Bottisham Village College

# KNOWLEDGE ORGANISER

## YEAR 9 TERM 2

# Bottisham Village College

At Bottisham Village College, we are striving to create a five-year curriculum plan that builds effective revision strategies into homework and lessons, to ensure that students are able to place powerful knowledge into their long-term memories. Additionally, we hope that this will help build effective learning strategies from early in their time here at the college.

Based on evidence, we know that regular recall activities are the best way of achieving this goal and committing powerful knowledge into the students' memories.

At the start of each term, we shall publish all the knowledge organisers that students will require for their studies in each curriculum area. These will cover a range of aspects: facts, dates, characters, quotes, precise definitions and important vocabulary. We are clear: if this fundamental knowledge is secured, students can then develop their higher-level skills of analysis and critical understanding with greater depth.

They will be given an electronic A4 Knowledge Organiser (KO) booklet for each term containing all of the knowledge required. In lessons, Bottisham staff will be regularly testing this fundamental knowledge, using short-quizzes or even more formal "Faculty Knowledge Tests".

The best way to use these organisers at home, is to follow a simple mantra:


**1. Look at a certain aspects of a particular knowledge organiser**
**2. Cover up part of their knowledge organiser**
**3. Write it out from memory**
**4. Check and correct any spelling mistakes, missing bits or mistakes**

**So simple but so effective.**

ART

# Body Adornment & Clay Sculpture

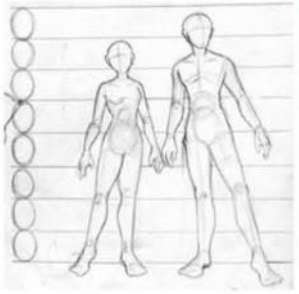
You will learn about what Body Adornment means, where it originated from and how it has changed through time.


Contemporary Headress Adornment

You will create a double page of research on an aspect of body adornment



You will learn how to draw the figure and adorn it with inspiration from sculptures.



**TOP TIPS**

- Keep **inside the lines** to make a sharper image
- Keep your pencil **sharp** for more accurate lines
- Avoid scratchy shading by holding your pencil at roughly a **45° angle**
- Avoid smudging your drawing by putting a piece of paper under your hand.

**Key words;**
Score & slip
Refine
Manipulate


You will learn how to sculpt a clay figure. You will also learn how to adorn it with different forms of mark making on clay & you will learn to refine your work appropriately.

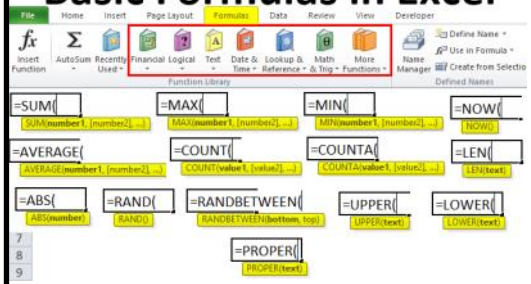
# COMPUTING

**Depending on which Technology rotation students are on, they may be working in Computing, D&T or Food Technology**

## Digital Literacy

**Excel tools: (Spreadsheet)**
**COUNTIF**–counts a particular item within a range to tell you how many times it appears.
**VLOOKUP**–finds a value and tells you what it is.
**IF Statement** –an action is carried out depending on a value in a cell. For example, if the value >50, it will say you passed the exam, if <50, it will say you failed.

### Basic Formulas in Excel




**Dreamweaver tools: (website making)**
**Hotspot Image** –an image on a site which had a hyperlink.
**Rollover Image** –an image which changes to another image when you hover your cursor over it.
**Target Audience** –who the site as aimed at.
**Site map** –how the site links together. Also called the navigation.
**WYSIWYG**–What You See Is What You Get.

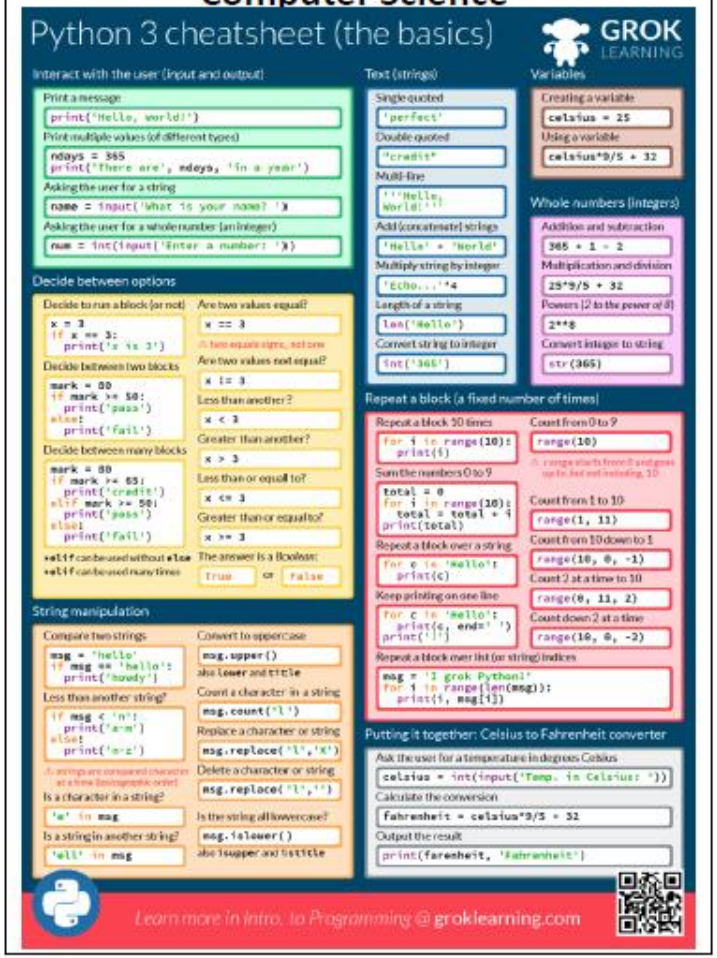
## Unit Topics:

Spreadsheets
Computer Systems recap
Programming
Website making

## Programs use:

GoogleSlides, GoogleDocs
Microsoft Office
Python
Dreamweaver

## Computer Science




## E-safety

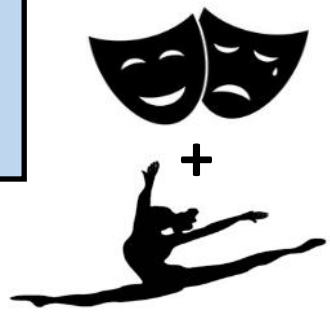
**Digital Footprint** – the trail of data you create while using the Internet.
**Privacy Settings** – the settings which can be applied so that you choose who sees your content.
**Fake News** – content which has been manipulated or incorrectly reported.
**Photoshopping** – editing images.
**Age Restriction** – an age limit in place to help protect users from seeing inappropriate content.


