Knowledge Organisers
Summer Term – Year 7

Name: _____

Please remember:
- It is to be kept inside your knowledge organiser book
- It is to be brought into school every day

Regular retrieval throughout a scheme of learning (daily, weekly and monthly) has been proven to **reduce the rate of forgetting**, supporting you to **retain more** in long term memory- making assessments/ exams way easier! The challenge for you as a student is to make sure you use your knowledge organiser for each subject properly to help you to know more and remember more over time. We've created this walk through to support you in using your knowledge organiser- for more support speak to your subject teachers.

Using your Knowledge Organiser

1	2	3	4	5
Look	**Cover**	**Write**	**Check**	**Repeat**
Start with a **small section of knowledge** that you want to remember e.*g Henry VIII's wives in History*. Read through this section of the knowledge organiser (a couple of times if it helps)	Now **cover up this section** of your knowledge organiser with a post it note or scrap paper.	**Self quiz- what can you remember** and rewrite? Make sure you do this without looking back at your knowledge organiser.	**Remove the post it and check for accuracy**- did you get the key terminology? Was it spelt correctly? Was the order correct? If you drew a diagram, how much of this did you get correct? Most importantly- what did you miss out?	After a short break away from your knowledge organiser repeat the look, cover, write, check **until you can recall all of the facts correctly without prompts.** This process can be used for any new knowledge that you want to acquire. It is good idea to do this on a regular basis, once a week.

Strategy 1- Look, cover, write, check – A really simple but effective way to use your knowledge organiser. Focus on a specific area of your knowledge organiser.

1	2	3	4	5
Focus	**Big ideas**	**Explain it**	**Link it**	**Record it**
Make it manageable by selecting an area of your KO <u>where your learning is not secure.</u> Don't waste time going off something you can already do!	Pick out the main points or the **big ideas** in this section.	**Explain what you know** about the main points (this could be written or shared verbally – a friend, a family member.	Now, see **how it links to other areas** within the subject. *E.g Eating meat – causes global warming. Cows produce methane which is a greenhouse gas.*	**Write down as many 'think it, link it' ideas** as you can in your book. See if you can beat others in you class!

Strategy 2- Think it, link it – Great for connecting the big ideas in your subject. How does 'x' relate to 'y'. What are the key factors which make an equation/ experiment/ process work? Challenge yourself to see how many links you can make!

1	2	3	4	5
Select topic	**Prepare quiz**	**Answer it**	**Self check**	**Repeat**
Decide **which area you want to be quizzed** on (this might build up over time)	Get someone else to **prepare 10 random questions** on that topic to challenge you.	**Set a time limit** (depending on the number of questions) and answer the questions without looking at your KO.	Now look at your KO to **self check**- make a note of your score. Celebrate your successes and make a note of anything you missed or got incorrect.	**Return to this section** in 2/3 weeks- see if you can improve your score! Re-do those questions that you missed or got incorrect.

Strategy 3- Knowledge quiz – You might try this after a few weeks of using your knowledge organiser. Get someone to set you 10 questions using your knowledge organiser. These could be spellings, key words, processes, equations etc to see how much you can remember! Record your score and see if you can beat your personal best each half term!

Contents Page

Mastery Descriptive Writing Rules

Emotion

- When describing a setting, you should aim to be **clear** and **emotive**(a).
- Make sure that the emotions you are using are **appropriate**(j) for the setting you are writing about.
- Consider how changing the emotion can change the **perception**(b) of a setting.

Imagery

- Using language techniques such as **metaphors**(c) to improve our descriptive writing.
- Identify your **tenor**(d), **ground**(e) and **vehicle**(f) to craft exciting and accurate imagery (l).
- Make sure the details in your image are **worthy** and **relevant** tenors.

The wild, stormy night was as black as death.
The wolf gazed at the moon and howled.

Sequence

- When writing descriptively, we need to focus on where our narrative is going. Always begin a new idea with **what happens in the next moment of the story.**
- The events in your writing need to be **logical**(g) and **possible**.
- Make sure that your writing is **consistent**(h) and does not jump ahead too much.

Plan & Edit

- Before you write anything, you will need to make a **plan**. What **images** and **emotions** will you include?
- After you have completed your writing, **review**(i) what you have written in order to check for **spelling, punctuation and grammar** mistakes.
- Is the writing **accurate**? What could you **improve**?

4

Descriptive Writing Model Example

You will be describing images just like the one below, making sure your writing is **accurate**, **emotive**(a), **imaginative** and **well-sequenced**(k).

Before I write anything, I should make sure that I **plan** what I am going to write.

I have made sure that the events in my narrative are **possible**, or **logical**(g).

My writing is looking at **what happens in the next moment**.

I am making sure that my writing is **consistent**(h).

I have used positive **emotive**(a) language.

I have used a **metaphor**(c), knowing my **tenor**(d), **vehicle**(f) and **ground**(e).

This is my **tenor**(d).

This is my **vehicle**(f).

These are my **grounds**(e).

The trees and hedgerows swayed in the light daybreak breeze, despite the cool morning dew of the November morning. Though their colourful leaves would be falling soon, the trees stood as proud as lions, tall and strong amongst the rest of the valley.

The sun broke the skyline, casting its golden rays to the fields spread out across the valley. It warmed the grass as the world opened its blurry eyes, ready to greet the new day.

As the sun met the eyes of the shepherd tending his flock, he smiled as he surveyed his land. The birds sang in the trees as the sun lazily rose in the sky.

~~A brand new day was hear.~~
A brand new day was here.

I have made a mistake. I will need to **review**(i) my work and **correct** it.

I have made sure that my descriptions result in a positive **perception**(b) of the image for the reader.

I have **corrected** my mistake.

	Key terms	Definition
A	**Emotive**	Expressing a great emotion rather than being factually descriptive.
B	**Perception**	The way something is understood or recognised.
C	**Metaphors**	When one thing is compared with something else, showing how they are both similar. **Example:** You are my sunshine!
D	**Tenor**	The real thing/idea you want to try and describe to your audience.
E	**Ground**	The things your tenor and your vehicle have in common.
F	**Vehicle**	The imaginative idea you compare your real thing/idea with to help your audience understand it.
G	**Logical**	When something is expected or sensible in the events happening at the time.
H	**Consistent**	Acting or done in the same way over time, and not containing anything that would change it.
I	**Review**	To check over something again in order to identify any mistakes.
J	**Appropriate**	If something is appropriate, it matches the situation. If the emotion you are describing is appropriate, it matches the rest of your writing.
K	**Well-sequenced**	When the events in your writing follow on from each other and make sense.
L	**Imagery**	Descriptions which create a visual image for the reader.

5

Year 7 – English – Poetry

Literal Language
If something is **literal**, it is accurate or exact.
- A **literal** description tells what actually happened.
- Something that is literal reports on things that have happened.
- An example would be: 'He is lazy.'

Metaphorical Language
If something is a **metaphor**, it is **not literal**.
- A **metaphor** does **not report on what actually happened.**
- A **metaphor** tells us more about something by connecting ideas together.
- An example would be: 'He is a couch potato.'

Parts of a Metaphor
The tenor: the thing you want to try and describe to your reader.

The vehicle: The imaginative idea you compare it with to help your audience understand it. This is the 'made up' bit.

The ground: the thing the tenor and the vehicle have in common.

