



ISCA ACADEMY

INSPIRATION FOR LIFE

**AUTUMN 2020**

**KNOWLEDGE BOOKLET**

**YEAR 7**

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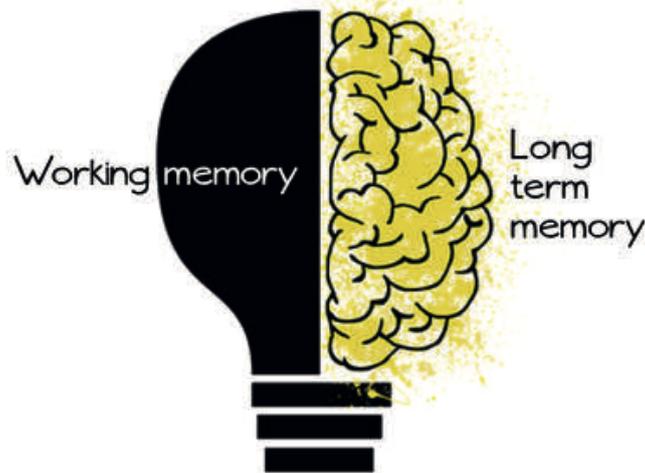
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# WHAT IS A KNOWLEDGE ORGANISER?

Your mind is split into two parts: the working-memory and the long-term memory. Everybody's working-memory is limited, and can very easily become overwhelmed and this is known as overload. Your long-term memory, on the other hand, is effectively a limitless storehouse for information.



You can support your working memory by storing key facts and processes in your long-term memory. These facts and processes can then be retrieved to stop your working memory becoming overloaded:

***Let's look at an example, the basic number fact:  $7 \times 8 = 56$***

***If you can instantly recall that  $7 \times 8 = 56$ , your working memory has more space to think about a more difficult problem, like  $37 \times 8$ . The answer of 56 comes effortlessly, and you can focus on  $30 \times 8$ , then add the product to the 56 in your head.***

***If you do not know that  $7 \times 8 = 56$  straight away, you are more likely to become confused and frustrated. Being able to very quickly recall key facts is a way of hacking your working memory, making thinking about difficult stuff much easier.***

This booklet contains knowledge organisers for all of your subjects for the Autumn term. Each knowledge organiser has the key information, which needs to be memorised to top up your long-term memory in order to help you master your subject and be successful in lessons. You will be expected to follow the homework schedule on page 4.

# HOW TO USE YOUR KNOWLEDGE ORGANISER

## Challenge yourself

Which will you choose?



### Look Cover Write Check

Look at your knowledge organiser, Cover a section of it, Write out the content you have just covered from memory and Check you have recalled it correctly



### Mindmaps

Place the key word/concept in the middle. Go wild with colourful, flowing shapes that link the key definitions and concepts.



### Revision Clock

Draw a clock and add the topic in the middle. Then, break it down into 10 minute sections. Add notes in each segment. Cover the clock and recite all the information out loud.



### Mnemonics

Creating mnemonics is a great way for remembering groups or lists of words. For example, to remember the order of planets in the solar system:  
**M**y **V**ery **E**xcited **M**other **J**ust **S**erved **U**S  
**N**achos



### Flash Cards

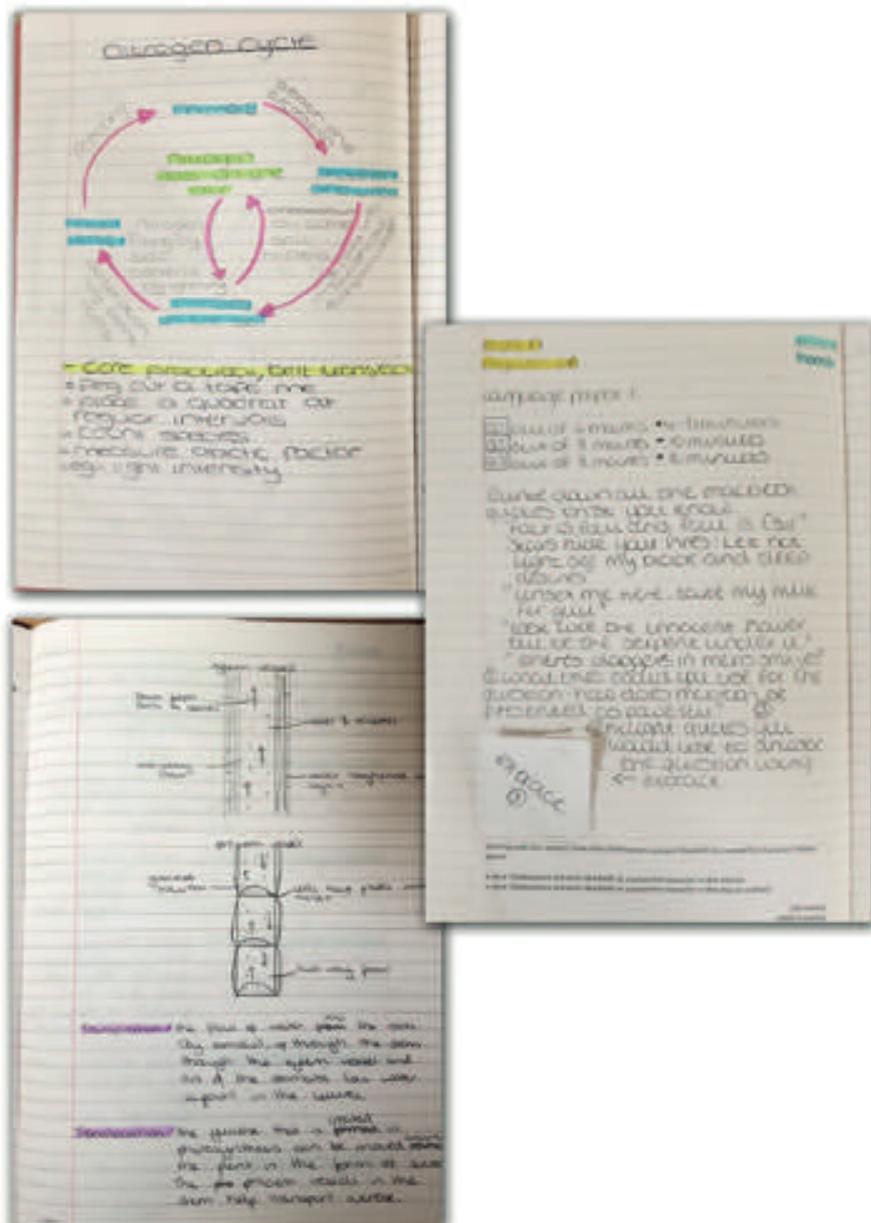
Write down the word/term on one side and a definition/explanation on the other side. Once you have notes written in your own words and summarised – move onto testing yourself quickly.

# EXPECTATIONS OF YOU

1. Check the schedule on the next page to see which knowledge organisers you should use each day for your homework
2. Complete **one full page for each subject** on the schedule in your knowledge book **every day**
3. Use your knowledge organiser after you have finished to **mark and correct** your own work
4. **Sign your self-check sheet at the end of each week** after you have finished your full page each day
5. Get your self-check sheet **signed by your tutor** during your knowledge organiser tutor time session

<b>T</b>	on Time
<b>A</b>	Accurate
<b>N</b>	Neat
<b>C</b>	Complete

Homework should be **TANC**. Below is an example of homework that would meet the expected standard. If it does, your tutor will sign your log on the morning you are working in silence on your knowledge organiser.



## YOUR SCHEDULE

Week A	
Day	Subject
Monday	Maths
Tuesday	Science
Wednesday	History
Thursday	Art/DT/Music/Drama (rotation)
Friday	PE
Week B	
Day	Subject
Monday	English
Tuesday	MFL
Wednesday	Geography
Thursday	RE
Friday	Computing

You will need to sign to confirm you have completed the knowledge organiser homework. Your tutor will check this each week.

Week commencing	Self Check	Tutor Sign	Week commencing	Self Check	Tutor Sign
7/9/2020			9/11/2020		
14/9/2020			16/11/2020		
21/9/2020			23/11/2020		
28/9/2020			30/11/2020		
5/10/2020			7/12/2020		
12/10/2020			14/12/2020		
19/10/2020					

You will notice on each knowledge organiser that there are green and blue edged boxes with text in. Text in a green edged box is key vocabulary you need to learn and writing in a blue edged box are the key concepts/knowledge you will need to learn.

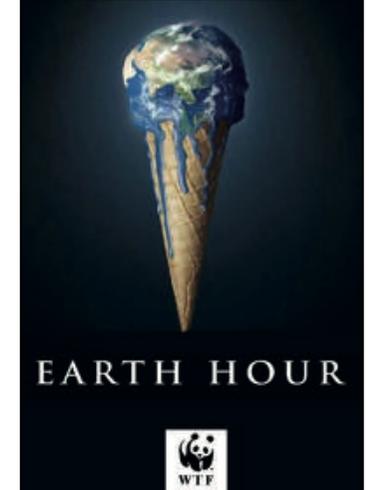
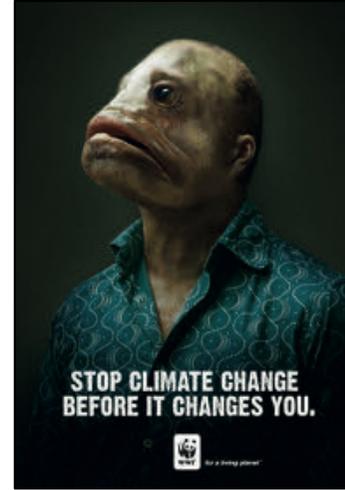
Key Vocabulary will be written in a green edged box like this.

Key concepts/ideas will be written in a blue edged box like this

# Y7 'Having a voice' Non-fiction unit

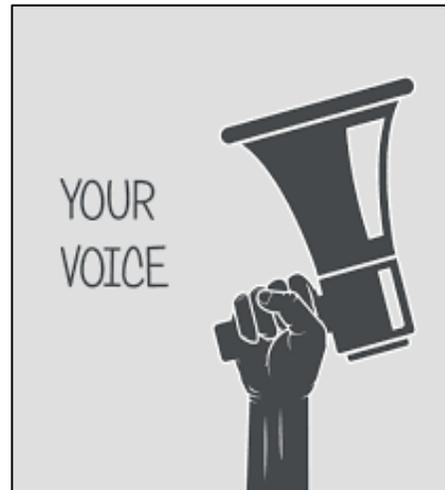
This unit is all about having your voice heard – and presenting a strong opinion. Use these words/phrases to help you:

In my opinion, ...  
To my mind, ...  
From my point of view, ...  
My view / opinion / belief / impression / conviction is that ...  
I hold the view that ...  
I would say that ...  
It seems to me that ...  
I am of the opinion that ...  
I have the feeling that ...  
My own feeling on the subject is that ...  
I have no doubt that ...  
I hold the opinion that ...



## 5 ingredients for great writing:

- 1. Ambitious vocabulary:** you use impressive words throughout your writing.
- 2. Interesting structures:** you think carefully about how you organise your writing.
- 3. A range of language techniques:** you use language techniques and methods like: similes, metaphors, alliteration, repetition, oxymoron etc
- 4. Varied sentences:** you purposefully vary the length of your sentences for effect, as well as start sentences with connectives, -ed, -ing, and -ly words.
- 5. A range of punctuation:** you accurately use punctuation throughout your writing, including, if appropriate, semi-colons and colons.