**Need help?** Search for:
Childline, internetmatters, ceop or thinkuknow for information and advice.

DANCE & DRAMA

# Practitioners in Dance and Drama

**Choreographic Process - Activities involved in creating dance.**



**Artistic intention— The decisions, made by theatre makers, to communicate deeper meaning through their work.**

**Dance Practitioners:**

- **Andy Blankenbueler**
- **Jasmin Vardimon**
- **Akram Khan**
- **Christopher Bruce**
- **Alvin Ailey**

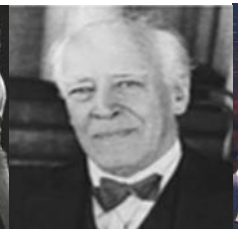
## Useful Youtube Links

- Hamilton—https://www.youtube.com/watch?v=r1izVfVpBwE&ab_channel=LucijaBrnat
- Jasmin Vardimon— https://www.youtube.com/watch?v=6iunk83-TNk&ab_channel=JasminVardimon
- Stanislavski—https://www.youtube.com/watch?v=iB1fPZX5Zgk&ab_channel=Lux
- Frantic Assembly—https://www.youtube.com/watch?v=H_M7t-kdVLw&ab_channel=franticassembly
- Alvin Ailey—https://www.youtube.com/watch?v=Uj_qoMzTgpY&ab_channel=BrutAmerica

**Drama Practitioners:**

- **Konstantin Stanislavski**
- **Frantic Assembly**
- **Antonin Artaud**
- **Bertolt Brecht**
- **Lin Manuel Miranda**
- **Gecko**





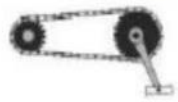
DESIGN & TECHNOLOGY

**Depending on which Technology rotation students are on, they may be working in Computing, D&T or Food Technology**

# Knowledge organiser for the Year 9 Automaton Project

The fretsaw is a general workshop machine. It is used to cut and shape light materials such as acrylic, MDF and plywood. The materials cut more easily if they are quite thin, for instance, any material thicker than 10mm would be difficult to shape. The general rule is that the thicker the material, the slower the machine operator pushes the work against the blade.

There are two types of Wood: **softwood** and **hardwood**. These names do not refer to the properties of the wood: some softwoods can be hard and some hardwoods can be soft. Softwoods, such as pine, come from **coniferous** trees. These keep their leaves all year round. They can be grown in renewable managed forests. This means that more wood can be grown to replace what's used.


CHAIN AND SPROCKET SYSTEM


LINKAGES


LEVERS


SPUR GEARS


PULLEY SYSTEM

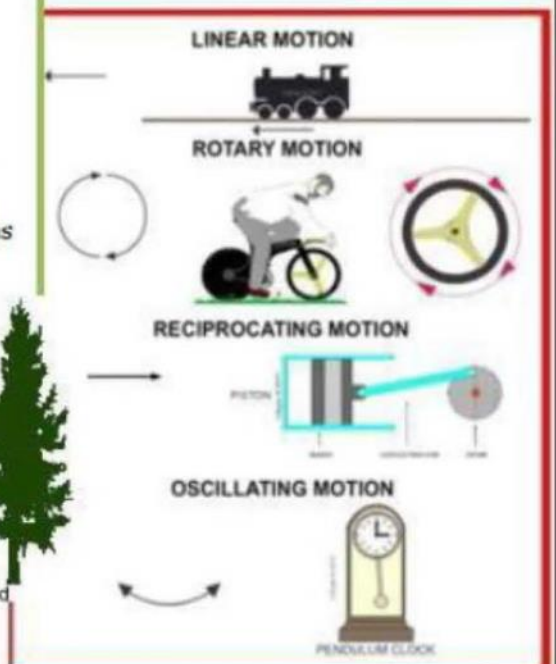

DROP CAM

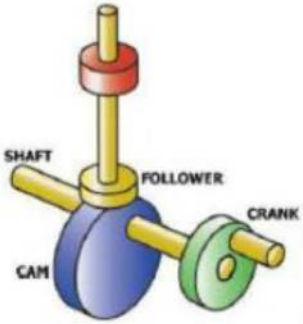

SCREW THREAD


RACK AND PINION


SPRING

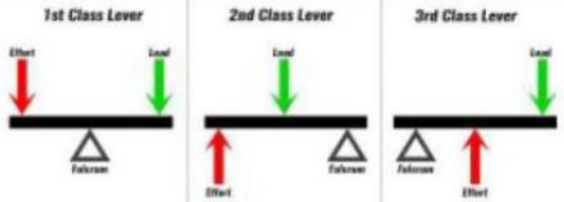

Hardwood - Softwood





**Key word Focus**; Mechanism, ratchet, reciprocating, circumference, diameter, radius



ENGLISH

# Gothic Writing

**Definition of 'Gothic' writing:**

*"Tales of the macabre, fantastic, and supernatural, usually set amid haunted castles, graveyards, ruins, and wild picturesque landscapes."*

| Typical genre features: | Typical characters: | Typical settings: |
|---|---|---|
| 1. Death and darkness | 1. Mysterious characters with high social status e.g. Princes, counts | 1. Wild landscapes |
| 2. Supernatural (magic, ghosts, vampires, curses) | 2. Female or feminine characters that are threatened by powerful men | 2. Medieval style castles, churches or abbeys |
| 3. Curses or prophecies | 3. Threatening women who are monsters or vampires | 3. Gloomy, decayed and ruined environments |
| 4. Madness and intense emotions/paranoia | 4. Powerful, tyrannical male figures | 4. Remote, uninhabited places (older gothic) or monsters intermingling in every day life (newer gothic) |
| 5. Mystery, terror and suspense | 5. Villains, vampires, ghosts, werewolves, giants | 5. Volatile and threatening weather (symbolism) |

## Social and Historical Context

- The term 'gothic' comes from the Germanic tribe 'the Goths', who played a part in the fall of the Roman Empire. The Goths are sometimes called barbarians. They destroyed a lot of Roman architecture in around C3 and replaced it with buildings in the gothic style.
- **Medieval Europe (C3-14)** is sometimes referred to as the '**Dark Ages**' (although this can be contested for a number of reasons.) Some believe that people lived in fear due to superstition and ignorance and that not much learning took place in this time. Castles with gargoyles were built to ward off evil spirits, this architecture is known as 'gothic' e.g. Notre Dame.
- Figures from **The Age of Enlightenment (C18-19)** believed that scientific progress was the only way to advance society, and great discoveries were made in this time. They tried to rid Europe of superstition and ignorance through promoting reason and logic.
- A group of poets, artists and thinkers called the Romantics challenged this because they believed that not everything can be explained by science, and too much reason rids the world of beauty and mystery.
- The gothic genre first emerged from the **Romantic movement**. It used art and ideas from the Dark Ages, wild emotion and nature to contrast modern ideas about science and logic.
- Gothic writing transformed into the format of the extremely popular **Victorian ghost story**.
- Today, we use the term 'gothic' widely to describe art, style, clothing (e.g. Alexander McQueen couture) music and film (e.g. Tim Burton films). The style and genre is very much still alive.