Unpicking an Example
'**Achilles** fought like a **lion.**'
(Both Achilles and the lion are **strong.**)
Achilles is the tenor because he is the thing being described. The lion is the vehicle because it is the imaginative idea Achilles is compared to. *The ground is that they are both strong because this is what they have in common.*

The Poems and Their Key Metaphors
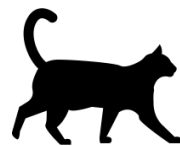
	'Fog' – Carl Sandburg, 1878 – 1967 '**The fog** comes on <u>little cat feet</u>' *Both 'the fog' and the 'little cat feet' are grey, delicate and move gently.*
	'November Night' – Adelaide Crapsey, 1878 – 1914 'like **steps of passing ghosts**,/ <u>The leaves,</u> frost –crisp'd, break from the trees and fall' *Both 'the leaves' and 'the steps of passing ghosts' rustle softly.*
	'The Tyger' – William Blake, 1757 – 1827 '**Tyger,** Tyger, <u>burning bright</u>' *Both the tiger and burning light are dangerous and both are orange and dazzling.*
	'Sally' – Phoebe Hesketh, 1909 – 2005 '**She** was <u>a dog-rose</u> kind of girl:/ Elusive, scattery as <u>petals</u>' *Both Sally and 'a dog-rose' are wild and not traditionally beautiful.*
	'Frogs' – Norman MacCaig, 1910 – 1996 'In mid-leap **they** are/ **parachutists falling/ in a free fall**' '… **their** <u>ballet dancer's/</u> legs' *Both frogs and 'parachutists' leap into the air and spread out when they fall. Both frogs and ballet dancers have powerful and elegant legs.*
	'The Eagle' – Alfred, Lord Tennyson, 1809 – 1892 'And like **a thunderbolt** <u>he falls</u>' *Both the eagle falling and 'a thunderbolt' are fast and dangerous.*

6

'The Eagle's' Metaphors

Tenor	Vehicle	Ground
The eagle's claws (line 1)	"…crooked hands"	*Strong, powerful, gnarled, dangerous.*
The sea (line 4)	…something "wrinkled"	*The sea is ancient, and not as powerful as the eagle.*
The sea (line 4)	…something that "crawls"	*The eagle flies dangerously quickly – the sea is sluggish.*
A mountain (line 5)	…"walls"	*The eagle is in a place of safety and strength, up on high ground.*
The eagle (line 6)	…"a thunderbolt"	*The eagle can strike its victims out of nowhere, is stunning to watch, and dangerous.*

The Eagle

He clasps the crag with crooked hands;
Close to the sun in lonely lands,
Ring'd with the azure world, he stands.

The wrinkled sea beneath him crawls;
He watches from his mountain walls,
And like a thunderbolt he falls.

clasps – grabs

azure – deep blue

Paragraph Structure

1. **Write your topic sentence.**
2. Introduce and provide the quotation.
3. *Explain what the quotation shows us about the eagle, using the ground to help you.*

Topic sentence which is accurate, about one thing and answers the question.

Explanation about effect of the quotation and the **similarities between the tenor and vehicle.** (ground)

A further development sentence is used to show understanding.

Example question:
How does Tennyson wants us to feel about the eagle?

Tennyson wants us to feel in awe of the eagle. This can be seen when he says, 'like a thunderbolt he falls'. *This quotation shows us that the eagle is fast and powerful. It can appear out of nowhere to strike its victims which makes it frightening. However, it also makes it awe-inspiring and this metaphor suggests that it would be stunning to watch such a spectacle. The word 'falls' also makes it sound very natural, as if swooping down to catch its prey is effortless for the eagle.*

An introduced quotation is used to link to the topic sentence.

To further develop the answers, a keyword is zoomed in on and the effect is explored.

7

Number Systems

Base 10

This is the number system we use every day.

Base 10 **place value** has a relationship of × 10 between columns, moving from right to left.

We can use a place value chart to help us read and write numbers in base 10.

Th Thousands	H Hundreds	T Tens	U Units	•	$\frac{1}{10}$ Tenths	$\frac{1}{100}$ Hundredths
1	3	5	6			
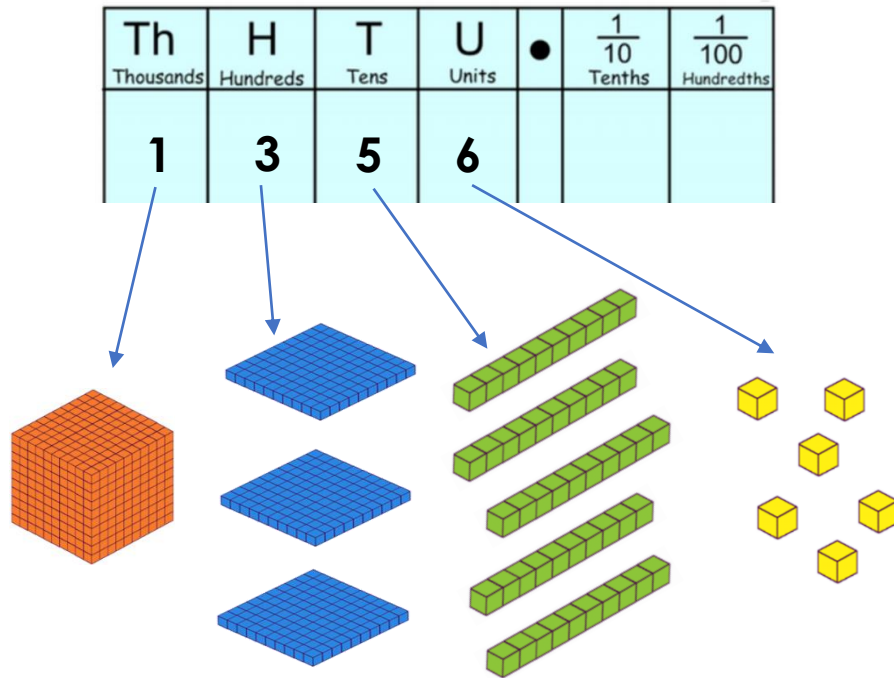
Reading and Writing Numbers

0 – Zero	**10** – Ten	**20** – Twenty
1 – One	**11** – Eleven	**30** – Thirty
2 – Two	**12** – Twelve	**40** – Fourty
3 – Three	**13** – Thirteen	**50** – Fifty
4 – Four	**14** – Fourteen	**60** – Sixty
5 – Five	**15** – Fifteen	**70** – Seventy
6 – Six	**16** – Sixteen	**80** – Eighty
7 – Seven	**17** – Seventeen	**90** – Ninety
8 – Eight	**18** – Eighteen	
9 – Nine	**19** – Nineteen	

The standard short scale system

1	ones
10	tens
100	hundreds
1 000	thousands
10 000	ten thousands
100 000	hundred thousands
1 000 000	millions
10 000 000	ten millions
100 000 000	hundred millions

354 943

This number is written as
three hundred and fifty four thousand, nine hundred and forty three.

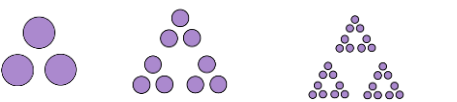| Keyword /Skill	Definition/Tips
Base 10	The system we use for counting. Also called the decimal system.
Place value	The value of each digit in a number. We can use a place value grid to help work this out.

Other Topics/Units this could appear in:

- Numbers, powers, roots, decimals and rounding
- Perimeter and area
- Multiples in context

8

Base 5 groups numbers in fives instead of tens.

