



WILMINGTON  
GRAMMAR SCHOOL FOR BOYS

# Knowledge Organisers

## Year 7 – Term 5

|            |  |
|------------|--|
| Name       |  |
| Form group |  |

The knowledge organisers in this booklet are full of the **essential facts** and **information** that you need to know and be able to recall in order to 'master' Term 5's units/topics in each of your subjects.

To achieve this, you will need to take in the facts and information and work at moving it all from your short to long-term memory.

We have included the reminder about how to self-quizz and various revision techniques.

Good luck in your learning,

Miss Price

Assistant Headteacher in charge of Teaching and Learning

*Knowledge is Power*

## How to self-quiz: A Reminder!



### **READ**

Read the specific facts/information you have been asked to focus on



### **SAY**

Say it in your head/out-loud (if you are at home and would like to)



### **COVER**

Cover the section of your knowledge organiser



### **WRITE**

Write out everything you can remember from what you have read and said to yourself



### **CHECK**

Check over what you have written – check every word.

If you have everything correct, tick your work with a green pen.

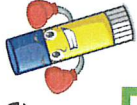
If you have made mistakes in word choice or spelling or have left words/information out, use the green pen to correct your work: This will help you identify the gaps in your knowledge and what you must spend time going over.

Repeat the process until you are able to write out all the facts/information, making no errors. We recommend at least 30 minutes in order to achieve this.

For an example of self-quizzing in action, please see the following instructional video:



# Making knowledge stick!



Get a family member/friend to test you (remember - word for word; number for number!)

**Focus and be positive** - say to yourself you can learn what you've been asked to/want to learn, because you can! It is proven that this makes a difference as you're more receptive to the knowledge going in!

**Make flash cards** (for example, have the term on one side and the definition on the other.) Please see this video that shows you how you can effectively use them over the course of a week or set amount of time to embed knowledge:

<https://www.youtube.com/watch?v=C20EvKtdJwQ&t=87s>

**Test yourself a lot - in all these ways and self-quizzing.** When you do so and answer incorrectly, not only are you more likely to remember the right answer after you look it up... you'll also remember that you didn't remember. (Getting something wrong is a great way to remember it the next time, especially if you tend to be hard on yourself.) That's why you need to start early and do little and often, and keep retrieving the same and old knowledge!

Say the words, definitions, formulae etc. **OUT-LOUD**: This turns you from passive to active in the learning process. Research shows that producing words aloud during study, relative to simply reading them silently, improves explicit memory.

**Incorporate mnemonics** (patterns of letters, ideas, or associations which assist in remembering something) to **recall longer strings of information**: e.g. **My Very Excellent Mother Just Served Us Noodles** (or **Nachos**) = The planets in order: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune

**Chunk your learning** - DON'T leave it until the night before it's due (if you do, you may know it a bit and be able to recognise the words, phrases and equations etc. But they won't be committed to memory.) Start early and do little and often; distributed practice is much more effective!

Build a 'MEMORY PALACE' (also known as method of loci; memory journey and mind palace technique): This memory aid was created thousands of years ago by the ancient Greeks. It's used by world record-holding memory champions (and Sherlock Holmes!) With a little planning and practice, you can build a memory palace, too. *Please see this video of a man helping an 8 year-old boy to know all the US presidents using this technique!*

[https://www.youtube.com/watch?v=aT7\\_g2E3q3Q&t=452s](https://www.youtube.com/watch?v=aT7_g2E3q3Q&t=452s)



# Mind Maps!

## How?

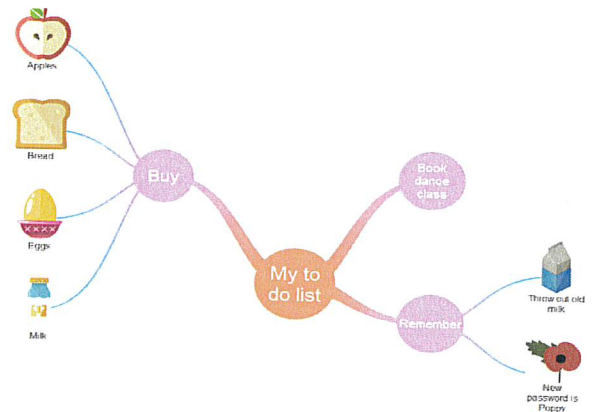
- Put the topic in the centre of a blank page
- Add big branches with the main ideas/themes of the topic
- Add small branches to these with more detail
- Try to write only 1 or 2 words per branch
  - Focus on the key points only
- Add an image to each branch (dual code\*):



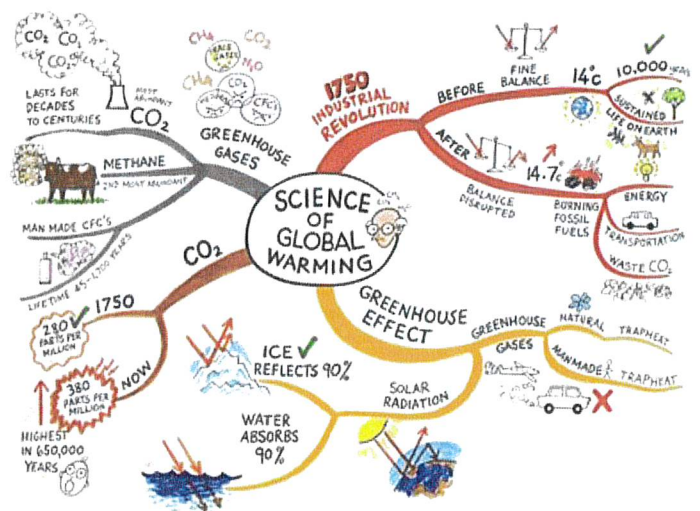
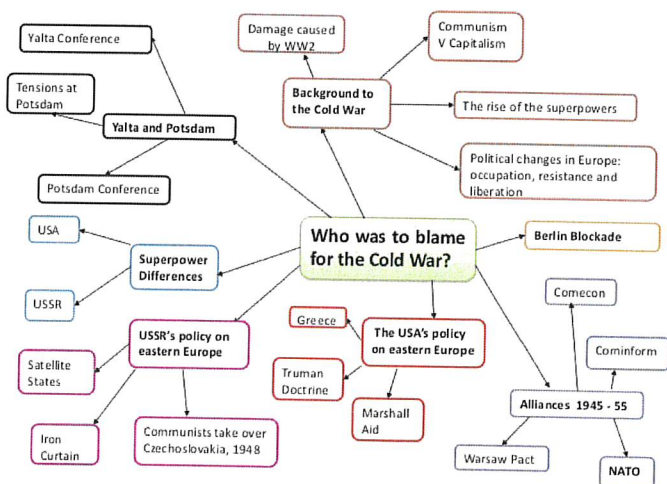
!!!The more creative, the better! Mind mapping can benefit memory retention when we create maps that involve association... The more imaginative and tailored an idea is to an individual, the more it will benefit their memory!!! ... As a simple example, let's work to remember a small 'to do' list:

- Buy apples
- Throw out old milk
- Remember the Internet password is now 'Poppy'
- Book a dance class

To help them remember items on their list, the individual who has created this mind map uses a picture of a 'Pink Lady' apple as a retrieval cue (trigger) because these are their favourite. Furthermore, the individual needs to remember that they have changed their password to 'Poppy', as another cue (trigger), so uses a picture of a remembrance poppy.