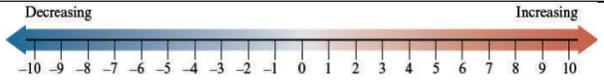
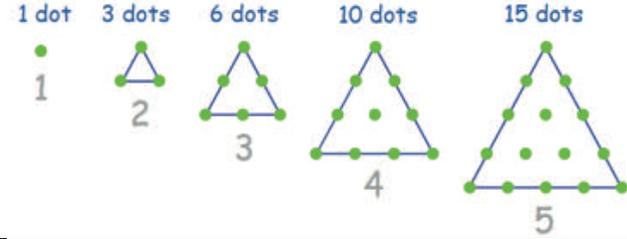


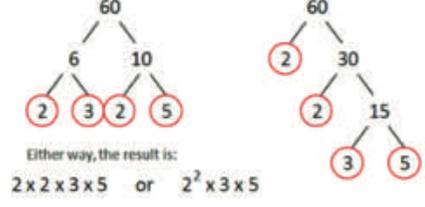
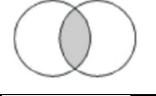
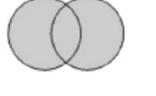
PURPOSE  
AUDIENCE  
FORM

## Key vocabulary:

- Equality
- Stereotype
- Discrimination
- Superficial
- Assumption
- Gender pay gap
- Body positive movement
- Misrepresentation
- Predominantly
- Exposed
- Peril
- Inevitable
- Eliminate
- Misrepresentation
- Motif

## Year 7 Term 1 Mathematics – Knowledge Organiser

		Year 7 Mathematics Unit 1 Written Calculation and Types of Number																									
DEFINITIONS																											
1.	<b>Integer</b>	A whole number																									
2.	<b>Positive</b>	A number greater than zero																									
3.	<b>Negative</b>	A number less than zero																									
4.	<b>Decimal</b>	A number with digits after the decimal point																									
5.	<b>Operations</b>	Symbols and words used to show how to combine numbers																									
		× Multiply + Add ÷ Divide – Subtract																									
6.	<b>Negative Numbers</b>	 Move <b>Right</b> for addition Move <b>Left</b> for subtraction																									
7.	<b>Adding and Subtracting Negative Numbers</b>	<b>Signs</b>	<b>Rules</b>																								
		+ +	Two like signs become positive +																								
		- -	Two like signs become positive +																								
		- +	Two unlike signs become negative -																								
	+ -	Two unlike signs become negative -																									
8.	<b>Prime number</b>	A number with exactly 2 factors; 1 and itself. 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97																									
9.	<b>Square number</b>	A number multiplied by itself <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>1<sup>2</sup></td><td>2<sup>2</sup></td><td>3<sup>2</sup></td><td>4<sup>2</sup></td><td>5<sup>2</sup></td><td>6<sup>2</sup></td><td>7<sup>2</sup></td><td>8<sup>2</sup></td><td>9<sup>2</sup></td><td>10<sup>2</sup></td><td>11<sup>2</sup></td><td>12<sup>2</sup></td> </tr> <tr> <td>1</td><td>4</td><td>9</td><td>16</td><td>25</td><td>36</td><td>49</td><td>64</td><td>81</td><td>100</td><td>121</td><td>144</td> </tr> </table>		1 <sup>2</sup>	2 <sup>2</sup>	3 <sup>2</sup>	4 <sup>2</sup>	5 <sup>2</sup>	6 <sup>2</sup>	7 <sup>2</sup>	8 <sup>2</sup>	9 <sup>2</sup>	10 <sup>2</sup>	11 <sup>2</sup>	12 <sup>2</sup>	1	4	9	16	25	36	49	64	81	100	121	144
1 <sup>2</sup>	2 <sup>2</sup>	3 <sup>2</sup>	4 <sup>2</sup>	5 <sup>2</sup>	6 <sup>2</sup>	7 <sup>2</sup>	8 <sup>2</sup>	9 <sup>2</sup>	10 <sup>2</sup>	11 <sup>2</sup>	12 <sup>2</sup>																
1	4	9	16	25	36	49	64	81	100	121	144																
10.	<b>Cube numbers</b>	A number multiplied by itself 3 times <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>1<sup>3</sup></td><td>2<sup>3</sup></td><td>3<sup>3</sup></td><td>4<sup>3</sup></td><td>5<sup>3</sup></td><td>6<sup>3</sup></td> </tr> <tr> <td>1</td><td>8</td><td>27</td><td>64</td><td>125</td><td>216</td> </tr> </table>		1 <sup>3</sup>	2 <sup>3</sup>	3 <sup>3</sup>	4 <sup>3</sup>	5 <sup>3</sup>	6 <sup>3</sup>	1	8	27	64	125	216												
1 <sup>3</sup>	2 <sup>3</sup>	3 <sup>3</sup>	4 <sup>3</sup>	5 <sup>3</sup>	6 <sup>3</sup>																						
1	8	27	64	125	216																						
11.	<b>Triangular numbers</b>	The number of dots in each triangular pattern 																									
12.	<b>Factor</b>	Numbers that we multiply together, to get another number, e.g. factors of 6: 1, 2, 3, 6																									

13.	<b>Multiple</b>	The result of multiplying a number with an integer, e.g. the first 5 multiples of 6 are 6, 12, 18, 24, 30	
14.	<b>Product</b>	The outcome when two or more numbers are multiplied together	
15.	<b>Product of Prime Factors</b>	Writing a number as a <b>product of its prime factors</b>  Either way, the result is: $2 \times 2 \times 3 \times 5$ or $2^2 \times 3 \times 5$	
16.	<b>Highest common factor (HCF)</b>	The highest number that divides exactly into two or more numbers. eg The HCF of 12 & 8 is 4	
17.	<b>Lowest common multiple (LCM)</b>	The smallest positive number that is a multiple of two or more numbers. eg The LCM of 12 & 8 is 24	

		Year 7 Mathematics Unit 2 Data Handling and Averages			
DEFINITIONS					
1.	<b>Qualitative</b>	Data described by words			
2.	<b>Quantitative</b>	Data that is categorized by numbers, it can be discrete or continuous			
3.	<b>Discrete data</b>	Can be counted, can only have a finite number of possible values			
4.	<b>Continuous data</b>	Can be measured, can have an infinite number of possible values within a selected range			
5.	<b>Inequality Signs</b>	< less than	> greater than	≤ less than or equal to	≥ greater than or equal to
MEASURE OF CENTRAL TENDENCY AND SPREAD					
6.	<b>Mean</b>	Add up all of the amounts. Divide by how many values there are.			
7.	<b>Median</b>	Put values in order. Locate the middle value			
8.	<b>Mode</b>	The value that occurs most often			
9.	<b>Range</b>	The biggest value minus the smallest value			
10.	<b>Outlier</b>	An extreme data value that doesn't fit the overall pattern			

ADVANTAGE & DISADVANTAGES OF AVERAGES			
11.	Average	Advantages	Disadvantages
	Mean	Every value makes a difference	Affected by extreme values
	Median	Not affected by extreme values	May not change if a data value changes
	Mode	Easy to find; not affected by extreme values; can be used with non-numerical data	There may not be a mode

 <b>Year 7 Mathematics</b> <b>Unit 3 Introduction to Algebra</b>				
1.	<b>Order of Operations</b>	The order in which operations should be done	B I DM AS	Brackets Indices Divide and Multiply Add and Subtract
2.	<b>Variable</b>	A letter representing a varying or unknown quantity		
3.	<b>Coefficient</b>	A number which multiplies a variable. eg 3 is the coefficient in 3y		
4.	<b>Term</b>	A part of an algebraic expression, could be a number, a variable or a product of both.		
5.	<b>Like Terms</b>	Terms that have the same variable, but may have different coefficients eg $a + 3a$ are like terms $b + a + a^2$ are not like term		
6.	<b>Expression</b>	One or a group of terms. May include variables, constants, operators and grouping symbols. No '=' sign		
7.	<b>Equation</b>	Expressions of equal value connected by an =		
8.	<b>Identity</b>	An equation that is true no matter what values are chosen, $\equiv$		
9.	<b>Formula</b>	A rule describing a relationship between different variables		
10.	<b>Substitute</b>	Replace a variable with a number		
11.	<b>Index</b>	A small number to the upper right of a base number that shows how many times the base is multiplied by itself		
12.	<b>Power</b>	Another word for an index		

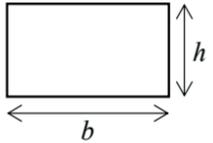
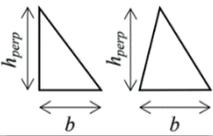
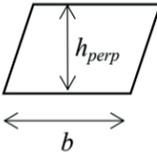
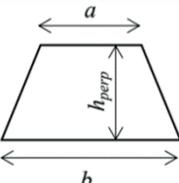
13.	<b>Indices</b>	Plural of index								
<b>ALGEBRAIC NOTATION</b>										
14.	<b>Adding like terms</b>	Add the coefficients	$a + a = 2a$							
15.	<b>Subtracting like terms</b>	Subtract the coefficients	$5a - 3a = 2a$							
16.	<b>Multiplying like terms</b>	Add the powers	$a \times a = a^2$							
17.	<b>Dividing terms</b>	If the base is the same, subtract the powers	$a^5 \div a^2 = a^3$							
18.	<b>Adding different terms</b>	Cannot combine if the terms are different	$a + b = a + b$							
19.	<b>Subtracting different terms</b>	Cannot combine if the terms are different	$3a - 2b = 3a - 2b$							
20.	<b>Multiplying different terms</b>	Combine with no 'x' sign	$a \times b = ab$							
21.	<b>Multiplying different terms with coefficients</b>	Combine with no 'x' sign, multiply the coefficients	$3c \times 4a = 12ac$							
22.	<b>Dividing different terms</b>	Write as fractions with no '÷' sign	$3b \div a = \frac{3b}{a}$							
23.	<b>Dividing different terms with coefficients</b>	Write as fractions with no '÷' sign, simplify the coefficients if possible	$20c \div 4a = \frac{5c}{a}$							
<b>EXPANDING SINGLE BRACKETS</b>										
24.	Multiply all of the terms inside the bracket, by the term on the outside									
25.		<table border="1"> <tr> <td></td> <td>3x</td> <td>+1</td> <td rowspan="2">= 5x + 15</td> </tr> <tr> <td>5</td> <td>15x</td> <td>+5</td> </tr> </table>		3x	+1	= 5x + 15	5	15x	+5	
	3x	+1	= 5x + 15							
5	15x	+5								
<b>FACTORISING</b>										
26.	Find the highest common factor of the terms This goes outside the bracket Divide each term by the factor to get the new terms inside the bracket.	eg $2x + 6$ HCF is 2 = 2( ) $2x \div 2 = x$ $6 \div 2 = 3$ = 2(x + 3)								
27.	CHECK by expanding your answer	<table border="1"> <tr> <td></td> <td>x</td> <td>+3</td> <td rowspan="2">= 2x + 6 ✓</td> </tr> <tr> <td>2</td> <td>2x</td> <td>+6</td> </tr> </table>		x	+3	= 2x + 6 ✓	2	2x	+6	
	x	+3	= 2x + 6 ✓							
2	2x	+6								



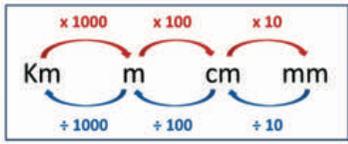
**Year 7 Mathematics**  
**Unit 4 Introduction to Geometry**

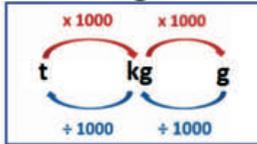
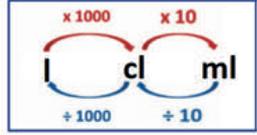
1.	<b>Polygon</b>	Any 2D shape formed with straight lines
2.	<b>Parallel</b>	Two lines that will never intersect (meet)
3.	<b>Perpendicular</b>	Two lines that meet at a right angle (90°)
4.	<b>Adjacent</b>	Next to, or adjoining something else
5.	<b>Perimeter</b>	The distance along the outside of a shape.
6.	<b>Area</b>	The space inside a 2D shape
7.	<b>Regular</b>	All the sides and angles of a shape are equal
8.	<b>Perpendicular height</b>	The height that forms a right angle with the base length.
9.	<b>Composite shape/Compound shape</b>	A shape that can be divided into more than one simple shape

**AREA AND PERIMETER (units in  $cm^2/mm^2/m^2$ )**

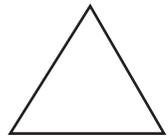
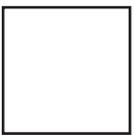
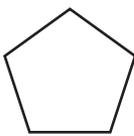
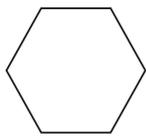
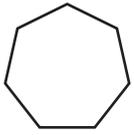
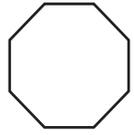
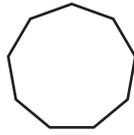
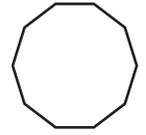
10.	<b>Square/rectangles</b>		$base \times height$
11.	<b>Triangles</b>		$\frac{base \times height}{2}$
12.	<b>Parallelogram</b>		$base \times height$
13.	<b>Trapezium</b>		$\left(\frac{a + b}{2}\right) \times h$

