



**Knowledge Organisers**  
**Year 8**  
**Spring 2020**

# **Knowledge Organisers**

**Autumn Term Knowledge Organisers still need to be brought to school every day, alongside this one.**

Some subjects have knowledge organisers which last two terms or even the whole year. To save on paper these are not printed again and students will need to refer to them in the Autumn Term booklet. Also some subjects like Design Technology organise the curriculum on a carousel, as such all the organisers for that subject are in the Autumn Term booklet.

## **Contents**

An introduction to Knowledge Organisers

Art

Computing

English

Geography

History

Mathematics

MFL

Music

PSHE

Religion, Ethics and Philosophy

Science

## An Introduction to Knowledge Organisers

### What is a Knowledge Organiser?

A knowledge organiser is a document, usually one side of A4, occasionally two, that contains key facts and information that children need to have a basic knowledge and understanding of a topic, or in some cases a series of topics.

Students are expected to bring their Knowledge Organiser Booklet to school every day. Students will be issued with a new booklet each term. However, it is important they keep the booklets to help with revision for end of year exams.

### What are the benefits of knowledge organisers?

The main benefit of knowledge organisers is that they give students and parents the 'bigger picture' of a topic or subject area. Some topics can be complicated, so having the essential knowledge, clear diagrams, explanations and key terms on one document can be really helpful.

Research shows that our brains remember things more efficiently when we know the 'bigger picture' and can see the way that nuggets of knowledge within that subject area link together. Making links, essentially, helps information move into our long-term memory.

### How can the students use them?

As mentioned earlier, students are expected to bring their Knowledge Organiser Booklet to school everyday. In lessons they can be used in a number of ways, for example, to look up the meaning of key words, spell words correctly and do some additional work if they have finished classwork.

At home knowledge organisers can be used to support homework, independent work and revise for tests and exams. Two quick and easy ways to do this are:

1. Look, cover write, check – look at part of the knowledge organiser, cover it, write as much as you can remember and then check it
2. Word up – Pick out any words you don't understand. Use a dictionary or thesaurus to find the meaning. If they don't help ask your teacher.

The more often you do this the better. YouTube has some clips on them; search 'Mr Garner look, cover, write, and check' and 'Mr Garner word up'

### How can parents use them?

- Read through the organiser with your son/daughter – if you don't understand the content then ask them to explain it to you – 'teaching' you helps them to reinforce their learning.
- Test them regularly on the spellings of key words until they are perfect. Get them to make a glossary (list) of key words with definitions or a list of formulae.
- Read sections out to them, missing out key words or phrases that they have to fill in. Miss out more and more until they are word perfect.

### How the booklet is organised

The knowledge organisers are in alphabetical order by subject.

# YEAR 8 ART COLOUR

# Knowledge Organiser - Term 2 & 3

- |                 |            |
|-----------------|------------|
| INDIA           | MAORI      |
| AFRICAN         | JAPANESE   |
| NATIVE AMERICAN | ABORIGINAL |
| CELTIC          | MEXICAN    |
| ISLAMIC         | AZTEC      |
| CHINESE         |            |



- KEY WORDS**
- Primary
  - Secondary
  - Tertiary
  - Complementary
  - Highlight
  - Abstract
  - Shadow
  - Shade
  - Tone
  - Cool
  - Warm
  - Application
  - Foreground
  - Background

**Colour Theory:**

The primary colours are the three main colours. They cannot be made but when mixed together they make all other colours.

The secondary colours are made by mixing two primary colours together

The tertiary colours are made by mixing a primary and secondary colour together.

Complementary colours are opposite on the colour wheel. They contrast each other to have a vibrant look.

To make a lighter colour you add white, this is called a tinte.



- Skills**
- Pattern and symbolism
  - Printmaking
  - Culture understanding/application
  - Development of mixed media skills

- Artists inspired by colour**
- Claude Monet
  - Henri Matisse
  - Barbara Rae
  - Georgia O'Keeffe
  - Mark Rothko
  - David Hockney

Warm colours - perceived as energetic or exciting.

attract attention and are generally energetic or exciting.

Cool colours- are generally perceived as soothing and

generally perceived as soothing and

- WARM COLOURS**
- RED
  - ORANGE
  - YELLOW

- COOL COLOURS**
- BLUE
  - GREEN
  - VIOLET

```

from turtle import *

down()
fd(50)
rt(90)
fd(50)
rt(90)
fd(50)
rt(90)
fd(50)
rt(90)
up()

```

This program draws a square. The **sequence** of instructions is important. If they are in a different order, the outcome of the program will be different.

down() and up() tell the turtle to start and stop drawing.

fd(50) moves the turtle forward 50 steps.

rt(90) rotates the turtle 90 degrees to the right (clockwise)

```

from turtle import *

down()
for i in range(4):
    fd(50)
    rt(90)
up()

```

This program does exactly the same thing. However, it uses a loop to repeat instructions, making it shorter and therefore easier to edit if necessary. This is known as **iteration**.

for i in range(4): means to repeat the instructions that are indented 4 times.

```

from turtle import *

sides = 4
steps = 50

down()
for i in range(sides):
    fd(steps)
    rt(360/sides)
up()

```

The program has been improved further here. It uses two **variables**, *sides* and *steps*.

This makes the program more flexible, by being able to draw shapes of different number of sides.

The number of degrees to rotate has been calculated by an **arithmetic operation**:  $360 \div \text{sides}$ . We use `'/'` as the division operator (instead of  $\div$ ) in computing.

## Computing: Programming with Python

```

from turtle import *

sides = input("How many sides?")
sides = int(sides)
steps = 50

down()
for i in range(sides):
    fd(steps)
    rt(360/sides)
up()

print("I've drawn a shape with",sides,"sides")

```

This time the program asks the user how many sides the shape should be. This is known as **user input** and the answer is stored in the variable *sides*.

Once the shape has been drawn, the program **outputs** text to the screen.

```

from turtle import *

print("Type r for a red shape, or b for blue")
col = input("")
if col == "r":
    color("red")
else:
    color("blue")

```

Finally, the user is given a choice of colours.

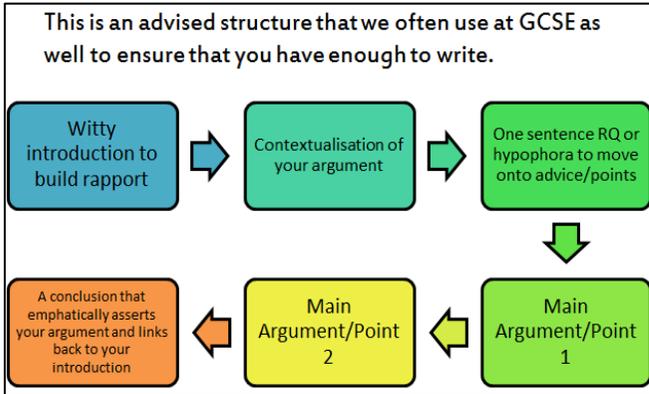
The user enters a colour which is stored as variable `'col'`

This part of the program uses a **Boolean expression** to compare `col` variable with `'r'`.

If this is *true* (the users types `'r'`), the pen colour is red.

If this is *false* (the user doesn't type `'r'`), the pen will be blue. *If... else* statements are known as **selection**.

**HOW TO STRUCTURE VIEWPOINT WRITING**



**ADVANCED SENTENCE STRUCTURES AND PATTERNS**

|             |   |
|-------------|---|
| *litotes    | Begin with the negative: use 'Nothing...' or 'Never...' for example   |
| *hypophora  | A rhetorical question that is answered  |
| *diacope    | Repeated use of the same word within/across sentences   |
| *isocolon   | Series of phrases or sentences structured in the same way: <i>Keep fit, keep active, keep healthy!</i>                      |
| *epizeuxis  | The repetition of a word or phrase in immediate succession: <i>Run, run, run!</i>   |
| *anaphora   | Using a phrase to begin more than one clause of sentence, such as 'I Have a dream...' in Martin Luther King's famous speech |
| *epistrophe | The repetition of a word at the end of successive clauses or sentences  |

**ADVANCED PUNCTUATION**

|             |  |
|-------------|--|
| *semi-colon | Used to replace 'and' in a compound sentence:<br><i>Like an angel, the sun shone; there wasn't a cloud to be seen.</i>   |
| *colon      | Means 'Here's my evidence' and follows a simple statement:<br><i>Majestically, the princess created a stir: she was beautiful!</i>   |
| *dash       | Single: Used to emphasise a description at the end of a sentence:<br><i>Happily, the sun shone - its rays reached across the whole land.</i><br>Double: Used to emphasise a description with further emphasis: <i>The sun's rays - its burning, radiant rays - shone across the kingdom.</i> |

**CONVENTIONS OF DESCRIPTIVE WRITING**

|                  |  |
|------------------|--|
| simile           | Phrase with 'as' or 'like' to suggest similarity                   |
| metaphor         | Suggesting something is something else                             |
| *motif           | A metaphor used across a piece of writing                          |
| personification  | Given an inanimate object human qualities like movement or emotion |
| alliteration     | Repetition of consonant sounds                                     |
| assonance        | Repetition of vowel sounds   |
| sibilance        | Repetition of 's' sounds   |
| pathetic fallacy | Where the weather or setting reflects a mood                       |

**KEY SPELLINGS FOR THIS SCHEME OF WORK**

|          |            |             |                           |                 |
|----------|------------|-------------|---------------------------|-----------------|
| rhetoric | statistics | epizeuxis   | interrogative (sentences) | simile          |
| irony    | anaphora   | hypophora   | imperatives               | personification |
| anecdote | epistrophe | hyperbole   | motif                     | alliteration    |
| tripling | repetition | exclamation | metaphor                  | assonance       |

**ROMANTIC POETRY**

- Popular poetry of the late 18<sup>th</sup> and early 19<sup>th</sup> century
- The genre was introduced and developed by William Wordsworth and Samuel Taylor-Coleridge
- Wordsworth's *Lyrical Ballads* (1798) is the first major collection of Romantic Poetry
- Romantic poems celebrated the natural world
- Romantics thought we could learn from nature and understand life better from its example
- Romantics were fascinated by the human mind and imagination

**FAMOUS ROMANTIC POETS**

- William Wordsworth (1770-1850)
- Samuel Taylor Coleridge (1772-1834)
- William Blake (1757-1827)
- P.B. Shelley (1792-1822)
- Lord Byron (1788-1824)
- John Keats (1795-1821)

**‘JERUSALEM’ BY WILLIAM BLAKE**

- This poem was written by Blake by 1820
- It celebrates the past beauty of England by comparing it to the Holy land of Jerusalem
- It is a poem that fears the impact of industrial change on beautiful, rural England

**KEY QUOTES:**

- 'dark satanic mills'
- 'England's green and pleasant land'
- 'Bring me my chariot of fire!'