<u>Base 5</u>

One hundred and thirteen is represented as
4 twenty-fives, 2 fives and 3 ones.

twenty-fives	fives	ones
4	2	3
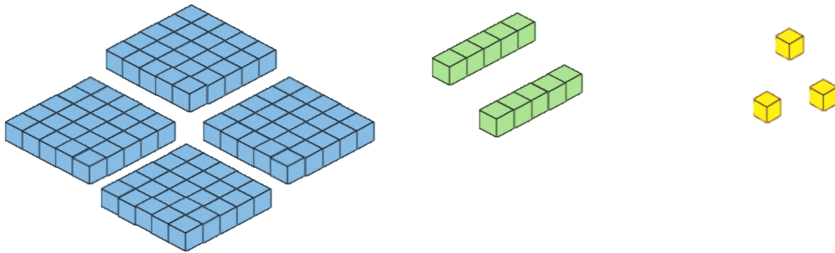
One hundred and sixty five is represented as
6 twenty-fives, 3 fives and 0 ones.

twenty-fives	fives	ones
6	3	0
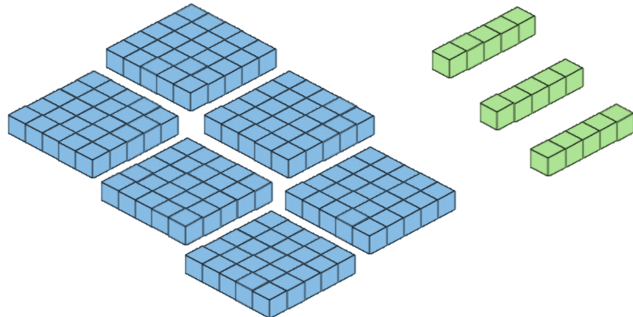
<u>Indian Number System</u>

The Indian number system

1	ones
10	tens
100	hundreds
1 000	thousands
10 000	ten thousands
1 00 000	lakhs
10 00 000	ten lakhs
1 00 00 000	crores
10 00 00 000	ten crores

<u>Mayan Number System</u>

Mayan number system

Keyword/ Skill	Definition/Tips
Base 5	Numbers are counted in fives, a bit like in a tally chart.
Base 10	The system we use for counting. Also called the decimal system.
Place value	The value of each digit in a number. We can use a place value grid to help work this out.

Other Topics/Units this could appear in:

- Numbers, powers, roots, decimals and rounding
- Perimeter and area
- Multiples in context

9

Index Form

Index form is writing numbers in terms of their powers, 4 x 4 = 4^2

$3^1 = 3$ $3^2 = 3 \times 3$ $3^3 = 3 \times 3 \times 3$

Prime Numbers

A prime number has exactly two factors

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

Highest Common Factor

To find the highest common factor of two numbers, you need a biggest factor of two numbers.

Ex1: Find the HCF of 36 and 12

36: 1, 2, 3, 4, 6, 9, 12, 18, 36

12: 1, 2, 3, 4, 6, 12
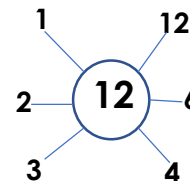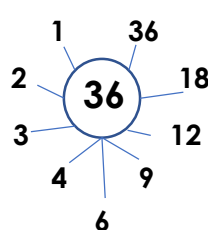
As you can see: 1, 2, 3, 4, 6 and 12 are all common factors. We want the **highest common factor** which in this case is 12
Ans: HCF of 12 and 36 = 12

The Lowest Common Multiple (LCM) is the smallest number that appears in both times tables

Multiples

multiples of 2: 2, 4, 6, 8, 10, 12, …   (+2 each)

multiples of 3: 3, 6, 9, 12, 15, …   (+3 each)

The LCM of 2 and 3 is 6

Prime Factor Decomposition

Any number can be written as a **product of prime factors**. It is also called **Prime Factorisation** or **Prime Factor Decomposition.**

EXAMPLE: Express 420 as a product of prime factors.

420
42 → 7, 6 → 2, 3
10 → 2, 5

So 420 = 2 × 2 × 3 × 5 × 7
= $2^2 \times 3 \times 5 \times 7$
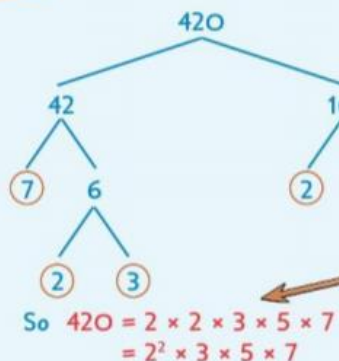
1) Start with the number at the top and split it into **factors** as shown.
2) Then do the same with the factors you have written.

3) If the number is a **prime number** put a circle around it.

4) Keep going until you can't go any further (i.e. you are just left with prime numbers

5) Write these prime numbers out as a **product**.

6) If there is more than one of the same factor, you can write them as powers (**index form**).

No matter what numbers you choose for each step, you'll find the product of primes is exactly the same!

| Keyword/Skill	Definition/Tips
Product	Means multiply
Prime number	A number that has exactly two **factors**
Factor	An integer that divides the number exactly leaving no remainder
Multiples	Multiples of 4 are all the numbers in the 4 times table: 4, 8, 12, 16, 20, 24, 28, …
Square number	A number multiplied by itself i.e. $2^2 = 4$
Cube number	The result of multiplying an integer by itself three times i.e. 2 x 2 x 2 = 2^3 = 8
Index Form	Writing numbers in terms of powers E.g. 6 x 6 x 6 x 6 = 6^4 <- This is in index form
Prime Factor	A **factor** of a number that is also a **prime number**
Prime Factor Decomposition/Prime Factorisation	To write a number as a **product** of **prime numbers** Every number has a unique **prime factorisation**
Highest Common Factor (HCF)	The highest number that can be divided exactly into each of two or more numbers
Lowest Common Multiple (LCM)	The lowest number that is a multiple of two or more given numbers

Other Topics/Units this could appear in:
- Numbers, powers, roots, decimals and rounding
- Product of prime factors
- Multiples in context
- Index Laws
- Standard Index Form

10

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We can also use the product of primes to figure out the HCF & LCM of two numbers:
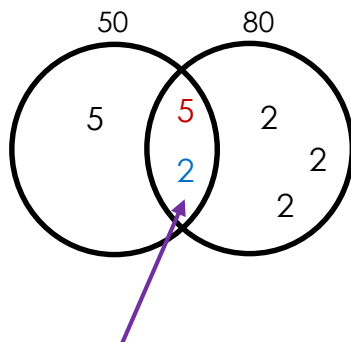
Example: What is the HCF and LCM of 50 and 80?