**METRIC UNIT CONVERSIONS**

14.	<b>Length</b>	
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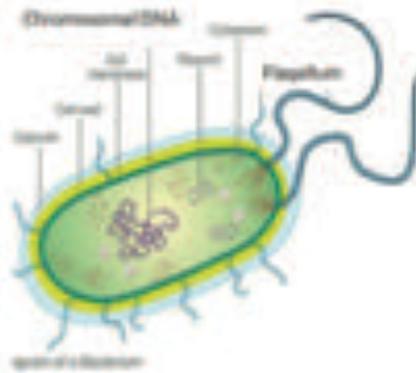
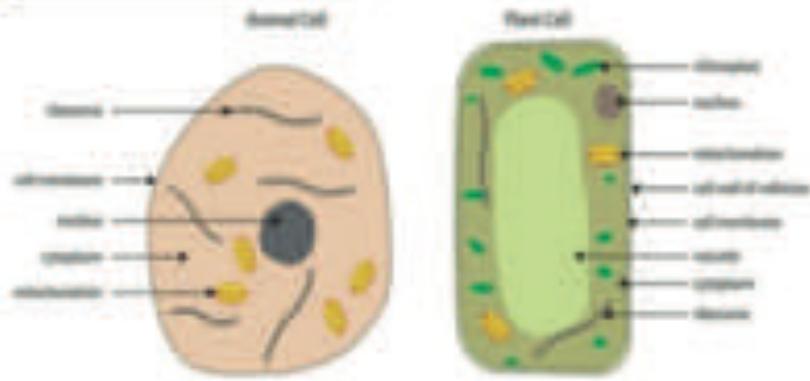
15.	<b>Weight</b>	
16.	<b>Volume</b>	

**POLYGONS**

		Number of Sides	Name		
		3	Triangle		
		4	Quadrilateral		
		5	Pentagon		
		6	Hexagon		
		7	Heptagon		
		8	Octagon		
		9	Nonagon		
		10	Decagon		
17.					
	<b>Triangle</b>	<b>Quadrilateral</b>	<b>Pentagon</b>	<b>Hexagon</b>	
					
	<b>Heptagon</b>	<b>Octagon</b>	<b>Nonagon</b>	<b>Decagon</b>	

# Year 7 Biology

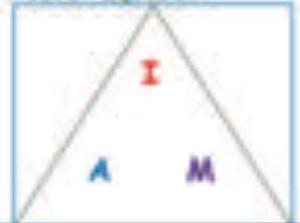
## Cells and Microscopes



### Microscopes core practical:

- Prepare both animal and plant cell slides
- Use a stain to ensure features are visible
- Draw a scientific drawing of what you can see- use pencil, no shading, include magnification

### Magnification Equation:

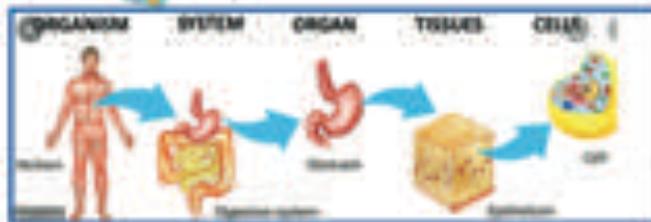
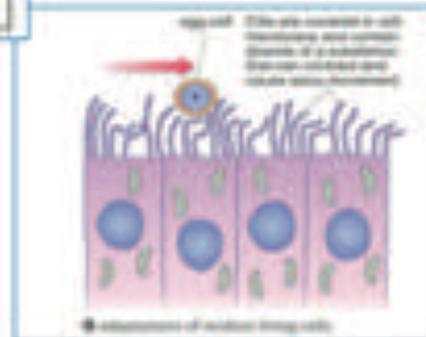


Organelle	Function
Nucleus	Encloses the genetic material
Cell membrane	Controls what enters and leave the cell
Cytoplasm	Where chemical reactions occur
Mitochondria	Site of aerobic respiration
Ribosome	Site of protein synthesis
Cell wall	Supports and protects the cell
Chloroplast	Site of photosynthesis
Vacuole	Stores cell sap, helps to keep the cell rigid
Plasmid	Small loop of bacterial DNA
Flagellum	Helps bacteria to move

### Electron vs Light Microscopes:

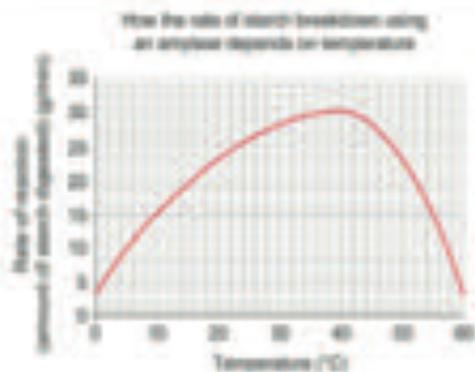
	Max Magnification	Max. Resolution	Problems
Light	X1500	0.001mm	Need very thin samples
Electron	X2,000,000	0.0000002mm	Expensive

Resolution	Smallest change that can be measured by an instrument. For example, in a microscope it is the smallest distance between two points that can be seen as two points and not blurred into one point.
Magnification	How much bigger something appears compared with its actual size.

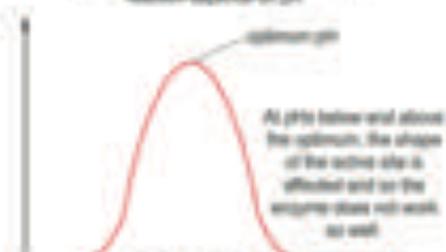


This diagram shows a cross-section of a human female ovary. Labels include: 'The cell membrane fuses with the sperm cell membrane. After fertilisation, the cell membrane becomes hard to stop other sperm cells entering.', 'The cytoplasm is packed with nutrients to supply the fertilised egg cell with energy and raw materials for the growth and development of the embryo.', 'The jelly coat prevents the egg cell. It also hardens after fertilisation, to ensure that only one sperm cell enters the egg cell.', 'Nucleus', 'The top of the head contains a small structure called the acrosome. It contains enzymes that break down the substances in the egg cell's jelly coat. This allows the sperm cell to become mobile.', 'A large number of mitochondria are arranged in a spiral around the top of the tail, to convert lots of energy to power the tail.', 'Tail with long movement', '10 µm', and 'A cross-section of a human female ovary'.

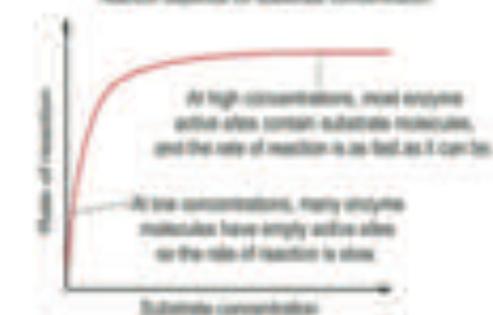
**Factors affecting enzyme action:**



How the rate of an enzyme-controlled reaction depends on pH

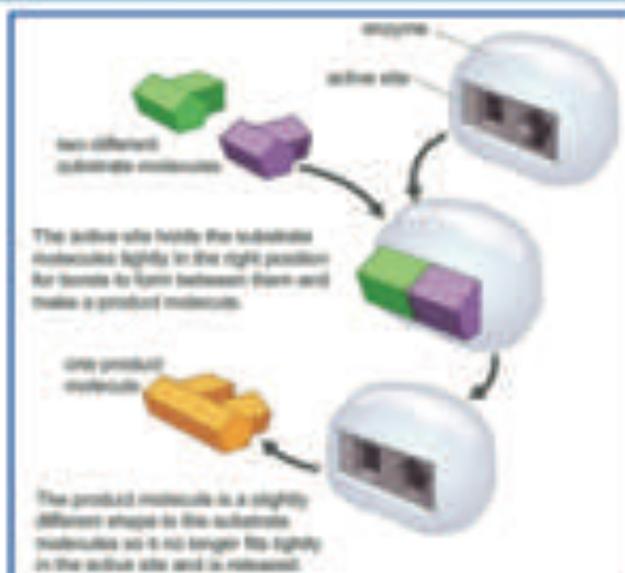


How the rate of an enzyme-controlled reaction depends on substrate concentration



<b>Enzyme</b>	A protein that acts as a biological catalyst
<b>Catalyst</b>	A substance that speeds up the rate of a reaction, without itself being used up
<b>Denature</b>	The shape of the active site has changed so much that its substrate no longer fits and the reaction can no longer happen.
<b>Optimum</b>	The conditions at which the enzyme works best
<b>Active Site</b>	The space in an enzyme where the substrate fits during an enzyme-catalysed reaction.
<b>Digestion</b>	To break down large molecules into smaller subunits, particularly in the digestive system.
<b>Synthesis</b>	To build a large molecule from smaller subunits.

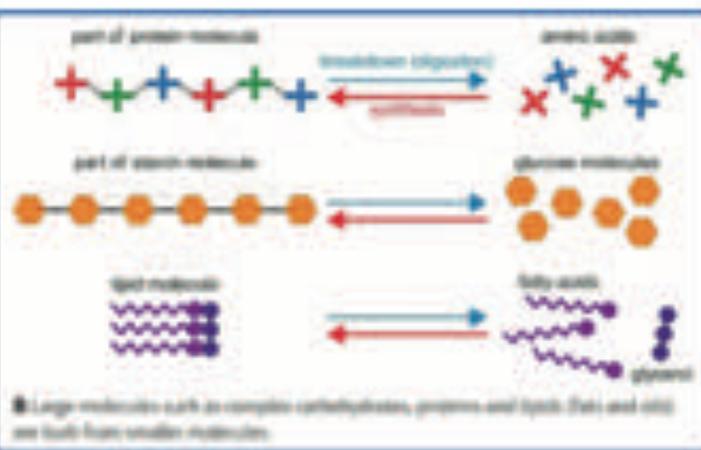
Enzyme name	Where found	Reaction catalysed
amylase	saliva and small intestine	breaking down starch to small sugars, such as maltose
catalase	most cells, but especially liver cells	breaking down hydrogen peroxide (made in many cell reactions) to water and oxygen
starch synthase	plant	synthesis of starch from glucose
DNA polymerase	nucleus	synthesis of DNA from its components