## Values and ideas held by gothic writers

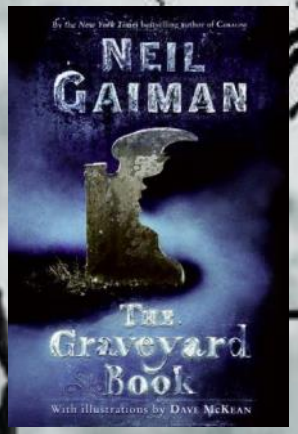
- Gothic writers are preoccupied with the supernatural because they believe that not everything has a scientific explanation.
- They believed that nature is 'sublime': it has the power to simultaneously inspire awe and terror in people.
- They challenged society's expectations about propriety and emotion. To show wild emotion was seen as crass and uncouth, but not to the gothic writers, who often depicted passion and rage.
- They explored the role of the female characters: often in gothic texts, there are powerful female roles, which contrasted the contemporary society.
- They were very interested in the psychological exploration of characters, particularly in relation to themes of madness.
- Big question: why is a genre that is so frightening so popular?

ENGLISH

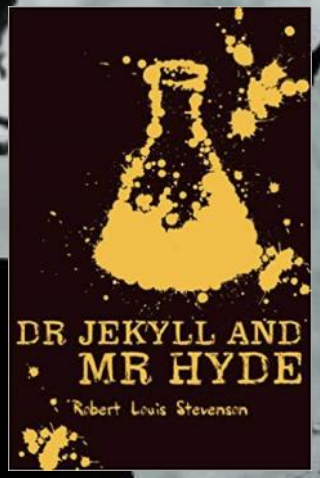
| Notable Gothic texts (in chronological order) | | | | | |
|---|---|---|---|---|---|
| **The Castle of Otranto – Horace Walpole, 1765** | **Vathek – William Beckford, 1786** | **Frankenstein – Mary Shelley, 1818** | **The Hunchback of Notre Dame – Victor Hugo, 1831** | **The Raven – Edgar Allen Poe, 1845** | **Wuthering Heights – Emily Bronte, 1847** |
| **The Strange Case of Dr Jekyll and Mr Hyde – R.L. Stevenson, 1887** | **The Picture of Dorian Gray - Oscar Wilde, 1890** | **Dracula - Bram Stoker 1897** | **Rebecca – Daphne Du Maurier, 1931** | **The woman in black - Susan Hill 1983** | **The Graveyard Book, Neil Gaiman 2008** |

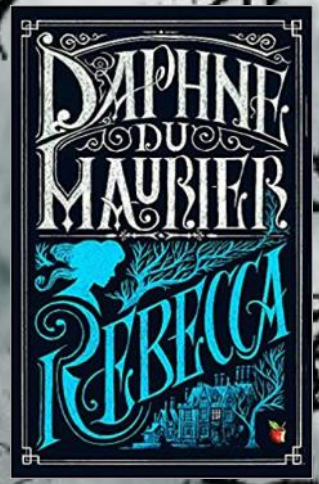
| Key vocabulary | |
|---|---|
| Abstruse | Entrapment |
| Afflicted | Forbidding |
| Alienate | Grotesque |
| Anguish | Hopeless |
| Annihilate | Lamentable |
| Apprehensions | Lifeless |
| Beguile | Mournfully |
| Claustrophobia | Obscured |
| Decomposing | Sinister |
| Despair | Torturous |
| Dilapidated | Unleashed |
| Discomforted | Vengeful |
| Disfigured | Withered |
| Enigma | Wretched |

| Key techniques | |
|---|---|
| Narrative voice | Semantic field |
| Sibilance | Assonance |
| Pathetic fallacy | alliteration |
| Contrast | Figurative |
| Imagery | Juxtaposition |
| Verb | Personification |
| Adjective | Symbolism |







# FOOD TECHNOLOGY

**Depending on which Technology rotation students are on, they may be working in Computing, D&T or Food Technology**

## Recipes to learn:

- Stir fry noodles
- Macaroni cheese
- Chicken, chorizo and chickpea stew
- Swiss roll
- Spanish tortilla
- Ratatouille
- Hob nob biscuit
- Shortbread
- Savoury rice
- scone

## Other topics to learn:

- Healthy eating
- Religion and diet
- Nutritional needs of different groups

## Scientific processes to learn

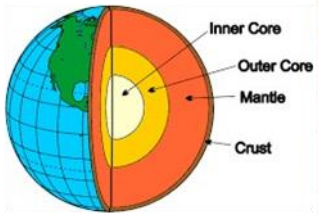
- Rubbing in – fat coats starch to limit the amount of gluten released
- Dextrinisation – starch turns brown in dry heat
- Denaturation – proteins change their structure when heated, whisked or mixed with acid
- Coagulation – proteins set when heated
- Aerating – adding air to a mixture to help it rise
- Caramelisation – sugar turns brown when heated.
- Convection heat – where heat is transferred through a liquid or gas.
- Conduction heat – where heat is transferred through solid materials.
- Gelatinisation – how starch thickens sauces

## Skills to learn

- Chopping safely using the **'bridge and claw'**
- How to 'rub in' butter and flour
- Sauce making (roux)
- Mixing
- Whisking
- Sautéing

# Y9: Plate Tectonics, Earthquakes and Volcanoes

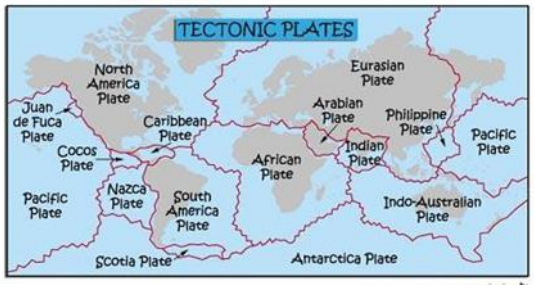
## Key idea 1: There are a range of different tectonic processes



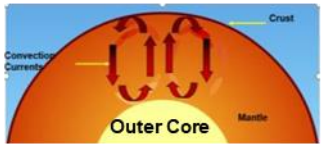

### Structure of the Earth

| | |
|---|---|
| Inner Core | Made of solid iron, the hottest layer over 5000ºc |
| Outer core | Made of liquid metals |
| Mantle | The largest layer. Made of semi-solid molten rock called **Magma.** |
| Crust | Made of huge **plates** of rock. These move and float on the mantle. There are **oceanic plates** and **continental plates.** |

**Tectonic Plates:**
The crust is split into huge **Plates.** Tectonic plates are floating and slowly moving on the mantle. They collide at the **plate boundaries** (edges) which cause earthquakes and volcanoes.