1) Find the product of prime factors for 50 and 80.
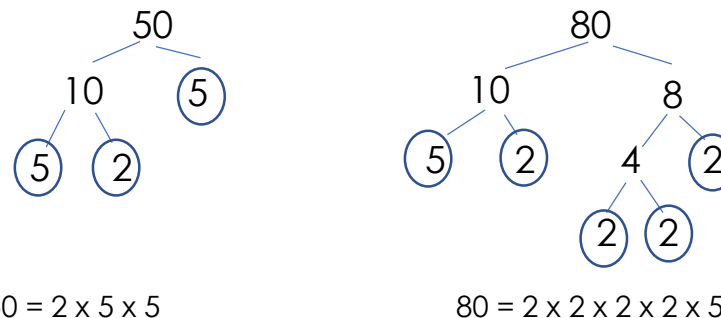
2) Put the prime factors of 50 and 80 into a Venn Diagram

$$50 = 2 \times 5 \times 5 \qquad 80 = 2 \times 2 \times 2 \times 2 \times 5$$

Numbers common to both 50 and 80 go in the middle…
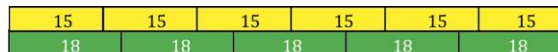
Multiply the middle numbers to find the **HCF**

→ 2 x 5 = **10**

Multiply all the numbers in the Venn Diagram to find the **LCM**

→ 5 x 5 x 2 x 2 x 2 x 2 = **400**

Finding HCF and LCM

50
10   5
5   2

$$50 = 2 \times 5 \times 5$$

80
10   8
5   2   4   2
2   2

$$80 = 2 \times 2 \times 2 \times 2 \times 5$$

Alternative Method

We can use the bar model to find the LCM

15	15	15	15	15	15
18	18	18	18	18	

18, 36, 54, 72, (90), 108 …   15, 30, 45, 60, 75, (90) …

Prime factors of 18   Prime factors of 15

2   3   5
3

15

$$90 = 2 \times 3 \times 3 \times 5$$

18
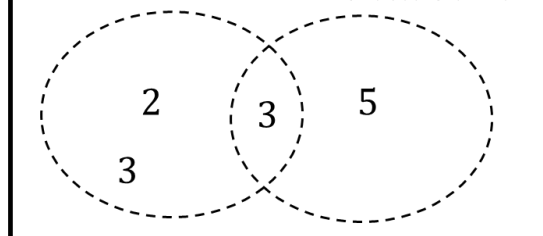
Here we find the same answer using two different methods

Keyword/Skill	Definition/Tips
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Prime number	A number that has exactly two **factors**
Factor	An integer that divides the number exactly leaving no remainder
Multiples	Multiples of 4 are all the numbers in the 4 times table: 4, 8, 12, 16, 20, 24, 28, …
Square number	A number multiplied by itself i.e. $2^2 = 4$
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Index Form	Writing numbers in terms of powers E.g. $6 \times 6 \times 6 \times 6 = 6^4$ <- This is in index form
Prime Factor	A **factor** of a number that is also a **prime number**
Prime Factor Decomposition/Prime Factorisation	To write a number as a **product** of **prime numbers** Every number has a unique **prime factorisation**
Highest Common Factor (HCF)	The highest number that can be divided exactly into each of two or more numbers
Lowest Common Multiple (LCM)	The lowest number that is a multiple of two or more given numbers

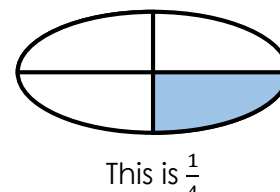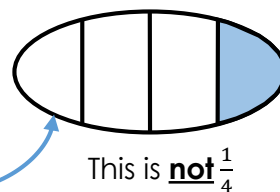Other Topics/Units this could appear in:
- Numbers, powers, roots, decimals and rounding
- Product of prime factors
- Multiples in context
- Index Laws
- Standard Index Form

11

Year 7 – Maths – Mastery: Unit 14 – Conceptualising and Comparing Fractions
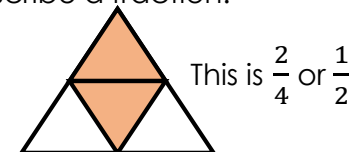
Recognising Fractions

Numerator
How many equal parts are shown

$$\frac{3}{8}$$

Denominator
How many equal parts there are altogether

These are not equal parts.
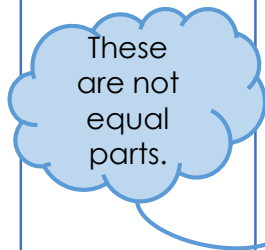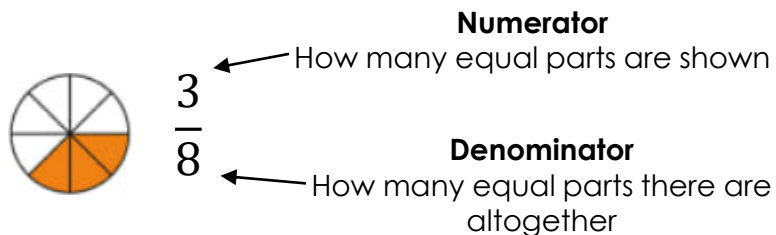
We can use fractions to describe **equal parts** of a whole.

This is **not** $\frac{1}{4}$

This is $\frac{1}{4}$

Describing Fractions

Sometimes, there is more than one way to describe a fraction.

This is $\frac{2}{4}$ or $\frac{1}{2}$

Fractions on a number line

We can split a number line into **equal parts** and place fractions along it. In this example, the hexagon represents 1.

$0 \quad \frac{1}{6} \quad \frac{2}{6} \quad \frac{3}{6} \quad \frac{4}{6} \quad 1 \quad \frac{8}{6}$

$\frac{1}{3} \quad \frac{1}{2} \quad \frac{2}{3} \quad \quad 1\frac{1}{3}$
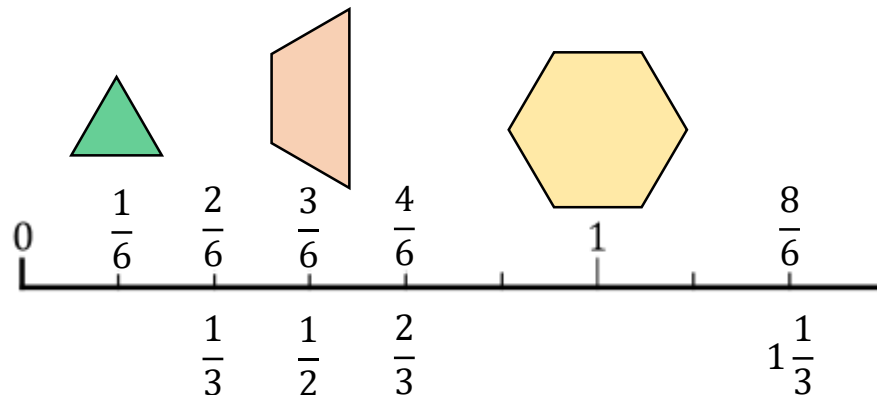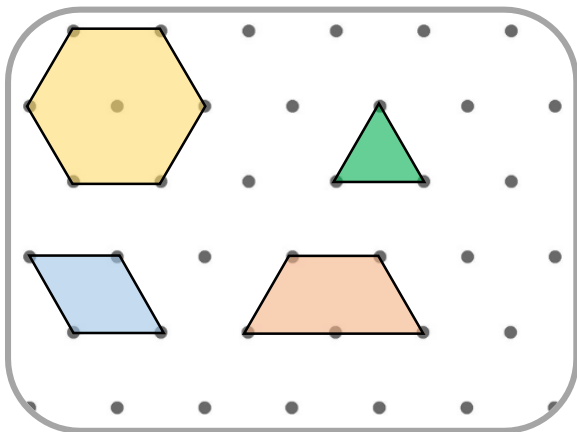
Improper Fractions and Mixed Numbers
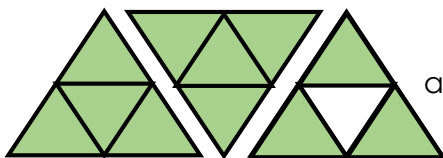
There are 2 wholes and 3 quarters, which is the same as 11 quarters.