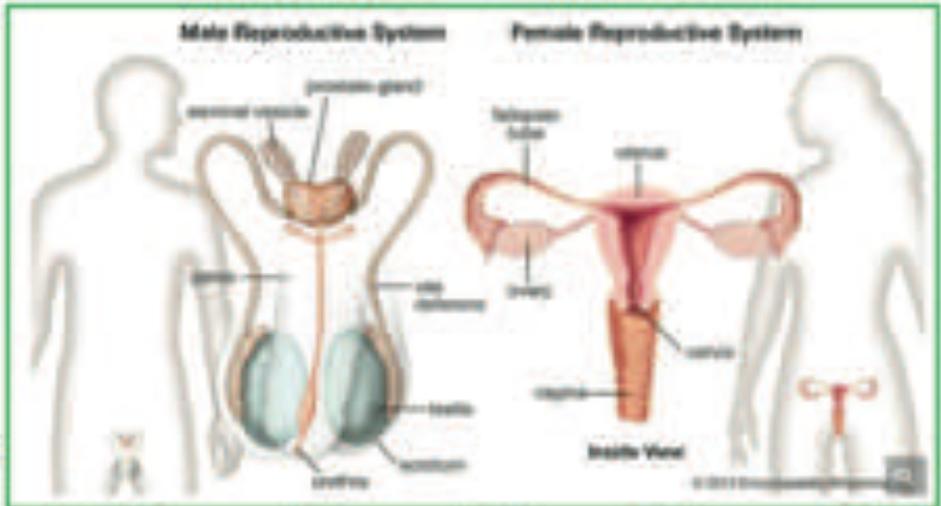
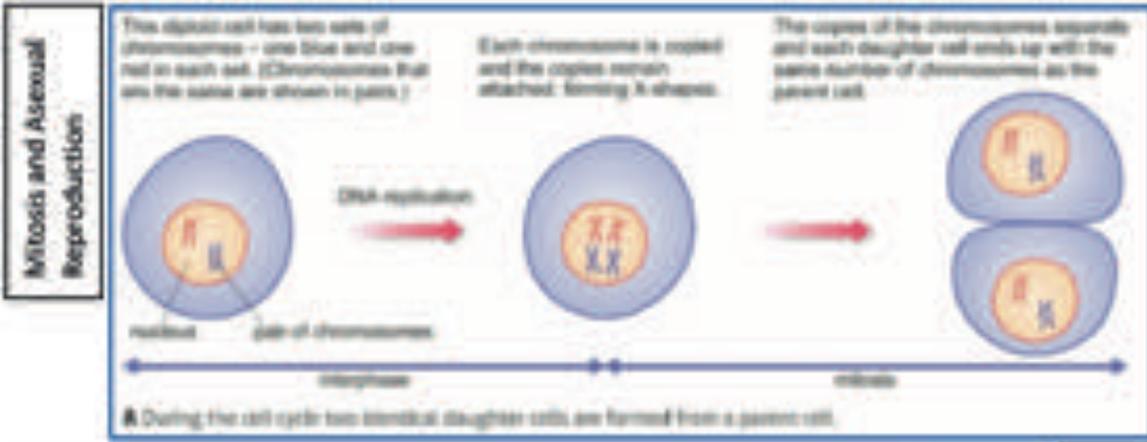


**Method**      **Enzyme Core Practical: Effect of pH**

- Wear eye protection.
- Set up heating apparatus using a tripod, gauze, heat-resistant mat, Bunsen burner and large beaker half-filled with water. Heat the water to a temperature of 40°C, and then use the collar on the Bunsen burner to produce a flame that keeps the water at this temperature. Check that the temperature is being kept constant for a couple of minutes before you start step D.
  - Place one drop of iodine solution into each depression of a well tray (single use).
  - Measure 2 cm<sup>3</sup> of amylase solution into a tube.
  - Add 1 cm<sup>3</sup> of a solution with a particular pH into the tube.
  - Add 2 cm<sup>3</sup> of starch solution to the tube and place it carefully into the water bath. Start the stop clock. Stir the mixture.
  - Every 20 seconds, take a small amount of mixture and place one drop of it into a fresh drop of iodine solution. Stop testing when the iodine solution stops changing colour.
  - Repeat the experiment using a different pH solution in step D.

**Enzymes Core Practical:**  
**Testing how changing pH affects the rate of enzyme action**



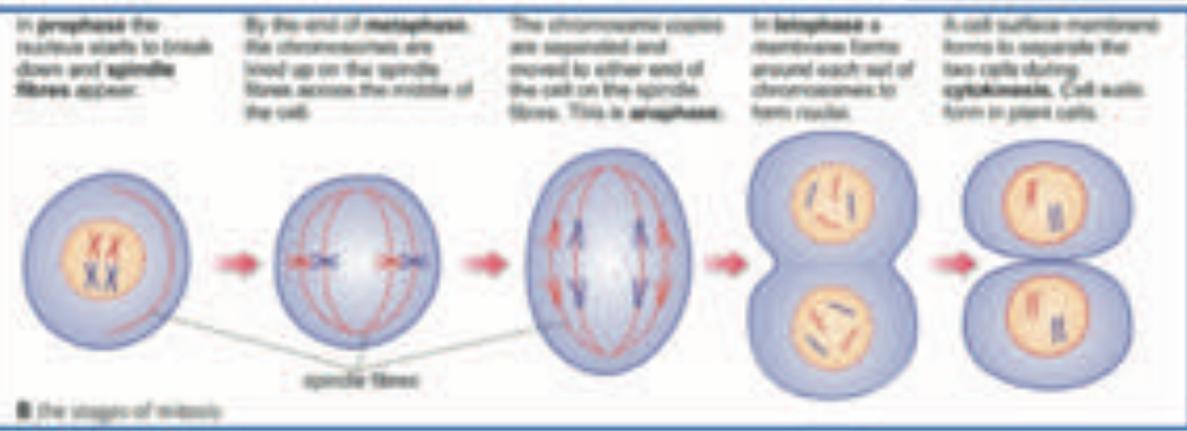
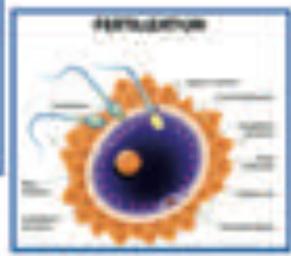


The nuclei of human body cells contain two copies of each of 23 types of chromosome, making 46 in all. Cells with two copies of each chromosome (two sets of chromosomes) are **diploid**. Gametes (sex cells) contain one copy of each type of chromosome and are **haploid**.

There are two phases in the cell cycle, the first of which is **interphase**. In this phase the cell makes extra sub-cellular cell parts (e.g. mitochondria). **DNA replication** (copying) also occurs, to make copies of all the chromosomes. The copies of the chromosomes stay attached to each another, making the chromosomes look like Xs.

The next phase of the cell cycle is cell division or **mitosis**. The cell splits to form two **daughter cells**, which are both identical to the parent cell. Mitosis occurs in a series of continuous stages, shown in diagram B.

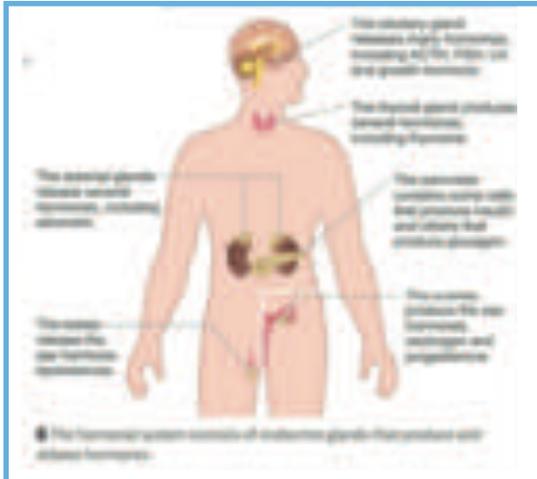
### Sex Organs and Foetal Development



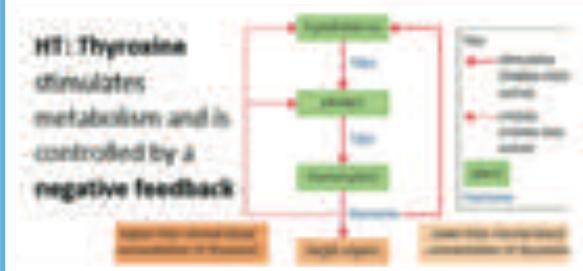
### Asexual reproduction

Some organisms can reproduce using just one parent. This **asexual reproduction** produces offspring that are **clones**, which means that their cells have the same chromosomes as the parent (they are genetically identical). So, asexual reproduction relies on mitosis. Strawberry plants, for example, reproduce asexually using stems that grow along the ground, called runners, and potatoes use tubers. Some animals, such as aphids, can also reproduce asexually. Asexual reproduction is much faster than sexual reproduction because organisms do not need others for reproduction. However, sexual reproduction produces variation and asexual reproduction does not.

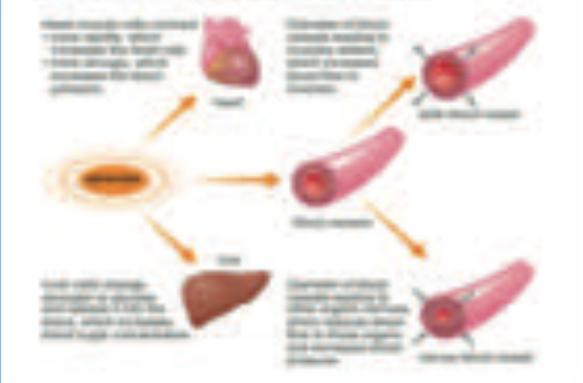
The hormonal system uses **hormones** (chemical messengers) released by **endocrine glands** and transported in the blood to signal to **target organs**.



**HT: Metabolic rate** is the rate that energy stored in food can be transferred by all the reactions that take place in your body to keep you alive.



**HT: Adrenaline** released by the adrenal gland prepares the body for 'fight or flight'



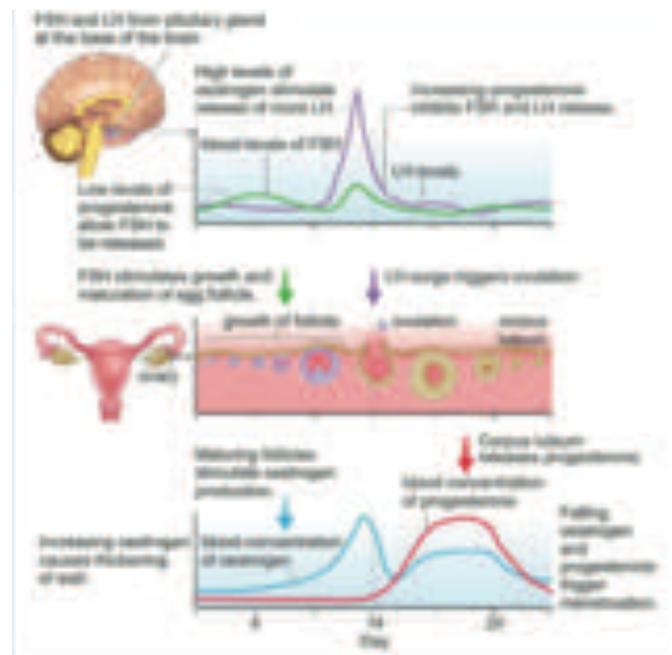
12 SCIENCE

**Homeostasis** - Maintaining a constant internal environment, important to prevent damage to the body.

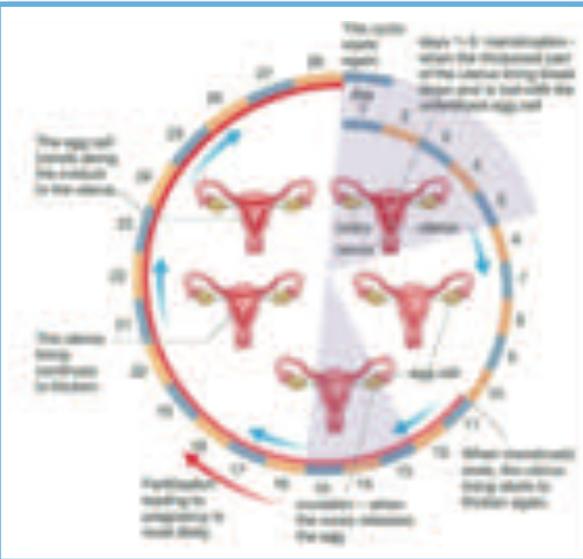
Blood glucose regulation is controlled by the hormone **insulin** which is released by the **pancreas**. Insulin causes cells in the liver and other organs to take in glucose when glucose levels are high (after you have just eaten) and store it for when your glucose levels are low.

**Type 1 diabetes** - The body's own immune system attacks pancreatic cells so they do not produce enough insulin. Treated by insulin injections.

**Type 2 diabetes** - Pancreatic cells do not produce enough insulin or target organs do not respond efficiently. Treated by eating healthy and reducing sugar in diet.



The **menstrual cycle** prepare the woman's body for fertilisation of an egg cell. It is controlled by the hormones **oestrogen** (which repairs and thickens the uterus lining) and **progesterone** (which maintains the uterus lining) ready for implantation of a fertilised egg.



**HT:** Glucose is stored as **glycogen** in liver cells. When glucose levels are low, **glucagon** is released from the pancreas to convert it back to glucose.