More examples of mind maps:



## Top tips!

- 1) ! Use different colours for each branch of your mind map. This helps your brain distinguish between each of the different information stems.
- 2) ! Use 'dual coding'\* in your mind maps. Dual coding means using both words and images to record the information you need to remember.



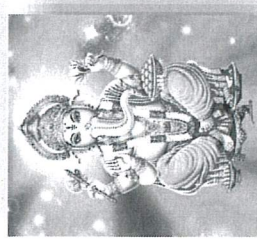
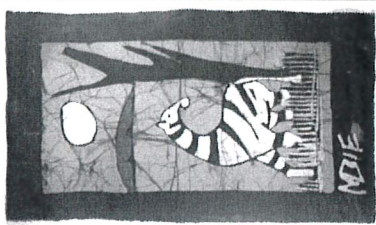
# WGSB Art - Year 7 Animal Symbolism Knowledge Organiser

## Hindu

|                 |   |
|-----------------|---|
| Cobra           | Wealth, power, fertility  |
| Sacred Cow      | Goodness, altruism, motherly love                               |
| Bull            | Masculinity, virility, strength, aggression, and fighting power |
| Butterfly, Frog | Reincarnation   |
| Bengal Tiger    | Victory over evil forces  |

Throughout history, animals have held significant meanings to different cultures of the world.

*Here are some examples of symbolic meanings of animals in different cultures.*



## Celtic

|                     |   |
|---------------------|---|
| <b>Adder, Snake</b> | Wisdom, reincarnation, cunning, creation, fertility, and healing. Thanks to the annual shedding of its skin, the snake was the Celtic animal symbolizing the cyclical nature of life. The crow was associated with death. |
| <b>Crow</b>         | The crow was associated with death.   |
| <b>Horse</b>        | Celtic horses were animals symbolizing development, healing, rejuvenation, and life in motion.  |
| <b>Salmon</b>       | The salmon was the symbol of all knowledge. These creatures that swam the rivers and oceans were also linked to sacred ancient mysteries and deep emotion.  |

## African

|                   |   |
|-------------------|---|
| <b>Lion</b>       | Strength, courage, pride, wisdom, authority, and protection, while the lioness represents fierce motherhood and femininity  |
| <b>Leopard</b>    | Agility, nobility, ferocity, aggression, and courage, and some consider it to be the Great Watcher.   |
| <b>Elephant</b>   | Good luck, patience, wisdom, longevity, and happiness.  |
| <b>Rhinoceros</b> | The rhino is believed in most African tribes to symbolise fierceness and savagery, often associating them with furious people, yet they are also a symbol of agility, freedom, solitude, and inner peace.               |
| <b>Monkey</b>     | Mischievousness and curiosity. Also, if you've ever watched a monkey, you notice they are humorous, social creatures. The monkey also represents comedy and friendship.   |
| <b>Giraffe</b>    | The giraffe represents grace. Their slender necks and long legs contribute to their elegant appearance. Giraffes also symbolize achievement. They are able to reach the tops of trees that most animals never even see. |
| <b>Zebra</b>      | The zebra symbolizes freedom, individuality, friendship and unity. Though they are a part of a herd, they each bring something special to the group and seemingly get along with all other animals.                     |

## Native American

|                  |   |
|------------------|---|
| <b>Ant</b>       | Self-discipline, teamwork, patience, diligence and work |
| <b>Bumblebee</b> | Honesty, pure thinking, willingness and drive           |
| <b>Dog</b>       | Protection, loyalty, companionship                      |
| <b>Owl</b>       | Wisdom, vision, insight, truth, patience, magic         |
| <b>Peacock</b>   | Pride, recognition, self-assurance                      |

# YEAR 7 DRAWING SKILLS KNOWLEDGE ORGANISER

| Keyword                 | Definition  |
|-------------------------|---|
| GANTT Chart             | A chart which plots tasks against time and can be used to plan a series of jobs to be completed in a specific timescale.  |
| Shading                 | The darkening or colouring of an illustration or diagram with parallel lines or a block of colour.  |
| Tone                    | A slight degree of difference in the intensity of a colour.   |
| Rendering               | To add colour and or texture to a drawing to represent a particular surface finish  |
| Grain                   | The fibrous structure of wood   |
| PVA – Polyvinyl Acetate | A water-based wood glue   |
| Glass Paper             | An abrasive paper used to sand down the surface of wood to achieve a high-quality finish  |
| Nets and Developments   | A series of 2D shapes that form the panels of a 3D shape. The panels are connected together in such a way that they can be folded and assembled into the 3D shape.  |
| Creasing                | The act of scoring or compressing a line of card so that the card can easily be bent along the crease.  |
| Tabs                    | A small flap or strip of material used to fasten the edges of a box together when you assemble it from a net.   |
| 3D drawing              | A drawing which shows length, width and height of an object.  |
| Isometric drawing       | A method of showing projection or perspective in which the 3 principal dimensions are represented by 3 axes 120 degrees apart.  |
| Crating                 | Drawing 3D boxes to use as guidelines to help you draw more complex shapes  |
| Orthographic Projection | An orthographic projection is a way of representing a 3D object by using several 2D views of the object. Orthographic drawings are also known as multiviews. The most commonly used views are top, front, and right side. |
| Front View              | A 2D drawing showing only the view of an item from the front  |
| Side View               | A 2D drawing showing only the view of an item from the side   |
| Plan View               | A 2D drawing showing only the view of an item from the top  |
| Dimensions              | Sizes of a drawing or item – these should always be in millimetres mm   |
| Construction Lines      | Feint lines that can be used to help in the creation of precise geometry  |