This is $2\frac{3}{4}$ or $\frac{11}{4}$

There is 1 whole and 1 quarter, which is the same as 5 quarters.
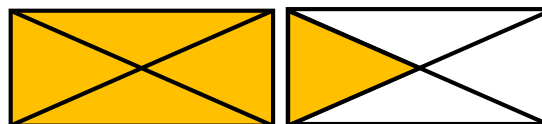
This is $\frac{5}{4}$ or $1\frac{1}{4}$

| Keyword/Skill	Definition/Tips
Equal parts	Fractions can only be described using equal parts of whole shapes.
Numerator	How many equal parts of a whole. The top number in a fraction.
Denominator	How many equal parts the whole is split into. The bottom number in a fraction.
Improper Fraction	A fraction where the **numerator** is bigger than the **denominator**.
Mixed Number	A number made from an integer and a fraction.
Equivalent Fractions	Two or more fractions that are equal in value.
Simplify	To cancel down a fraction to its lowest terms by dividing by all common factors.
Common Denominator	When two or more fractions have the same denominator.
Ascending Order	Order the numbers from the smallest value up to the biggest value.
Descending Order	Order the numbers from the biggest value to the smallest value.

Here are some different representations of fractions. Make sure you can match them up into **equivalent** sets.
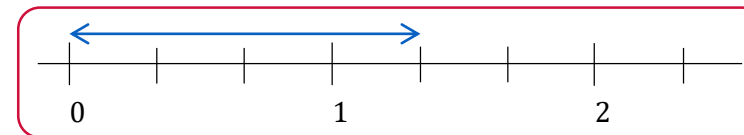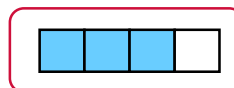
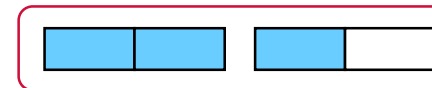<u>Different Representations</u>
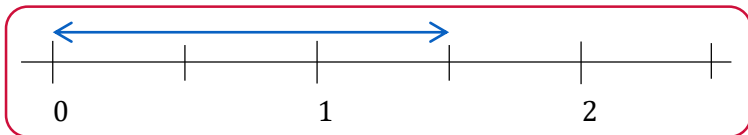
One and one half

$\frac{3}{2}$
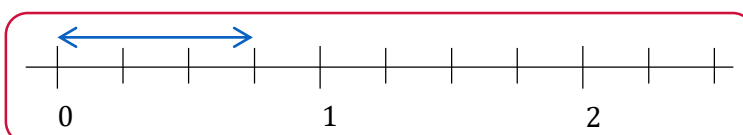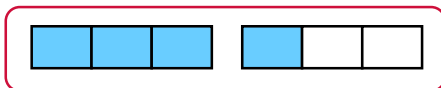
Three quarters

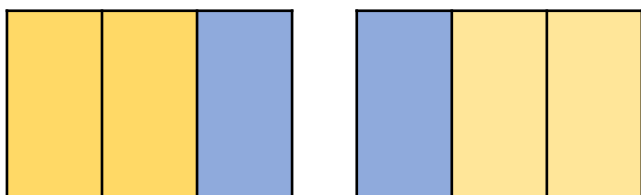$\frac{3}{4}$

One and one third

$\frac{4}{3}$

Fractions as Division

Two bars of chocolate are shared **<u>equally</u>** by three children. How much does each child get?

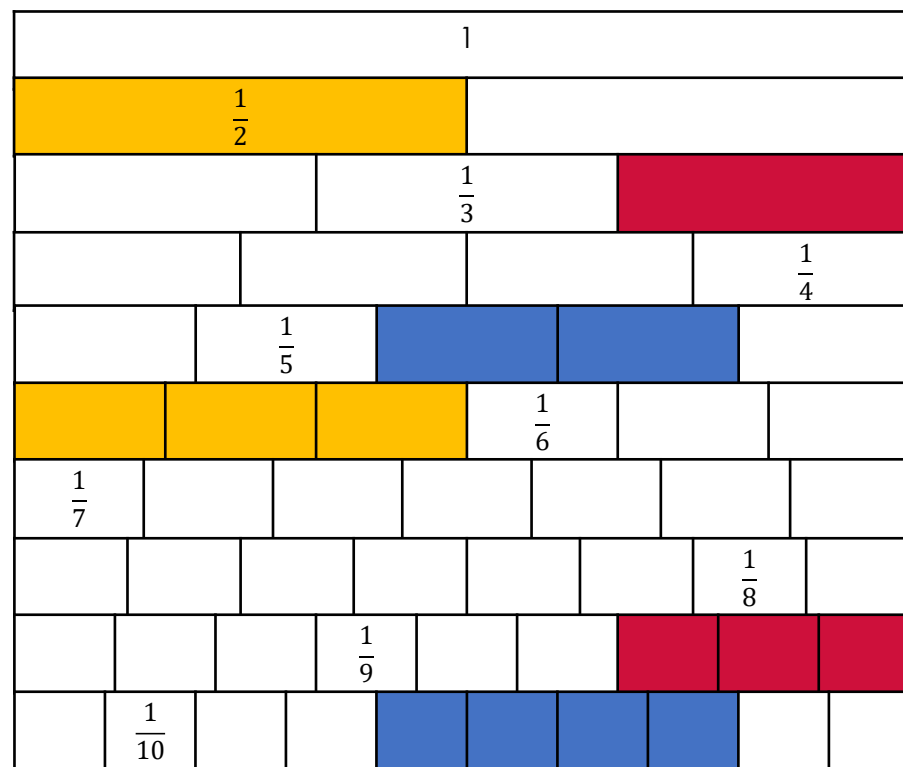We can use fraction notation to describe a division.

Two shared between three $= 2 \div 3 = \frac{2}{3}$

They get $\frac{2}{3}$ of a bar each.

Fraction wall:

1									
$\frac{1}{2}$				
$\frac{1}{3}$		
$\frac{1}{4}$			
$\frac{1}{5}$				
$\frac{1}{6}$					
$\frac{1}{7}$						
$\frac{1}{8}$							
$\frac{1}{9}$								
$\frac{1}{10}$									