Method and success rate (% of pregnancies prevented)	How it prevents fertilisation
Ruik condom (98% success rate)	glaze over cervix, prevents sperm entering the vagina
Diaphragm or cap (92-96% success rate)	glaze over the cervix, prevents sperm entering the uterus
Hormonal pill or implant placed under the skin (99% success rate)	release hormones to prevent ovulation and thicken mucus at the cervix, making it difficult for sperm cells to pass through

**HT:** There are many reasons why couples are unable to have a child. Techniques to aid conception:

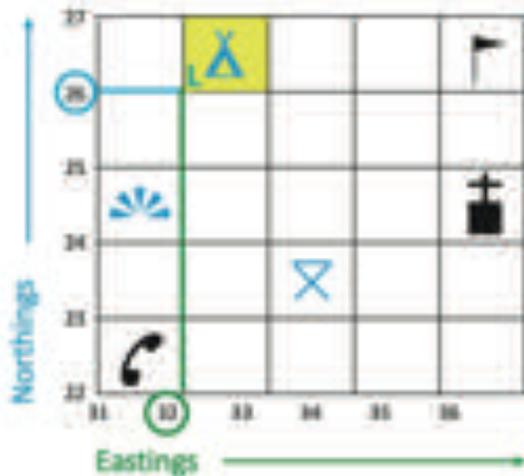
- 1) Assisted reproductive technology (ART) - using hormones to increase chance of pregnancy
- 2) Clomifene therapy - increases concentration of FSH and LH in the blood to help release an egg
- 3) In-vitro fertilisation (IVF) - An egg cell is fertilised externally and embryo implanted back into uterus.

### What is Geography?

"Geography is the study of the Earth's landscapes, peoples, places and environments. It is, quite simply, the study of the world we live in."  
 Geography is part of your everyday life; you use it every day without even realising!

### 4 Figure Grid References

Along the edges of maps there are numbers. These numbers help you to work out where a location is on a map. Northings are numbers that go from bottom to top, Eastings go from left to right.



The first two numbers give the eastings. **32** **26** The second two numbers give the northings.

Remember: eastings then northings!

Along the corridor and up the stairs!

## Map Skills

### Map of the UK



### Map Symbols

Symbols are useful for lots of reasons, including, space saving on a map, multi-lingual (all languages understand them), saves time, clear.



### Types of Geography

- Human Geography** The impact of people on the earth
- Physical Geography** The natural world without people
- Environmental Geography** Human interaction with nature

### Compass Points



### Where is the UK?



The United Kingdom (UK) is an island country located in the continent of Europe, it is made up of four countries: England, Wales, Scotland and Northern Ireland.



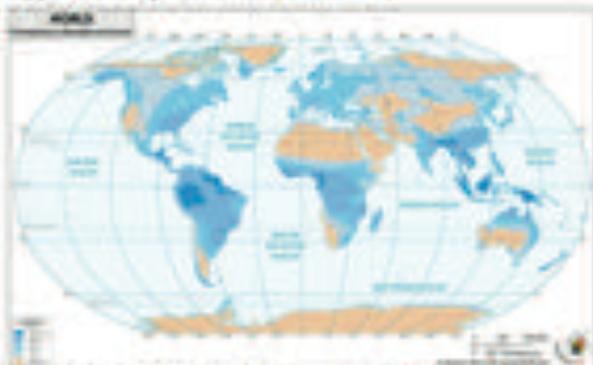
### Atlas Skills

There are generally three main types of maps shown in an atlas:

**Physical Maps** show topography (the shape of the land) and other physical features such as rivers and lakes.

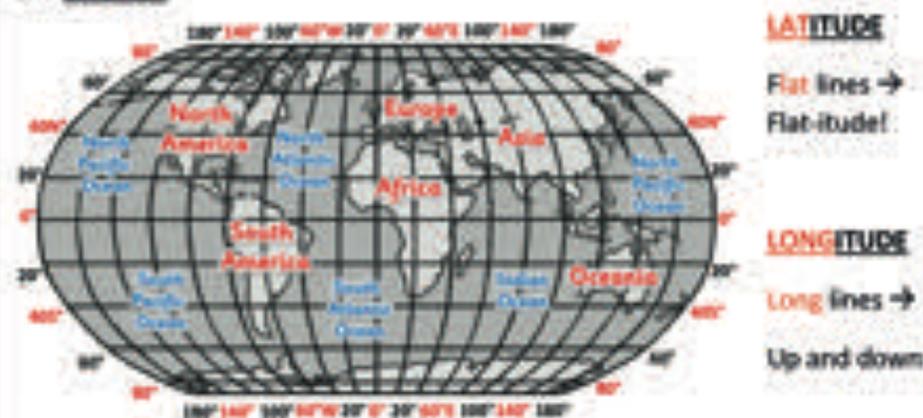
**Political Maps** show country borders, cities, transport links etc.

**Thematic Maps** show information such as climate data, agricultural types etc.



### Longitude and Latitude

Unlike grid lines where we go along the corridor and up the stairs, here we go **UP** and **ACROSS**.



### 6 Figure Grid References

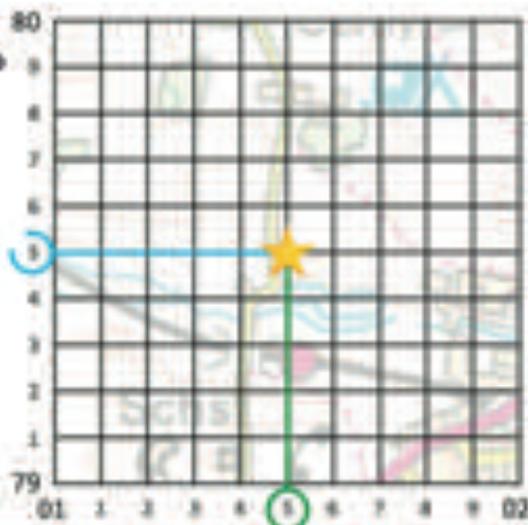
We can use six-figure grid references to find exact locations within a grid square, so they are much more accurate. Each grid square is divided into tenths.

Example

015 795

The first three numbers give the easting which includes the number of tenths.

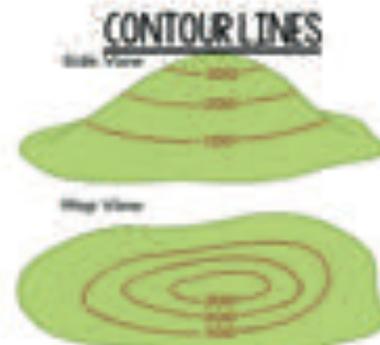
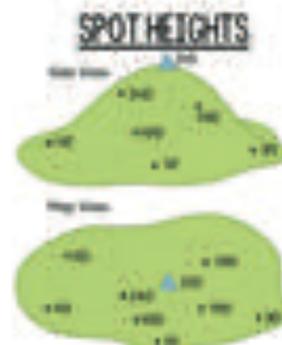
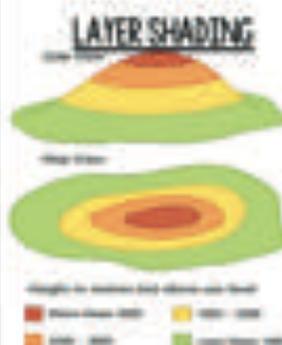
The last three numbers give the northing which includes the number of tenths.



### Height and Relief

**Relief**- the difference between the highest and lowest heights of an area.

**Topography**- the surface features of the earths like hills, mountains and valleys.



Areas of different heights are shown using different colours. A key is used to show how high the land is.

The exact height of a place above the ground is measured and written on to a map.

Contour lines are lines on a map which join up places of the same height. Everywhere along a contour line is the same height!

Height is always measured above sea level, usually in meters.

**Scale and Distance** OS maps have a scale. On some smaller maps, 1cm on the map equals 250m in real life. On some larger maps, 1cm on the map equals 500m. Different maps might have different scales, so check on your map to find its scale.



### WORD SCALE

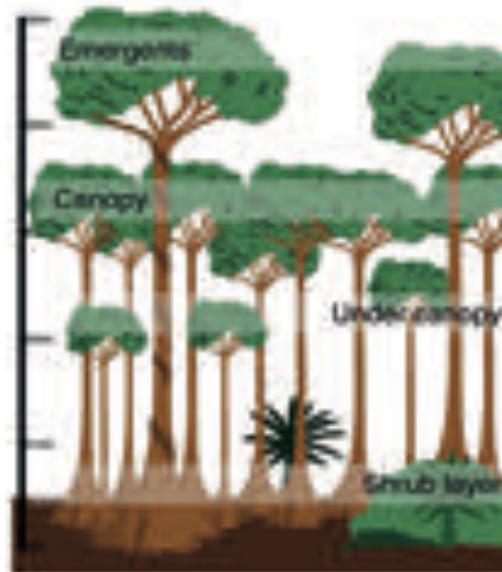
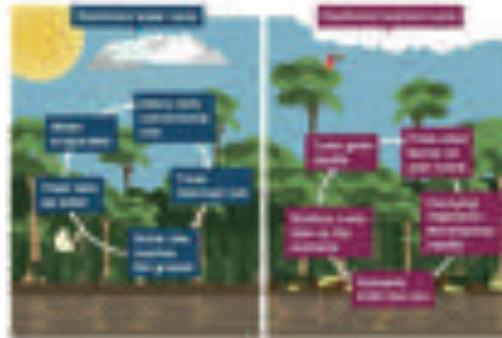
One centimeter on the map represents 3 kilometers on the ground. (1cm = 3 km)

# YEAR 7 GEOGRAPHY - Biomes Knowledge Organiser

<b>Ecosystem</b>	A community of plants and animals that communicate with interact with each other and their environment
<b>Biome</b>	A plant and animal community that covers a large area of the Earth's surface (e.g. desert, tropical rainforest)
<b>Global atmospheric circulation</b>	The worldwide system of winds which moves heat from the equator to the poles. It helps to create the conditions for different biomes to exist.
<b>Climate</b>	The average weather conditions over the long period of time. Around the world, this creates zones that have the same pattern of temperature and rainfall.

## Biomes of the world

<b>Tundra</b>	Low growing plants due to cold and windy conditions
<b>Coniferous forest</b>	Cone-bearing evergreen trees able to cope with harsh winters
<b>Temperate deciduous forest</b>	Trees such as oak and beech that lose leaves during the autumn
<b>Temperate grasslands</b>	Grassy plains suited to dry, hot summers and cold winters
<b>Mediterranean</b>	Shrubs, herbs and olive trees able to cope with high temperatures and summer drought
<b>Desert</b>	Few plants (e.g. cactus) and animals (e.g. camels) that cope with extreme temperatures and very dry conditions
<b>Tropical rainforest</b>	Vegetation suited to warm, wet climate throughout the year and inhabited by 50% of the world's plants and animal species
<b>Tropical grassland (savanna)</b>	Grassland able to cope with long, dry periods with some violent thunderstorms; grazed by animals (e.g. gazelles) and stalked by predators (e.g. lions)



## Tropical rainforests

Tropical rainforests only cover 6% of the Earth's surface, yet they contain 50% of the plant and animal species.

<b>Emergents</b>	Tallest trees in the rainforest reaching around 50 metres
<b>Canopy</b>	Receives 70% of sunlight and 80% of rainfall. Around 30 metres high.
<b>Undercanopy</b>	Trees growing to a height of 20 metres
<b>Shrub layer</b>	Only small trees and shrubs. Less than 5% of sunlight reaches the forest floor
<b>Epiphytes</b>	Some plants grow on larger trees as they only need water and air to survive e.g. orchids
<b>Convectional rainfall</b>	Where the ground is heated intensely by the sun, the air rises, cools and condenses to form clouds and heavy downpours.

## Threats to tropical rainforests

<b>Deforestation</b>	The cutting down of trees, transforming a forest into cleared land for other uses such as building or growing crops
<b>Logging</b>	Trees cut down for items such as furniture, paper and utensils. Half of wood used for fuel.
<b>Cattle ranching</b>	Cattle raised on the cleared land to meet the demand for beef elsewhere e.g. USA.
<b>Mining</b>	Rainforests contain copper, diamonds, gold and other metals. Some places also have oil and gas.
<b>Palm oil plantations</b>	Palm oil is found in around half the products in supermarkets e.g. biscuits, shampoo, margarine.
<b>Dam building</b>	Often built to produce hydroelectric power for other activities such as logging.