| Keyword             | Definition   |
|---------------------|--|
| Aeration            | Incorporating air into a mixture to give a light fluffy texture.   |
| Al dente            | Typically pasta cooked so as to be firm when bitten  |
| Antibacterial       | To prevent the growth or spread of bacteria  |
| Au gratin           | Sprinkled with breadcrumbs or grated cheese and browned  |
| Bacteria            | Microscopic organisms not visible with the naked eye   |
| Beating             | This is the rigorous mixing of ingredients using a wooden spoon, electric whisk, food mixer or food processor to thoroughly combine ingredients and to incorporate air                                 |
| Bridge hold         | Creating an arch over the ingredient with your hand so the knife can fit underneath to safely chop ingredients.  |
| Boiling             | The cooking method of cooking food in water or other liquids at a high temperature   |
| Chopping board      | These are used for chopping and preparing ingredients, they are available in a number of different colours and the correct colour must be used for the correct ingredient to avoid cross contamination |
| Coeliac disease     | A disease in which the small intestine is hypersensitive to gluten, leading to difficulty in digesting food  |
| Colander            | A perforated bowl used to strain off liquid from food after washing or cooking   |
| Claw grip           | A chopping techniques where your fingers are curled inward and gripping the food with the fingernails, the side of the knife blade should rest against the knuckles, used for slicing ingredients.     |
| Cross contamination | The process by which bacteria are transferred from one substance or object to another, with harmful effect. Transferring bacteria from raw to cooked food is the cause of most infections              |
| Dough               | A thick, malleable mixture of flour and liquid, used for baking into bread or pastry   |
| Electric hand mixer | An electric kitchen utensil that consists of a set of beaters used to mix ingredients  |
| Enzymic browning    | Is an oxidation reaction that takes place in some foods, mostly fruit and vegetables, causing the food to turn brown   |
| Flour dredger       | A container with small holes in the lid, used to sprinkle flour onto the dough and work surface  |
| Food Hygiene        | The conditions and measures necessary to ensure the safety of food from production to consumption.   |
| Food poisoning      | Illness caused by bacteria or other toxins in food, typically with vomiting and diarrhoea.   |
| Gelatinisation      | When starch particles swell and burst, thickening a liquid   |
| Glazing             | Spreading a thin layer of beaten egg, milk or other liquid onto the surface before cooking to give a shiny finish  |
| Gluten              | A mixture of two proteins (glutenin and gliadin) present in cereal grains, especially wheat, which is responsible for the elastic texture of dough   |
| Grater              | A device with various sized raised holes on each side used for cutting food into very small pieces   |
| Hob                 | A surface on top of a cooker which can be heated in order to cook ingredients on   |
| J-Cloth             | a light, absorbent, reusable cloth used for wiping household surfaces  |
| Kneading            | Stretching the dough with your hands to unravel the gluten strands. This makes the dough elastic and helps the bread to rise   |
| Measuring scales    | A kitchen device used to measure the weight of ingredients   |
| Mini bridge hold    | Creating an arch over a small ingredient with your first finger and thumb so the knife can fit underneath to safely chop ingredient  |
| Oven                | An enclosed compartment of the cooker used for cooking and heating food  |
| Personal Hygiene    | Ensuring people are clean and ready to handle food in order to avoid any form of contamination.  |
| Pizza cutter        | A circular cutting blade with a handle that rotates to cut food  |
| Proving             | Leaving dough in a warm place to give the yeast time to ferment  |
| Rolling pin         | A cylindrical cooking equipment used to flatten and level dough  |
| Rubbing in          | To coat flour grains with fat by gently rubbing between the fingertips and thumbs, continuing until the mixture resembles coarse breadcrumbs.  |
| Scone cutter        | A round tool with a sharp edge and fluted edge used for cutting dough into circle shapes   |
| Shortening          | The ability of a fat to produce a characteristic crumbly texture to baked products, i.e. pastry  |
| Sieve               | A cooking utensil made of a wire or plastic mesh in a frame with a handle used for separating particles such as flour  |
| Simmering           | A cooking method of cooking ingredients in water or a liquid at a gentle temperature, below its boiling temperature  |
| Tea Towel           | A cloth used for drying washing crockery, cooking equipment and cutlery  |
| Whisking            | Blend ingredients together quickly or to incorporate air into ingredients such as egg whites or heavy cream in order to increase the volume of the mixture   |
| Yeast               | A micro organism which feeds off the sugar and gives off carbon dioxide, creating bubbles inside the bread and makes the bread rise  |



# YEAR 7 PASSIVE AMPLIFIER KNOWLEDGE ORGANISER

| Keyword                         | Definition   |
|---------------------------------|--|
| Passive Amplifier               | A passive amplifier amplifies sound (increases the amplitude of acoustic power, sound intensity and sound pressure level) by passive means. In other words, it does so without the use of external electrical power or additional energy of any sort.    |
| Plywood                         | a type of strong thin wooden board consisting of two or more layers glued and pressed together with the direction of the grain alternating.  |
| MDF – Medium Density Fibreboard | a type of board made from very small pieces of wood that have been pressed and stuck together, often used for making furniture   |
| Acrylic                         | a transparent plastic material with outstanding strength, stiffness, and optical clarity. Acrylic sheet is easy to fabricate, bonds well with adhesives and solvents, and is easy to thermoform.   |
| Coping Saw                      | a saw with a very narrow blade stretched across a D-shaped frame, used for cutting curves in wood and plastic.   |
| Pillar Drill                    | Pillar drills are free standing machine tools used by engineers that use high powered motors to rotate drill bits at varying speed. These bits are then used to accurately machine, drill or tap holes in a variety of materials such as metal and wood. |
| Risk Assessment                 | a systematic process of evaluating the potential risks that may be involved in a projected activity  |
| Hazard                          | a danger or risk   |
| Control Measure                 | Control measures include actions that can be taken to reduce the potential of exposure to the hazard, or the control measure could be to remove the hazard or to reduce the likelihood of the risk of the exposure to that hazard being realised.        |
| Template                        | a shaped piece of rigid material used as a pattern for processes such as cutting out, shaping, or drilling   |
| 2D Design                       | A piece of CAD software that can be used to produce highly detailed, accurate 2-dimensional drawings. Drawings produced on this software can be used to control the laser cutter.  |
| CAD – Computer Aided Design     | the use of computers to aid in the creation, modification, analysis, or optimization of a design.  |



## Year 7 Drama

### Key Terminology Summer 1



One of the favourite forms of entertainment for the Ancient Greeks was the theatre. It began as part of a festival to the Greek god Dionysus, but eventually became a major part of the Greek culture.

