by Muslims all around the world.</li> <li>Muslim children are also encouraged to pray.</li> <li>Praying connects Muslims to God (Allah) and also to the wider Muslim community.</li> </ul> 	<ul style="list-style-type: none"> <li>Charity</li> <li>The compulsory giving of a 2.5% of your wealth to charity (each year) to benefit the poor.</li> <li>Those who cannot afford it can give time or practical help.</li> <li>It is regarded as an act of worship as well as a way to help individuals become less selfish.</li> </ul> 	<ul style="list-style-type: none"> <li>Fasting (going without food/drink) during Ramadan, the ninth month of the Islamic lunar calendar.</li> <li>All adult Muslims must fast during the hours of daylight.</li> <li>Muslims who are unwell, under twelve, very old, pregnant or breast-feeding do not have to fast.</li> </ul> 	<ul style="list-style-type: none"> <li>The journey that every Muslim must undertake at least once in their lives if they can afford it and are physically able.</li> <li>It happens once a year in the month of Dhul Hijjah, the twelfth month of the Islamic lunar calendar.</li> <li>Muslims from all over the world gather together in Mecca and stand before the Kaaba to praise Allah.</li> </ul> 

**The Quran**

- The Muslim holy book which contains the **word of God (Allah)**, guidance and teachings.
- It is written in **Arabic**.
- It was given to The **Prophet Mohammed** by the Angel Jibril on the Night of Power.
- The **Night of Power** is celebrated during Ramadan.



**How The Quran is treated**

- Kept on a **high shelf** (to show that nothing is higher than the word of God/Allah)
- Covered with a **special cloth**
- Raised off the ground to be read
- Wash (perform wudu) before touching it – you need to **be clean** to touch the word of Allah.



**WORD REVOLUTION**

<b>Afterlife</b>	What some people think happens after we die
<b>Ancient</b>	Very old, from a long time ago
<b>Civilisation</b>	A group of people who live together with their own culture and rules
<b>Custom</b>	A way of doing things that people in a culture have done for a long time
<b>Embalming</b>	The process of preserving a dead body to keep it from decaying
<b>Festival</b>	A special time when people celebrate with events, music, food
<b>Judgement</b>	Making a decision about someone's actions (right or wrong)
<b>Mummification</b>	The process used in ancient Egypt to prepare a dead body for the afterlife
<b>Myths</b>	A traditional story from long ago
<b>Polytheistic</b>	Belief in multiple Gods/Goddesses
<b>Ritual</b>	A special thing using words/actions that people do again and again
<b>Virtue</b>	A good quality or habit, like being brave
<b>Wisdom</b>	Knowing what is right and making good choices based on experience
<b>Worship</b>	Showing respect and love to a God or something you believe is very

**What will I study in this topic?**

In this topic you will learn how people in ancient Egypt, Greece, and Rome believed in many Gods and an afterlife. You'll explore how these beliefs shaped their daily lives, including how they worshipped, celebrated festivals, and prepared for death and the afterlife.

**Curriculum Connections:**

This topic introduces you to some philosophical and religious ideas about life after death and how our behaviour on earth affects this. You will go onto explore some of these ideas in more detail in Year 8 and Year 9.

**Ancient Egypt**

- Ancient Egyptians believed in many Gods who controlled every aspect of life and nature.
- They thought the soul lived on after death, so they prepared carefully for the afterlife by building tombs and mummifying bodies.
- People prayed, made offerings and celebrated festivals to honour the Gods.



**Ancient Rome**

- Ancient Romans believed in many Gods and Goddesses who looked after different parts of life.
- They prayed, made offerings, and held festivals to please the Gods and protect their city.
- Religion was part of everyday life and influenced important events like wars, celebrations, and government decisions.



**Ancient Greece**



- Religion was an important part of daily life and certain key ideas about the Gods were widely accepted.
  - They did exist
  - They could influence human affairs
  - They welcomed and responded to acts of worship
- As a result, there were temples dedicated to the different Gods and Goddesses. Anyone could visit a temple whenever they wished. They often left offerings such as flowers or food to please the Gods and gain favour.



**KEY VOCABULARY**

key verbs	time phrases
<b>usar</b> to use	<b>a menudo</b> often
<b>sacar fotos</b> take photos	<b>todos los días</b> every day
<b>ir (voy)</b> to go (I go)	<b>por la tarde</b> in the evening
<b>descargar</b> to download	<b>por la mañana</b> in the morning
<b>jugar</b> to play	<b>el fin de semana</b> at the weekend
<b>escribir</b> to write	<b>time phrases</b> (past tense)
<b>hacer amigos</b> to make friends	<b>el fin de semana pasado</b> last weekend
<b>compartir</b> to share	<b>ayer</b> yesterday
<b>ver (veo)</b> to watch (I watch)	<b>la semana pasada</b> last week
<b>chatear</b> to chat	<b>hace dos días</b> two days ago
<b>publicar</b> to post	<b>anoche</b> last night
<b>reference to others</b>	<b>adjectives</b>
<b>mi madre</b> mum	<b>animado</b> lively
<b>mi padre</b> dad	<b>útil / inútil</b> useful / useless
<b>mi hermano</b> brother	<b>práctico</b> practical
<b>mi hermana</b> sister	<b>barato / caro</b> cheap /cheap
<b>mi primo</b> cousin	<b>rápido</b> quick
<b>mi amigo/a</b> friend	<b>peligroso</b> dangerous
<b>mi profesor</b> teacher	<b>fácil / difícil</b> easy / difficult
<b>mi vecino</b> neighbour	<b>cómodo</b> comfy / easy to use

What will I study in this topic?

- 1: Describing how often I use technology
- 2: Saying how friends & family use technology
- 3: How I used technology last weekend
- 4: Writing about my use of technology

What will I be able to do by the end of this topic?