## Year 7 History Cycle 1: Prehistory and Medieval England



### Chronological Understanding

4500-1700BCE – Neolithic Period

1700-700BCE – Bronze Age

500BCE-400CE – Iron Age

55BCE – First Roman invasion of Britain

43CE – Permanent Roman invasion of Britain

400-1066CE – Anglo-Saxon England

5<sup>th</sup> January, 1066CE – Edward the Confessor dies

14<sup>th</sup> October, 1066 – Battle of

### Key Knowledge

**Prehistory** – Split into the Neolithic ('new stone-age'), Bronze Age and Iron Age. During the Neolithic Period stone tools were mostly used and the agricultural revolution happened meaning people switched from being hunter-gatherers to farmers. Bronze tools are developed in the Bronze Age and Stone Henge is built. The Iron Age sees the development of iron.

**Roman Britain** – Roman elite live in villas equipped with bath-houses and intricate mosaics. The road network was developed and called the Cursus Publicus. Towns such as Londinium (London) were developed based on a plan that included the forum and a temple and often an amphitheatre.

**Dark Ages and Anglo-Saxon England** – The Anglo-Saxons came from what is now Germany during the 5<sup>th</sup> century CE. They created works of literature such as the Anglo Saxon Chronicle and Bede's Ecclesiastical History. They lived in sunken wooden houses called grubenhouse (grub-huts). The burial of a 90-ft wooden ship at Sutton Hoo along with gold and silver items shows their wealth.

**Claimants to the throne** – Edward the Confessor dies in January 1066 leaving Edgar the Aethling, Harald Hardrada, Harold Godwinson and William of Normandy to fight over the throne.

**1066** – Harold Godwinson defeats Harald Hardrada and Tostig at Stamford Bridge after marching 200 miles from London. Harold meets William in Battle at Hastings in October, 1066 and is defeated after William feigns retreat and destroys the Saxon shield wall of housecarls with his cavalry.

**Consolidation** – William sets about building motte and bailey castles (later developed into stone) to consolidate his power. He also takes part in the Harrying of the North and has to contend with constant rebellions such as that of Hereward the Wake.

Key Word	Definition
BCE/CE	BCE – Before the year zero, CE – After the year zero
Source	The evidence we use to gather information in History
Infer	Anything you can learn from a historical source
Interpretation	An opinion based on a source
Anglo-Saxon	Germanic groups that ruled England 400-1066CE
Claimant	A person who has a claim to the throne
Aristocracy	The ruling class, or the elite.

### I say, I say...

*"There are times and places when history, British history, comes at you with a rush. Violent, decisive, bloody. A truck-load of trouble knocking you down, wiping out everything that gives you your bearings in the world – law, custom, loyalty and language. And this is one of those places."*

Simon Schama, Historian



### Chronological Understanding

**1166** – Common Law created by Henry II

**1215** – King John is forced to sign Magna Carta

**1348** – Black Death arrives in England

**1351** – Statute of Labourers

**1381** – Peasants Revolt

**1500** – Early Modern period begins

### Key Knowledge

**Medieval Life** – Population of 2 million in 1086 up to 5 million by 1300. 90% of all people live in the countryside as peasants or serfs working the land. Houses in the countryside are made of timber and wattle and daub. Average life expectancy is 30 years old. People live in 'vills' that are in many cases beginning to turn into small towns and named 'boroughs'. If you lived in a borough you were free from the slavery of serfdom. 125 new towns formed between 1066 and 1230.

**Feudal System** – Hierarchy that distributes land in exchange for services. The monarch at the top technically owns all land. Land is then given to the lords (barons, earls and dukes) directly by the king and they pledge 40 days military service and taxes in return. There are 40-80 lords by 1300. The lords then do the same for the knights below them and they also pledge to recruit soldiers and offer 40 days military service. At the bottom of the system are the peasants – this includes serfs who are tied to their lord in law and cannot leave.

**Magna Carta** – Forced upon King John at Runnymede in 1215 by leading barons. John had been placing heavy taxes on England in order to fight wars in France so as to gain back land he had lost in Normandy and Anjou. Magna Carta or 'great charter' put restrictions on the power of the king.

**Black Death** – Yersinia Pestis (the plague) arrived in England in 1348 from East Asia on rats. There were 3 types of plague; bubonic, pneumonic and septicemic. Most died within 3 days of catching it. At the time they thought it was caused by miasma or as a punishment from God.

**Peasants' Revolt** – After another heavy poll tax, peasants led by Wat Tyler and John Ball marched on London and made demands of King Richard II. Wat Tyler was killed by the Mayor of London and many peasants were executed for their involvement.

Key Word	Definition
Clergy	Anyone belonging to the church e.g a priest
Monarch	The king or queen
Serf	An agricultural labourer bound to his/her lord's land
Feudalism	A hierarchy whereby land is granted in exchange of service
Miasma	The theory that disease is caused by impure air
Flagellant	Christians who publicly whip themselves to sure their sins
Buboes	Apple-sized boils filled with black pus. A symptom of bubonic plague.

### I say, I say...

*"The Middle Ages was a period when times were tough and life was hard. Measly food and measly death by plague, or war, or torture, or simply overwork. And you think homework, school dinners and history lessons are bad?"*

**Terry Deary, Children's Author and Historian**



## Year 7 French Cycle 1- Moi

	French	English	Literal English
1	Salut! Je m'appelle Pierre et je suis français.	Hi! I'm called Pierre and I am French.	<i>Hi! I myself call Pierre and I am French.</i>
2	Ça s'écrit P-I-E-R-R-E. Ce n'est pas difficile !	It is written P-I-E-R-R-E. It's not difficult!	<i>It writes itself P-I-E-R-R-E. It not is not difficult!</i>
3	Actuellement j'ai onze ans, <b>je viens de fêter mon anniversaire.</b>	I'm currently 11 years old, <b>I have just celebrated</b> my birthday.	<i>Currently, I have eleven years, I come of to celebrate my birthday.</i>
4	Mon anniversaire est le vingt août.	My birthday is on the 20th August.	<i>My birthday is the 20 August.</i>
5	J'habite à Paris en France avec ma famille.	I live in Paris en France with my family.	<i>I live at Paris in France with my family.</i>
6	On habite avec mon beau-père <b>qui s'appelle Jérôme.</b>	We live with my step-dad <b>who is called Jérôme.</b>	<i>One lives with my step-dad who himself calls Jérôme.</i>
7	<b>Ma mère dit que</b> je suis paresseux mais marrant.	<b>My Mum says that</b> I am lazy but funny.	<i>My Mum says that I am lazy but funny.</i>
8	<b>Je dirais que</b> ma sœur est ennuyeuse et aussi agaçante. Je n'aime pas ma sœur!	<b>I would say that</b> my sister is boring and also annoying. I don't like my sister!	<i>I would say that my sister is boring and also annoying. I not like my sister!</i>
9	Elle a les cheveux courts et bruns. De plus, elle a les yeux verts.	She has short brown hair. Furthermore, she has green eyes.	<i>He has the hairs short and brown. Furtherermore, he has the eyes green.</i>
10	<b>Je m'entends bien avec ma famille parce qu'elle est compréhensive</b>	<b>I get on well with my family because they are understanding</b>	<i>I myself get on well with my family because she is understanding</i>
11	<b>bien que ma mère soit assez sévère.</b>	<b>although my mum is quite strict.</b>	<i>although my mum is quite severe.</i>

A	B	C	D	E	F	G	H	I	J	K	L	M	N
AH	BAY	SAY	DAY	UGH	EFF	JHAY	ASH	EE	JHEE	KAH	EL	EM	EN
O	P	Q	R	S	T	U	V	W		X	Y	Z	
OH	PAY	KOO	ERR	ESS	TAY	OO	VAY	DOO BL VAY		EES	EE-GREC	ZED	

Week 1- Nationalities	
français(e)	French
anglais(e)	English
allemand(e)	German
gallois(e)	Welsh
suisse	Swiss
belge	Belgian
arabe	Arab
espagnol(e)	Spanish
polonais(e)	Polish
s'appeler	to be called
je m'appelle	I am called
tu t'appelles	you are called
être	to be
je suis	I am
tu es	you are

Week 2- Names	
Comment ça s'écrit ?	How is it written?
s'écrire	to be written
ça s'écrit	it is written
ce n'est pas	it isn't
c'est	it is
compliqué	complicated
facile	easy
difficile	difficult
nom	surname
prénom	first name
+ alphabet	

Week 3- Ages	
avoir	To have
j'ai ___ ans	I am ___ years old
tu as ___ ans	You are ___ years old
Quel âge as-tu ?	How old are you?
actuellement	currently
bientôt	soon
je viens de fêter mon anniversaire	I have just celebrated my birthday
+ numbers 1-31	

Week 4- Dates	
Noël	Christmas
lundi	Monday
mardi	Tuesday
mercredi	Wednesday
jeudi	Thursday
vendredi	Friday
samedi	Saturday
dimanche	Sunday
janvier	January
février	February
mars	March
avril	April
mai	May
juin	June
juillet	July
août	August
septembre	September
octobre	October
novembre	November
décembre	December

Week 5- Where do you live?	
habiter	to live
j'habite	I live
tu habites	You live
il/elle/on habite	You live
avec ma famille	with my family
Où habites-tu ?	Where do you live?
à Paris	in Paris
en France	in France
en Angleterre	in England
en Espagne	in Spain
en Allemagne	in Germany
en Belgique	in Belgium
en Pologne	in Poland
en Suisse	in Switzerland
au Pays de Galles	in Wales

Week 6- Family	
une mère	a mum
une belle-mère	a step-mum
un père	a dad
un beau-père	a step-dad
une sœur	a sister
une demi-soeur	a step-sister
un frère	a brother
un demi-frère	a half-brother
un grand-père	a grandfather
une grand-mère	a grandmother
un oncle	an uncle
une tante	an aunt
je suis fils unique	I am an only child (m)
je suis fille unique	I am an only child (f)
je suis fil adoptif	I am an adopted child (m)
je suis fille adoptive	I am an adopted child (f)
mon / ma / mes	my
ton / ta / tes	your

Week 7- Describing others	
être	To be
je suis	I am
je ne suis pas	I am not
tu es	You are
il/elle est	He/she is
très	very
un peu	a bit
assez	quite
ennuyeux	boring
paresseux	lazy
agaçant	annoying
marrant	funny
amusant	funny
barbant	boring
intéressant	interesting
sympa	kind
timide	shy
travailleur	hardworking
gentil	kind
sportif	athletic
actif	active
égoïste	selfish
et	and
aussi	also
mais	but

Week 8- er verbs	
aimer	To like
j'aime	I like
tu aimes	You like
il/elle/on aime	He/she likes
nous aimons	We like
Vous aimez	You like
Ils/elles aiment	They like

Week 9- Physical descriptions	
avoir	to have
j'ai	I have
tu as	you have
il/elle/on a	he/she/we have
les cheveux :	the hair
longs	long
courts	short
bouclés	curly
raides	straight
frisés	frizzy
les yeux :	the eyes
noirs	black
marron	brown
verts	green
bleus	blue
gris	grey
noisette	hazel

1	un	11	onze	21	vingt et un	31	trente et un
2	deux	12	douze	22	vingt-deux	32	trente-deux
3	trois	13	treize	23	vingt-trois	40	quarante
4	quatre	14	quatorze	24	vingt-quatre	50	cinquante
5	cinq	15	quinze	25	vingt-cinq	60	soixante
6	six	16	seize	26	vingt-six	70	soixante-dix
7	sept	17	dix-sept	27	vingt-sept	80	quatre-vingts
8	huit	18	dix-huit	28	vingt-huit	90	quatre-vingt-dix
9	neuf	19	dix-neuf	29	vingt-neuf	100	cent
10	dix	20	vingt	30	trente	1000	mille