**‘OZYMANDIAS’ BY P.B. SHELLEY**

- This sonnet was written by P.B. Shelley in 1818
- Shelley wrote this poem, inspired by the discovery of the statue of Ramesses II in Egypt. He wrote it before the statue had even arrived in the British Museum in London, where you can still see it today
- Rameses was a tyrant who had immense power in Egypt; he fought many wars and built many monuments to celebrate this power
- Ozymandias is the Greek name for Ramesses II.

**KEY QUOTES:**

- 'Two vast and trunkless legs'
- 'Look on my works, ye Mighty, and despair!'

**‘SONGS OF INNOCENCE AND EXPERIENCE’ BY WILLIAM BLAKE**

- These collections of poems were counterparts to each other: *Songs of Innocence* was published in 1789 and the *Songs of Experience* in 1794.
- Blake explored childhood innocence in his first collection and then explored the adult world of 'experience' and suffering in a time of industrialisation and war. Here are some examples...

**‘THE LAMB’ (INNOCENCE) AND ‘THE TYGER’ (EXPERIENCE)**

These poems use animal symbolism to explore the innocence of childhood (*The Lamb*) compared to the corruption and industrialisation of the Victorian era (*The Tyger*)

**KEY QUOTES**

**The Lamb:** 'Little Lamb, God bless thee!'

**The Tyger:** 'Tyger tiger, burning bright/In the forests of the night'

**‘THE CHIMNEY SWEEPER’ POEMS**

These poems explore the experiences of young chimney sweepers. Blake criticises how institutions like the Church would justify this child labour through religion with working be the behaviour of good boys.

**KEY QUOTES**

**The Chimney Sweeper (Innocence):** 'If all do their duty they need not fear harm'

**The Chimney Sweeper (Experience):** 'They clothed me in the clothes of death'

**KEY SPELLINGS FOR THIS SCHEME OF WORK**

|             |        |            |          |
|-------------|--------|------------|----------|
| Romanticism | ballad | symbolism  | pastoral |
| sublime     | sonnet | refrain    | radical  |
| beautiful   | meter  | enjambment | persona  |
| awesome     | rhyme  | caesura    | speaker  |

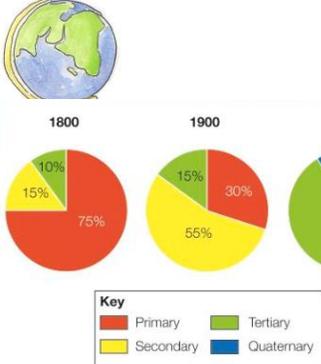
# Year 8 Geography

## Unit 3: Economic Activities



LOOK  
SAY  
COVER  
WRITE  
CHECK

### KEYWORDS



**Lesson 1-2:** Economic activities are split into 4 categories, primary, secondary, tertiary, quaternary.

**Lesson 17:**

- In the past, the UK's economy was based on farming. Two types- arable and pastoral farming
- During industrialisation, the UK moved to the secondary sector
- De-industrialisation (factories and industry moving to elsewhere)
- The UK then moved into tertiary and quaternary sectors

**Lesson 2-4:** When choosing a site for a factory to locate, the following factors need to be considered:

**Raw materials-** These are the things that are made into something

**Labour-** These are the workers who work at the factory

**Power-** This is the energy used to make the factory work

**Transport-** This is how the natural resources and finished products are moved

**Market-** This is the place where the finished products are sold

**Site-** This is where the factory is located

**Lessons 10-15:** Shopping patterns, high street change and Altrincham fieldwork.



Out of town shopping centres (like the TC) led to a decline in UK high streets, especially Altrincham, resulting in many empty shops. Altrincham has changed its high street to attract more people back to it.

Methodologies carried out during Alt. fieldwork. These were presented as a **bi-polar graph** and **bar chart**.

|                       | HOW? | WHY? | POSITIVES? | NEGATIVES? |
|-----------------------|------|------|------------|------------|
| Land Use Mapping      |      |      |            |            |
| Environmental Quality |      |      |            |            |
| Pedestrian Counts     |      |      |            |            |

|                   | Definition   |
|-------------------|--|
| <b>Primary</b>    | collecting or producing raw materials e.g coal miner, farmer                             |
| <b>Secondary</b>  | making something using the processed raw materials. Manufacturing products. e.g a joiner |
| <b>Tertiary</b>   | Selling services or skills. e.g banking or retail jobs                                   |
| <b>Quaternary</b> | Providing information services. E.g. research and development jobs, government           |



**Lesson 5-6:** 'Made in China' China now produces goods for the world. This has given China much more money, but has harmed the environment

**Lesson 16:** High tech industries: These are advanced industries, that develop new things. They are located near business/science parks and Universities so they can recruit a highly skilled workforce.

The M4 corridor is the most famous UK EG



**Lesson 18:** Modern industries, like quarries, can be made more sustainable. This means that the damage they do to the environment can be reduced. One way to do this is by turning old quarries into nature reserves.



# The Growth & Decline of the British Empire

## Big Question – Was the British Empire a force for good or bad in the world?

### Timeline of Key Events

|       |   |
|-------|---|
| 1612  | The East India Company began to build up a small empire of trading posts in India.  |
| 1757  | Robert Clive leads a group of soldiers who beat an Indian army at the Battle of Plassey. This established British control in India  |
| 1857  | Major rebellion against the rule of the British East India Company by Indian troops known as sepoys. The government took over rule of India from the East India Company.      |
| 1881  | The Scramble for Africa begins. the occupation, division, and colonization of African territory by European powers (including Britain) begins                                 |
| 1924  | The British Empire Exhibition at Wembley Stadium. The Empire looked happy and strong. It controlled nearly 1/3 of the world.  |
| 1930  | Mohandas Gandhi, who demands Indian independence, holds a non-violent protest against British rule, the Salt March- many poor Indians support him                             |
| 1948  | India & Pakistan are granted independence from Britain. The first major arrival of immigrants from the Caribbean on the Empire Windrush takes place.                          |
| 1960s | British Prime Minister Harold Macmillan admitted there was a "wind of change" in Africa. Most of Britain's African and Caribbean colonies achieved independence in the 1960s. |

### Assessment Objectives

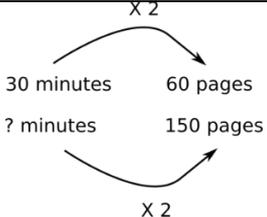
- To explain how and why the empire grew
- To explore different experiences of the empire
- To explain how and why the empire ended
- To reach a judgement on how far the British Empire was a force for good or bad in the world

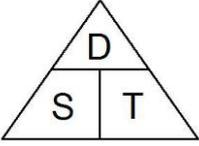
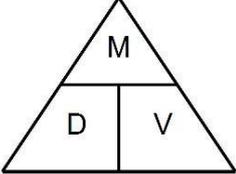
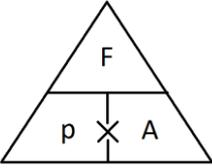
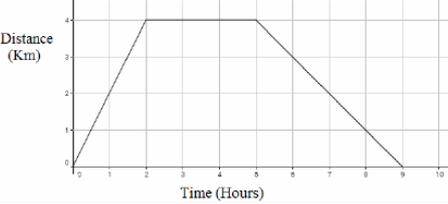
### Keyword

### Definition

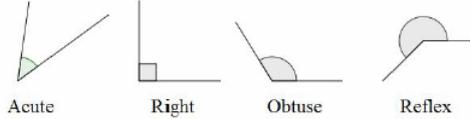
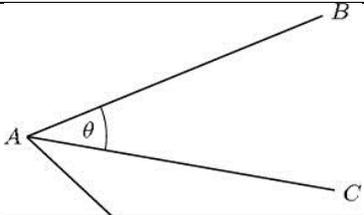
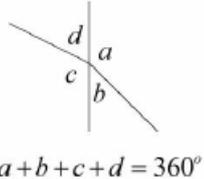
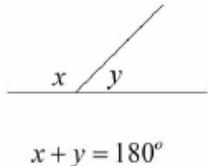
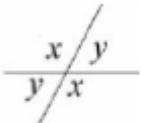
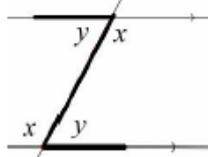
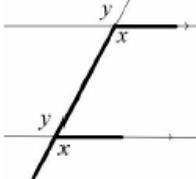
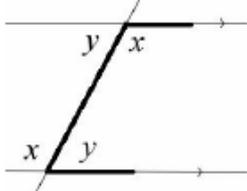
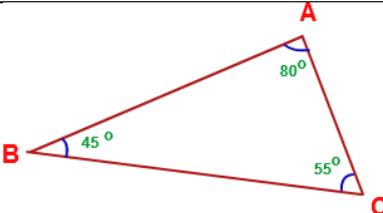
|                   |   |
|-------------------|---|
| Colony            | Area of an Empire   |
| Trade             | Exchange of goods   |
| Nationalism       | Believing your country is better than others  |
| Independence      | Be freeing to run your own affairs  |
| Missionary        | Person spreading Christianity   |
| Imperial          | Word describing Empire  |
| Legacy            | Something left behind   |
| Multi-cultural    | Society influenced by many cultures   |
| Atrocity          | Terrible crime  |
| Indigenous        | People originally from an area  |
| Empire            | Control of land outside of your borders   |
| Merchant          | Salesperson   |
| Aborigine         | Original inhabitants of Australia   |
| Useful Websites   | <a href="https://www.bbc.com/education/guides/zf7fr82/revision/1">https://www.bbc.com/education/guides/zf7fr82/revision/1</a> |
| <b>Key People</b> |   |
| Robert Clive      |   |
| Mir Zafar         |   |
| Thomas Coryate    |   |
| Rammohan Roy      |   |
| Mohandas Gandhi   |   |
| Harold MacMillan  |   |

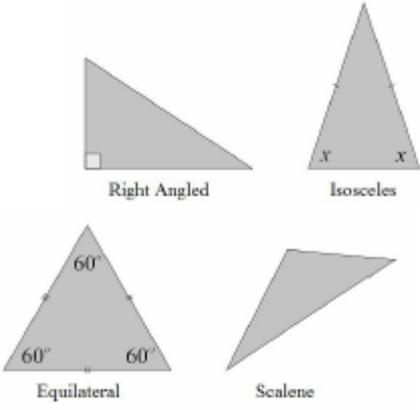
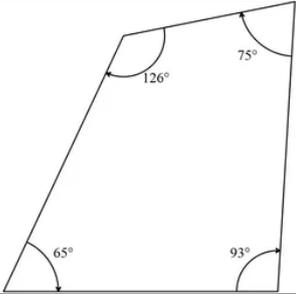
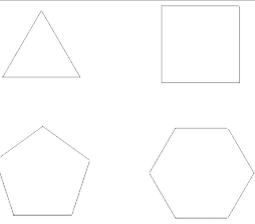
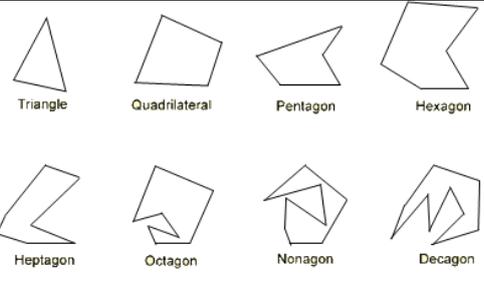
## Stage 8: Proportional Reasoning