Discuss free time hobbies and how I use technology  
Talk about other people (reference to others)  
Begin to understand how to use past tense verbs

**Grammar: ⚠ el pretérito (past tense)**

**Past tense** The main past tense in Spanish is called the *pretérito* or *preterite*.

-ar verbs	-er + -ir verbs
<b>usé</b> I used	<b>vi</b> I watched
<b>saqué</b> I took	<b>escribí</b> I wrote
<b>descargué</b> I downloaded	<b>compartí</b> I shared
<b>jugué</b> I played	<b>fui*</b> I went
<b>chateé</b> I chatted	<b>hice*</b> I did/made
<b>publiqué</b> I posted	<b>tuve*</b> I had

**Grammar: Reference to others**

The Spanish **verb ending** changes depending on **who the verb refers to (the subject)**

**(Ella)** **mandó** un mensaje  
**she** sent a message  
**(Ellos)** **mandaron** un mensaje  
**they** sent a message

You can also choose to use a **pronoun** but it is not usually needed

**Grammar: uso + para + infinitive**

- ✓ **'Uso'** means **'I use'**
- ✓ English infinitives start with 'to'
- ✓ Spanish infinitives end in '-ar', '-er', '-ir'
- ✓ **'para'** means **'in order to'**

**uso** mi móvil **para chatear**.  
I use my phone **to** chat.

**uso** mi tableta **para ver** videos.  
I use my tablet **to** watch videos.

**The present tense**

Present tense **endings** are different from **past tense**

**hablar** – to speak

<b>yo</b> <b>hablo</b>	I speak
<b>tú</b> <b>hablas</b>	you (singular) speak
<b>él/ella</b> <b>habla</b>	he/she/one speaks
<b>nosotros</b> <b>hablamos</b>	we speak
<b>vosotros</b> <b>habláis</b>	you (plural) speak
<b>ellos/ellas</b> <b>hablan</b>	they speak



Key Questions:	<p>¿Qué tecnología te gusta usar? ¿Por qué? What technology do you like to use? ¿Why?                  ¿Para qué usas (tu móvil/tableta/etc) normalmente? What do you use (your mobile/tablet/etc) normally?                  ¿Para qué usaste (tu móvil/tableta/etc) ayer? What did you use (your mobile/tablet/etc) yesterday?</p>			
Cultural links:	Technology for language learning. Try putting the social media you use normally in Spanish!			
	 Radio y Television de España (like BBC)	 youtube.es (Spanish version)	 Quizlet.com Educake.com vocabulary and skills	 Podcasts in Spanish for beginners!

⚠ Preterit (past tense) verbs			
The verb ending changes for each person. It doesn't matter about gender, just <b>who</b> is doing the action.			
-ar verbs		-er + -ir verbs	
(yo) <b>hablé</b>	I spoke	(yo) <b>comí</b>	I ate
(tú) <b>hablaste</b>	you spoke	(tú) <b>comiste</b>	you ate
(él / ella) <b>habló</b>	s/he spoke	(él / ella) <b>comió</b>	s/he ate
(nosotros) <b>hablamos</b>	we spoke	(nosotros) <b>comimos</b>	we ate
(vosotros) <b>hablastéis</b>	you pl. spoke	(vosotros) <b>comisteis</b>	you pl. ate
(ellos / ellas) <b>hablaron</b>	they spoke	(ellos / ellas) <b>comieron</b>	they ate
	1 <sup>st</sup> person (I)		1 <sup>st</sup> person (we)
	2 <sup>nd</sup> person (you)		2 <sup>nd</sup> person (you pl)
	3 <sup>rd</sup> person (s/he)		3 <sup>rd</sup> person (they)

🗣️ 🤖 📄 ✖️ 🗂️ Curriculum Connections:
<input type="checkbox"/> <b>Opinions</b> <input type="checkbox"/> C <input type="checkbox"/> <b>Reference to others</b> <input type="checkbox"/> D <input type="checkbox"/> N <input type="checkbox"/> F

Spanish in context
<p><b>Me gusta usar mi móvil. Uso mi móvil todos los días porque es muy útil.</b>                  I like to use my phone. I use my phone every day.</p> <p><b>Generalmente uso la tableta para hacer deberes y para jugar videojuegos. Es práctico.</b>                  Generally, I use the tablet to do homework and to play videogames.</p> <p><b>El fin de semana pasado, escuché música y vi videos con mis amigos. Fue divertido.</b>                  Last weekend, I listened to music, and I watched videos with my friends.</p>

Quantifiers and intensifiers:								
Get into the habit of including <b>quantifiers</b> and <b>intensifiers</b> to <b>add detail to your work</b>								
<table border="1" style="width: 100%;"> <tr> <td style="background-color: #f2f2f2;"><b>un poco</b></td> <td>a little</td> </tr> <tr> <td style="background-color: #f2f2f2;"><b>muy</b></td> <td>very</td> </tr> <tr> <td style="background-color: #f2f2f2;"><b>bastante</b></td> <td>quite</td> </tr> <tr> <td style="background-color: #f2f2f2;"><b>demasiado</b></td> <td>too (much)</td> </tr> </table>	<b>un poco</b>	a little	<b>muy</b>	very	<b>bastante</b>	quite	<b>demasiado</b>	too (much)
<b>un poco</b>	a little							
<b>muy</b>	very							
<b>bastante</b>	quite							
<b>demasiado</b>	too (much)							



**KEY VOCABULARY**

topic vocabulary	key eating verbs
el pan – bread	comer – to eat
el queso – cheese	tomar – to take (have)
el jamón – ham	beber – to drink
el pollo – chicken	desayunar – to breakfast
el pescado – fish	almorzar* (almuerzo) – to lunch (l lunch)
la carne – meat	
la fruta – fruit	merendar* (meriendo) – to snack (l snack)
la manzana – apple	
la naranja – orange	cenar – to dine
la verdura – vegetables	<b>adjectives</b>
la ensalada – salad	delicioso/a – delicious
el arroz – rice	rico/a – tasty, rich in flavour
la pasta – pasta	sabroso/a – flavourful
la sopa – soup	picante – spicy
el huevo – egg	dulce – sweet
la leche – milk	salado/a – salty
el agua – water	amargo/a – bitter
el zumo – juice	frío/a – cold
el café – coffee	caliente – hot
	asqueroso – disgusting

What will I study in this topic?

- 1: Saying what food I like and don't like to eat
- 2: Saying what I have at different meal- times
- 3: Investigating Spanish cultural dishes and comparing them
- 4: Café and restaurant conversations

What will I be able to do by the end of this topic?

Discuss food preferences  
Find out about Spanish food; differences and similarities between what and when we eat



**Grammar: Direct Object Pronouns**

Spanish **direct object pronouns**

<b>me</b> me	<b>nos</b> us
<b>te</b> you (one person)	<b>os</b> you plural
<b>lo</b> it (masculine)	<b>los</b> them (m)
<b>la</b> it (feminine)	<b>las</b> them (f)

**Me gusta el pan. Lo como por la mañana.**  
I like **bread**. I eat **it** in the morning.

**Grammar: Direct Object Pronouns**

- ✓ A **direct object** is the **thing or person that receives the action** of the verb.

I want **the apple**.  
→ "The apple" is the **direct object**.

- ✓ To avoid repeating nouns, we can replace the direct object with a **direct object pronoun**.

I want **the apple**. I eat **it**  
→ "**it**" is the **direct object**.