<p><b>Key Words:</b></p> <p><b>Worship:</b> To show respect and adoration for a god/goddess or important religious icon.</p> <p><b>Origin:</b> The point at which something begins</p> <p><b>Prayer:</b> Communication with a religious or spiritual figure; usually a god</p> <p><b>Heritage:</b> Something that is passed down from generations</p> <p><b>Inherent:</b> existing in something as a permanent characteristic</p> <p><b>Synagogue:</b> Jewish place of worship</p> <p><b>Zionism:</b> A movement which wants to develop a Jewish Nation in Israel.</p> <p><b>Persecution:</b> Poor treatment towards a person or group of people based on a characteristic such as race, religion, ethnicity, gender or sexuality.</p> <p><b>Messiah:</b> The leader or saviour of a particular group</p> <p><b>Monothelistic:</b> Believing in only one god</p> <p><b>Exodus:</b> A mass departure of people</p> <p><b>Atonement:</b> making up for wrong doings</p> <p><b>Fasting:</b> Not eating any food or drink</p> <p><b>Congregation:</b> A group of people together for worship</p>	<p><b>Origins of Judaism</b></p>  <p>Abraham is the founder of Judaism. Due to his purity, it is believed that God called out to him and commanded him to leave his homeland behind for a new life. God made Abraham several promises and guided him to create what we now know to be Judaism. Moses is thought of as the greatest of prophets and is the only person believed to have seen God face to face. God gave Moses the 10 commandments, which are the key rules in Judaism.</p>	<p><b>God &amp; The Messiah</b></p> <p>Jewish people believe there is only one God and that he is all loving (omnibenevolent), all powerful (omnipotent) and all knowing (omniscient). They believe he created the whole world and will judge people based on their actions in life which are judged against the rules he has given his people. Where Christians believe that Jesus was the messiah, Jewish people believe that the messiah is yet to come to Earth.</p> 	<p><b>The Value of Life</b></p>  <p>Jews believe that humans were made as part of God's creation and in God's image. Therefore, human life should be valued and considered as sacred and God-given. Due to these attitudes towards the sanctity of life, Jews believe that only God can give life, and only God should take life away.</p>	<p><b>Groups within Judaism</b></p> <p>The three largest groups within Judaism are reform, conservative and orthodox. There are many different groups because of the way that scripture may be interpreted but may also have cultural differences based on where they live. Because Judaism is inherited from the mother, some people who are Jewish do not believe in God. These people are called secular Jews.</p> 	<p><b>Synagogue and Prayer</b></p> <p>Synagogues look different depending on the type of Jewish people who worship there. The language used in the synagogue might be different. Orthodox Jews use Hebrew as the original language of Jewish people. Services are on a Friday evening, Saturday morning (this is the longest service), and Saturday afternoon. Selected portions of the Torah (holy book) are read and the Rabbi (leader of the congregation) will give a weekly lesson.</p> 
	<p><b>Zionism</b></p>  <p>At the end of the 19<sup>th</sup> Century, Jews were being persecuted. Some decided that the solution was to form a state of only Jewish people where they could practice their religion freely. Since Judaism began in and around Jerusalem, they decided to go back to there to form this "homeland" however it had since had many different rulers and the ownership of this land remains in dispute.</p>	<p><b>Rosh Hashanah</b></p> <p>Services for this festival emphasise God's power. Jews believe God balances a person's good deeds over the last year against their bad deeds and decides their fate accordingly. The 10 days beginning with Rosh Hashanah are known as the Days of Awe, during which Jews are expected to find all the people they have hurt during the previous year and apologise to them.</p> 	<p><b>Yom Kippur</b></p>  <p>Yom Kippur is a Day of Atonement when synagogue attendance is important. It is a day of fasting. On Yom Kippur Jews believe God makes the final decision on who will live, die, prosper and fail during the next year, and seals his judgement in the Book of Life. Worship includes the confession of sins and asking for forgiveness, which is done aloud by the entire congregation.</p>	<p><b>Shabbat</b></p> <p>Shabbat starts on Friday when a special meal is eaten and finishes sunset on Saturday. On Saturday morning, the family will attend the synagogue and no work will be done during the day. For some Orthodox Jews this includes driving or using electricity. The time is spent as a family relaxing and spending time together, for example playing games.</p> 	<p><b>Food Laws</b></p>  <p>Judaism's food laws are known as kashrut. Food that is allowed is called kosher. For food to be considered Kosher it must obey these rules: Land animals must have split hooves and must eat grass. Seafood must have fins and scales. Any birds that are eaten must not eat other meats. Meat and dairy cannot be eaten together.</p>

**Storage Drives****S Drive**

The S drive (student shared) is where teachers will put files for you to easily access. Cannot be accessed at home.

**H Drive**

The H drive is where you store your files you work on in school. They need to put into folders so that your files are organised. Cannot be accessed at home.

**Google Drive**

This drive can be accessed on: <http://drive.google.com> and by typing in your google classroom username and password. You can store any type of file here, you can create folders as well. This can be accessed at home, and on any mobile/tablet device.

**Forgotten a Password?**

At School: Talk to Mr Hayden or IT support  
At Home: email (using any email address)  
[passwords@tesdwrappetrust.co.uk](mailto:passwords@tesdwrappetrust.co.uk) Tell them your school and your username and they will reset it for you

**A strong password should have:**

- Letters,
- Capital letters,
- Numbers,
- Symbols,
- 8 or more characters,
- No dictionary words.

**Who can you report inappropriate content to online?**



# Computer Science & iMedia

**Homework**

Is set on **Classcharts**. Your password for this is a unique PIN number which will be emailed to you at the beginning of the school year. So check your email. There is an app for this which works on apple and android.

**Office Products – Use it correctly!**

Word Processing & Typing: Use Word or Google Sheets.

Presenting: Use PowerPoint

Calculations: Use Excel

Please do not use PowerPoint for Word processing

**Google Classroom**

Can be accessed at home. Using [classroom.google.com](https://classroom.google.com) you use your school email address and school password.

For example: Matthew Hayden's email would be: [mathay@iscaewater.co.uk](mailto:mhay@iscaewater.co.uk) (first 3 letters of your first name and first 3 letters of your second name) this is true for the vast majority of students

**School email**

Go to [mail.iscaewater.co.uk](mailto:mail.iscaewater.co.uk) and use the same username and password you would use for google classroom.

**Key vocabulary**

<b>File</b>	An object on a computer that stores data, information, settings, or commands used with a computer program.
<b>Folder</b>	A way to organise computer files. A folder is a storage space that many files can be placed into to group them together and organise the computer.
<b>Email</b>	Electronic mail - a method of exchanging messages between people using electronics and email addresses.
<b>Email address</b>	The address of an electronic post-box that can receive (and send) email messages on a network.
<b>Domain</b>	The group to which an email address belongs.
<b>Attachment</b>	A document which is sent with an email.
<b>Carbon Copy (CC)</b>	used to add more than one recipient to an email.
<b>Blind Carbon Copy (BCC)</b>	used to hide recipients from one another.
<b>Copy</b>	
<b>Subject</b>	A brief description of what will follow in an email.
<b>Internet</b>	A global computer network made up of interconnected networks via dedicated routers and servers.
<b>E-safety</b>	Maximising personal safety and security risks to private information and property associated with using the internet.
<b>Username</b>	Identification used by a person with access to a computer, network, or online service. (eg. IYB1...)
<b>Password</b>	A secret word, phrase, or string of characters that allows access to a computer, interface, or system.
<b>Private information</b>	Information that can be used to identify, contact or locate a person.
<b>Public information</b>	Information that has been made available for anyone to access.
<b>Inappropriate content</b>	Content that is not suitable for its setting - this could include offensive, illegal or irrelevant images or text.

### Key Words:

**Chord** - More than one note played at once to create harmony

**Keyboard Technique** - A good way to play the keyboard using more than one finger and having a good hand position

**Guitar** - a 6 stringed instrument

**Keyboard** - an electric piano instrument

**Fluency** - Playing smoothly

**Accuracy** - Playing the right notes

**Notation** - the way music is written

**TAB** - Notation for guitar

**Bass** - the lowest sounds

**Ukulele** - a 4 stringed instrument from Hawaii

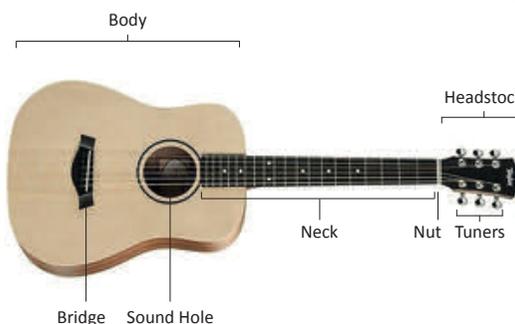
### **Keyboard Technique:**

Playing chords on a keyboard

- Using 1 hand
- Using 3 fingers
- Playing relaxed
- Playing slowly
- Spotting patterns



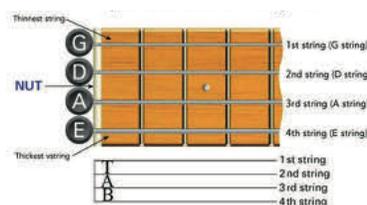
### **The Guitar:**



### **How to hold a guitar**



### **How to read TAB**



## **Year 7 MUSIC Knowledge Organiser Autumn Term**

### The Musical Elements:

**Pitch** - How high or low a note is.

**Rhythm** - The pattern of the notes.

**Tempo** - How fast or slow music is.

**Texture** - How many layers the music has (thick or thin)

**Silence** - Pause in music

**Instrumentation/Timbre** - What instruments or sounds are used.

**Structure** - How the music is made up (e.g. song structure).



**WEEKS 1&2**

**Still Image/Freeze Frame**

A moment of action frozen in time, like a photograph.

An acronym to remember the Physical Skills keywords is **Funny Boppers Get Lots (of) Excellent Party Invitations**

**Facial Expression:**

Using your face to communicate emotions.

**Body Language:**

Using your body to communicate thoughts and feelings.

**Gesture** : Using your body, head or hands to express emotion/meaning

**Levels**

Positioning on stage to communicate status/meaning.

**Eye Contact**

Looking at another person or the audience to communicate a message.

**Posture**

Position you hold your body upright when standing/sitting.

**Interaction with others**

communicating with others nonverbally and verbally.

**Nonverbally** - communicating with others not using your voice.

**WEEKS 3&4**

**Rules for performers**

- Face the audience
- Focus, stay in character
- Stay frozen at the end of your performance
- Listen to feedback

**Rules for audience members**

- Watch, listen and focus
  - Respect the performer/s
  - Be ready to give feedback
- Thought Tracking** - A Thought Track is when an actor speaks their inner thoughts and feelings on stage, all other actors are frozen on stage.

**Volume** - Loud/quiet.

**Tone** - how the character sounds (emotions) pitch, strength, quality of voice.

**Pace** - Speed, fast/slow.

**Pitch** - high/low

**Pause** - a temporary stop

**WEEKS 5&6**

**Role Play** - Acting and movement using performance skills to communicate with the audience.

**What does a great Role-Play look like?**

- Starts and ends in a freeze-frame (so the audience know it has started and when it has ended).
- Voice projection- we need to be able to hear you.
- No backs to the audience – we want to see you!
- Good use of the space.
- No laughing, focus- we want to believe the role-play is real.

**Multi-role** - Actors playing more than one character in a performance.

**Freeze Frame** - Used to capture the whole story in a still image.

**Characterisation** - skills used by an actor to help make each character they perform more realistic and believable.

**WEEKS 7&8**

**Physical Theatre**

When an actor uses their bodies to create the props or scenery.

or scenery.

**Mime** - When an actor uses exaggerated body language/gesture to show specific props.

**Soundscape** - When an actor or group of actors use sounds to create location and an atmosphere.

**Yocal Performance Skills**

**Volume** - Loud/quiet

**Pitch** - High/low

**Pace** - Speed, fast/slow

**Pause** - A temporary stop

**Tone** - Emotion, strength, quality of voice **Areas of the performance space** Always try to imagine you are the actor standing on stage to ensure you get the correct right/left.



**WEEKS 9&10**

**Hot Seating** - is a technique used when a character is sat down in front of an audience and they ask the character questions - the character must think on their feet and respond how they think the character would.

**Narration** - An actor describing what is happening/telling the story.

**Flashback** - the action onstage goes backwards in time.

**Flashforward** - the action onstage goes forwards in time.

**Cross cutting** - Split stage, action on one side and frozen on the other. You can then create drama that goes forwards and backwards in time.