#### Amphitheatres

Some of the theatres were quite large and could seat over 20,000 people. They were open-air theatres with tiered seating built in a semi-circle around the main stage. The bowl shape of the seating allowed the actors' voices to carry throughout the entire theatre. Actors performed in the open area at the centre of the theatre, which was called the orchestra.



#### Types of Plays

There were two main types of plays that the Greeks performed: tragedies and comedies.

Tragedy - Greek tragedies were very serious plays with a moral lesson. They usually told the story of a mythical hero who would eventually meet his doom because of his pride.

Comedy - Comedies were more light-hearted than tragedies. They told stories of everyday life and often made fun of Greek celebrities and politicians.

#### Music

Many plays were accompanied by music. Common instruments were the lyre (a stringed instrument) and the aulos (like a flute). There was also a group of performers near the front of the stage called the chorus that would chant or sing together during the play.



#### Actors, Costumes, and Masks

The actors wore costumes and masks to play different characters. The masks had different expressions on them to help the audience understand the character. Masks with large frowns were common for tragedies, while masks with big grins were used for comedies. The costumes were usually padded and exaggerated so they could be seen from the back seats. All of the actors were men. They dressed up as women when playing female characters.

#### Special effects

The Greeks used a variety of special effects to enhance their plays. They had ways of creating sounds such as rain, thunder, and horses hooves. They used cranes to lift actors up so they appeared to be flying. They often used a wheeled platform to roll out dead heroes onto the stage.

#### Famous Greek Playwrights

The best playwrights of the day were famous celebrities in Ancient Greece. There were often competitions during festivals and the playwright with the best play was presented an award. The most famous Greek playwrights were Aeschylus, Sophocles, Euripides, and Aristophanes.

## Knowledge Organiser

| Year 7   | Term 5   |  | 'Much Ado About Nothing' William Shakespeare  |
|--|--|--|---|
| Key Characters   | Key Context  |  | Structure of the Play   |
| <p><b>Beatrice</b> - Leonato's niece and Hero's cousin.</p> <p><b>Benedick</b> - An aristocratic soldier who has recently been fighting under Don Pedro, and a friend of Don Pedro and Claudio.</p> <p><b>Claudio</b> - A young soldier who has won great acclaim fighting under Don Pedro during the recent wars.</p> <p><b>Hero</b> - The beautiful young daughter of Leonato and the cousin of Beatrice.</p> <p><b>Don Pedro</b> - An important nobleman from Aragon, sometimes referred to as "Prince." Don Pedro is a long-time friend of Leonato, Hero's father, and is also close to the soldiers who have been fighting under him—the younger Benedick and the very young Claudio.</p> <p><b>Leonato</b> - A respected, well-to-do, elderly noble at whose home, in Messina, Italy, the action is set.</p> <p><b>Don John</b> - The illegitimate brother of Don Pedro; sometimes called "the Bastard."</p> | <ul style="list-style-type: none"> <li>Shakespeare went to a grammar school, where he was taught Ancient Greek. He uses some of the conventions of Ancient Greek comedy in the play: slapstick humour, witty debates, song and dance, elaborate costumes, as well as the possibility for mistaken identity.</li> <li>Elizabeth I was the ruling monarch when the play was written (in 1598 or 1599) and she had chosen not to marry.</li> <li>The belief (and sometimes even fear) in magic was palpable at the time.</li> <li>Cupid is an ancient god of love (he is often portrayed as the son of Venus and Mars). He is most commonly depicted as a baby with a bow and arrow, with the arrows being used to encourage people to fall in love.</li> </ul> <p style="text-align: center;"><b>Setting</b></p> <p><i>Much Ado About Nothing</i> is set in Messina, a port on the island of Sicily, which is next to the toe of Italy. Sicily was ruled by Aragon at the time the play was set. The action of the play takes place mainly at the home and on the grounds of Leonato's Estate.</p> |  | <p><b>Much Ado About Nothing</b> is a comedic 5-act play by William Shakespeare about misunderstandings, love and deception.</p> <p><b>The Plot:</b></p> <p>Benedick, Claudio and Don Pedro arrive at Leonato's house in Messina. Beatrice and Benedick bicker with each other and Claudio, a soldier, falls in love with Leonato's daughter, Hero.</p> <p>Don John, who is Don Pedro's evil half-brother, tricks Claudio into believing that he has seen Hero being unfaithful.</p> <p>Meanwhile, Don Pedro and others plot to bring Benedick and Beatrice together. Claudio accuses Hero of infidelity and refuses to marry her. Leonato is persuaded to pretend that she is dead.</p> <p>Hero's innocence is proven and Claudio repents. He agrees to accept Antonio's daughter in marriage and she turns out to be Hero after all! The trick to make Benedick and Beatrice fall in love succeeds and he proposes to her at the end of the play.</p> |
| Key Quotations   |  |  | Key Words   |
| <ul style="list-style-type: none"> <li>'The savage bull may, but if ever the sensible Benedick bear it, pluck off the bull's horns and set them in my forehead, and let me be vilely painted, and in such great letters as they write 'Here is good horse to hire' let them signify under my sign 'Here you may see Benedick, the married man.' (I.i.215–219) Beatrice</li> <li>'What should I do with him—dress him in my apparel and make him my waiting gentlewoman? He that hath a beard is more than a youth, and he that hath no beard is less than a man; and he that is more than a youth is not for me, and he that is less than a man, I am not for him.' (II.i.28–32) Beatrice</li> </ul>   | <ul style="list-style-type: none"> <li>'Dost thou not suspect my place? Dost thou not suspect my years? O that he were here to write me down an ass! But masters, remember that I am an ass. Though it be not written down, yet forget not that I am an ass. No, thou villain, thou art full of piety, as shall be proved upon thee by good witness. I am a wise fellow, and which is more, an officer, and which is more, a householder, and which is more, as pretty a piece of flesh as any is in Messina, and one that knows the law, go to . . . and one that hath two gowns, and everything handsome about him. Bring him away. O that I had been writ down an ass!' (IV.ii.67–78) Dogberry</li> </ul>   |  | <ul style="list-style-type: none"> <li><b>Soliloquy</b> – a speech in a play that the character speaks to himself or herself or to the audience, rather than to the other characters.</li> <li><b>Severe</b> – very strict or harsh.</li> <li><b>Elope</b> – to run away with a young person without the necessary permission from a parent or guardian.</li> <li><b>Conflict</b> – a serious disagreement, battle or struggle between two sides or ideas.</li> <li><b>Mockery</b> – to make fun of someone.</li> <li><b>Chaos</b> – a situation that lacks order and is filled with confusion.</li> <li><b>Resolution</b> – to solve a problem or difficulty.</li> </ul>   |