**Grammar: Subject Pronouns**

- ✓ **Pronoun:** replaces a **noun**.
- ✓ **Subject pronouns** show who is doing the action of a verb

<b>yo</b> I	<b>nosotros</b> we
<b>tú</b> you (one person)	<b>vosotros</b> you plural
<b>él</b> he	<b>ellos</b> they
<b>ella</b> she	<b>ellas</b> they –(f)

**Regular present tense verb -er**

**comer – to eat**

<b>yo como</b>	I eat
<b>tú comes</b>	you (singular) eat
<b>él/ella come</b>	he/she/one eats
<b>nosotros comemos</b>	we eat
<b>vosotros coméis</b>	you (plural) eat
<b>ellos/ellas comen</b>	they eat



Key Questions:	<p><b>¿Qué comes normalmente?</b> What do you normally eat?</p> <p><b>¿Qué comiste ayer?</b> What did you eat yesterday?</p> <p><b>¿Qué plato español te gustaría probar?</b> What Spanish food would you want to try?</p>
Cultural links:	<p>In Spain breakfast (el desayuno) is similar to in the UK. In Spain lunch (el almuerzo) is a bigger meal than in the UK. There is a snack at tea time (la merienda). The evening meal (la cena) is later than in the UK around 10 p.m.</p> <p>Typical food is quite different in Spain. Here are four typical foods found in Spain:</p> <p><b>Mira los imágenes abajo</b> ↓</p>

**La comida típica española**

<p><b>Tapas</b> mini dishes</p>	<p><b>Paella</b> rice dish</p>	<p><b>Empanadas</b> pasties</p>	<p><b>Gazpacho</b> soup</p>
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**Reference to others**

Talking about other people means you need to change the verb.

**Mi hermano come paella de vacaciones**  
My brother eats paella on holiday

**Mis amigos cenan en mi casa**  
My friends eat dinner at my house

**Spanish in context**

**Me gusta comer pescado. Lo como el viernes con patatas.**  
I like fish. I eat it on Fridays with chips.

**Ayer cené pasta. Mi padre la cocinó.**  
Yesterday, I ate pasta for dinner. My dad cooked it.

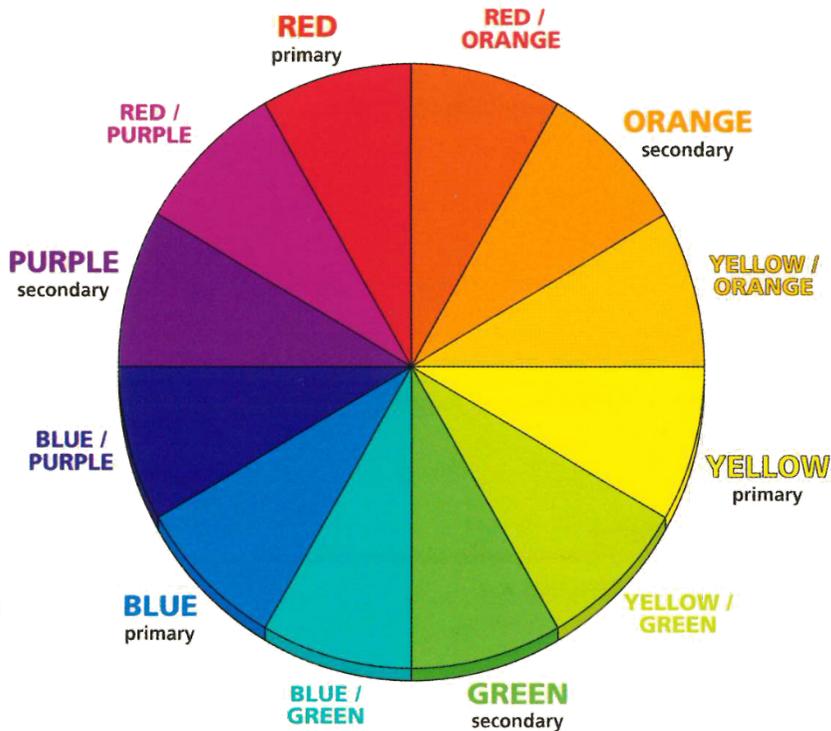
**Mi plato español favorito sería la paella. Me encanta comer el arroz.**  
My favourite Spanish dish would be paella. I love to eat it with rice.

**Curriculum Connections:**

- Opinion** about food
- C
- Reference to others:** discussing food
- Description** of what you eat, when
- N
- F



# THE COLOUR WHEEL



## COMPLEMENTARY COLOURS

The colours opposite each other on the wheel are called complementary colours.

**RED** is opposite **GREEN**  
**BLUE** is opposite **ORANGE**  
**YELLOW** is opposite **PURPLE**

If a colour is surrounded by its complementary colour it will appear stronger and brighter.



## PRIMARY COLOURS

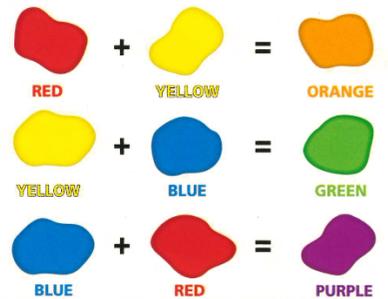
There are **THREE PRIMARY COLOURS**. These are pure colours which cannot be made by mixing other colours.



## SECONDARY COLOURS

Secondary colours are made by mixing each primary colour with one other primary colour.

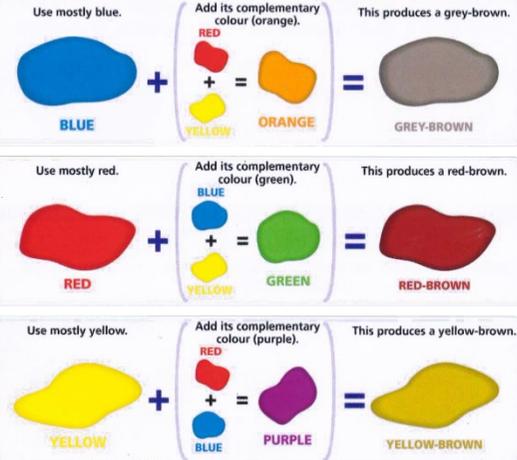
PRIMARY + PRIMARY = SECONDARY



## TERTIARY COLOURS

TERTIARY COLOURS CONTAIN A MIX OF ALL THREE PRIMARY COLOURS. A PRIMARY, MIXED WITH ITS COMPLEMENTARY COLOUR EQUALS A TERTIARY COLOUR

PRIMARY + COMPLEMENTARY = TERTIARY

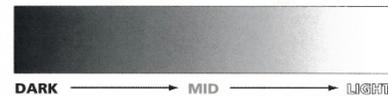


By using varying amounts of each colour, an infinite number of shades are possible. The more colours are mixed on the palette, the less luminous the result.