**Unison** - Speaking/moving at the same time as other people.

# Health & Safety, Hand Tools & CAD/CAM

## Keywords

Goggles  
Apron  
Recycled  
Sustainable  
Equipment  
Machinery  
Safety  
Measuring  
Acrylic  
Tenon Saw  
Coping Saw  
Design  
CAD/CAM  
Manufacture  
Millimetres  
Centimetres

(Look up the meanings of these words).

## Workshop Health & Safety (H & S)

All these points must be observed when completing a practical task in the workshop.

Bags stored away from the workshop floor to avoid tripping.

Tie back long hair and remove any jewellery.

Wear strong shoes to protect your feet.

Stack the stools away from the work benches and machinery.

Always wear an apron over your clothes to protect them and hold loose clothing in place.

Do not run, push or mess around in the workshop – this could cause an accident.

Wear goggles when using the workshop equipment.

Know where the emergency stop buttons are and how to use them in an emergency.

Respect the equipment by putting things away in the correct place after use.

Do not use any equipment that you have not been taught to use safely by the teacher.

Listen carefully to the instructions given by the teacher.

Where a machine has a safety guard, make sure it is used correctly.

Report broken or damaged tools or machines to the teacher.

Keep your hands away from moving parts of the machinery.

Use hand tools carefully, making sure you are focused and working correctly.

## HAND TOOLS

Tenon saw – sawing straight cuts



Coping saw – sawing curves and shapes in wood or acrylic.



Files & rasps – smoothing & shaping wood, metal or acrylic.



Tri square – marking and measuring right angles



Steel or metal ruler – measuring or marking straight line.



Bench hook – Used for holding wood or acrylic when cutting with a saw.



Get to know the hand tools you will be using and the correct names

### CAD CAM

#### **CAD – Computer Aided Design**

Designing a product using computer drawing software, such as 2D Design.

#### **CAM – Computer Aided Manufacture**

Using machines controlled by computers, to make products. Machines can be quicker, more accurate and safer. In school you will use a laser cutter to cut acrylic – this is CAM

Can you think of any disadvantages to using CAD/CAM when designing and making a product?

### Designers & Companies

#### **Task to complete**

Log in to Focus eLearning and research 2 Designers and 2 Companies.

Either on paper or in your Google Classroom Electronic Workbook, produce a page of information on each of your chosen Designers and companies, using images and text to show an understanding of the products and designs they are well known for.

Use the log in details opposite and click on Designers & Companies.

An example of a company is Dyson.



User Name

Password

Login

#### Design Solutions - Challenge

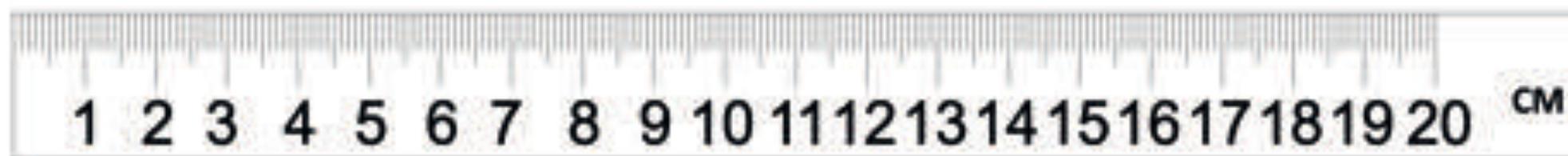
Think about something you use every day, such as a tooth brush, bicycle, mobile phone or glasses. Can you come up with 1 idea to modify the design to make it better or easier to use?

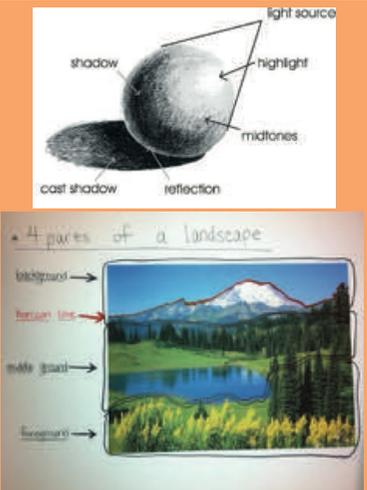
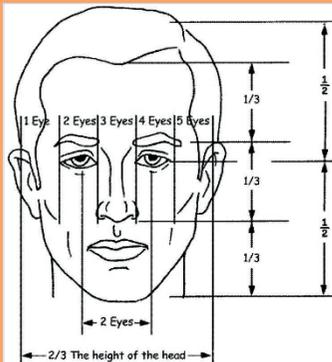
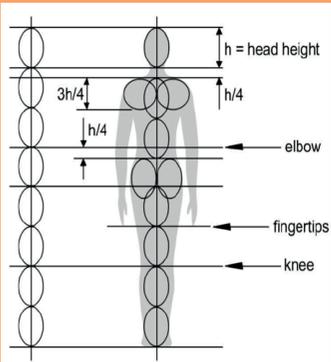
### MEASURING

Accurate measuring is an important part of working in technology. If your measurements are not accurate then your design or the object you are making, might not work. We use a metric system to measure, using Metres (m), Centimetres (cm) and Millimetres (mm).

Learn and remember these measurements: **1 metre = 100cm** or **1m = 1000mm** **10cm = 100mm** **1cm = 10mm**

Practice measuring objects in your home, using metres, centimetres or millimetres. Record some sizes in your workbook.





Year 7 **Art and Design**.

# Me and My World

I see what is in front of me and am aware of how I can draw this to represent me in my world. I understand the artist and how they see the world.

**Stretch and Challenge:** The more you do something, the better you get at it!

1. Take photos of views, places and environments that you find interesting. Print them out and draw from them.
2. Complete the tasks written in green.

## Key vocabulary

Symbol, image, drawing, identity, introduce. Customise, visual vs written, Visual field, background / Foreground, close by / far away, Landscape, view, space, outdoor, place, point of view, perspective, distance, back, middle, foreground. Horizon, line. Shape. Tone. Texture, detail, Light/Shade. Intensity. Size, Proportion. Division, time, Beauty, Weather, Season, realistic vs imaginative. Context, information, self-portrait, Paris, France, Europe, tax collection, exotic, naive, jungle, scale, proportion, wet-on-wet, wet-on-dry, watercolour, brush, bristles, colour wash, layout, presentation.

**Who am I?** It's exciting to use art to express who we are. You will be creating a fantastic title page full of drawings. **What images/symbols** can you think of and imagine that represent who you are? Get a piece of paper and start playing!

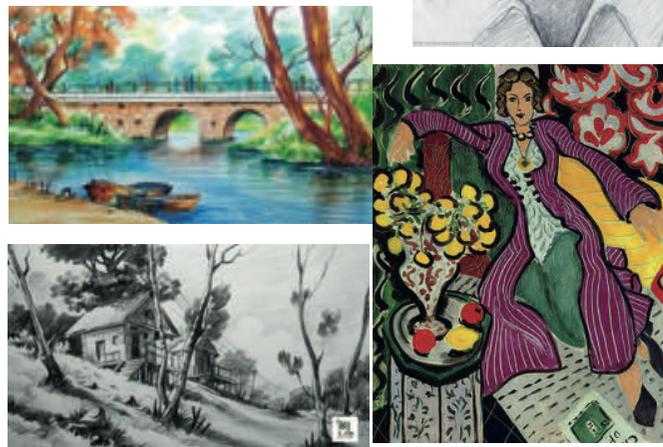


**Drawing faces!** Drawing faces – hard right? You will be amazed at just how good you get at drawing faces during this project. You will learn about the scale, measurement and proportions of the head as well as how to use mark-making and tone to make it look realistic! Wow! **Look in a mirror or take a selfie and have a go at drawing your own self-portrait. Have fun!**

## My world – my environment.

Skilfully drawing views, places and environments! You will learn how to do just that during this project. **Choose a view that you find beautiful and have a go at drawing what you see. Enjoy!**

Other people inspired by our world: Geography, History, RE, Engineering, Maths, science,



**Discovering artists!** It is fascinating to see the work of other artists (yes, you too are an artist!) and learn about their inspirations, styles and techniques. You will be inspired by how your own style, skill and ideas transform whilst you explore the artist. **Find an artwork that includes a figure and landscape and research about it and the artist. Then have a go at doing your**

**New techniques and processes:** Pencil drawing, watercolour painting, mark-making, measuring, comparing, contrasting, looking  
**Tools:** Pencil, brush, eyes, camera, computer,

# Warming Up and Effect of Exercise

## WARM UP

**1 PULSE RAISER**

**2 DYNAMIC STRETCHES**

**3 SKILL DEVELOPMENT**

**Stage 1: Pulse Raising Activity**  
 The first stage of a warm up is designed to prepare you for exercise!

- Raise Heart Rate – To increase the supply of blood, carrying oxygen, to the working muscles around the body
- Increase breathing rate and depth of breathing to allow more oxygen to be delivered into the blood stream and to the muscles. Also to remove waste products such as carbon dioxide
- Cardiac Output increases (The volume of blood ejected from the heart every minute)
- Stroke Volume increased (The volume of blood ejected from the heart every beat/stroke)

**Stage 2: Dynamic Stretching (moving stretches)**  
 -Stretching prepares your muscles for the movement that are about to perform in your sport  
 -Gradually stretching these muscles increases their elasticity and reduces the risk of injury

**Stage 3: Skill Practice**  
 -This element allows you to practise some of the skills ready to perform them in your sport. This time is also used to mentally prepare for your performance



**Immediate Effects** = As soon as you start exercising  
**Short Term Effects** = 24 – 36 hours after exercising  
**Long Term Effects** = Months to years later

**Cool Down (After Exercising)**

**Stage 1: Reduce body to normal resting state**

- Reduce heart rate and breathing rate to normal rhythm by steadily reducing your exercise to a walk.

**Stage 2: Static Stretches**

- Stretches held in one position for up to 30 seconds to reduce soreness and stiffness

**Key words:**

Warm Up	Long
Cool Down	Short
Exercise	Immediate
Pulse Raiser	DOMS
Dynamic	Temperature
Static	Sweat
Stretching	Fatigued
Heart Rate	Muscle Ache
Breathing Rate	Hypertrophy



**General**

**Childline—www.childline.org**

0800 1111

Offers information and advice, 1-2-1 confidential chat (text, email, phone) and support from message boards on a wide range of issues.

**This website is one of the most useful you will find and can direct you to help or information about all the other topics mentioned here, and**

**Safety, bullying and abuse**

**Child Exploitation and Online Protection (CEOP) - www.ceop.police.uk**

Report inappropriate online contact, any unlawful misuse of social media, or a child protection concern to a trained police officer. You can also click this button on your platform:



**NSPCC—www.nspcc.org.uk 0800 1111**

Information and help about on- and offline abuse

**National Bullying Helpline—  
www.nationalbullyinghelpline.co.uk 0845 22  
55 787**



**Health**

**School nurse—07520 631722**

Text only for confidential advice

**National Health Service—www.nhs.uk**

Research and useful information on health issues

**Walk-In Centre, RD&E Hospital—01392 411611**

Non-urgent and sexual health needs

**Walk-In Centre, 31 Sidwell Street—01392  
276892**



**Healthy relationships**

**Thinkuknow—www.thinkuknow.co.uk**

Age-related help and advice about on- and offline relationships and consent.



**Drugs and alcohol**

**YSmart—ysmart.org.uk 01271 388162**

Information about substance misuse, advice, recovery and treatment

**Homeless, skills, advice, getting your voice heard**

**Young Devon—www.youngdevon.org 01392  
331 666**



**Mental Health and well-being**

**amaritans—www.samaritans.org**

Call 116 123 for emergency help

Email jo@samaritans.org (response within 24 hours)

**Papyrus—papyrus-uk.org 0800 068 41 41**

Urgent help for you or someone you know

**YoungMinds—youngminds.org.uk**

Text YM to 85258 for urgent help

**Happy Maps—www.happymaps.co.uk**

Advice on everything from sleep problems to anxiety, bullying, self-harm, coping with divorce, autism, ADHD, gender dysphoria and more

**Kooth—www.kooth.com**



**LGBT**

**X-PLORE—www.lgbtqyouthdevon.org.uk**

Local support and groups for LGBTQ young people

**If someone's life is at risk, you should always dial**

**999**