**Why do Tectonic plates move?**
The **core** heats the bottom of the mantle. This rises to the crust, where it spreads sideways, and drags the crust along through friction.



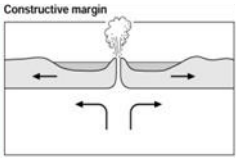

**Why is the UK safe?**
Earthquakes and Volcanoes usually occur on the **plate boundary** which is where 2 plates meet. Countries such as the UK which are in the middle of a plate do not suffer large earthquakes and volcanoes.

| Key term | Definition | Key term | Definition |
|---|---|---|---|
| Tectonic Plate | A large segment of the Earth's crust which can float and move on the semi-molten rock below. | High Income Countries (HICs) | Rich and well developed. Good services and infrastructure. |
| Convection currents | The circular movement of magma, within the Earth's mantle, driven by heat from the core. | Low Income Countries (LICs) | Poorer and less well developed. Services need developing. |
| Oceanic crust | The denser, thinner part of the Earth's crust. Made of basalt rocks. | Infrastructure | Key technology and services e.g. sewers, roads, electricity, water. |
| Continental crust | The less dense, thicker part of the Earth's crust. Made of granite rocks. | Prediction | Attempts to forecast where and when a hazard will strike. |
| Primary impacts | Problems that occur immediately as a hazard strikes e.g. strong shaking, buildings collapse and roads and railways buckle. | Protection | Constructing buildings so that they are safe to live in and will not collapse. |
| Secondary impacts | The subsequent effects of the hazard – tsunamis, landslides, diseases and fires. | Preparation | Plans and resources developed to be safe and ready in a hazard. |

## Key idea 2: Tectonic processes result in different types of hazards

### Types of plate boundary

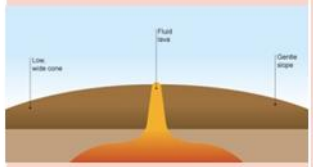
| | |
|---|---|
| | Dense, heavy oceanic crust subducts below a continental plate. Here it melts and forms a magma chamber. **Hazards:** violent volcanoes and EQs. |
| | Two plates slide past each other, folding the land but leaving no gap for magma (lava) to escape. **Hazards:** violent EQs (no volcanoes) |



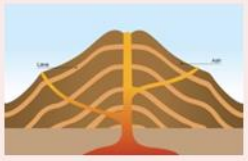

Two tectonic plates pull away from each other, causing friction and leaving a space for magma in the mantle to escape
**Hazards:** Volcanoes and EQs.

**What process causes earthquakes?**

### Types of volcano



**Shield:** A wide, low volcano made of runny lava. Found at constructive boundaries. They are quite predictable.



**Composite:** A steep sided volcano found at destructive plate boundaries. Violent eruptions.

## Key idea 3: The impacts of, and responses to, tectonic hazards vary between locations

### Natural disaster risk hazards

Not all natural disasters have the same impact.. The scale of damage down will vary due to these factors:

| | |
|---|---|
| HIC v LIC<br>Urban v Rural<br>Small size v Large<br>Local v Far away | LICs are less well prepared.<br>More people affected in cities.<br>More powerful hazards cause more impacts.<br>Hazards become less powerful the further you are from them. |

### Impacts of Natural disasters

| Earthquakes | Volcanoes |
|---|---|
| **Primary Impacts** | |
| Violent shaking<br>Ground liquefaction<br>Building collapse<br>Infrastructure damaged<br>Death and injury | Pyroclastic flow<br>Lava Flows<br>Ash clouds<br>Volcanic bombs<br>Infrastructure damaged<br>Death and injury |
| **Secondary impacts** | |
| Healthcare overwhelmed<br>Roads, ports and airports closed<br>Homelessness<br>Emotional damage/grief<br>Businesses closed<br>Cost of rebuilding | |

### Managing Earthquakes

**Prediction**

Using maps and seismometers to say **where** earthquakes will happen. It is nearly impossible to predict **when**.

**Protection**

Rubber shock absorbers in the foundations. Steel frames that can sway without cracking. Shatter proof glass.
Strong **regulations** for building design and quality.

**Preparation**

# Year 9 Geography: How important is China?

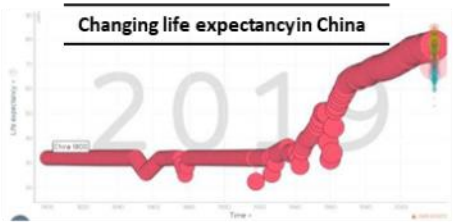
| Key term | Definition |
|---|---|
| Urban | Built up areas – cities |
| Rural | The countryside |
| Inequality | The unequal distribution of resources such as wealth, power and income |

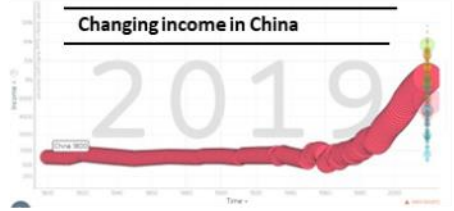
| Key term | Definition |
|---|---|
| Sustainability | Whether or not something will last into the future |
| Hydro-electric power (HEP) | Renewable electricity produced by turbines in a dam |
| Economy | The processes of the production and consumption of goods and services, and the supply of money |

## Key idea 1: China is a country of contrasts

**There are huge variations in China, both in terms of its physical geography and its human geography, including levels of development. China is also a radically different country to the one it was in recent decades**

| Province | GNI/capita | Life expectancy | Adult literacy (%) | HDI |
|---|---|---|---|---|
| China (whole) | $9,770 | 76 | 97 | 0.758 |
| Shanghai (A) | $22,799 | 84 | 97.5 | 0.867 |
| Guizhou (B) | $6,731 | 71 | 89.9 | 0.680 |