Using a Fraction Wall

We can see which fractions are equivalent because they are the same size in the fraction wall.
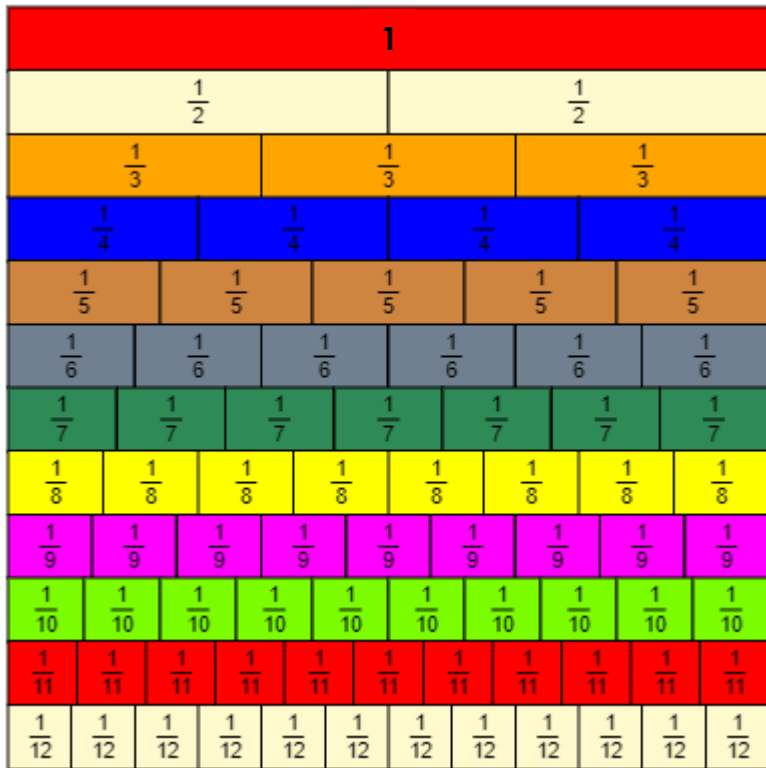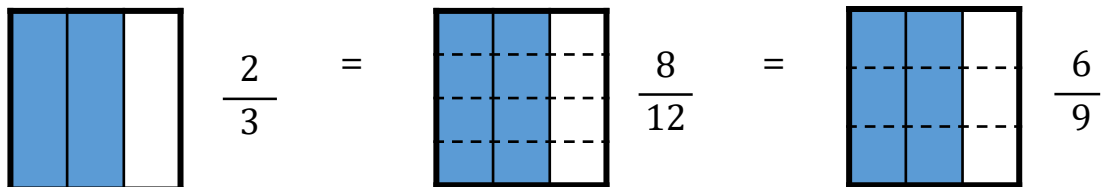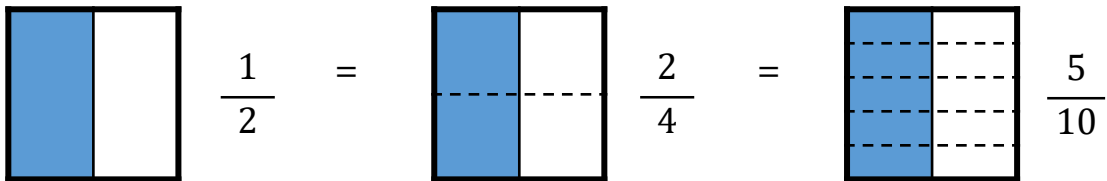
$\frac{1}{2} = \frac{3}{6}$ $\frac{1}{3} = \frac{3}{9}$ $\frac{2}{5} = \frac{4}{10}$

Other Topics/Units this could come up in:

Unit 15 – Manipulating and Calculating with Fractions

13

Equivalent Fractions

We can see that all these are **equivalent**.

$$\frac{1}{2} = \frac{2}{4} = \frac{5}{10}$$

$$\frac{2}{3} = \frac{8}{12} = \frac{6}{9}$$

A fraction wall is a useful way of finding fractions that are **equivalent**.

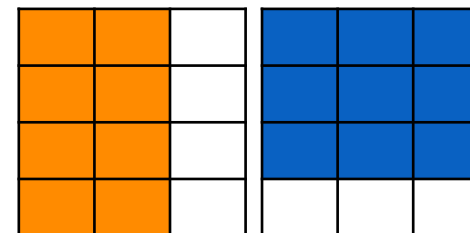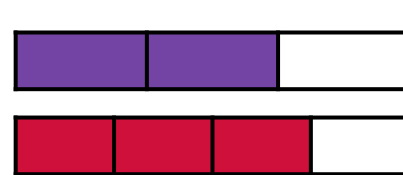| 1											

We can see that

$$\frac{1}{4} = \frac{2}{8} = \frac{3}{12}$$

because they are the same size on the fraction wall.

Can you spot any patterns in the numbers that also shows why they are equivalent?

Common Denominators to Compare Fractions

Both these models have been used to compare $\frac{2}{3}$ and $\frac{3}{4}$.

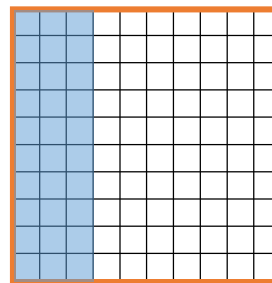We can see that $\frac{3}{4}$ is greater than $\frac{2}{3}$ from the first model.

The second model uses a **common denominator** of both fractions to show how much greater.
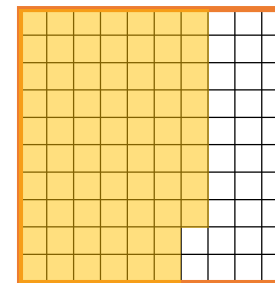
From the second model, we can see that

$$\frac{2}{3} = \frac{8}{12} \text{ and } \frac{3}{4} = \frac{9}{12} \text{ which shows that } \frac{3}{4} \text{ is } \frac{1}{12} \text{ greater than } \frac{2}{3}$$
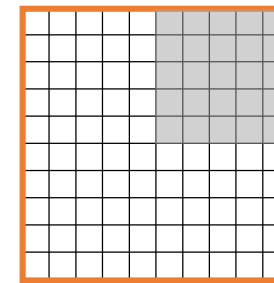
Decimal Fractions

Decimal fractions (those with a denominator of 10, 100, …) can be represented using a hundred square.
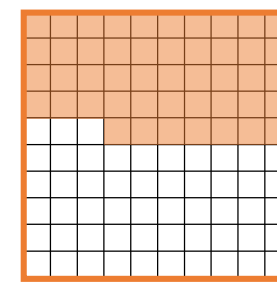
$$\frac{3}{10}, \frac{30}{100}, 0.3$$

$$\frac{68}{100}, \frac{34}{50}, 0.68$$
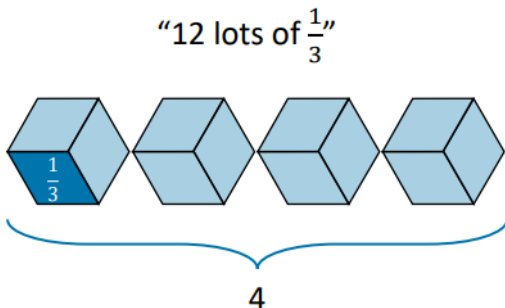
$$\frac{25}{100}, \frac{1}{4}, 0.25$$

$$\frac{47}{100}, 0.47$$
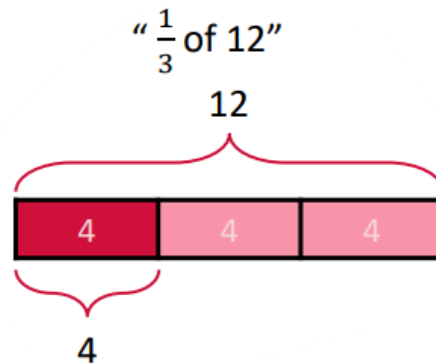
Modelling 'Lots of;

- When multiplying integers and fractions there are two ways we can think of it.
  Example: $12 \times \frac{1}{3}$

- This model shows how you can have lots of the fraction. 12 lots of $\frac{1}{3}$ means you have a total of 4

"12 lots of $\frac{1}{3}$"

- This model shows how you can split the integer up into the fractional parts.
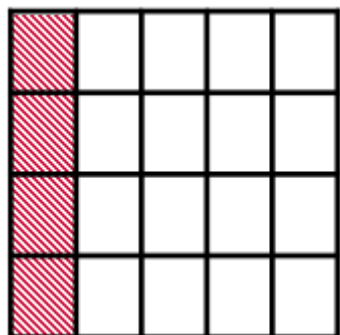
"$\frac{1}{3}$ of 12"

Modelling Multiplying Fractions

- When multiplying fractions we can use a model to represent what happens.
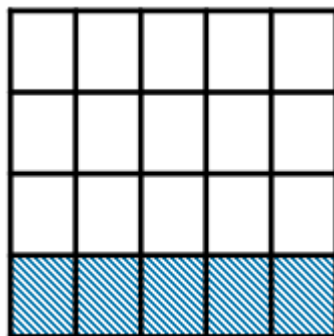
Example: We want to model $\frac{1}{4} \times \frac{1}{5}$

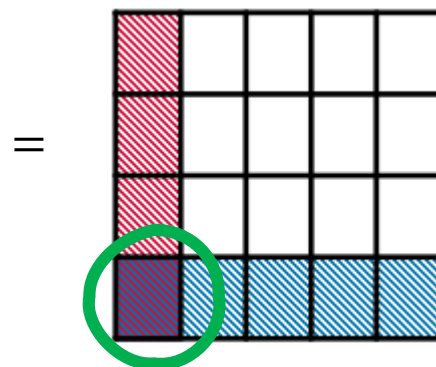The red rectangle is $\frac{1}{5}$.