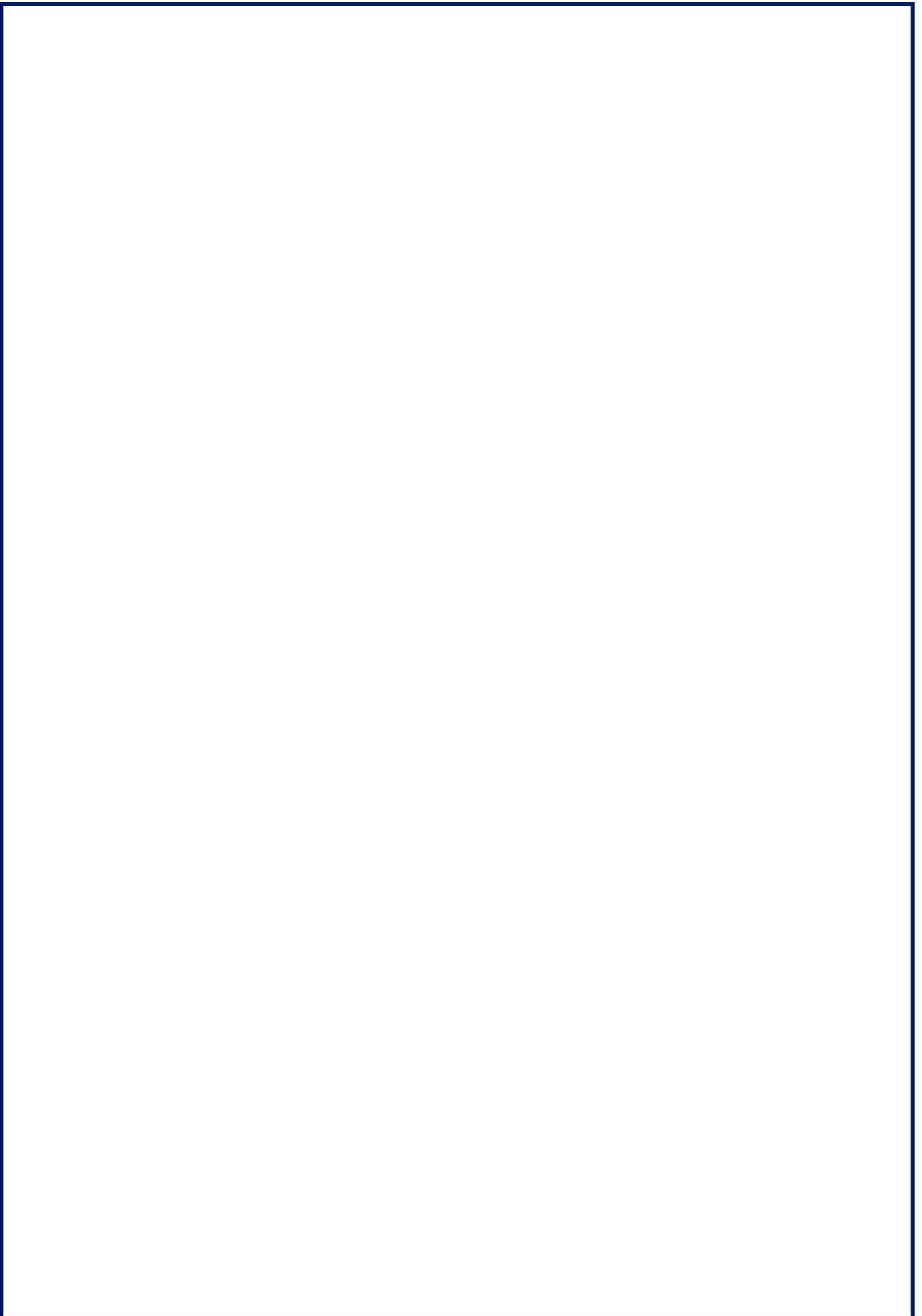
| Topic/Skill                              | Definition/Tips  | Example  |
|--|--|--|
| 1. Ratio                                 | Ratio compares the size of <b>one part</b> to <b>another part</b> .<br><br>Written using the ':' symbol.   | $3 : 1$   |
| 2. Proportion                            | Proportion compares the size of <b>one part</b> to the size of the <b>whole</b> .<br><br>Usually written as a fraction.  | In a class with 13 boys and 9 girls, the proportion of boys is $\frac{13}{22}$ and the proportion of girls is $\frac{9}{22}$   |
| 3. Simplifying Ratios                    | <b>Divide</b> all parts of the ratio by a <b>common factor</b> .   | $5 : 10 = 1 : 2$ (divide both by 5)<br>$14 : 21 = 2 : 3$ (divide both by 7)  |
| 4. Ratios in the form $1 : n$ or $n : 1$ | <b>Divide</b> both parts of the ratio by one of the numbers to make <b>one part equal 1</b> .  | $5 : 7 = 1 : \frac{7}{5}$ in the form $1 : n$<br>$5 : 7 = \frac{5}{7} : 1$ in the form $n : 1$   |
| 5. Sharing in a Ratio                    | <ol style="list-style-type: none"> <li><b>Add</b> the total parts of the ratio.</li> <li><b>Divide</b> the amount to be shared by this value to find the value of one part.</li> <li><b>Multiply</b> this value by each part of the ratio.</li> </ol><br>Use only if you <b>know the total</b> . | Share £60 in the ratio $3 : 2 : 1$ .<br><br>$3 + 2 + 1 = 6$<br>$60 \div 6 = 10$<br>$3 \times 10 = 30, 2 \times 10 = 20, 1 \times 10 = 10$<br>$\pounds 30 : \pounds 20 : \pounds 10$  |
| 6. Proportional Reasoning                | Comparing two things using <b>multiplicative reasoning</b> and applying this to a new situation.<br><br>Identify one multiplicative link and use this to find missing quantities.  |   |
| 7. Unitary Method                        | Finding the <b>value of a single unit</b> and then finding the necessary value by <b>multiplying</b> the single unit value.  | 3 cakes require 450g of sugar to make. Find how much sugar is needed to make 5 cakes.<br><br>$3 \text{ cakes} = 450\text{g}$<br>So $1 \text{ cake} = 150\text{g}$ ( $\div$ by 3)<br>So $5 \text{ cakes} = 750 \text{ g}$ ( $\times$ by 5)                                    |
| 8. Ratio already shared                  | Find what <b>one part</b> of the ratio is worth using the <b>unitary method</b> .  | Money was shared in the ratio $3:2:5$ between Ann, Bob and Cat. Given that Bob had £16, found out the total amount of money shared.<br><br>$\pounds 16 = 2 \text{ parts}$<br>So $\pounds 8 = 1 \text{ part}$<br>$3 + 2 + 5 = 10 \text{ parts, so } 8 \times 10 = \pounds 80$ |
| 9. Best Buys                             | Find the <b>unit cost</b> by <b>dividing the price by the quantity</b> .<br>The <b>lowest</b> number is the best value.  | $8 \text{ cakes for } \pounds 1.28 \rightarrow 16\text{p each}$ ( $\div$ by 8)<br>$13 \text{ cakes for } \pounds 2.05 \rightarrow 15.8\text{p each}$ ( $\div$ by 13)<br>Pack of 13 cakes is best value.  |

|                                      |  |  |
|--------------------------------------|--|--|
| <p>10. Speed,<br/>Distance, Time</p> | <p><b>Speed = Distance ÷ Time</b><br/> <b>Distance = Speed x Time</b><br/> <b>Time = Distance ÷ Speed</b></p>  <p>Remember the correct units.</p>   | <p>Speed = 4mph<br/> Time = 2 hours</p> <p>Find the Distance.</p> $D = S \times T = 4 \times 2 = 8 \text{ miles}$            |
| <p>11. Density,<br/>Mass, Volume</p> | <p><b>Density = Mass ÷ Volume</b><br/> <b>Mass = Density x Volume</b><br/> <b>Volume = Mass ÷ Density</b></p>  <p>Remember the correct units.</p>   | <p>Density = 8kg/m<sup>3</sup><br/> Mass = 2000g</p> <p>Find the Volume.</p> $V = M \div D = 2 \div 8 = 0.25m^3$             |
| <p>12. Pressure,<br/>Force, Area</p> | <p><b>Pressure = Force ÷ Area</b><br/> <b>Force = Pressure x Area</b><br/> <b>Area = Force ÷ Pressure</b></p>  <p>Remember the correct units.</p> | <p>Pressure = 10 Pascals<br/> Area = 6cm<sup>2</sup></p> <p>Find the Force</p> $F = P \times A = 10 \times 6 = 60 \text{ N}$ |
| <p>13. Distance-<br/>Time Graphs</p> | <p>You can find the <b>speed</b> from the <b>gradient</b> of the line (Distance ÷ Time)<br/> The steeper the line, the quicker the speed.<br/> A <b>horizontal</b> line means the object is not moving (<b>stationary</b>).</p>      |    |