## Knowledge Organiser

**Department: Geography**

**Year: 7**

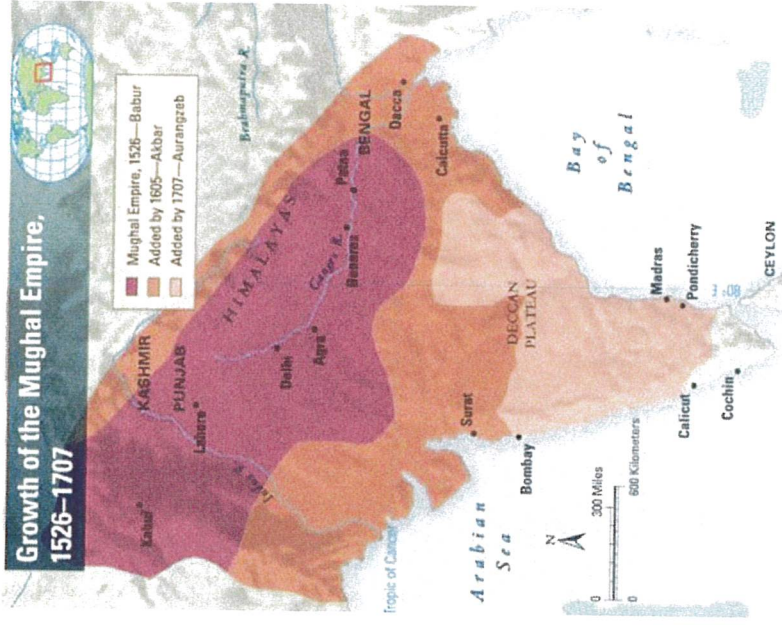
**Term: 5**

**Topic: Biomes#1**

| Key Words  | Key Learning Concepts/Facts  |
|--|--|
| <ul style="list-style-type: none"> <li>● <b>Ecosystem</b>-An ecosystem is a community of living organisms (plants and animals) sharing an environment.</li> <li>● <b>Biome</b>- A biome is a very large ecosystem e.g. Tropical Rainforest.</li> <li>● <b>Environment</b>- The natural or physical surroundings where plants and animals live.</li> <li>● <b>The non-living environment</b>- Rocks, soil, the air and climate.</li> <li>● <b>The living environment</b> - Animals, birds, fish, insects and people.</li> <li>● <b>Biosphere</b> – The part of the Earth’s surface inhabited by living things.</li> <li>● <b>Temperate</b> – a region characterised by a mild climate between the tropics and polar/boreal regions.</li> <li>● <b>Deciduous</b>- a tree or shrub that sheds its leaves annually</li> <li>● <b>Taiga</b>- coniferous forest of high northern latitudes</li> <li>● <b>Coniferous</b>- evergreen trees that bear foliage throughout the year.</li> <li>● <b>Tundra</b> – the coldest biome characterised by treeless vegetation</li> <li>● <b>Permafrost</b>- permanently frozen ground where only the surface layer thaws during the brief summer</li> <li>● <b>Inuit</b>- indigenous people who live in the tundra</li> <li>● <b>Indigenous</b> – original people of that area.</li> <li>● <b>Sustainable</b> – using resources in a way that lets them naturally repair and thus be available for use by future generations.</li> <li>● <b>Mediterranean</b> biome a- temperate biome, characterized by hot-dry summers and mild and rainy winters.</li> <li>● <b>Xerophytes</b>- Plants adapted to very dry conditions</li> </ul> <p><b>With your knowledge you should be able to...</b></p> <ul style="list-style-type: none"> <li>● Describe the key components of an ecosystem.</li> <li>● Describe the distribution of a biome you have studied.</li> <li>● Explain the climate of the tundra biome.</li> <li>● Describe and explain how plants and animals have adapted to the conditions found in a biome you have studied.</li> <li>● How have human beings adapted to living in tundra regions in the past and present.</li> </ul> | <ul style="list-style-type: none"> <li>● <b>What are ecosystems and biomes and where are they found?</b><br/>An ecosystem is the interaction of living and non-living things in an environment. A biome is a specific geographic area notable for the species living there. A biome can be made up of many ecosystems. For example, an aquatic biome can contain ecosystems such as coral reefs and kelp forests. There are 9 land-based Biomes.<br/>Temperate deciduous forest, Coniferous Forest, Woodland Chaparral, Tundra Grassland, Desert, Tropical Savanna and Tropical Forest as well as Ocean Biomes.</li> <li>● <b>To understand how deciduous woodlands are adapted to the climate, and why they are important.</b><br/>Temperate deciduous forests are found between 40° and 60° north and south of the equator. The rainfall is high, between 500-1,500 mm a year. The temperatures remain on average above 0°C even in the winter. The summer temperatures average between 25-20°C. The winter is cooler, encouraging the trees to shed their leaves. The trees have typically large broad leaves, such as oak, beech and elm. These form the canopy layer. As some light can get through, the vegetation is layered. Beneath the taller trees is a shrub layer. The shrub layer contains species like hazel, ash and holly. Grass, bracken or bluebells can be found in the ground layer. Deciduous woodlands contain trees with broad leaves, such as oak, beech and elm. Humans use woodlands in a variety of ways: <ul style="list-style-type: none"> <li>● as a resource - wood is used for fuel (firewood) or as timber for buildings</li> <li>● for recreation - for example for deer hunting or walks</li> <li>● for conservation</li> </ul> </li> <li>● <b>To know the main features of the taiga (boreal) forest and understand how its trees are adapted to the Climate.</b><br/>The coniferous biome, also known as the Taiga, is characterised by evergreen trees. They have adapted by: <ul style="list-style-type: none"> <li>● Coniferous trees have thick bark to protect against the cold. They are cone-shaped, with flexible branches which help them to cope with heavy snow fall.</li> <li>● Pine cones protect the seeds during the harsh winter.</li> <li>● The thin waxy needles reduce water loss.</li> <li>● Their evergreen nature means that the needles can photosynthesise whenever there is sufficient sunlight.</li> <li>● The dense forest creates warmth during the harsh winter.</li> <li>● They have shallow roots.</li> </ul> </li> </ul> |