The blue rectangle is $\frac{1}{4}$.

We can then combine the two diagrams

$\times$

$=$

The crossover section is the answer.
It represents $\frac{1}{4}$ of $\frac{1}{5}$ **or** $\frac{1}{5}$ of $\frac{1}{4}$
Therefore, $\frac{1}{4} \times \frac{1}{5} = \frac{1}{20}$

Keyword/Skill	Definition/Tips
Fraction	Parts of a whole.
Numerator	How many parts of a whole. The top number in a fraction.
Denominator	How many parts the whole is split into. The bottom number in a fraction.
Improper Fraction	A fraction where the **numerator** is bigger than the **denominator** Ex: $\frac{12}{7}$
Mixed Number	A number made from an integer and a fraction. Ex: $2\frac{3}{4}$
Reciprocal	One of two numbers that multiply to make 1. e.g. the reciprocal of 2 is $\frac{1}{2}$ because $2 \times \frac{1}{2} = 1$
Multiplicative Inverse	Another way of describing reciprocal
Conversion	To change our fraction into something else (decimal or percentage)
Product	The product of two numbers means you need to multiply
Integer	A whole number.
Common Denominator	When two or more fractions have the same denominator
Equivalent Fractions	Fractions which have the same value, even though they may look different.

Other Topics/Units this could come up in:

- Fractions, Decimals & Percentages
- More Complex Percentages of Amounts
- Interest & Growth
- Depreciation & Decay
- Reverse Percentages
- Fraction Calculations
- Recurring Fractions
- Surds including Rationalising

15

Dividing Fractions by an Integer

- When multiplying integers and fractions there are two ways we can think of it.
Example: $12 \times \frac{1}{3}$

$$\frac{6}{7} \div 2 = \frac{3}{7}$$

$$\frac{6}{7} \div 2 = \frac{6}{14}$$

- Here we have 6 parts of 7, so when we divide by two we have half the number of parts so it is 3 parts out of seven. (Divide the numerator by the integer.)

- Here we have 6 parts of 7, so when we divide by each part is half the size. So instead of have 7 total parts, we have 14 total parts. (Multiply the denominator by the integer)

Whichever way you do this your answer will be the same. $\frac{3}{7}$ is equivalent to $\frac{6}{14}$

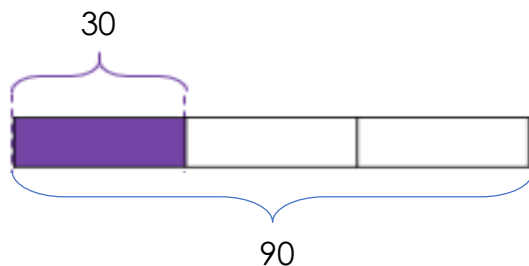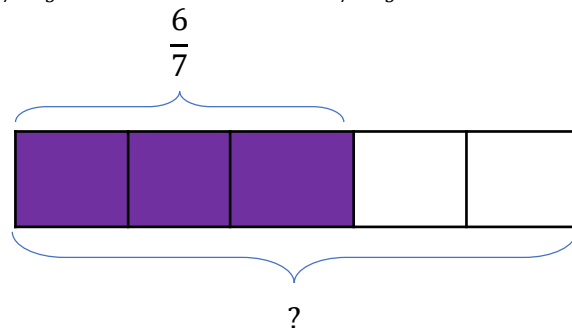## Dividing Fractions by an Integer

$30 \div \frac{1}{3}$ can be expressed as 30 is $\frac{1}{3}$ of something?

30

90

As 30 is $\frac{1}{3}$ of something. If you multiply 30 by 3 you get the value of the whole bar which gives us our answer to $30 \div \frac{1}{3} = 90$

Dividing Fractions by a Fraction

$\frac{6}{7} \div \frac{3}{5}$ can be expressed as $\frac{6}{7}$ is $\frac{3}{5}$ of something?
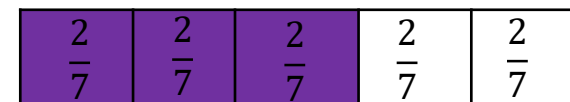
$$\frac{6}{7}$$

?

We need to figure out what one part of the bar model is worth. We can do that by doing $\frac{6}{7} \div 3$ which equals $\frac{2}{7}$

This means one part of the bar model is worth $\frac{2}{7}$.

To find the answer to $\frac{6}{7} \div \frac{3}{5}$ we want to know what the whole bar is worth.

$\frac{2}{7}$	$\frac{2}{7}$	$\frac{2}{7}$	$\frac{2}{7}$	$\frac{2}{7}$

We have 5 lots of $\frac{2}{7}$ which equals $\frac{10}{7}$.

Therefore the answer to $\frac{6}{7} \div \frac{3}{5} = \frac{10}{7}$

Keyword/Skill	Definition/Tips
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Common Denominator	When two or more fractions have the same denominator
Equivalent Fractions	Fractions which have the same value, even though they may look different.

16

ORMISTON SWB ACADEMY

Adding Fractions with the Same Denominator

- If fractions have the same denominator we can add or subtract them straight away.
- Example: This model shows we can add fractions with the same denominator.

$$= 1$$

$$\frac{2}{4} + \frac{3}{4} = \frac{5}{4} = 1\frac{1}{4}$$
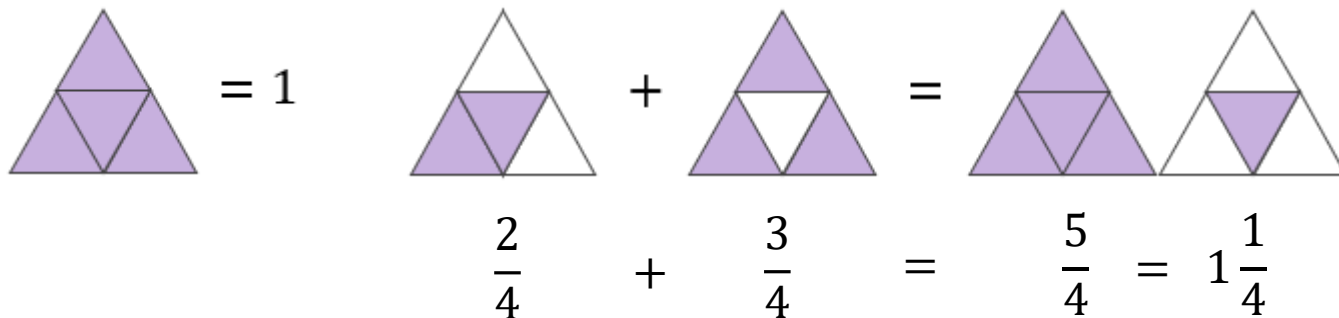
Adding Fractions with Different Denominators