## Stage 8: Angles

| Topic/Skill                   | Definition/Tips  | Example  |
|-------------------------------|--|--|
| 1. Types of Angles            | <p><b>Acute angles</b> are less than <math>90^\circ</math>.</p> <p><b>Right angles</b> are exactly <math>90^\circ</math>.</p> <p><b>Obtuse angles</b> are greater than <math>90^\circ</math> but less than <math>180^\circ</math>.</p> <p><b>Reflex angles</b> are greater than <math>180^\circ</math> but less than <math>360^\circ</math>.</p> |  <p>Acute      Right      Obtuse      Reflex</p> |
| 2. Angle Notation             | <p>Can use <b>one lower-case</b> letters, eg. <math>\theta</math> or <math>x</math></p> <p>Can use <b>three upper-case</b> letters, eg. <math>BAC</math></p>   |   |
| 3. Angles at a Point          | <b>Angles around a point add up to <math>360^\circ</math>.</b>   |  <p><math>a + b + c + d = 360^\circ</math></p>  |
| 4. Angles on a Straight Line  | <b>Angles around a point on a straight line add up to <math>180^\circ</math>.</b>  |  <p><math>x + y = 180^\circ</math></p>         |
| 5. Vertically Opposite Angles | <b>Vertically opposite angles are equal.</b>   |  <p><math>x = y</math></p>                    |
| 6. Alternate Angles           | <b>Alternate angles are equal.</b><br>They look like Z angles, but never say this in the exam.   |  <p><math>x = y</math></p>                    |
| 7. Corresponding Angles       | <b>Corresponding angles are equal.</b><br>They look like F angles, but never say this in the exam.   |  <p><math>x = y</math></p>                    |
| 8. Co-Interior Angles         | <b>Co-Interior angles add up to <math>180^\circ</math>.</b><br>They look like C angles, but never say this in the exam.  |  <p><math>x + y = 180^\circ</math></p>        |
| 9. Angles in a Triangle       | <b>Angles in a triangle add up to <math>180^\circ</math>.</b>  |   |

|  |   |  |
|--|---|--|
| <p>10. Types of Triangles</p>                          | <p><b>Right Angle</b> Triangles have a <b>90°</b> angle in.</p> <p><b>Isosceles</b> Triangles have <b>2 equal sides</b> and <b>2 equal base angles</b>.</p> <p><b>Equilateral</b> Triangles have <b>3 equal sides</b> and <b>3 equal angles (60°)</b>.</p> <p><b>Scalene</b> Triangles have <b>different sides</b> and <b>different angles</b>.</p> <p><b>Base angles in an isosceles triangle are equal.</b></p> |    |
| <p>11. Angles in a Quadrilateral</p>                   | <p><b>Angles in a quadrilateral add up to 360°.</b></p>   |   |
| <p>12. Polygon</p>                                     | <p>A <b>2D</b> shape with <b>only straight edges</b>.</p>   | <p>Rectangle, Hexagon, Decagon, Kite etc.</p>  |
| <p>13. Regular</p>                                     | <p>A shape is regular if all the <b>sides</b> and all the <b>angles</b> are <b>equal</b>.</p>   |    |
| <p>14. Names of Polygons</p>                           | <p><b>3-sided = Triangle</b><br/> <b>4-sided = Quadrilateral</b><br/> <b>5-sided = Pentagon</b><br/> <b>6-sided = Hexagon</b><br/> <b>7-sided = Heptagon/Septagon</b><br/> <b>8-sided = Octagon</b><br/> <b>9-sided = Nonagon</b><br/> <b>10-sided = Decagon</b></p>  |    |
| <p>15. Sum of Interior Angles</p>                      | <p><math>(n - 2) \times 180</math><br/> where n is the number of sides.</p>   | <p>Sum of Interior Angles in a Decagon =<br/> <math>(10 - 2) \times 180 = 1440^\circ</math></p>                                  |
| <p>16. Size of Interior Angle in a Regular Polygon</p> | <p><math display="block">\frac{(n - 2) \times 180}{n}</math></p> <p>You can also use the formula:<br/> <b>180 – Size of Exterior Angle</b></p>  | <p>Size of Interior Angle in a Regular Pentagon =<br/> <math display="block">\frac{(5 - 2) \times 180}{5} = 108^\circ</math></p> |
| <p>17. Size of Exterior Angle in a Regular Polygon</p> | <p><math display="block">\frac{360}{n}</math></p> <p>You can also use the formula:<br/> <b>180 – Size of Interior Angle</b></p>   | <p>Size of Exterior Angle in a Regular Octagon =<br/> <math display="block">\frac{360}{8} = 45^\circ</math></p>                  |



## Stage 8: Calculating with Percentages, Decimals, Fractions

| Topic/Skill                             | Definition/Tips   | Example  |
|---|---|--|
| 1. Increase or Decrease by a Percentage | <p>Non-calculator: <b>Find the percentage</b> and <b>add</b> or <b>subtract</b> it from the <b>original</b> amount.</p> <p>Calculator: Find the <b>percentage multiplier</b> and multiply.</p>  | <p><u>Increase 500 by 20% (Non Calc):</u><br/>           10% of 500 = 50<br/>           so 20% of 500 = 100<br/>           500 + 100 = 600</p> <p><u>Decrease 800 by 17% (Calc):</u><br/>           100% - 17% = 83%<br/>           83% ÷ 100 = 0.83<br/>           0.83 x 800 = 664</p>   |
| 2. Percentage Multiplier                | The <b>number</b> you <b>multiply</b> a quantity by to <b>increase or decrease</b> it by a <b>percentage</b> .  | <p>The multiplier for increasing by 12% is 1.12</p> <p>The multiplier for decreasing by 12% is 0.88</p> <p>The multiplier for increasing by 100% is 2.</p>   |
| 3. Percentage Change                    | $\frac{\text{Difference}}{\text{Original}} \times 100\%$  | <p>A games console is bought for £200 and sold for £250.</p> <p>% change = <math>\frac{50}{200} \times 100 = 25\%</math></p>   |
| 4. Reverse Percentage                   | <p>Find the <b>correct percentage given in the question</b>, then work backwards to <b>find 100%</b></p> <p>Look out for words like <b>'before'</b> or <b>'original'</b></p>  | <p>A jumper was priced at £48.60 after a 10% reduction. Find its original price.</p> <p>100% - 10% = 90%</p> <p>90% = £48.60<br/>           1% = £0.54<br/>           100% = £54</p>   |
| 5. Simple Interest                      | Interest calculated as a <b>percentage of the original</b> amount.  | <p>£1000 invested for 3 years at 10% simple interest.</p> <p>10% of £1000 = £100</p> <p>Interest = 3 × £100 = £300</p>   |
| 6. Compound Interest                    | Interest paid on the <b>original amount and the accumulated interest</b> .  | <p>A bank pays 5% compound interest a year. Bob invests £3000. How much will he have after 7 years.</p> <p style="text-align: center;"><math>3000 \times 1.05^7 = £4221.30</math></p>  |
| 7. Adding or Subtracting Fractions      | <p>Find the <b>LCM of the denominators</b> to find a common denominator.</p> <p>Use equivalent fractions to change each fraction to the <b>common denominator</b>.</p> <p>Then just <b>add or subtract the numerators</b> and keep the <b>denominator the same</b>.</p> | <p style="text-align: center;"><math>\frac{2}{3} + \frac{4}{5}</math></p> <p>Multiples of 3: 3, 6, 9, 12, <b>15..</b><br/>           Multiples of 5: 5, 10, <b>15..</b><br/>           LCM of 3 and 5 = 15</p> <p style="text-align: center;"><math>\frac{2}{3} = \frac{10}{15}</math></p> |

|                          |  |  |
|--------------------------|--|--|
|                          |  | $\frac{4}{5} = \frac{12}{15}$ $\frac{10}{15} + \frac{12}{15} = \frac{22}{15} = 1\frac{7}{15}$  |
| 8. Multiplying Fractions | <b>Multiply the numerators</b> together and <b>multiply the denominators</b> together.   | $\frac{3}{8} \times \frac{2}{9} = \frac{6}{72} = \frac{1}{12}$                                 |
| 9. Dividing Fractions    | <p><b>‘Keep it, Flip it, Change it – KFC’</b><br/>           Keep the first fraction the same<br/>           Flip the second fraction upside down<br/>           Change the divide to a multiply</p> <p>Multiply by the reciprocal of the second fraction.</p> | $\frac{3}{4} \div \frac{5}{6} = \frac{3}{4} \times \frac{6}{5} = \frac{18}{20} = \frac{9}{10}$ |

## Stage 8: Equations

| Topic/Skill             | Definition/Tips  | Example   |
|-------------------------|--|---|
| 1. Solve                | To find the <b>answer</b> /value of something<br><br>Use <b>inverse operations</b> on both sides of the equation (balancing method) until you find the value for the letter. | Solve $2x - 3 = 7$<br><br>Add 3 on both sides<br>$2x = 10$<br>Divide by 2 on both sides<br>$x = 5$<br><br>Solve $3x + 1 = 5x - 3$<br><br>Subtract $3x$ (the smallest amount of $x$ ) from both sides<br>$1 = 2x - 3$<br>Add 3 on both sides<br>$4 = 2x$<br>Divide by 2 on both sides<br>$2 = x$ |
| 2. Inverse              | <b>Opposite</b>  | The inverse of addition is subtraction.<br>The inverse of multiplication is division.   |
| 3. Rearranging Formulae | Use <b>inverse operations</b> on both sides of the formula (balancing method) until you find the expression for the letter.  | Make $x$ the subject of $y = \frac{2x-1}{z}$<br><br>Multiply both sides by $z$<br>$yz = 2x - 1$<br>Add 1 to both sides<br>$yz + 1 = 2x$<br>Divide by 2 on both sides<br>$\frac{yz + 1}{2} = x$<br>We now have $x$ as the subject.   |
| 4. Writing Formulae     | <b>Substitute letters for words</b> in the question.   | Bob charges £3 per window and a £5 call out charge.<br><br>$C = 3N + 5$<br><br>Where $N$ =number of windows and $C$ =cost   |
| 5. Substitution         | <b>Replace letters with numbers.</b><br><br>Be careful of $5x^2$ . You need to square first, then multiply by 5.   | $a = 3, b = 2$ and $c = 5$ . Find:<br>1. $2a = 2 \times 3 = 6$<br>2. $3a - 2b = 3 \times 3 - 2 \times 2 = 5$<br>3. $7b^2 - 5 = 7 \times 2^2 - 5 = 23$   |

## Year 8 French

### Knowledge Organiser HT3

#### La technologie

|                 |                |
|-----------------|----------------|
| une maison      | a house        |
| un appartement  | a flat         |
| la rue          | the street     |
| à la campagne   | in the country |
| dans un village | in a village   |
| dans une ville  | in a town      |

#### Rooms in a house

|                   |                 |
|-------------------|-----------------|
| chez moi          | in my home      |
| la chambre        | the bedroom     |
| la cuisine        | the kitchen     |
| le jardin         | the garden      |
| la salle à manger | the dining room |
| la salle de bains | the bathroom    |
| le salon          | the living room |

#### Prepositions

|            |             |
|------------|-------------|
| devant     | in front of |
| derrière   | behind      |
| en face de | opposite    |
| sur        | on          |
| sous       | under       |

#### Intensifiers

|          |        |
|----------|--------|
| vraiment | really |
| très     | very   |
| assez    | quite  |
| trop     | too    |
| un peu   | a bit  |

#### Giving an opinion

|                    |                   |
|--------------------|-------------------|
| je pense que       | I think that      |
| à mon avis         | in my opinion     |
| je préfère         | I prefer          |
| je trouve ça       | I find it         |
| je suis fan de     | I am a fan of     |
| j'ai horreur de    | I hate            |
| ça me fait rire    | it makes me laugh |
| ça me fait pleurer | it makes me cry   |