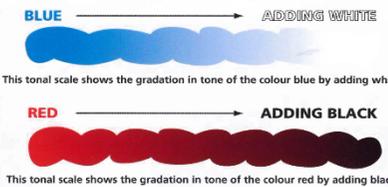
## TONE

This tonal scale shows the gradation of dark tones, mid tones and light tones. It shows the passage from black through grey to white.

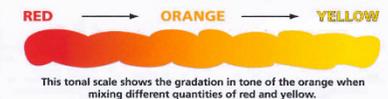


## TINTING AND SHADING

Tinting and shading refer to making a colour lighter by adding white (tinting) or darker by adding black (shading).



## TINTING AND SHADING WITH COLOUR



## WORD REVOLUTION VOCABULARY

PORTRAIT OBSERVATION FACIAL - PROPORTION EXPRESSION TONE TINT SHADE CUBISM CONTOUR DISTORTION GRADATION COMPLIMENTARY - COLOUR	VIEWPOINT SYMMETRICAL STILL-LIFE ELLIPSE VERTICAL DEPTH PROPORTION ACCURACY LIMITED PALETTE MONOCHROME COLLAGE DEFINE COMPOSITION DIAGONAL METHOD PERSPECTIVE	GRAPHIC ART ILLUSTRATION FINE ART ICONOGRAPHY SYMBOLISM ZENTANGLE MARK-MAKING HATCHING CROSS HATCHING STIPLING TONAL RANGE COMPOSITION CONTEXTUAL ANALYSIS PERSONAL LAYERING VISUAL IDENTITY
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# PORTRAIT

## HOW TO DRAW A PORTRAIT - A STEP BY STEP GUIDE

**STEP 1**

- Draw an egg-shaped oval.
- Split the oval in two halves with a horizontal line (median line).

**STEP 2**

- Draw a vertical line of symmetry.
- Draw 5 ovals across the median line.
- Two of the ovals become the eyes.

**STEP 3**

- The nose is the width of the centre oval.
- The base of the nose lies halfway between the median line and the bottom of the face.

**STEP 4**

- The mouth lies above a line halfway between the base of the nose and bottom of the face.
- The bottom lip is usually fuller than the top.

**STEP 5**

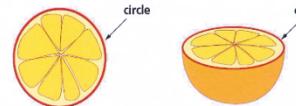
- The ears are bigger than you would imagine.
- They are drawn from the median line to just below the base of the nose line.

**STEP 6**

- Add the eyebrows which are thicker in the middle and thinner on the outside of the face.
- Add a hair style of your choice.

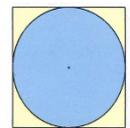
## CIRCLES & ELLIPSES

An ellipse is a circle tilted away from you - a circle in perspective.



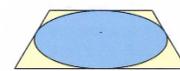
### HOW A CIRCLE BECOMES AN ELLIPSE

A circle can be drawn in a square.



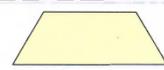
The centre of the square is also the centre of the circle.

By tilting the square, it is now in perspective.

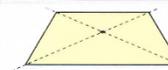


The circle has now become an ellipse.

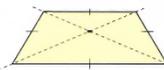
### HOW TO DRAW AN ELLIPSE



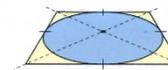
1. Draw a square in perspective.



2. Find the perspective centre of the square by drawing diagonal lines.



3. Mark the perspective centre of each side of the square.

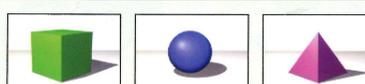


4. Now draw an ellipse so the curve touches each of the four sides.

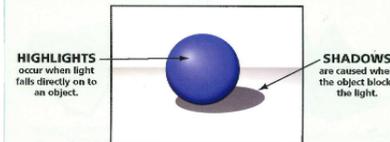
## LIGHT AND SHADE



The above flat (2-dimensional) objects appear solid (3-dimensional) when drawn in perspective as shown below.



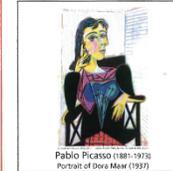
Light helps show the volume of an object. When light falls on an object, shadows and highlights occur.



## ANALYSING IMAGES

**CONTENT**

- What is the image about?
- Is it a representational or an abstract piece of work?



Pablo Picasso (1881-1973)  
Portrait of Dora Maar (1937)

- Are there any hidden meanings in the picture?

**FORM**

- What colours have been used?
- Is it realistic, harmonious or contrasting?

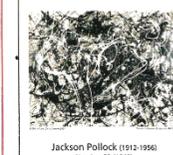


Jacoba van Heemskerck (1676-1928)  
Landscape (1915)

- Are there any recurrent shapes, lines, forms, patterns or textures?

**PROCESS**

- How was the piece produced and of what was it made?

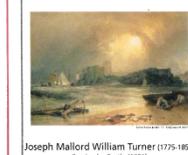


Jackson Pollock (1912-1956)  
Number 33 (1949)

- What techniques and processes were used?

**MOOD**

- Does the work capture a mood, feeling or emotion?

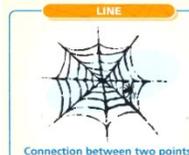


Joseph Mallord William Turner (1775-1851)  
Rain, Steam, and Great Bridge (1810)

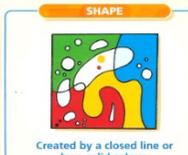
- What techniques has the artist used to convey the mood?

## FORMAL ELEMENTS

THE FORMAL ELEMENTS ARE THE BASIC COMPONENTS FROM WHICH TWO-DIMENSIONAL DESIGNS ARE COMPOSED



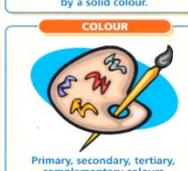
Connection between two points.



Created by a closed line or by a solid colour.



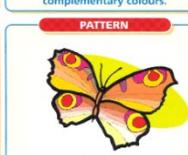
Visual and tactile surface.



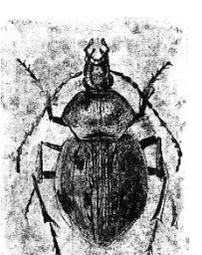
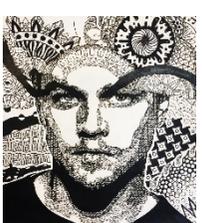
Primary, secondary, tertiary, complementary colours.



Shadows, mid-tones, highlights.