## Key idea 2: Projects have tried to improve China's development

**The Three Gorges Dam, on the Yangtze river**

This has been constructed on the Yangtze river in central China.
It is the third longest river in the world.
The population of the Yangtze basin is over 358 million people.
Purpose: : Flood control, power generation, improved navigation.
Estimated construction cost: US$ 25 billion

| Impacts of the Three Gorges Dam | Positive | Negative |
|---|---|---|
| Social | - Flood control<br>- Job creation<br>- Increased energy supplies | - Forced relocation of 1.2 million<br>- Flooding of over 1200 historical sites |
| Economic | - Increased river navigation<br>- Increased energy supplies<br>- Job creation in construction | - Flooding of fertile farmland<br>- Huge cost<br>- Jobs are short term |
| Environmental | - Reduced air pollution<br>- Renewable energy | - Increased water pollution<br>- Ecosystems damage |

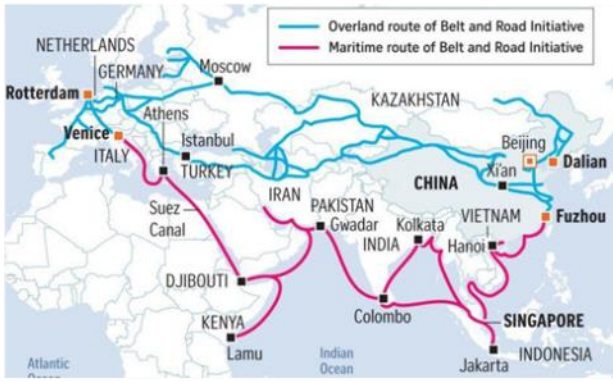
## Key idea 3: China is having an increasingly important global role

**The World's Factory**

27% of China's overall economic output is from manufacturing, which also accounts for 20% of the world's manufacturing output. Factors like lower wages and less strict regulations for companies encourages investment.

**China's Belt and Road Initiative**

China is increasing it's reach around the world through this project, which is actually many separate investment and infrastructure construction projects in over 60 countries around the world.



HISTORY

# World War 1

## What was it?

- A war that lasted four years, from 1914 to 1918.
- It was a war between the countries of Europe: The Triple Entente (Britain, France and Russia) against the Triple Alliance (Germany, Austria-Hungary and Italy) Due to some of these countries having large empires, other parts of the world were dragged into the conflict.
- Over 50 million people died, including 900 000 soldiers from Britain and her Empire. About 10% of the British soldiers who fought in the war were killed.
- The tension/anger left by the war was one of the main reasons from World War Two breaking out in 1939.

## Key People

**Franz Ferdinand:** Heir to the throne of Austria Hungary. His assassination on 28 June 1918 was the event that triggered the war.

**Gavrilo Princip**: A member of the Serbian terrorist group, The Black Hand, who planned to assassinate Franz Ferdinand. Princip shot and killed Ferdinand when he was visiting Sarajevo, Bosnia.

**General Sir Douglas Haig** The commander of the British army from 1915 onwards. Historians have disagreed about whether or not he was a good commander.

**General Ludendorff** In 1918 he planned and led the German offensives that were designed to win the war for the Germans.

**Wilson, Lloyd George and Clemenceau** When the war ended, these were the leaders of the USA, the UK and France. They decided what would be in the Treaty of Versailles, a peace agreement signed in 1919 which outlined the punishments/ rewards from the war.

## What caused it?

- Europe in 1914 was a tense place: France and Germany were enemies. Germany had defeated France in a war in 1871; France wanted revenge for that defeat. Following the war, Germany had taken part of France, called Alsace-Lorraine. The French wanted it back.
- Meanwhile, in the Balkans, Serbia wanted a coast, which meant taking land from Austria Hungary. This made the Austro Hungarians feel very threatened. Russia was very friendly with Serbia.
- Britain was worried about Germany becoming too powerful and taking Britain's empire. They were bothered that Germany was trying to build a navy which was as large as the Royal Navy.
- Austria-Hungary and Germany were in an alliance; Russia, Britain and France were also allies. On 28 June 1914 Franz Ferdinand, the heir to the throne of Austria Hungary, was assassinated by some terrorists who had been given weapons by members of the Serbian government. This set off a chain of events that led to the war breaking out.
- Austria-Hungary blamed Serbia for the death of Franz Ferdinand and threatened them; Russia objected to this as they were friendly with Serbia. Russia threatened Austria Hungary.
- Austria Hungary's ally was Germany, so when Austria Hungary was threatened by Russia, Germany threatened to go to war with Russia. But the Germans knew that if they went to war with Russia, France might attack them, because it was allied with Russia, and it wanted Alsace Lorraine back. So, to stop this happening, they went to attack France.
- They attacked France through Belgium, as part of the Schlieffen plan. Britain had promised to defend the Belgians in a treaty that they had signed in 1839. Also, Britain didn't want Germany to be the most powerful country in Europe, which she would have been if she had defeated France and Russia. Britain wanted to maintain the balance of power in Europe so Britain decided to join the war on 4 Aug 1914.
- Most people thought the war would be over quickly: it ended up lasting for 4 years.

HISTORY

## Fighting in World War 1

### The Trenches

- On the Western Front, the war took place in trenches. These were ditches that the soldiers dug into the ground to protect themselves from enemy fire.
- The line of trenches ran from the English Channel to the mountains of Switzerland. The British controlled the trenches in Belgium and Northern France up to the Somme. The French controlled the rest.
- Trenches varied, but a typical one would be ten feet deep, with a firing step. Barbed wire would be in front of it, and it would be protected by sandbags. The soldiers would sleep in dugouts: underground rooms that gave them some protection from shells. Usually there would be two or three lines of trenches, linked by communication trenches.
- It was very difficult to break through the trenches. This is because the defensive weapons used in the war were much better than the offensive weapons.
- **Machine Guns:** One machine gun could fire a thousand bullets in a minute. This made it very difficult to attack an enemy trench: your troops would be mown down.
- **Artillery:** Big guns that fired shells at the enemy. They were used to attack and to defend positions. Some the artillery had a long range, and could be fired from up to 5 miles away from the enemy. Most of the combat deaths in the war were caused by artillery.
- **A shell:** An explosive fired from an artillery gun. A big bullet!
- **Shrapnel:** These shells were packed with tiny metal balls. They exploded over the heads of attacking soldiers, raining down red hot metal on them.
- **Gas:** Poisonous gas was first used by the Germans in 1915. It was a scary weapon but was not that effective, as it could be countered by soldiers putting on gas masks. Later on, gas shells that could be fired from artillery were developed.
- **Tanks:** The first tanks were used by the British during the battle of the Somme. They were slow, and kept breaking down. Because they were a new weapon, the generals did not know how to use them. But they were the weapon of the future.
- **Aeroplanes:** These were a new weapon. They were very fragile and could not carry much weight. They were mostly used for reconnaissance—trying to work out what the enemy were doing by spotting them from the air.