# Year 7 – Term 5 KO ‘The Mughals sought only to conquer’

|                              |   |
|------------------------------|---|
| <b>Islam</b>                 | The official religion of the Mughal empire. Followers of Islam believe in the teachings of the Prophet Muhammed. Pilgrimage to Mecca (Hajj) is very important.  |
| <b>Persian</b>               | Art, language and ideas originating from Persia (modern day Iran).  |
| <b>Hinduism</b>              | A major religious belief in India during the Mughal Empire. Hindus worship many gods but the three most important are the trimurti (Brahma, Vishnu and Shiva).  |
| <b>Sikhism</b>               | A religion founded in the Punjab region of India in the 15 <sup>th</sup> century. Sikhs believe in one god who guides and protects them.  |
| <b>Battle of Panipat</b>     | A decisive battle in 1526 when Babur defeated the forces of Ibrahim Lodhi to control northern India.  |
| <b>Administrative system</b> | The way in which government is organised especially to collect taxes and ensure that laws are followed.   |
| <b>Marathas</b>              | A Hindu warrior group who were increasingly in conflict with the Mughal Empire.   |
| <b>Religious toleration</b>  | The policy of allowing different religions to exist within the empire. This was a policy of several of the Mughal emperors, with Akbar decreeing that non-Muslims didn't have to follow Islamic law. Some historians argue that it was not really tolerant. |
| <b>East India Company</b>    | A British trading company set up to trade goods from Asia back to Britain. It eventually took control of large areas of the Indian sub-continent until the Indian Rebellion of 1857 when the British Raj took full control.                                 |



**1526**  
Babur establishes the Mughal Empire



**1555**  
Humayan restored to the Mughal throne after exile in Afghanistan



**1570**  
Akbar controls northern India, Afghanistan, Pakistan and Bangladesh



**1615**  
Britain sends an ambassador to the Mughal Court



**1627**  
Jahangir dies, Shah Jahan becomes the next emperor



**1658**  
Aurangzeb imprisons his father for the rest of his life and takes over as emperor

**1707**

Death of Aurangzeb, decline of the Mughals. By this stage it controlled all of India, Pakistan, Bangladesh and Afghanistan

# Year 7 Knowledge Organiser

Make sure to read the pages that relate to the topic you're studying. To help you remember the key points, you can copy, say, cover and check. Once you think you have learnt the key knowledge, use the Knowledge Retriever book to test yourself. Look at the next page to see how to use the knowledge retriever book.

| Term | Topics Taught                            | Knowledge Organiser Book Pages                                   | Knowledge Retriever Book Pages |
|------|--|--|--------------------------------|
| 1    | Negative Numbers                         | 2  | 3, 4                           |
|      | Order of Operations                      | 2  | 3, 4                           |
|      | Algebraic Expressions                    | 13 (not multiplying brackets), 16, 17 (not rearranging formulas) | 29, 30, 35-38                  |
| 2    | Fractions                                | 7  | 15, 16                         |
|      | Sequences (nth term)                     | 18   | 41, 42                         |
| 3    | Number Theory                            | 5, 6   | 9-12                           |
|      | Area and Perimeter                       | 41   | 97, 98                         |
|      | Fractions and Decimals                   | 8  | 17, 18                         |
|      | Percentages                              | 32, 33   | 75-78                          |
|      | Angle facts and angles in parallel lines | 45, 46 (not interior and exterior angles of polygons)            | 107-110                        |
| 4    | Expanding single brackets                | 13 (this is the at the bottom of the page)                       | 29, 30                         |
|      | Forming and solving linear equations     | 15   | 33, 34                         |
|      | Charts and Graphs                        | 58, 59   | 139-142                        |
| 5    | Averages                                 | 61, 62   | 145-148                        |
|      | Manipulating decimals                    | 3, 4   | 5-8                            |
| 6    | Rounding and approximation               | 7, 8 (not rounded or truncated measurements)                     | 19-22                          |
|      | Pythagoras Theorem                       | 50 (not three trigonometry formulas)                             | 119-120                        |
|      | Ratio                                    | 28, 29, 49 (map scales only)                                     | 65, 59, 117, 118               |
|      | Transformations                          | 40   | 93, 94                         |
| 6    | Volume of prisms                         | 43 (Volumes of cuboids & prisms only)                            | 101, 102                       |
|      | Plans & elevations                       | 42 (Three projections only)                                      | 99, 100                        |

## How to Use This Book

Every page in this book matches a page in the Higher GCSE Maths Knowledge Organiser. Before using this book, try to memorise everything on a Knowledge Organiser page. Then follow these seven steps to see how much knowledge you're able to retrieve...

**1** Memorise the Knowledge Organiser page.

**2** Retrieve information from the Knowledge Organiser to fill in any dotted lines or white spaces. You may need to draw, complete or add labels to tables, graphs and diagrams too.

**3** Use what you've learned from the Knowledge Organiser to check your work. Use a different coloured pen to write in anything you missed or that wasn't quite right. This lets you see clearly what you know and what you don't know.

**4** After doing the First Go page, wait a few days. This is important because spacing out your retrieval practice helps you to remember things better.

**5** Now do the Second Go page. The Second Go page is harder — it has more things missing. You should see some improvement between your first and second go.

**6** Again, check your work against the Knowledge Organiser and correct it with a different coloured pen. You should see some improvement between your first and second go.

**7** Wait another few days, then try to recreate any methods, formulas, tables or diagrams from the Knowledge Organiser page on a blank piece of paper. You can also have a go at any example questions. If you can do all this, you'll know you've really learned it.

There are also Mixed Practice Quizzes dotted throughout the book:

- The quizzes come in sets of four. They test a mix of content from the previous few pages.
- Do each quiz on a different day — write the date you do each one at the top of the quiz.
- Tick the questions you get right and record your score in the box at the end.