Natural, man-made, repeat or mirrored.





**WORD REVOLUTION**

<b>Wicket</b>	Three stumps with two bails across at either side of the cricket pitch.
<b>LBW</b>	Ball hits batter's body instead of the bat which would have hit the wicket.
<b>Batter</b>	Striker of the ball.
<b>Bowler</b>	A member of the fielding time who bowls.
<b>Reaction time</b>	The length of time taken to respond to a stimulus.
<b>Power</b>	Strength X Speed
<b>Speed</b>	The rate at which someone moves.
<b>Warm-up</b>	Preparing for physical activity by gently exercising beforehand.
<b>Pulse-raiser</b>	First stage of a warm up, a light continuous exercise like jogging.
<b>Stretching</b>	Lengthening muscles to improve flexibility and range of motion.
<b>Accuracy</b>	The quality of being precise.
<b>Metre</b>	Unit of measurement used for high jump and shot put.
<b>Co-ordination</b>	The ability to use different parts of the body together efficiently.

Why might you take your pulse?  
When might you take your pulse?  
What will it show you?



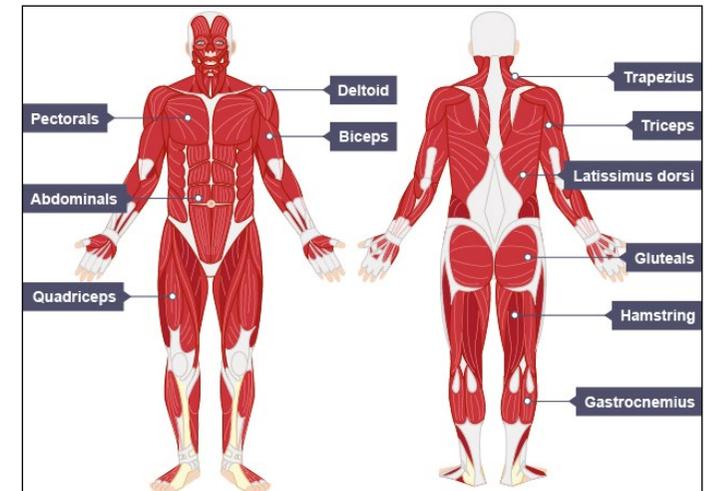
How to Take Your Pulse

**Immediate effects of exercise**

<b>Increased Heart Rate</b>	Your heart beats faster to pump more oxygen-rich blood to your muscles.
<b>Increased Body Temperature</b>	Muscle activity generates heat, raising your core temperature. You may start to sweat to cool down.
<b>Increased Breathing Rate and Depth</b>	You breathe more quickly and deeply to take in more oxygen and expel carbon dioxide.

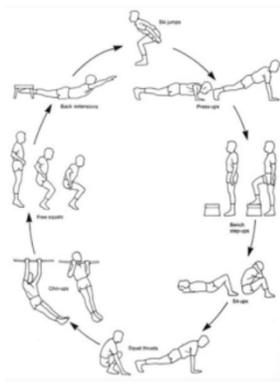
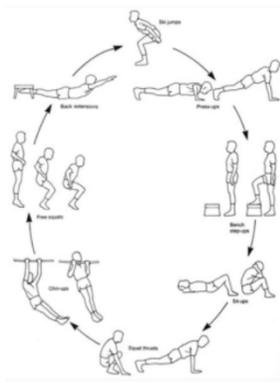
**Further reading/resources**

BBC Bite size KS3  
[www.youthsporttrust.org](http://www.youthsporttrust.org)  
 PE with Joe (you tube)  
[www.englandnetball.co.uk](http://www.englandnetball.co.uk)



**Task:** Can you identify the main arm and leg muscles being stretched in the diagrams to the left?

**Challenge yourself:** Can you identify which skills you will need these muscles for?

Athletics – Field	Athletics - Track	Rounders	Cricket	Fitness	Dance
<p><b>Shot put:</b></p> <p><b>Technique:</b></p> <ul style="list-style-type: none"> <li>- Shot rests on the neck, gripped with fingers and not touching the palm</li> <li>- Elbow high and out</li> <li>- Eyes forward</li> <li>- Body upright</li> <li>- Follow through</li> </ul> <p>Measure distance from toe board to nearest mark by the shot (metres)</p> <p><b>High jump:</b></p> <p><b>Technique:</b></p> <ul style="list-style-type: none"> <li>- Curved run</li> <li>- Last 2 steps quick and powerful</li> <li>- Take off from inside foot</li> <li>- Drive outside knee upward with arms</li> <li>- Maintain upright posture</li> <li>- Land on back or seated to absorb impact.</li> </ul> <p>Measure height of the bar (metres)</p>	<p><b>Sprint technique:</b></p> <ul style="list-style-type: none"> <li>- Tall stance</li> <li>- Head neutral</li> <li>- Knees high</li> <li>- Elbows bent</li> <li>- Hands straight</li> <li>- “Hip to lip”</li> <li>- Push off the balls of the feet</li> </ul> <p><b>Sprint start position:</b></p> <ul style="list-style-type: none"> <li>- Dominant foot behind line</li> <li>- Non-dominant foot behind heel (T)</li> <li>- Dominant foot moved behind (T)</li> <li>- Front foot flat, rear foot on toes</li> <li>- Hands shoulder-width apart, fingers behind line</li> </ul> <p><b>Relay:</b></p> <ul style="list-style-type: none"> <li>- Baton held at the bottom</li> <li>- Place baton firmly in receiver’s hand</li> <li>- Receive starts moving before giver reaches the zone</li> <li>- Maintain speed</li> </ul>	<p><b>Underarm throw:</b></p> <ul style="list-style-type: none"> <li>- Face direction of target</li> <li>- Hold throwing arm straight behind back</li> <li>- Swing arm forwards</li> <li>- Release ball at waist height</li> </ul> <p><b>Catching:</b></p> <ul style="list-style-type: none"> <li>- Cupped hand position</li> <li>- Bringing hands into body</li> <li>- Eyes on the ball</li> </ul> <p><b>Barrier:</b></p> <ul style="list-style-type: none"> <li>- Keep eyes on the ball</li> <li>- Hands in position and heel + knee joint directly under eyes</li> <li>- Little fingers together and palm facing up</li> </ul> <p><b>Bowling:</b></p> <ul style="list-style-type: none"> <li>- Smooth underarm action</li> <li>- Height of throw between knee and head</li> <li>- Bend knees and align shoulders with hips</li> <li>- Release ball from fingertips</li> </ul> <p><b>Batting:</b></p> <ul style="list-style-type: none"> <li>- Sideways stance</li> <li>- Strong grip</li> <li>- Swing through the ball</li> <li>- Step forward with opposite foot</li> <li>- Transfer weight for power generation</li> <li>- Maintain balance</li> </ul>	<p><b>High catch:</b></p> <ul style="list-style-type: none"> <li>- Position body under the ball</li> <li>- Keep eyes on the ball</li> <li>- Cup shape with hands to cushion the catch</li> <li>- Bring the ball into body.</li> </ul> <p><b>Overarm throw:</b></p> <ul style="list-style-type: none"> <li>- Step towards target, swing the throwing arm forward</li> <li>- Release ball at head height</li> <li>- Transfer weight</li> </ul> <p><b>Bowling:</b></p> <ul style="list-style-type: none"> <li>- Turn shoulder towards wicket</li> <li>- Rotate shoulder and push bowling arm forward and down</li> <li>- Ball needs to bounce before the target</li> </ul> 	<p><b>Circuit Training</b></p> <p><b>Stations:</b> range from 6-10 they alternate muscle groups the arrows show the direction of movement from one station to another</p> <p><b>Flow:</b> Arrows show the direction students move from one station to the next.</p> <p><b>How it works:</b> Spend a set time at each station They then move to the next station Can be repeated</p> 	<p><b>Gestures</b></p> <p>Use your hands, arms, or face to express emotion or tell a story. Movements should be clear and intentional. Can be literal (e.g., waving) or abstract (e.g., reaching).</p>  <p><b>Levels</b></p> <p>Use different heights in your movement: high (standing tall), medium (bent knees), and low (close to the floor).</p>  <p><b>Mirroring</b></p> <p>Copy your partner’s movements as if you are their reflection. Stay directly opposite your partner. Focus on timing and direction to match perfectly.</p> 
Key rules and important things to remember					
<p>Show technique on “Technique!”</p> <p>Throw on “Throw!”</p> <p>Avoid twisting or turning mid-air</p>	<p>Eyes forward – Do not look back</p> <p>Focus on own performance</p>	<p><b>Out if...</b></p> <p>Your shot is caught, you ran inside a post, the post you are running to is stumped, you overtake</p>	<p><b>Out if...</b></p> <p>Bowler hits the stumps with their bowl, shot is caught, you knock over your own stumps</p>	<p>Safe technique, hydration, alternate muscle groups, progressive in time, rest period</p>	<p>Work in a 32-beat count, good body tension, aesthetically pleasing</p>