## End of WW1

- The USA joined the war in April of 1917. In the short term, this did not help the British and French because America had a small army, which needed to be transported across the Atlantic. They wouldn't start arriving until May 1918.
- Russia dropped out of the war in Nov 1917. This helped the Germans in the short term, because they could move their experienced troops to the Western Front. They had a chance to win the war before the Americans came. They needed to do so quickly, because they were running out of food and supplies due to the blockade.
- The Germans launched a massive attack in 1918. At first this was really successful, but by August 8th the attack had run out of steam, and the Germans were starting to run out of troops.
- The British and French counterattacked and pushed the Germans back. By Oct 1918 the Germans knew they had lost. The Armistice was signed on 11th November, ending the war.

## Key topic terms

**Allies** Two or more countries who agree to work together in an alliance. The two alliances in WW1 were the Triple Entente and the Triple Alliance
**Civilian** Someone who is not a soldier
**Armistice** Where countries agree to stop fighting, usually because one side has defeated the other
**Offensive** A large, organised attack by one army on another army.
**The Balkans** Part of Europe to the North of Greece. Austria-Hungary & Russia both wanted to control the Balkans
**Two front war** Fighting a war in two separate places e.g. Germany fighting in France & Russia
**Blockade** When a country stops supplies from reaching another country. Britain used her navy to stop supply ship reaching Germany
**Stalemate** When neither side is able to defeat the other in a battle.
**The Western Front** Where the British and French did most of their fighting against the Germans. It was in Belgium and Northern France. Where the Germans fought the Russians was called the Eastern Front.

## Key history terms

**Cause:** A reason why something happened e.g. the reasons why WW1 started

**Inevitable:** Definitely going to happen/unavoidable.

**Evolve:** Change/develop over time e.g. the tactics used in WW1 developed over time

MATHS

# Maths – Year 9

## Standard Form

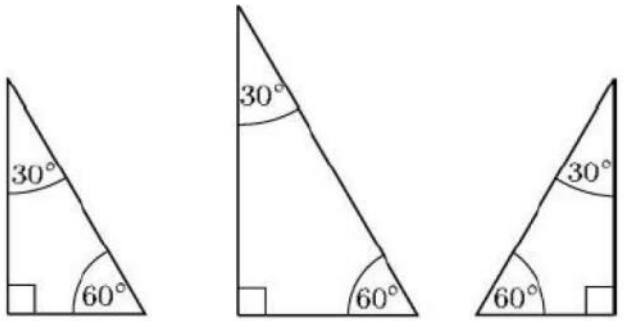
First significant figure must always be in the ones column.

$1{,}200{,}000 = 1.2 \times 10^{6}$

$0.0034 = 3.4 \times 10^{-3}$

## Similar Shapes

When a shape is enlarged:
The sides change length
Angles stay the same
The ratio of the sides stay the same



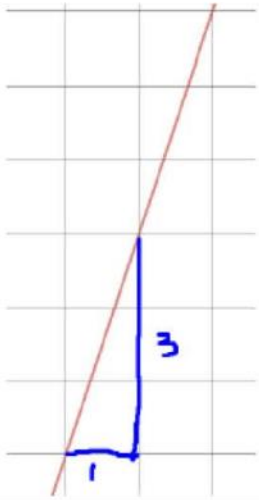

## Prime Numbers

Numbers with only themselves and 1 as a factor:

2, 3, 5, 7, 11, 13, 17, 19, ...

## Gradient of a line

How much the goes up/down for every one step across



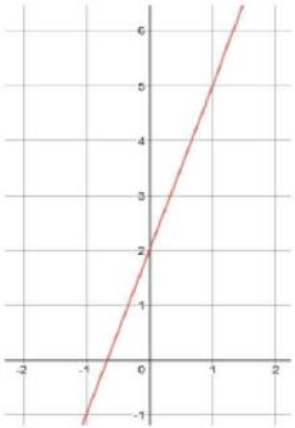

## Linear Graphs

$y = mx + c$

m is the gradient

c is the y-intercept

$y = 3x + 2$



## Expanding pairs of brackets

$(x + 3)(x + 5)$

| | x | 3 |
|---|---|---|
| x | $x^2$ | 3x |
| 5 | 5x | 15 |

$x^2 + 3x + 5x + 15$

$x^2 + 8x + 15$

## Nth Term of a linear sequence

How much is the sequence changing by each time? This is the times table it is similar to.
How much is the first term different from the timestable. This is what you add/subtract at the end.

2, 5, 8, 11, 14, 17, ... goes up in 3s. The first term is 1 less than 3 so the nth term is 3n - 1

## Indices

| | |
|---|---|
| $a^m \times a^n$ | $a^{m+n}$ |
| $a^m \div a^n$ | $a^{m-n}$ |
| $(a^m)^n$ | $a^{mn}$ |
| $a^0$ | 1 |

MUSIC

# Band Skills

## Guitar Tab

**What is Guitar/Ukulele/Bass Tab?**

- Tab or tablature is a way of notating or writing down music.
- It shows a graphic representation of the strings and frets on the guitar fretboard.
- Each note is indicated by placing a number, which indicates the fret to play, on the appropriate string.

**The Lines**

- When reading guitar tab you will see six lines.
- The thickest string on the guitar or bass is the one nearest your chin, with the thinnest string being the closest to the floor.

**The Numbers**

- The numbers show which **fret** to play – where the number is written will show which string is to be played.
- Frets are the metal strips that run across the fretboard.

## Drum Tab

**What is Drum Tab?**

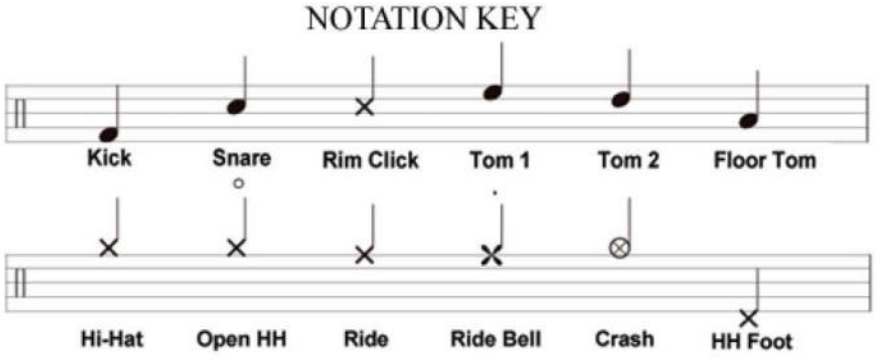
- When reading drum tab you will see five lines (like the normal stave).
- Instead of having different notes on the stave, each place is a different part of the drum kit.