#### Present tense key verbs

|                     |                    |
|---------------------|--------------------|
| Je regarde          | I watch            |
| Tu regardes         | you watch          |
| il/elle regarde     | he/she watches     |
| nous regardons      | we watch           |
| vous regardez       | you (formal) watch |
| ils/elles regardent | they watch         |
| je vais             | I go               |
| tu vas              | you go             |
| il/elle va          | he /she goes       |
| nous allons         | we go              |
| vous allez          | you go             |
| ils /elles vont     | they go            |
| je fais             | I do               |
| tu fais             | you do             |
| il/elle fait        | he/she does        |
| nous faisons        | we do              |
| vous faites         | you do             |
| ils/elles font      | they do            |

#### Weather

|                               |               |
|-------------------------------|---------------|
| Il fait beau                  | it is nice    |
| Il pleut                      | it is raining |
| Il fait chaud                 | it is hot     |
| Il fait froid                 | it is cold    |
| <u>On TV</u>                  |               |
| les dessins animés            | cartoons      |
| les infos                     | the news      |
| les jeux télévisés            | game shows    |
| la météo                      | the weather   |
| les séries                    | series        |
| les documentaires             |               |
| les émissions de sport        |               |
| les émissions de télé-réalité |               |

#### Internet

|                             |                      |
|-----------------------------|----------------------|
| Je fais des achats en ligne | I do online shopping |
| Je fais des recherches      | I do searches        |
| J'envoie                    | I send               |
| Je mets à jour              | I update             |
| Je joue à des jeux en ligne | I play games on line |

#### Time phrases: When?

|                            |                         |
|----------------------------|-------------------------|
| le weekend                 | at the weekend          |
| le matin                   | in the morning          |
| l'après midi               | in the afternoon        |
| le soir                    | in the evening/at night |
| <u>samedi</u> matin        | on Saturday morning     |
| <u>dimanche</u> après-midi | on Sunday afternoon     |

#### Past tense

|                 |              |
|-----------------|--------------|
| J'ai discuté    | I discussed  |
| J'ai écouté     | I listened   |
| J'ai envoyé     | I sent       |
| J'ai joué       | I played     |
| J'ai posté      | I posted     |
| J'ai regardé    | I watched    |
| J'ai surfé      | I surfed     |
| J'ai tchatté    | I chatted    |
| J'ai téléchargé | I downloaded |

#### Connectives and sequencers

|           |         |
|-----------|---------|
| cependant | however |
| aussi     | also    |
| puis      | then    |
| d'abord   | firstly |
| ensuite   | next    |
| après     | after   |
| avant     | before  |

#### Adjectives

|             |             |
|-------------|-------------|
| ennuyeux    | boring      |
| rasant      | boring      |
| barbant     | boring      |
| passionnant | exciting    |
| amusant     | fun/funny   |
| confortable | comfortable |
| douillet    | cosy        |
| assez bien  | quite good  |
| chouette    | excellent   |
| effrayant   | frightening |
| émouvant    | moving      |
| passionnant | exciting    |
| pratique    | practical   |

## Year 8 French Knowledge

### Organiser HT4

#### Intensifiers

|          |        |
|----------|--------|
| vraiment | really |
| très     | very   |
| assez    | quite  |
| trop     | too    |
| un peu   | a bit  |

#### Giving an opinion

|                         |               |
|-------------------------|---------------|
| je pense que            | I think that  |
| à mon avis              | in my opinion |
| je préfère              | I prefer      |
| je trouve ça            | I find it     |
| je suis d'accord        | I agree       |
| je ne suis pas d'accord | I don't agree |

#### Relationships

|                          |                            |
|--------------------------|----------------------------|
| On s'amuse               | We have fun                |
| On se chamaille          | We squabble                |
| On se confie des secrets | We tell each other secrets |
| On se dit                | We tell each other         |
| On se dispute            | We argue                   |
| On s'entend              | We get on                  |
| On se fâche              | We get angry               |

#### Mon caractère

|                      |                   |
|----------------------|-------------------|
| Je suis              | I am              |
| Je pense que je suis | I think that I am |
| Je ne suis pas       | I am not          |

Je ne suis pas du tout I am not at all

Mon meilleur ami/Ma meilleure amie est... My best friend is

|                 |             |
|-----------------|-------------|
| Adorable        | adorable    |
| Arrogant(e)     | arrogant    |
| Amusant(e)      | funny       |
| Casse-pieds     | annoying    |
| Curieux/se      | curious     |
| Débrouillard(e) | resourceful |
| Drôle           | funny       |
| égoïste         | selfish     |
| gentil(le)      | nice        |
| intelligent(e)  | intelligent |
| optimiste       | optimistic  |
| paresseux/se    | lazy        |
| patient(e)      | patient     |
| pessimiste      | pessimistic |
| rigolo(te)      | funny       |
| sociable        | sociable    |
| sympa           | nice        |

#### les vêtements Clothes

Normalement, je porte... Normally, I wear

|                |          |
|----------------|----------|
| Des baskets    | trainers |
| Des bottes     | boots    |
| Des chaussures | shoes    |
| Une chemise    | a shirt  |
| Un chapeau     | a hat    |
| Un jean        | jeans    |
| Une jupe       | a skirt  |
| Un pantalon    | trousers |
| Un pull        | a jumper |

|                    |           |
|--------------------|-----------|
| un sweat à capuche | a hoodie  |
| un tee-shirt       | a T-shirt |
| une veste          | a jacket  |

#### Verbes essentiels Key verbs

|            |                              |
|------------|------------------------------|
| Je vais    | I am going/I go              |
| Tu vas     | You go/You are going         |
| Il/elle va | He/She is going/He/S he goes |
| On va      | We are going/we go           |

#### Using the past tense

|                     |           |
|---------------------|-----------|
| Hier                | Yesterday |
| La semaine dernière | Last week |
| Je suis allé(e)     | I went    |
| J'ai regardé        | I watched |
| J'ai dansé          | I danced  |
| C'était             | It was... |

#### Using the present tense

|             |          |
|-------------|----------|
| Normalement | Normally |
| D'habitude  | Usually  |
| Je vais     | I go     |
| Je regarde  | I watch  |
| Je danse    | I dance  |
| C'est       | It is    |

#### Using the future tense

|                  |                    |
|------------------|--------------------|
| Ce weekend       | This weekend       |
| Cet été          | This summer        |
| Je vais aller    | I'm going to go    |
| Je vais regarder | I'm going to watch |

|                |                    |
|----------------|--------------------|
| Je vais danser | I'm going to dance |
| Ça va être     | It's going to be   |

#### Les couleurs

|                 |                 |
|-----------------|-----------------|
| Beige           | beige           |
| Blanc(he)       | white           |
| Bleu turquoise  | turquoise       |
| Gris(e)         | grey            |
| Marron chocolat | chocolate brown |
| Noir(e)         | black           |
| Orange          | orange          |
| Vert kaki       | khaki           |

#### Les mots essentiels High frequency words

|               |              |
|---------------|--------------|
| Avec          | with         |
| Bien          | well         |
| Comme d'hab   | as usual     |
| En général    | in general   |
| En plus       | in addition  |
| Ensemble      | together     |
| Même          | same         |
| Ou            | or           |
| Partout       | everywhere   |
| Plutôt        | rather       |
| Quand         | when         |
| Sinon         | otherwise    |
| Surtout       | especially   |
| Souvent       | often        |
| Tout(e)       | all, every   |
| Tout le temps | all the time |
| Vraiment      | really       |

### Spanish HT 3

#### Las comidas

|                      |                                |
|----------------------|--------------------------------|
| ¿Qué desayunas?      | What do you eat for breakfast? |
| ¿Qué comes?          | What do you eat?               |
| ¿Qué meriendas?      | What do you eat for tea?       |
| ¿Qué cenas?          | What do you eat for dinner?    |
| Desayuno...          | For breakfast I have...        |
| Como...              | For lunch I eat...             |
| Meriando...          | For tea I eat...               |
| Ceno...              | For dinner I eat...            |
| carne con verduras   | meat with vegetables           |
| cereales             | cereals                        |
| fruta                | fruit                          |
| galletas             | biscuits                       |
| magdalenas           | fairy cakes                    |
| pasta                | pasta                          |
| patatas fritas       | chips                          |
| pescado con ensalada | fish with salad                |
| pizza                | pizza                          |
| pollo                | chicken                        |
| tostadas             | toast                          |
| un bocadillo         | a sandwich                     |

#### Meals

|                                |
|--------------------------------|
| What do you eat for breakfast? |
| What do you eat?               |
| What do you eat for tea?       |
| What do you eat for dinner?    |
| For breakfast I have...        |
| For lunch I eat...             |
| For tea I eat...               |
| For dinner I eat...            |
| meat with vegetables           |
| cereals                        |
| fruit                          |
| biscuits                       |
| fairy cakes                    |
| pasta                          |
| chips                          |
| fish with salad                |
| pizza                          |
| chicken                        |
| toast                          |
| a sandwich                     |

#### ¿Qué bebes?

|                              |   |
|------------------------------|---|
| Bebo...                      | I drink...                              |
| Cola Cao                     | Cola Cao (drinking chocolate)           |
| té                           | tea                                     |
| zum de naranja               | orange juice                            |
| No meriendo.                 | I don't have tea                        |
| No desayuno nada             | I don't have anything for breakfast     |
| Nunca como                   | I never have lunch                      |
| ¿A qué hora desayunas/cenas? | What time do you have breakfast/dinner? |
| Desayuno a las ocho          | I eat breakfast at eight                |
| Como a mediodía              | I have lunch/eat at midday              |
| Ceno después de las nueve    | I have dinner after 9 o'clock           |

#### What do you drink?

|   |
|---|
| I drink...                              |
| Cola Cao (drinking chocolate)           |
| tea                                     |
| orange juice                            |
| I don't have tea                        |
| I don't have anything for breakfast     |
| I never have lunch                      |
| What time do you have breakfast/dinner? |
| I eat breakfast at eight                |
| I have lunch/eat at midday              |
| I have dinner after 9 o'clock           |

#### ¿Con qué frecuencia?

|              |           |
|--------------|-----------|
| siempre      | always    |
| generalmente | generally |
| normalmente  | normally  |
| a veces      | sometimes |

#### How often?

|           |
|-----------|
| always    |
| generally |
| normally  |
| sometimes |