**WORD REVOLUTION**

<b>Spreadsheet</b>	A type of program which stores and analyses data in a table format
<b>Formula</b>	A mathematical rule expressed in symbols.
<b>Autosum</b>	A function that quickly calculates the sum of a range of number
<b>Data</b>	Information that can be interpreted and processed by a computer
<b>Information</b>	Data which has meaning to it.
<b>Control</b>	The ability to manage or direct a computer system or process
<b>Input</b>	A device through which information enters a system
<b>Output</b>	A device where information leaves a system
<b>Process</b>	The running of a computer program
<b>Flowchart</b>	A diagram to show the sequence of actions in a computer system
<b>Program</b>	A series of coded software instructions to control a computer
<b>Sequence</b>	A particular order in which related things follow each other
<b>Variable</b>	A named storage location in a computer's memory that holds a value
<b>Iteration</b>	To repeat something within a program

What will I study in this topic?

We will be looking extensively at spreadsheets, and how these can be used to manipulate data to present them in a manner that makes it easier to understand. We will look at examples of control systems and how these use the four main fundamentals of Inputting, Outputting, Storing and Processing data. Finally, we get practical, building on the basic programming principles taught in primary school and how this can be used in a text-based environment.

What will I be able to do by the end of this topic?

By the end of Semester 2, students will be able identify if a piece of hardware is an Input, Output, Storage or Process device. Students will be able to describe why we might use spreadsheet software. They will have used a range of functions and formulas in a spreadsheet and produced at least one visual method of displaying this. Students will have used both block and text-based programming and structured programs to draw shapes and used variables to store text.

**Key tips for using spreadsheet software**

- Always start a formula with an equals sign (=)
- Boxes are called 'cells'
- Cells are referred to by their name (A1, B4, H8)
- The letter indicates the Column and the number the Row
- Use the Autofill to quickly copy formulas downwards



**Presenting data visually in spreadsheets**

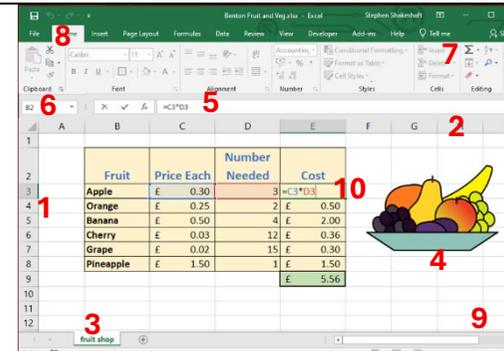
**Bar Charts** – are a great way to make quick comparisons between items.

**Line Charts** – can be used to show trends and patterns over time

**Pie Chart** – Shows visually the percentage share of a item, object or event

**Parts of a spreadsheet**

- 1) Rows
- 2) Columns
- 3) Worksheet Name
- 4) Image
- 5) Cell Reference



- 6) Cell reference
- 7) Autosum
- 8) Save
- 9) Zoom Tool
- 10) Formula

**SUBJECT: Computer Science**

**YEAR: 7**

**TOPIC: Understanding Computer Systems**

**SEMESTER: 2**



<p><b>Key Questions:</b></p>	<ol style="list-style-type: none"> <li>1. How can we store data in a way that we can manipulate to produce results we want?</li> <li>2. How can we turn data into meaningful and visual information?</li> <li>3. What is the difference between software and hardware?</li> <li>4. How can we determine if a piece of hardware on a computer is an Input, Output, Storage or Processing device?</li> <li>5. What do we mean by words 'to program'?</li> <li>6. Do computers ever make mistakes if we are the ones programming them?</li> </ol>
<p><b>Curriculum Connections:</b></p>	<p>In Semester 2 units, we begin our journey towards understanding data and information and how this can be manipulated and represented visually. This provides the knowledge base for future units in Year 8 and 9 to explore in more detail data modelling. We look at how computer systems are based on the principles of inputs and outputs which will lead on to hardware, software and components within the Tech in the House unit at the start of year 8. Programming or coding plays an integral part to understanding how computers process instructions in a sequenced manner and will provide the underpinning knowledge required for future lessons on block based programming in Year 8 and Python programming for the future in Year 9.</p>