**The note heads**

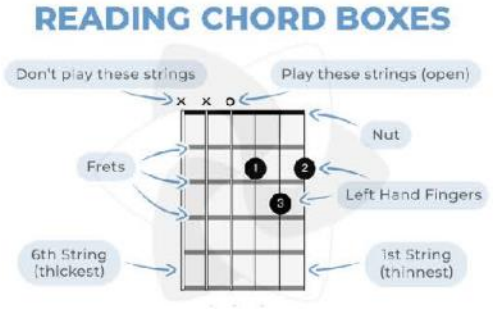
- The head of the note changes to tells the drummer how to hit the drum or cymbal, for example whether it is a click, a rim shot, or an accent

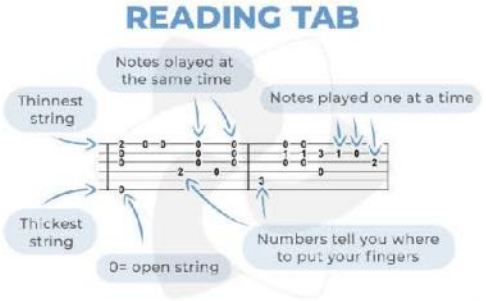
## KEYWORDS

| | |
|---|---|
| **1- Melody** – The main tune of a song, often sung. | **6- Arrangement –** the order/structure you choose to play a piece of music |
| **2- Chord –** 2 or more notes played simultaneously. | **7- Balance –** ensuing each part and instrument can be heard, with the main parts playing out. |
| **3- Bassline** – the bottom part of a song, played in the left hand of the piano or on the bass guitar. | **8- Rhythm –** a) the combination of different note durations in a piece.<br>b) The instruments that keep the pulse of a song. |
| **4- Riff** – a repeated pattern | **9- Verse** – the parts of a song that change lyrics, telling the story, that precedes a chorus. |
| **5- Hook** – a musical idea, often a short riff, passage, or phrase, that is used in popular music to make a song appealing and to "catch the ear of the listener". | **10- Chorus** – the repeating section of a song, usually following a verse, which sums up the theme of the song. |







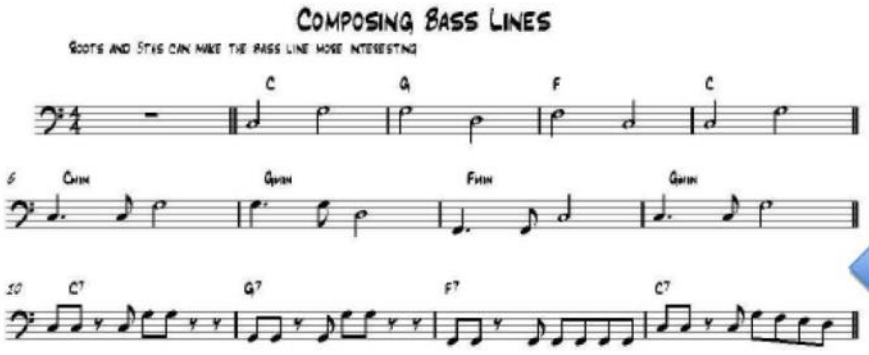



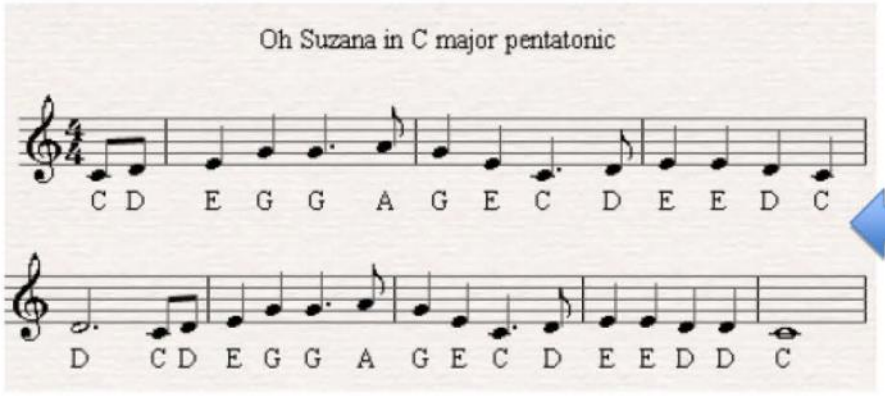
MUSIC

# Year 9 Music – Composing - Songwriting

| KEYWORDS |
|---|
| **1- Chord**: 2 or more notes played simultaneously. |
| **2- Chord Sequence**: A set order of chords that usually repeats during a song. |
| **3- Cadence:** the two chords at the end of a musical phrase. |
| **4- Riff**: short repeated phrase in popular music. |
| **5- Melody:** the main tune of a song, made up of several phrases |
| **6- Phrase**: a short musical passage; a musical sentence. |
| **7- Motif:** a short musical idea, a musical word, part of a phrase |
| **8- Bass:** the lowest part of a piece, often providing harmonic support. |
| **9- Modulation:** Change from one key to another. |
| **10- Sequence:** the repetition of a musical phrase at a higher or lower pitch than the original. |
| **11- Imitation:** Repeating a line with some changes |
| **12- Harmony:** chords, parts that play together simultaneously create chords, such as backing vocals or a countermelody |

| MAJOR CHORD PROGRESSIONS | | | | | | |
|---|---|---|---|---|---|---|
| I | ii | iii | IV | V | vi | vii° |
| Major | Minor | Minor | Major | Major | Minor | Diminished |
| A | B | C# | D | E | F# | G# |
| B | C# | D# | E | F# | G# | A# |
| C | D | E | F | G | A | B |
| D | E | F# | G | A | B | C# |
| E | F# | G# | A | B | C# | D# |
| F | G | A | Bb | C | D | E |
| G | A | B | C | D | E | F# |




## 4 Rules for Chord Progressions

1. Start and end on chord I
2. The primary/major chords are strong (I, IV & V)
3. The minor chords add some interest and variety (but avoid using iii
4. NEVER use chord vii (diminished)