## Year 7 Term 5 KO

### Where you usually go on holiday

Tous les ans every year  
 Je vais I go  
 il/elle va he/she goes  
 nous allons we go  
 ils/elles vont they go  
 en France to France  
 en Espagne to Spain  
 en Grèce to Greece  
 en Italie to Italy  
 aux États-Unis to the USA  
 au Portugal to Portugal  
 à la mer to the seaside  
 à la montagne to the mountains  
 à la campagne to the countryside

### Holiday activities (past tense)

l'année dernière last year  
 je suis allé(e) en France I went to France  
 je suis allé(e) au restaurant I went to the restaurant  
 je suis resté(e) à la maison I stayed at home  
 j'ai fait du camping I did camping  
 j'ai fait de la rando I did hiking  
 j'ai fait de la natation I did swimming  
 j'ai fait du vélo I did cycling  
 j'ai retrouvé mes copains I met my friends  
 j'ai visité les monuments I visited the monuments  
 j'ai mangé au restaurant I ate in the restaurant  
 j'ai joué au foot I played football  
 j'ai regardé la télé I watched TV  
 j'ai parlé avec mes amis I talked with my friends  
 j'ai bavardé I chatted  
 j'ai rigolé I joked around

### Holiday activities (present tense)

je vais au restaurant I go to the restaurant  
 je fais du camping I do camping  
 je fais de la rando I go hiking  
 je fais de la natation I do swimming  
 je fais des activités sportives I do sports activities  
 je fais du vélo I do cycling  
 je reste à la maison I stay at home  
 je fais de la voile I do sailing  
 je nage dans la mer I swim in the sea  
 je reste au lit I stay in bed  
 je retrouve mes copains I meet my friends  
 je visite les monuments I visit the monuments  
 je mange au restaurant I eat in a restaurant  
 je joue au foot I play football  
 je joue à des jeux vidéo I play video games  
 je regarde la télé I watch TV  
 je parle avec mes amis I talk with my friends  
 je bavarde I chat  
 je rigole I joke around

### Holiday activities (future tense)

l'année prochaine... next year  
 je vais... I am going...  
 je ne vais pas... I am not going...  
 tu vas...? are you going...?  
 il/elle va... he/she is going...  
 on va... we are going...  
 nous allons... we are going...  
 ils/elles vont they are going...  
 aller en France to go to France  
 aller au restaurant to go to the restaurant  
 faire du camping to do camping  
 faire de la rando to do hiking  
 faire de la natation to do swimming  
 faire du vélo to do cycling  
 rester à la maison to stay at home  
 retrouver mes copains to meet my friends  
 visiter les monuments to visit the monuments  
 manger au restaurant to eat in the restaurant  
 jouer au foot to play football  
 jouer à des jeux vidéo to play video games  
 regarder la télé to watch TV  
 parler avec mes amis to talk with my friends  
 bavarder to chat  
 rigoler to joke around

Je vais I go

J'allais I used to go

je suis allé I went

Je vais aller I am going to go

Je voudrais aller I would like to go

ma mère/mon père dit que my

mum/dad says that

puisque since

ceci dit having said that

je dois dire que I have to say that

### At the café

j'ai faim I'm hungry

j'ai soif I'm thirsty

je voudrais I'd like

un café a black coffee

un café-crème a white coffee

un thé a tea

un chocolat chaud a hot chocolate

un coca a cola

un jus d'orange an orange juice

un Orangina an Orangina

une limonade a lemonade

un sandwich au fromage a cheese sandwich

un sandwich au jambon a ham sandwich

un croque-monsieur a toasted cheese and

ham sandwich

une crêpe a pancake

une glace an ice-cream

Future dreams

si je pouvais if I were able to

je voudrais I would like

aller à Paris to go to Paris

être footballeur professionnelle to be a

professional footballer

être danseuse professionnelle to be a

professional dancer

habiter dans une grande maison to live in a

big house

avoir une voiture très cool to have a very

cool car

habiter dans une grande maison to live in a

big house

faire le tour du monde to travel the world



| Key Terms  | Topics   | Essential Knowledge   |
|--|--|---|
| <p><b>Human:</b> A human being; a person</p> <p><b>Humanism:</b> A system of thought and action based on the nature of interest of humans.</p> <p><b>Humanist:</b> A follower of the principles of humanism.</p> <p><b>Theist:</b> Someone who believes that there is a God.</p> <p><b>Atheist:</b> Someone who does not believe in God.</p> <p><b>Agnostic:</b> Someone who is not sure whether God exists.</p> <p><b>Empathy:</b> To understand and share the feelings of others.</p> <p><b>Non-religious:</b> Not relating with a religion.</p> <p><b>Reason:</b> The power of the mind to think, understand and form judgements.</p> | <p>What is Humanism?</p> <p>Where do I come from?</p> <p>How does humanist work out what is right or wrong?</p> <p>What do humanist believe about life after death?</p> <p>How do humanists celebrate life events?</p> | <p>Humanism is not a religion. It is an approach to life which encourages living based on reason. It rejects religion. Humanist believe humans evolved over the years, to learn, to make choices and have their own beliefs. It is a worldview that only uses science, evidence, reason and empathy to make sense of the world and to inform how they should act and care for others.</p> <p>Humanists do not believe that we were created by God. They believe in evolution. Research carried out by <b>Charles Darwin</b>.</p> <p>Humanists do not believe in God or other supernatural beings and do not believe that our knowledge of right and wrong comes from religious rules such as those found in scripture. They believe in the <b>Golden Rule</b> which is treat others as you yourself want to be treated. Humanists try to live a full and happy life and help others do the same and believe we should use our own human nature as a guide to good living.</p> <p>What do humanists believe happens when we die? For some religious people they believe that when we die, we move into another life. Humanism is a non-religious worldview. Humanists do not believe in an afterlife. They believe that death is the natural process that is the end of our existence on earth. They don't believe in an afterlife, they don't believe that anything happens after we die, that means that we should make the most of our lives because this is the only one that we have, and that might be in different ways.</p> <p>Humanists do celebrate important life events. This is done differently, for example for a wedding. Couples will write down their own vows and promises than basing it on what religious text says. Humanists do not have a naming ceremony for their baby. Parents write down the promises they have for their child.</p> |



**Key Words**

**Optics and Audiology**

- Dispersion** The process in which white light is separated into different colours
- Inverted** Upside down
- Medium** The material through which a wave travels
- Translucent** A material through which light passes but is scattered so that you cannot see through it clearly
- Frequency** The number of vibrations per second
- Normal** The line in a ray diagram drawn at 90° to a boundary
- Amplitude** The greatest height of a wave, measured from the mid-point to the peak or trough
- Incident ray** The ray of light that initially hits the surface of an object
- Hertz** The unit of frequency
- Refraction** The change of speed of a wave as it passes from one material to another
- Spectrum** A range of related waves
- Opaque** An object through which light cannot pass
- Ultrasound** A sound wave emitted above 20kHz
- Transverse** A wave where the particles move perpendicularly to the direction in which the energy travels
- Reflected** When a wave bounces off of a surface
- Vibration** A regular back and forth motion of an object that creates a wave
- Longitudinal** A wave where the particles move in the same plane as the direction in which the energy travels
- Infrasound** A sound wave emitted below 20Hz
- Transparent** A material through which light can pass
- Vacuum** An empty space from which all matter has been removed