**Differences between Hardware and Software**

<ul style="list-style-type: none"> <li>• Software are the programs that run on the computer</li> <li>• They cannot be touched</li> <li>• Software needs hardware to work</li> <li>• Eg. Word, Excel,</li> </ul>		<ul style="list-style-type: none"> <li>• Hardware are the physical parts</li> <li>• They can be touched</li> <li>• Computers need hardware to run</li> <li>• Hardware needs software</li> </ul>
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**Convergence – merging devices together**

**Your phone is so much more than a phone**

**Peripheral (add-on) Devices of a Computer System**

INPUT DEVICES	OUTPUT DEVICES	STORAGE DEVICES
<p>KEYBOARD    MOUSE    JOYSTICK</p>	<p>MONITOR    PRINTER    SPEAKER</p>	<p>USB FLASH DRIVE    MEMORY CARD    HARD DISK DRIVE (HDD)    CD, DVD &amp; BLUE RAY</p>
<p>SCANNER    WEB CAMERA    MICROPHONE</p>	<p>HEADPHONE    PROJECTOR</p>	<p>FLOPPY DISK    EXTERNAL HARD DISK</p>

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### Python Vs Scratch – what’s the difference?

Python Term	What It Means	Like in Scratch
<b>Variable</b>	A name that stores a value (like a number or word).	A variable block (e.g., score = 10)
<b>Print</b>	Shows a message on the screen.	Like the “say” block, but in the console.
<b>Input</b>	Lets the user type something.	Like asking a question and storing the answer.
<b>If Statement</b>	Makes decisions (runs code only if something is true).	Like the “if” or “if-else” block.
<b>Loop</b>	Repeats code.	Like “repeat” or “forever” blocks.

### Understanding Python – what do the colours mean?

Colour	What It Highlights	Example	What It Means
<b>Orange</b>	Keywords	<code>if, else, def, while</code>	Special words that Python understands as commands.
<b>Green</b>	Strings (text)	<code>"Hello" or 'name'</code>	Text inside quotes.
<b>Purple</b>	Built-in functions	<code>print(), input()</code>	Functions that Python already knows how to use.
<b>Black</b>	Variables	<code>name = "Alex"</code>	Names you create to store values in. Choose the name of your variables well.
<b>Red</b>	Errors or warnings	<code>SyntaxError</code>	Something is wrong with code.

### What’s the difference between data and information?

Data is like raw facts or pieces of a puzzle. On their own, they don’t tell you much. *Example: 5, 12, 18, 22 – just numbers.*

Information is what you get when you organise or understand the data. It’s the completed puzzle that tells a story. *Example: “The average age of the students is 14.*

We use many different types of software to transform data into meaningful information such as Access and Excel  
Now the numbers make sense!

```
function test_prime(n)
{
    if (n===1)
    {
        return false;
    }
    else if(n === 2)
    {
        return true;
    }else
    {
        for(var x = 2; x < n; x++)
        {
            if(n % x === 0)
            {
                return false;
            }
        }
    }
}
```



**WORD REVOLUTION**

<b>Design Brief</b>	A short paragraph explaining what you need to design and make
<b>Accuracy</b>	Doing something very carefully and exactly
<b>CAD</b>	Computer Aided Design: using a computer to draw your design
<b>CAM</b>	Computer Aided Manufacture: using a machine to make your design
<b>Evaluation</b>	Saying what went well and how you could improve your work
<b>Pewter</b>	A soft, silvery alloy used for casting.
<b>MDF</b>	A man-made wood made from tiny fibres
<b>Alloy</b>	A mixture of 2 or more metals. Done to improve properties
<b>Coping Saw</b>	A thin-bladed saw for cutting curves in wood or plastic
<b>Pillar Drill</b>	A large, fixed drill used to make holes in materials
<b>Try Square</b>	A tool used to draw straight lines at 90°
<b>Vice</b>	A tool that holds materials still while you work
<b>Annotation</b>	Notes or labels that explain your drawings
<b>Pins</b>	Small nails used to hold material together until glue dries

What will I study in this topic?

- Designing for a client (Tropical World)
- Computer Aided Design (CAD)
- How to create movement using mechanisms
- Pewter casting

What will I be able to do by the end of this topic?

- Use the range of key tools show below safely and effectively
- Follow the design process: research, design, make and evaluate
- Use CAD to design for laser cutting
- Measure and mark out materials using a steel rule and try square

**Key Tools:**



Try Square

Pillar Drill

Wood Vice

Coping Saw

**Health & Safety**



Wear goggles when operating machinery



Tie back long hair



Wear an apron.

**Curriculum Connections:**

Introduces key skills that you will use throughout your time in D&T at Benton Park:

- Developing ideas through sketching
- Computer Aided Design (CAD)
- Marking out accurately
- Use of basic hand tools
- Safe and effective use of the pillar drill

**How will I be assessed?**



Design Ideas



Practical outcomes



End of unit test



<p><b>Key practical skill:</b> Marking out with a try square</p>	<p><b>Try Square</b></p>	<p><b>Step 1</b></p> <p>Mark out your dimension with a steel rule</p>	<p><b>Step 2</b></p> <p>Place the blade flat on your work in line with your measurement</p>	<p><b>Step 3</b></p> <p>Place the brass plate securely against your work</p>	<p><b>Step 4</b></p> <p>Run your pencil along the blade to draw your line</p>
<p><b>Key Technical Knowledge:</b> Materials</p>	<p><b>Alloys</b></p> <p>Alloys are made by mixing different metals together. This is done to achieve improved properties</p>	<p><b>Pewter</b> is an example of an alloy</p>	<p><b>Manufactured Boards</b></p> <p>These are timber based materials made by combining wood with another material, usually a type of glue called resin</p>		<p><b>MDF</b> is an example of a manufactured board</p>

**Cam Mechanisms**

The rise and fall movement of the follower is determined by the shape of the cam:

<p><b>Snail cam</b></p>	<p><b>Eccentric cam</b></p> <p>1 Even rise and fall per turn</p>	<p><b>Heart cam</b></p> <p>Slow long rise, short fall, short rise, long fall</p>	<p><b>Hexagon cam</b></p> <p>6 small rises and falls per turn</p>	<p><b>Drop cam</b></p> <p>Slow rise, fast drop once per turn</p>
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**2D Design Key Tools**

- Line tool.** Press and hold for the connected line tool
- Shape tool.** Press and hold a choice of different shapes
- Path tool.** Use to draw a curved path. Left click to place a point on the path. Right click to end the path
- Text tool.** Use to add text or letters
- Delete all tool.** Press and hold for the delete between 2 intersections tool:

**Pewter Casting**

<p><b>Step 1</b></p> <p>A mould is designed using "2D Design" on the computer (CAD). There must be a runner to pour the molten pewter in and a riser to allow air to escape. Red lines tell the laser to cut</p>	<p><b>Step 2</b></p> <p>The mould is cut out using the laser cutter</p>	<p><b>Step 3</b></p> <p>Pewter is melted in a ladle until it reaches its melting point (approx. 200C)</p>	<p><b>Step 4</b></p> <p>Molten pewter is poured into the mould through the runner</p>
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**WORD REVOLUTION**

<b>The Elements of Music</b>	These are the building blocks of any piece of music.
<b>Dynamics</b>	The volume of the music
<b>Rhythm</b>	Note duration / length
<b>Pitch</b>	How high or low the notes are
<b>Structure</b>	How the music is set out
<b>Metre</b>	The number of beats per bar
<b>Instruments (sonority)</b>	The instruments used (sound colour)
<b>Tonality</b>	The key of the music – major 😊 minor 😞
<b>Texture</b>	How the musical layers are combined
<b>Tempo</b>	The speed of the music
<b>Harmony</b>	Use of chords and accompaniment
<b>Sharp and Flat</b>	<p>Sharp Flat</p> <p># b</p> <p>A sharp raises a note by a semitone A flat lower a note by a semitone</p>

What will I study this year?	<p><b>Performing:</b> Keyboard, drums, guitar and voice</p> <p><b>Reading Music:</b> Learn symbols for notes &amp; rhythms</p> <p><b>Composing:</b> Make short tunes in different styles</p> <p><b>Technology:</b> Use GarageBand to make and save music</p> <p><b>Listening:</b> Identify pitch, dynamics, texture</p> <p><b>Context:</b> Understand music's origins and emotions</p>
What will I be able to do by the end of this year?	<p><b>Compose:</b> Create music in C major/D minor on GarageBand</p> <p><b>Understand:</b> Treble clef notes, rhythms, and time values</p> <p><b>Identify Styles:</b> E.g. Classical era, Jazz, Rock, Pop</p> <p><b>Perform:</b> Use instruments or voice in time confidently</p>

Dynamics	
<i>pp</i>	Pianissimo
<i>p</i>	Piano
<i>mp</i>	Mezzo Piano
<i>mf</i>	Mezzo Forte
<i>f</i>	Forte
<i>ff</i>	Fortissimo
	Crescendo
	Diminuendo

Tempo		
Lento	Slowly	
Largo	Slow and stately	
Adagio	Leisurely	
Moderato	Moderate pace	
Andante	Walking pace	
Allegro	Fast	
Vivace	Lively	
Presto	Very quickly	

Rhythm	
Semibreve	
Minim	
Crotchet	
Quaver	
Semiquaver	

= tea    = coffee    = Coca-Cola

**Texture is the way the musical layers are combined.** Basic texture can be described as 'thick' or 'thin'

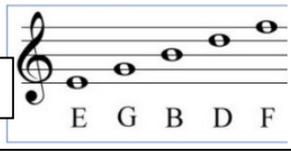
	<b>Monophonic</b>
	<b>Homophonic</b>
	<b>Polyphonic</b>

Space notes



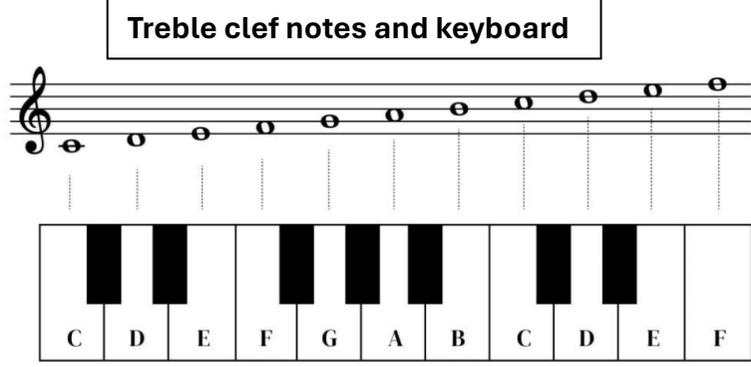
F A C E

Line notes



E G B D F

Treble clef notes and keyboard

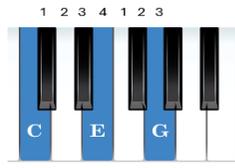


Every Green Bus Drives Fast

**How to work out major and minor chords**

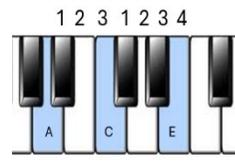
**Major**

4 steps then 3 steps



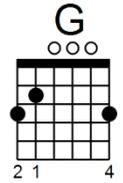
**Minor**

3 steps then 4 steps

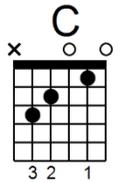


**Guitar Chords**

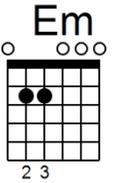
**G**



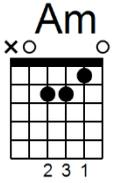
**C**



**Em**



**Am**



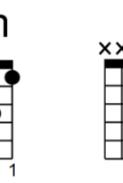
**D**



**Dm**

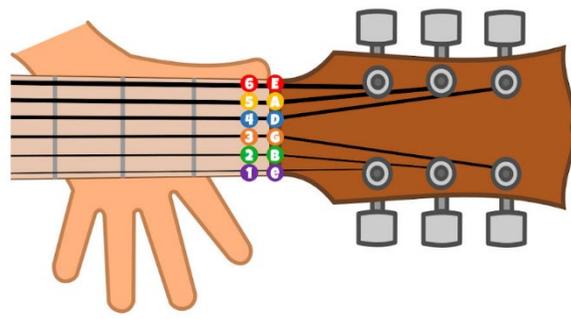


**F**



Beat	1	2	3	4
RH Hi-hat	X	X	X	X
LH Snare drum			X	
RF Bass drum	X			

Drum Kit Rock Beat

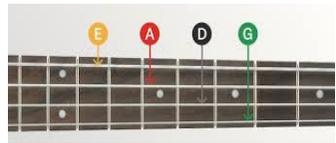


1st string (high E)

Fret numbers



6th string (low E)



Bass Guitar strings

INSTRUMENTS			
Strings	Woodwind	Brass	Percussion
Violin	Flute	Trumpet	Xylophone
Viola	Clarinet	French Horn	Glockenspiel
Cello	Oboe	Trombone	Timpani
Double Bass	Bassoon	Tuba	Triangle
Guitar	Saxophone	Cornet	Tambourine
Bass Guitar	Recorder		Drum Kit