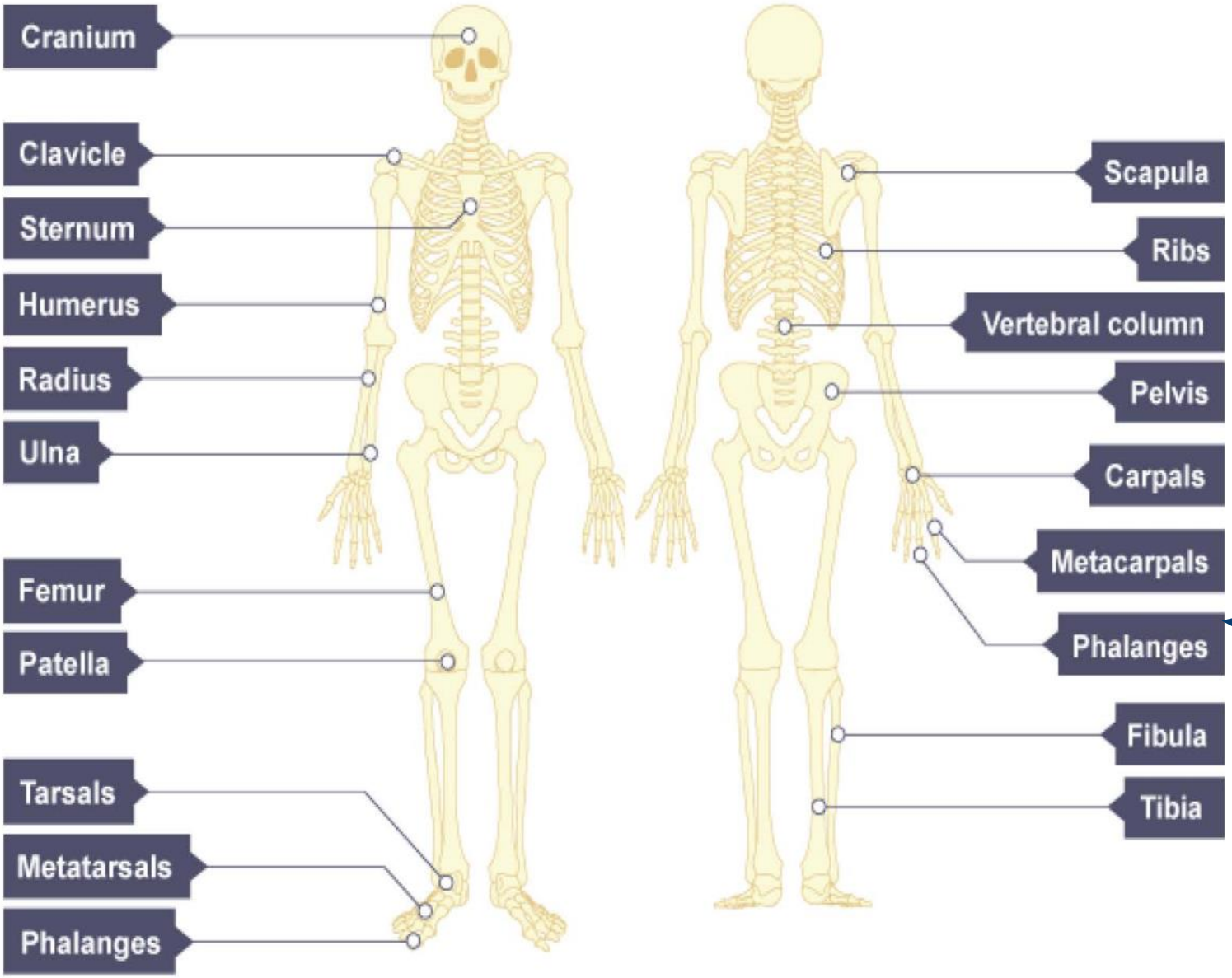
## 3 hints for Basslines

1. Bass them around the root (bottom) note of the chord
2. Use other notes of the chords for interest
3. Add some rhythm for character
4. Add passing notes (the notes between the chord notes)

## 5 characteristics of a good melody

1. Starts and ends on the same note (C)
2. Moves mainly by step
3. Has a smooth contour/shape (join the dots and see what shape it makes!)
4. Has 2 or 4 bar phrases
5. Uses similar short motifs (ideas) to give it a clear character (see how the top and bottom lines look similar?)

PE




## Functions of the skeleton:

- ⇒ Provides **support** and **posture** for the body
- ⇒ **Protects** vital organs
- ⇒ Allows **movements**
- ⇒ **Contains marrow** which produces blood cells
- ⇒ **Stores minerals**

**Challenge**

Can you think of sporting examples for the functions of the skeleton?

REP

# Unit 1: Is the media helpful to religion?

| Key Term | Definition |
|---|---|
| Media | Mass form of communication |
| Examples of Media | TV, Radio, Films, Youtube, Social Media, Newspaper, Vlogging and Books |
| Blasphemy | the action or offence of speaking disrespectfully about God or sacred things. |
| Freedom of Speech | the power or right to express one's opinions without censorship. |
| Censorship | is the practice of limiting access to information, ideas or books in order to prevent knowledge. |

| Media with religious themes | Themes |
|---|---|
| Prince of Egypt, Bruce Almighty, Evan Almighty, Life of Brian, Joseph and his Amazing Technicolour Dream coat, Chronicles of Narnia – The Lion, the Witch and the Wardrobe.<br>TV: Vicar of Dibley, Simpsons Episodes | Forgiveness, bravery, history, characteristics of God, compassion, charity, ideas of life after death, enlightenment/Knowledge/Wisdom. |
| <u>Controversy:</u><br>Concepts and ideas surrounding the Da Vinci Code and the claims made about Jesus Christ and Mary Magdalene. | <u>Symbolism in Art</u><br>Use of religious icons – dove – represents peace and the idea of Holy Spirit. |

| Skills in REP |
|---|
| Debate |
| Empathy |
| Enquiry |
| Discussion |
| Analysis |

| Key words |
|---|
| Believe / Belief |
| Faith |
| Moral |
| Religion |






## Advantages of Social Media

- **Connects the global community.**
- **People prefer to use technology than face to face.**
- **Can help in an educational setting – i.e film clips, videos, articles…**
- **Appealing to the younger generation.**

## Disadvantages of Social Media

- **Not everyone has access to the right technology.**
- **People mis-use religion to scare people.**
- **Distract people and lose meaning.**
- **Can be lonely – take away community/social ideas.**
- **Distract people and lose meaning.**