#### En el mercado

|                              |                                   |
|------------------------------|-----------------------------------|
| ¿Qué quieres?                | What would you like?              |
| Un kilo de...                | A kilo of...                      |
| dos kilos de...              | 2 kilos of...                     |
| medio kilo de...             | half a kilo of...                 |
| quinientos gramos de...      | 500g of                           |
| jamón                        | ham                               |
| manzanas                     | apples                            |
| peras                        | pears                             |
| queso                        | cheese                            |
| tomates                      | tomatoes                          |
| uvas                         | grapes                            |
| zanahorias                   | carrots                           |
| un cartón de leche           | a carton of milk                  |
| un chorizo                   | a chorizo (spicy Spanish sausage) |
| una barra de pan             | a baguette/loaf of bread          |
| una botella de agua          | a bottle of water                 |
| una lechuga                  | a lettuce                         |
| ¿Algo más?                   | Anything else?                    |
| Sí, quiero...                | Yes, I'd like...                  |
| por favor                    | please                            |
| Nada más, gracias.           | Nothing else, thank you.          |
| ¿Cuánto cuesta?              | How much is it?                   |
| Un euro                      | One euro.                         |
| Dos euros y veinte céntimos. | €2,20                             |
| Ochenta céntimos.            | Eighty cents                      |

#### Una cena especial

|                            |                             |
|----------------------------|-----------------------------|
| El fin de semana pasado... | Last weekend...             |
| salí con...                | I went out with...          |
| Fui a...                   | I went to...                |
| un restaurante español     | a Spanish restaurant        |
| un restaurante muy caro    | a very expensive restaurant |
| Comí una ensalada.         | I ate a salad               |
| Mi amigo/a comió gambas.   | My friend ate prawns        |
| Compartimos una paella     | We shared a paella          |
| Bebimos agua               | We drank water              |
| Hablamos de música         | We talked about music       |
| ¡Fue genial!               | It was brilliant!           |

#### En el restaurante

|                          |                             |
|--------------------------|-----------------------------|
| ¿Qué vas a tomar?        | What are you going to have? |
| De primer plato...       | As a starter...             |
| De segundo plato...      | As a main course..          |
| De postre...             | As a dessert                |
| quiero                   | I want.../I'd lie...        |
| fruta                    | fruit                       |
| pescado                  | fish                        |
| pollo                    | chicken                     |
| un flan                  | a crème caramel             |
| un helado (de chocolate) | a (chocolate) ice cream     |
| una ensalada             | a salad                     |
| una paella (de mariscos) | a (seafood) paella          |
| una sopa                 | a soup                      |
| unas gambas              | some prawns                 |
| ¿Para beber?             | And to drink?               |
| (Quiero)... por favor    | I want/I'd like...please    |
| agua                     | water                       |
| una Coca Cola            | a Coke                      |
| una limonada             | a lemonade                  |
| Tengo hambre             | I'm hungry                  |
| No tengo hambre          | I'm not hungry              |
| Tengo sed                | I'm thirsty                 |
| La cuenta por favor      | The bill, please            |

#### ¿Qué te gusta comer?

|                             |                                  |
|-----------------------------|----------------------------------|
| Me gusta (mucho) comer...   | I (really) like eating...        |
| No me gusta (nada) comer... | I (really (don't) like eating... |
| A veces como...             | Sometimes I eat...               |
| Nunca como...               | I never eat...                   |
| Me gusta beber...           | I like drinking...               |
| Nunca bebo...               | I never drink...                 |
| Normalmente como...         | Normally I eat...                |
| Nunca bebo...               | I never drink...                 |
| Normalmente bebo...         | Normally I drink...              |
| Normalmente como...         | Normally I eat...                |
| El fin de semana pasado...  | last weekend...                  |
| comí...                     | I ate...                         |
| bebí...                     | I drank...                       |
| Mañana voy a comer...       | Tomorrow I'm going to eat...     |

#### Los números

|               |      |
|---------------|------|
| cien          | 100  |
| ciento diez   | 110  |
| doscientos    | 200  |
| trescientos   | 300  |
| cuatrocientos | 400  |
| quinientos    | 500  |
| seiscientos   | 600  |
| setecientos   | 700  |
| ochocientos   | 800  |
| novecientos   | 900  |
| mil           | 1000 |

#### Palabras muy útiles

##### Very useful words

|               |
|---------------|
| normalmente   |
| de            |
| nada          |
| nunca         |
| algo          |
| mucho/a/os/as |



## Unit 6 – Mira 2

### En la ciudad

|                        |                              |
|------------------------|------------------------------|
| ¿Qué hay en Barcelona? | What is there in Barcelona?  |
| En Barcelona hay...    | In Barcelona there is/are... |
| muchas cosas           | lots of things               |
| el acuario             | the aquarium                 |
| el cine IMAX           | the IMAX cinema              |

¿Adónde vas? Where are you going (to)?

|                                    |                                  |
|------------------------------------|----------------------------------|
| Voy...                             | I'm going...                     |
| al acuario                         | to the aquarium                  |
| al Camp Nou                        | to the Camp Nou                  |
| al cine IMAX                       | to the IMAX cinema               |
| al monumento Colón                 | to the Columbus Monument         |
| al museo Picasso                   | to the Picasso Museum            |
| al Tibidabo                        | to the Tibidabo funfair          |
| a la playa de Barceloneta y el mar | to Barceloneta beach and the sea |
| a la plaza de Cataluña             | to the Plaza Cataluña            |
| a la Sagrada Familia               | to the Sagrada Familia church    |
| a la torre Agbar                   | to the Agbar Tower               |
| a la Villa Olímpica                | to the Olympic Villiage          |
| a las ramblas                      | to the Ramblas                   |
| Me gusta Barcelona porque...       | I like Barcelona because...      |
| me encanta...                      | I love...                        |
| me gusta (mucho)...                | I (really) like...               |
| ir de compras                      | going shopping                   |
| mirar pinturas                     | looking at paintings             |
| montar en las atracciones          | going on rides                   |
| sacar fotos                        | taking photos                    |
| tomar el sol                       | sunbathing                       |
| ver partidos de fútbol             | watching football matches        |
| ver películas                      | watching films                   |
| ver tiburones                      | watching sharks                  |
| Le gusta (mucho)...                | He/She (really) likes...         |
| Le encanta...                      | He/She loves...                  |

### De compras

- ¿Dónde se puede comprar...?
- Where can you buy...?

|           |           |
|-----------|-----------|
| carne     | meat      |
| comida    | food      |
| pan       | bread     |
| ropa      | clothes   |
| un café   | a coffee  |
| un regalo | a present |

- ¿Dónde se pueden comprar...?
- Where can you buy...?

|          |           |
|----------|-----------|
| pasteles | cakes     |
| joyas    | jewellery |
| zapatos  | shoes     |
| libros   | books     |
| CDs      | CDs       |

- Se puede(n) comprar... en...
- You can buy...in...

|                      |                |
|----------------------|----------------|
| un supermercado      | a supermarket  |
| una cafetería        | a café         |
| una carnicería       | a butcher's    |
| una joyería          | a jeweller's   |
| una librería         | a bookshop     |
| una panadería        | a baker's      |
| una pastelería       | a cake shop    |
| una tienda de música | a music shop   |
| una tienda de ropa   | a clothes shop |
| una zapatería        | a shoe shop    |

### Las direcciones

|                  |               |
|------------------|---------------|
| Perdón           | Excuse me     |
| ¿Dónde está ...? | Where is ...? |
| ¿Dónde están?    | Where are...? |

|          |              |
|----------|--------------|
| A ver... | Let's see... |
| Bueno... | Well...      |
| Pues...  | Well...      |
| luego... | then...      |

|                           |                               |
|---------------------------|-------------------------------|
| Sigue todo recto          | Go straight on                |
| Dobla a la derecha        | Turn right                    |
| Dobla a la izquierda      | Turn left                     |
| Cruza la plaza            | Cross the square              |
| Toma la segunda calle     | Take the 2nd street           |
| Está al final de la calle | It's at the end of the street |
| Está a la derecha         | It's on the right             |
| Está a la izquierda       | It's on the left              |

### Soy turista...

|                              |                                 |
|------------------------------|---------------------------------|
| Hoy...                       | Today                           |
| Estoy en Barcelona.          | I am in Barcelona.              |
| Es genial.                   | It's great.                     |
| Anteayer...                  | The day before yesterday...     |
| Ayer por la tarde            | Yesterday afternoon             |
| fui a la playa               | I went to the beach             |
| comí paella                  | I ate paella                    |
| bebí limonada                | I drank lemonade                |
| descansé un poco             | I rested a little bit           |
| Lo pasé fenomenal.           | I had an amazing time.          |
| Me gustó.                    | I liked it.                     |
| No me gustó.                 | I didn't like it.               |
| Mañana...                    | Tomorrow...                     |
| Pasado mañana...             | The day after tomorrow...       |
| voy a ir al museo            | I am going to go to the museum  |
| voy a ir de compras          | I am going to go shopping       |
| voy a comprar unas camisetas | I am going to buy some T-shirts |

### Palabras muy útiles

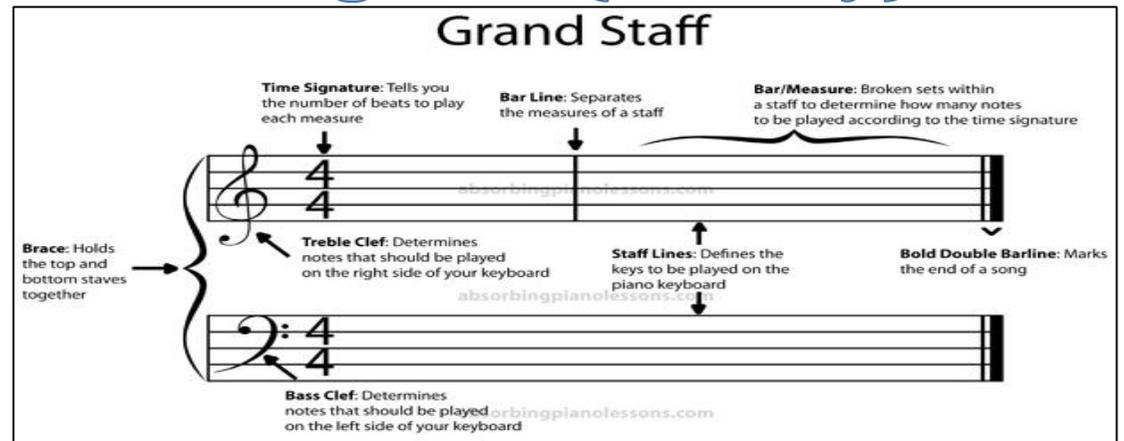
#### Very useful words

|          |                          |
|----------|--------------------------|
| a (al)   | to                       |
| hay      | there is/are             |
| ¿dónde?  | where?                   |
| ¿adónde? | whereabouts?             |
| en       | in                       |
| hoy      | today                    |
| ayer     | yesterday                |
| anteayer | the day before yesterday |
| mañana   | tomorrow                 |