**Key Learning Concepts**

**Optics and Audiology**

Light travels in straight lines from a source. Light travels through **transparent** objects but not through opaque objects. **Translucent** objects show a glow of light through them. Transparent materials let light pass straight through. We say they **transmit** light. Opaque surfaces can **absorb** or **reflect** light. A pinhole camera is a simple camera with a small hole in one end and a screen at the other. It works in a similar way to our eyes. Light rays are **scattered** by rough surfaces, and a **reflection** cannot be seen. When light shines onto an object viewed in a mirror, the rays are **reflected** into the eye. The rays seem to come from a position behind the mirror. The image is the **same size** as the object and the **same distance** from the mirror. In the image left is right and right becomes left. The **angle of incidence** is equal to the **angle of reflection**. When light hits something transparent it changes speed and direction. This is called **refraction**. Refraction takes place at the **interface** between two substances. When light is transmitted through glass it slows down and changes direction **towards** the normal. When it travels back out it speeds up again and changes direction **away from** the normal. **Lenses** are curved pieces of glass or transparent plastic that are designed to refract light in particular ways. Some lenses make rays of light come together, and some lenses make the light spread out. Lenses are used in spectacles and microscopes. White light is a mixture of colours and can be split up using a **prism** to give a **spectrum** of seven colours (red, orange, yellow, green, blue, indigo, violet). The splitting of colour into a **spectrum** is called dispersion. Objects reflect all the colours, but a red object only reflects red and all other colours are absorbed. This idea applies to all colours except black – black objects absorb all colours. **Sound** is a form of **energy**. Sounds are made when things **vibrate**. The vibrations are passed on by particles. Sound therefore needs a substance to pass on the vibrations, so it can travel through solids, liquids and gases but not through a **vacuum**. The speed of sound is faster through material in which particles are closer together. When the sound energy moves from one place to another it has been **transferred**. The **frequency** of a **sound wave** is the number of complete waves passing a point each second. The unit of frequency is **hertz (Hz)**. The **wavelength** is the distance between any two identical points on neighbouring waves. Sound waves travel through the air and into the ear. They cause the eardrum to vibrate. The vibrations are passed on to the **cochlea** in the **inner ear**, where they are changed to electrical signals called **impulses**. A **nerve** takes this message to the brain. When the message reaches the brain we hear the sound. Loud sounds can damage the eardrum or the cochlea. People who are exposed to loud sounds for long periods of time are at risk of damaging their hearing or even suffering permanent deafness. To avoid this, people who work in loud environments wear ear protection. Unpleasant sound is often called **noise**. Wax, ear infections and getting older can also affect hearing. We can measure how loud a sound is by using a sound intensity meter. It measures the loudness of a sound in **decibels (dB)**. The **threshold of hearing** is the quietest sound we can hear and this is 0dB.

| Key Words       |  | Key Learning Concepts/Facts   |
|-----------------|--|---|
| word            | definition   |   |
| Fertilisation   | Fusing of a male sex cell with a female sex cell.  | <p><b>The human reproductive systems</b></p> <p>Humans have <b>reproductive organs</b> so that they can reproduce. The ovaries and testes produce sex cells. The <b>menstrual cycle</b> starts with <b>menstruation</b> (the loss of the uterus lining and some blood through the vagina). It takes 28–32 days for each cycle. About 14 days after menstruation starts, an egg cell is released from an ovary. This is called <b>ovulation</b>. If the egg cell is not fertilised, the uterus lining starts to break down and the cycle starts again.</p> <p>Sperm cells and egg cells are <b>adapted</b> to their <b>functions</b>. A sperm cell is much smaller than an egg cell.</p> <p><b>Pregnancy</b></p> <p>If the egg cell meets a sperm cell in an oviduct, <b>fertilisation</b> can occur (the nuclei from the two cells <b>fuse</b>). The <b>fertilised egg cell</b> divides to form a ball of cells (an <b>embryo</b>). The embryo travels to the uterus where it sinks into the soft lining (<b>implantation</b>). The woman is now <b>pregnant</b>. Once it has developed all its organs (after about 10 weeks) it is called a <b>foetus</b>. It takes about 40 weeks (9 months) for a fertilised egg cell to grow into a baby ready to be born. This time is called the <b>gestation period</b>.</p> <p>When the baby is ready to be born, the uterus starts <b>contractions</b> and the woman goes into <b>labour</b>. The muscles of the cervix relax. The baby is pushed out head first through the cervix and the vagina. After birth, the baby starts to breathe and the cord is cut. The scar left behind is the <b>navel</b>. After this, the placenta is pushed out of the uterus. This is the <b>afterbirth</b>. The mother's breasts contain <b>mammary glands</b> that produce milk to feed the baby. Breast milk contains <b>antibodies</b> that help destroy microbes that might cause a disease in the baby.</p> |
| sex cell        | A cell used for sexual reproduction.   |   |
| Oviduct         | Carries egg cells from the ovaries to the uterus in women. Fertilisation happens here.   |   |
| sperm duct      | Tube that carries sperm from the testes to the urethra.  |   |
| Testis          | Male reproductive organ. Produces sperm cells.<br>Plural =testes.  |   |
| Implantation    | When an embryo sinks into the soft lining of the uterus.   |   |
| amniotic fluid  | Liquid surrounding the growing embryo and protecting it.   |   |
| menstrual cycle | Series of events lasting about a month, happening in the female reproductive system.<br>The cycle causes ovulation and the lining of the uterus is replaced. |   |
| Placenta        | Attached to the uterus wall, this takes oxygen and food out of the mother's blood and puts waste materials into the mother's blood.                          |   |
| umbilical cord  | Carries food, oxygen and waste between the placenta and the growing foetus.  |   |
| Labour          | Time when the baby is about to be born.  |   |
| Puberty         | Time when big physical changes happen in the body of a teenager.   |   |
| Gestation       | The time between conception and birth, during which the embryo or foetus is developing in the uterus.  |   |

# WGSB Year 7 Academic Merits

|  | <b>BRONZE</b> | <b>SILVER</b> | <b>GOLD</b> |
|--|---------------|---------------|-------------|
| Life Programme                                   | 3             | 5             | 8           |
| Art, Computer Studies, Drama, Finance, Music, RS | 8             | 10            | 12          |
| DT   | 10            | 15            | 20          |
| Geography, History, PE                           | 20            | 25            | 30          |
| Maths, French                                    | 30            | 40            | 50          |
| English, Science                                 | 35            | 45            | 55          |