# Year 8 Music – Composer’s Logbook (melody)

## KEYWORDS

- 1- Time Signature:** to specify how many beats are to be contained in each bar and which note value is equivalent to one beat.
- 2- Bar:** Each bar usually has the same number of beats in it. Music that feels like 1-2-3-4 will be divided into bars with four beats worth of music in each bar.
- 3- Barline:** The bar line is a vertical line written in the music which separates the **bars**.
- 4- Rest:** an interval of silence in a piece of music, marked by a symbol that corresponds to a particular note value.
- 5- Melody:** the main tune of a song.
- 6- Phrase:** a short musical passage; a musical sentence.
- 7- Pentatonic:** 5-notes. A pentatonic scale is a series of 5-notes used to create a piece.
- 8- Call and Response:** 2 phrases that occur in different parts one after another. Often a solo part then repeated by a chorus (African music).
- 9- Question and Answer:** 2 phrases that occur one after another, the second in direct response, and complimentary to the first.
- 10- Ostinato:** a persistent phrase or motif repeated over several bars or more.
- 11- Dorian mode:** a medieval **mode** whose scale pattern is that of playing d to d on the white keys of a piano (T-s-T-T-s-T).
- 12- Drone:** an accompaniment where a note is continuously heard/played throughout a piece
- 13- Harmony:** parts that play together simultaneously create harmony. Often accompanying or secondary parts to a melody.
- 14- Dictation:** the ability to hear a piece of music and quickly write it down.



| Note | Name                       | Beats    | Rest | Note | Name                                     | Beats    | Rest |
|------|----------------------------|----------|------|------|--|----------|------|
|      | Semibreve, Whole Note      | 4 beats  |      |      | Dotted Semibreve, Dotted Whole Note      | 6 beats  |      |
|      | Minim, Half Note           | 2 beats  |      |      | Dotted Minim, Dotted Half Note           | 3 beats  |      |
|      | Crotchet, Quarter Note     | 1 beat   |      |      | Dotted Crotchet, Dotted Quarter Note     | 1½ beats |      |
|      | Quaver, Eighth Note        | 1/2 beat |      |      | Dotted Quaver, Dotted Eighth Note        | ¾ beat   |      |
|      | Semiquaver, Sixteenth Note | 1/4 beat |      |      | Dotted Semiquaver, Dotted Sixteenth Note | ¾ beat   |      |

Oh Suzana in C major pentatonic

C D E G G A G E C D E E D C

D C D E G G A G E C D E E D D C

### 5 characteristics of a good melody

A Good Melody...

1. Starts and ends on the same note (C)
2. Moves mainly by step
3. Has a smooth contour/shape
4. Has 2 or 4 bar phrases
5. Uses similar short motifs to give it a clear character

Annotate the melody above to identify its use of the '5 characteristics of a good melody'.

# Unit 2: Animal Rights

## Year 8

### Skills

- Engage with and reflect on different ideas, opinions and beliefs to help develop personal opinion.
- Express and explain opinions through discussion and written assessments.
- Reflect on the knowledge and skills needed for setting realistic targets and personal goals.
- Work individually and with others to negotiate, plan and take action.
- Analyse and reflect upon action taken and progress made.

### Knowledge

Learn and understand about Animal Rights & the law related to animals

Understand what is Battery farming & the law on battery farming

Appreciate why animals are used in research



# Unit 3: Sex Education

## Year 8

### Skills

- Engage with and reflect on different ideas, opinions and beliefs to help develop personal opinion.
- Can express and explain opinions through discussion and written assessments.
- Develop empathy with the situations others may find themselves in

### Knowledge

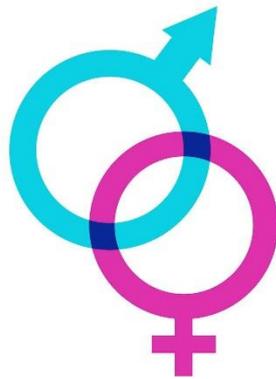
Be aware of current teenage pregnancy statistics

Develop awareness of the different methods of contraceptives

Gain knowledge and understanding about STIs and the dangers of them

Eliminate myths about STIs

Gain knowledge and understanding about HIV & AIDS





# Y8: Unit 2 Hinduism

Hinduism is the third biggest religion in the world, existing for around 4000 years. Hinduism is made up of a variety of different religious beliefs and practices which originated near the river Indus in India. In this unit of work, you will learn about the Hindu religion, analyse and understand ethical ideas such as potential consequences of actions and equality among all and philosophical questions surrounding human existence.

## Curriculum Organiser

### Religions

#### Lesson 1

##### **Hinduism: What is it all about?**

*How and where did Hinduism originate?*

*Describe a day in a life of a typical Hindu teenager.*

*Give 3 ways that Hinduism is different to Judaism (Unit 1).*

#### Lesson 4

##### **Hindu festivals – what is celebrated?**

*What is the story behind Diwali?*

*Name and explain the traditions behind one other Hindu festival.*

*“Religious festivals are just an excuse for a party”.  
Give 3 reasons to agree and disagree.*

#### Lesson 7

##### **Samskaras – what are significant events in the life of a Hindu?**

*What does the term samskara mean?*

*Explain 5 different samskaras.*

*Compare 3 samskaras with 3 Jewish life events. What are the similarities and differences?*

### Ethics

#### Lesson 2

##### **Karma, samsara and rebirth – how does it work?**

*How do Hindus reach moksha?*

*Explain the concept of karma and how it relates to the samsara cycle.*

*Is there any evidence for rebirth? Give 2 reasons for and against.*

#### Lesson 5

##### **Equality P4C - Are some people more important than others?**

*What is the difference between equality and fairness?  
What are the 9 protected characteristics of the Equality Act 2010?*

*Some people say that we don't need a law to tell us that we're all equal – do you agree or disagree? Explain your view.*

#### Lesson 8

##### **Should we all have goals that benefit others? Or just ourselves?**

*What are the 4 key goals in a Hindu's life?*

*Do you think that you are achieving your dharma in life?*

*“Money doesn't bring happiness” – what would a Hindu say to this?*

### Philosophy

#### Lesson 3

##### **How do Hindus understand God?**

*Explain the difference between monotheism and polytheism. Which is Hinduism?*

*Explain how the Trimurti represents Brahman.*

*How might a Hindu's belief in God influence their daily lives?*

#### Lesson 6

##### **The Caste system - What is the perfect way to organise society?**

*Describe the different levels of the caste system.*

*What decides the caste that someone is in?*

*“Life is easier if everyone knows their place.” Give 2 reasons to agree and disagree.*

#### Lesson 9

##### **Is this whole world an illusion? What is real?**

*Explain the terms maya and moksha.*

*Could a Hindu still be a scientist?*

*How could the belief in maya influence a Hindu's daily life?*

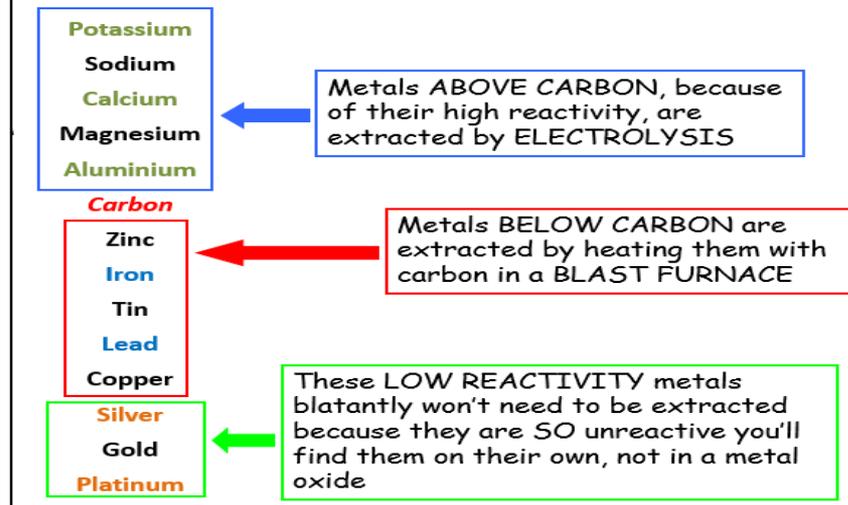
*\*Following these 9 lessons pupils will be assessed and feedback will be given in exercise books.*

# 8C2 Metals

## Properties of metals and non-metals

| Property                      | Metals                                | Non-metals   |
|-------------------------------|---------------------------------------|--|
| Appearance                    | Shiny                                 | Dull   |
| State at room temp            | Solid (except mercury)                | Half are solids, half are gases, one is liquid (bromine) |
| Density                       | High                                  | Low  |
| Strength                      | Strong                                | Weak   |
| Malleable or brittle          | Malleable (can bend without breaking) | Brittle (will shatter when hammered)                     |
| Conduction (heat/electricity) | Conduct both well                     | Poor (graphite only non-metal conductor)                 |
| Magnetic                      | Only iron, cobalt and nickel          | None   |

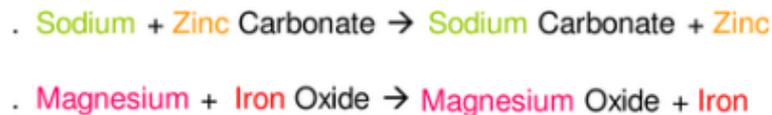
## How metals are extracted



## General Equations for metal reactions



**Displacement-** When a more reactive metal will displace a less reactive metal from solutions of its compounds



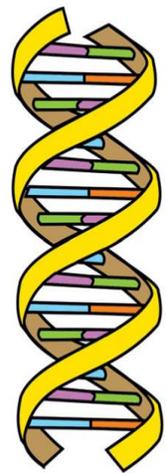
| Metal     |    | Reaction with AIR  | Reaction with WATER  | Reaction with ACIDS  |
|-----------|----|--|--|--|
| Potassium | K  | Burn vigorously to form metal oxides                             | React with <b>cold water H<sub>2</sub>O (l)</b> to form H <sub>2</sub> (g) and (metal)OH <sub>(aq)</sub> | Strong reaction with <b>diluted acid (aq)</b> to form H <sub>2</sub> (g). Metal replaces H in compound to form a salt.   |
| Sodium    | Na |  |  |  |
| Calcium   | Ca | Burn with decreasing vigour down the series to form metal oxides | Only reacts with <b>steam H<sub>2</sub>O(g)</b> to form H <sub>2</sub> (g) and metal oxide               |  |
| Magnesium | Mg |  |  |  |
| Aluminium | Al |  |  |  |
| Zinc      | Zn |  |  |  |
| Iron      | Fe |  |  |  |
| Lead      | Pb | React slowly (when heated) to form an oxide layer                | No reaction  | React with <b>concentrated acid (l)</b> . Metal replaces H to make a salt. Some of the acid decomposes into <b>NO<sub>2</sub>(g)</b> and <b>H<sub>2</sub>O (l)</b> . |
| Copper    | Cu |  |  |  |
| Mercury   | Hg |  |  |  |
| Silver    | Ag | No reaction  | No reaction  | No reaction  |
| Gold      | Au |  |  |  |

### Advantages of Recycling

- Conserves raw materials.
- Less energy is used so less fossil fuels are used.
- Reduces waste in landfill.
- Avoids the use of mining for ores.
- Less damage to habitats.
- Less energy needed to melt and reform metals than to extract them.
- Produces less carbon dioxide.

### Disadvantages of Recycling

- Carbon dioxide is a greenhouse gas.
- Greenhouse gases cause global warming.
- Electricity for electrolysis is expensive and usually comes from fossil fuels.



- Adenine
- Thymine
- Cytosine
- Guanine
- Sugar-phosphate backbone

In DNA, the complementary base pairs are held together by hydrogen bonds.

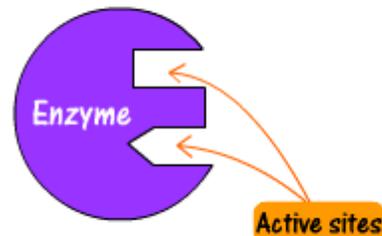
DNA is the molecule which controls our characteristics. It makes up 'genes' which code for proteins

# Year 8 Knowledge Organiser : 8A – Genes and inheritance

|                     |   |  |
|---------------------|---|--|
| <b>carbohydrase</b> | = | breaks carbohydrate into sugar molecules |
| <b>lipase</b>       | = | breaks fat into glycerol and fatty acids |
| <b>protease</b>     | = | breaks protein into amino acids          |

## Enzymes

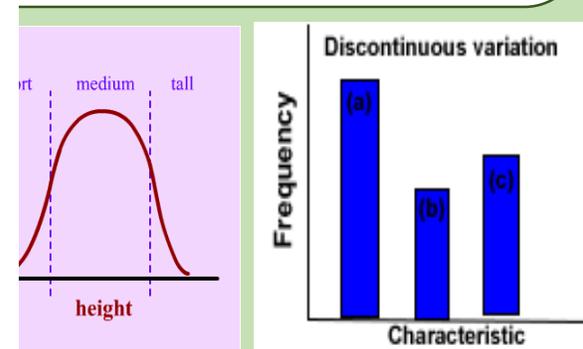
Enzymes are biological catalysts. They speed up chemical reactions within the cell.



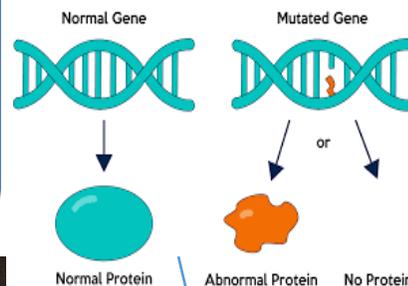
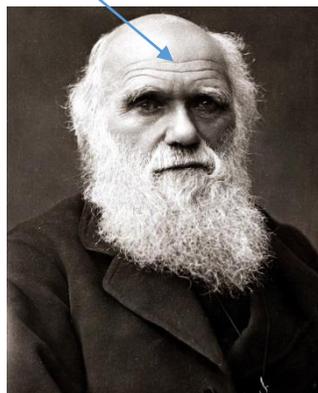
Enzymes are found in the cells of all living things

They are protein machines.

Variation is the difference between members of the same species. It can be caused by environmental or genetic factors.

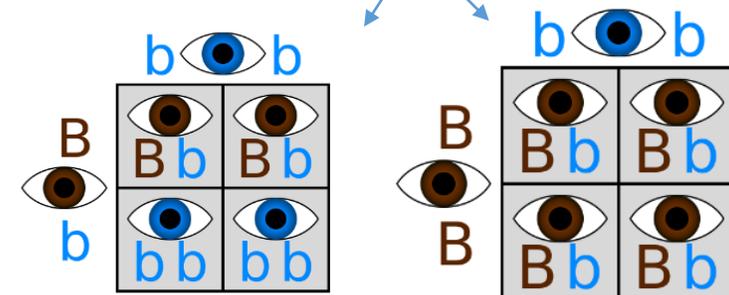


Charles Darwin proposed the theory of 'natural selection' to explain evolution



Punnett squares are used to help you determine what genes the child of two parents will have. Everyone has 2 copies of a certain gene (called an **allele**): 1 copy comes from your mum and 1 copy comes from your dad. But since your mum and dad each have 2 copies, how do you know which ones you will get?

Mutation is the change in the base sequence of DNA.



| Term              | Description   |
|-------------------|---|
| Species           | A group of individuals that are physically similar that can produce fertile offspring   |
| Variation         | The presence of differences between living things of the same species   |
| Competition       | Interaction between groups of organisms seeking to access limited supplies of factors required for life e.g. light, space, food   |
| Natural selection | A process that causes populations to change over time.  |
| Evolution         | The change in species over long periods of time   |
| Gene              | The basic units of genetic material inherited from our parents. A gene is a section of DNA which controls part of a cell's chemistry - particularly protein production. |

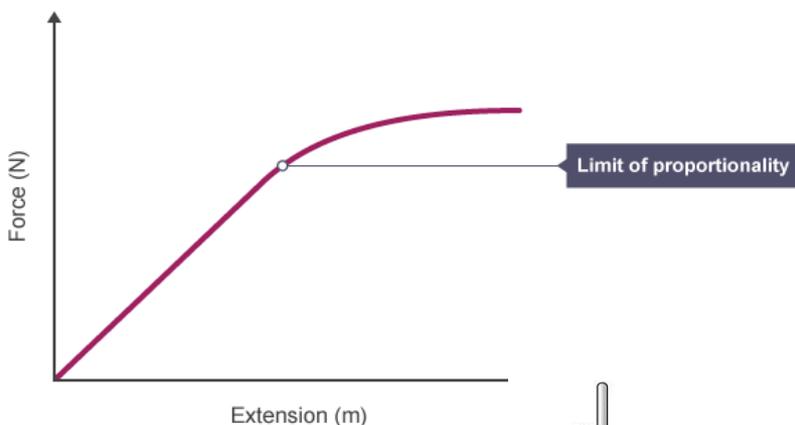
# 8P2 – Pressure knowledge Organiser

## Hooke's law

Extension happens when an object increases in length, and compression happens when it decreases in length. The extension of an elastic object, such as a spring, is described by Hooke's law:

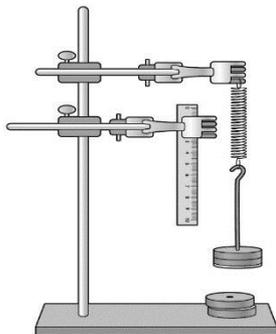
$$f = k \times x$$

force = spring constant  $\times$  extension



## Deforming

After going past their elastic limit, a spring or rubber band will not return to its original shape and therefore will behave differently.



## Measuring density

You need to know two things to measure the density of a substance:

- the mass of a sample of some of it
- the volume of that sample

The mass is measured using a balance. The volume of a liquid is easily measured using a measuring cylinder. The volume of a solid can be measured by:

- measuring the side of a cube or block of the substance, then using mathematics to calculate its volume, or
- using a displacement can (also called a eureka can) – the sample is lowered into a container of water and the volume of water it displaces or pushes out of the way is the same as the volume of the object

## Density Properties

### Solids

The particles in solids are very close together. They are tightly packed, giving solids high densities.

### Liquids

The particles in liquids are close together. Although they are randomly arranged, they are still tightly packed, giving liquids high densities. The density of a substance as a liquid is usually only slightly less than its density as a solid.

Water is different from most substances: it is less dense as a solid than as a liquid, because its particles move apart slightly on freezing. This is why ice cubes and icebergs float on liquid water.

### Gases

The particles in gases are very far apart, so gases have a very low density.

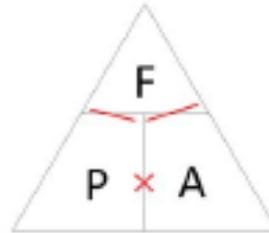
## Pressure on surfaces

You may have been warned about swinging around on one leg of a chair. Apart from the risk that you will damage the chair or hurt yourself, the chair leg can damage the floor. This is because it puts too much pressure on the floor.

## Calculating pressure

To calculate pressure, you need to know two things:  
the force or weight exerted  
the surface area over which the force or weight is spread

$$\text{Pressure} = \text{Force} \div \text{Area}$$



## Example

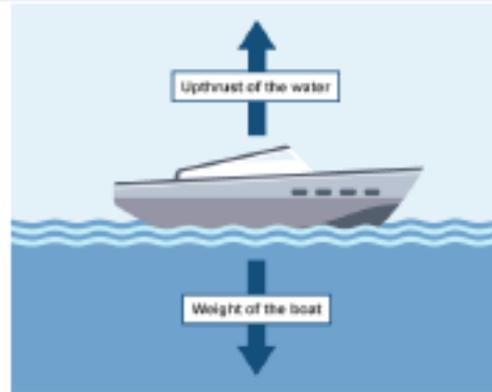
A force of 20 N acts over an area of 4 m<sup>2</sup>. Calculate the pressure.

$$\begin{aligned} \text{pressure} &= \text{force} \div \text{area} \\ &= 20 \text{ N} \div 4 \text{ m}^2 = 5 \text{ N/m}^2 \end{aligned}$$

Notice that the unit of pressure here is N/m<sup>2</sup> (newtons per square metre). Sometimes you will see another unit being used. This is called the pascal and it has the symbol Pa. 1 Pa = 1 N/m<sup>2</sup>, so in the example above the pressure is 5 Pa.

## Pressure in liquids

Liquid pressure is exerted on the surface of an object in a liquid. This pressure causes upthrust. An object placed in a liquid will begin to sink. As it sinks, the liquid pressure on it increases and so the upthrust increases. For a floating object, the upthrust is equal and opposite to the object's weight. An object will continue to sink if its weight is greater than the maximum upthrust.



## Pressure in fluids

Liquids and gases are fluids. A fluid is able to change shape and flow from place to place. Fluids exert pressure on surfaces, and this pressure acts at 90° to those surfaces – we say that it acts normal to the surface.

$$p = \rho \times g \times h$$

*Pressure*  
*= density x gravity x height*

$$\text{Density} = \frac{\text{Mass (kg)}}{\text{Volume (m}^3\text{)}} \quad (\text{kg/m}^3)$$