When we are adding fractions with different denominators we need to find a common denominator. We can do find one by combining models of each fraction
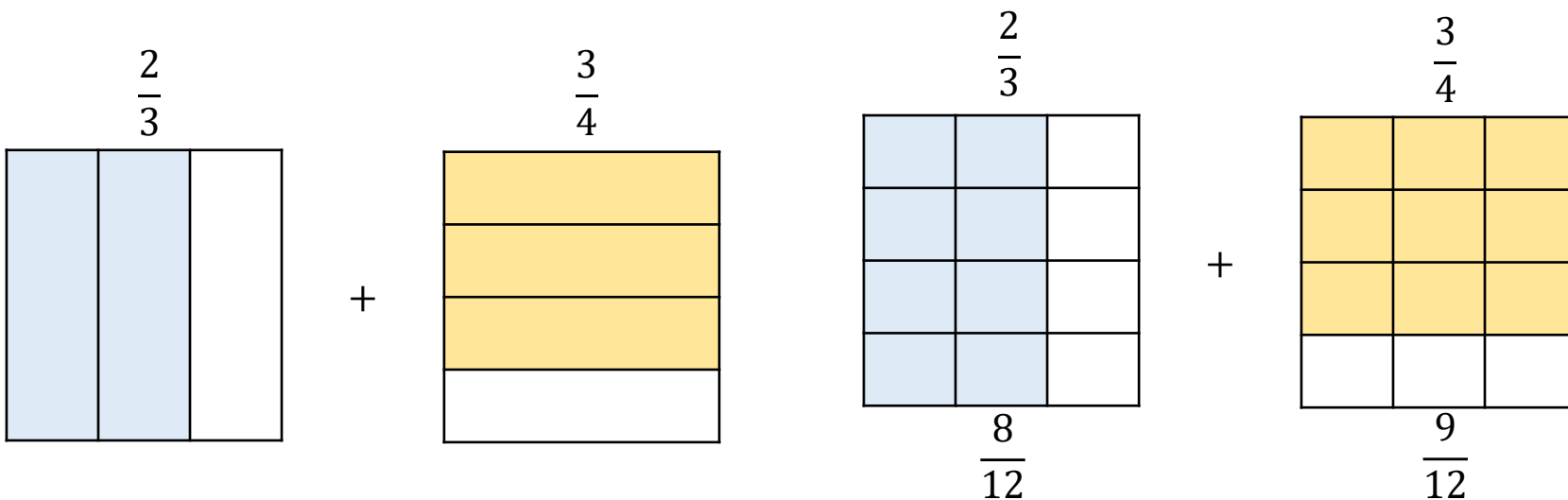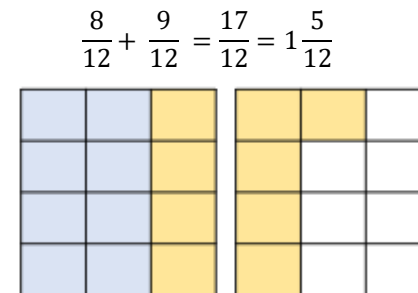
Example: $\frac{2}{3} + \frac{3}{4}$

I can combine models to see what my common denominator will be:

$$\frac{2}{3}$$

$$\frac{3}{4}$$

$$\frac{2}{3} + \frac{3}{4}$$

$$\frac{8}{12}$$

$$\frac{9}{12}$$

Now they are split into the same number of parts, I can add them together!

$$\frac{8}{12} + \frac{9}{12} = \frac{17}{12} = 1\frac{5}{12}$$

Keyword/Skill	Definition/Tips
Fraction	Parts of a whole.
Numerator	How many parts of a whole. The top number in a fraction.
Denominator	How many parts the whole is split into. The bottom number in a fraction.
Improper Fraction	A fraction where the **numerator** is bigger than the **denominator** Ex: $\frac{12}{7}$
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17

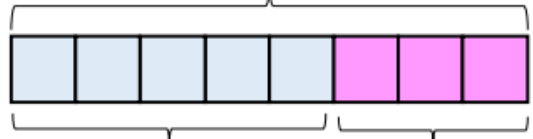# Year 7 – Maths – Mastery: Unit 16 – Ratio

Representing a Ratio
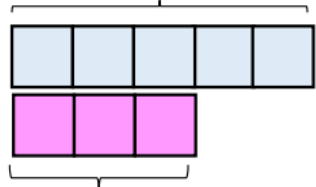
"For every 5 boys there are 3 girls" $\longrightarrow$ $5 : 3$

This is the "whole" – boys and girls together

This represents the 5 boys

This represents the 5 boys   This represents the 3 girls

This is the "whole" – boys and girls together

This represents the 3 girls

Order is Important
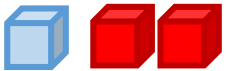
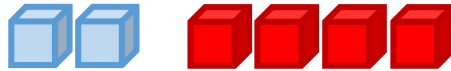"For every dog there are 2 cats"

Dogs : Cats

🐕 $1 : 2$ 🐈 🐈

The ratio has to be written in the same order as the information given.

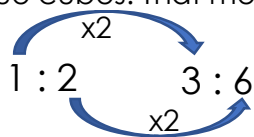E.g. 2 : 1 would represent 2 dogs for every 1 cat

In The Same Ratio

The ratio of blue cubes to red cubes is **1 : 2**

If we add 1 blue and 2 red cubes, the ratio of red cubes to blue cubes is now **2 : 4**   **2 : 4** is in the same ratio as **1 : 2**

If we have 3 blue cubes, to keep it in the same ratio as **1 : 2** we need double the amount of blue cubes. That means 6 red cubes are needed

$1 : 2 \qquad 3 : 6$

x2

x2

If 2 cubes of each colour cubes are taken added, the ratio of red cubes to blue is **3 : 4**

This is NOT in the same ratio as **1 : 2**
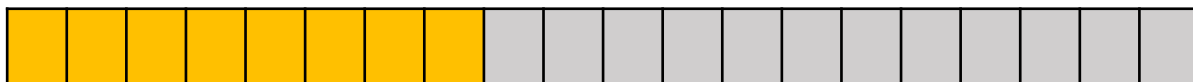
Equivalent Ratios

$2 : 3$

$4 : 6$

$6 : 9$

$8 : 12$

These strips show that each ratio is equivalent as the same area of each strip is gold and silver.

Keyword/Skill	Definition/Tips
Ratio	Ratio compares the size of **one part** to **another part**. Written using the ':' symbol. $3 : 1$
Proportion	Proportion compares the size of one part to the size of the whole. In a class with 13 boys and 9 girls, the proportion of boys is $\frac{13}{22}$ and the proportion of girls is $\frac{9}{22}$
Share	Split or divide.
Parts	One cube in the bar model represents one part.
Direct Proportion	As one amount increases, another amount increases at the same rate.
Inverse Proportion	When one value **decreases** at the same rate that the other increases.
Bar Model	A picture (usually a bar) to represent a known or unknown number $3 : 1$
Enlargement	Make the object bigger or smaller
Constant of Proportionality	The constant value relating to amounts that rise or fall at the same rate together

Other Topics/Units this could appear in:
- Ratio & Proportion
- Direct and inverse proportion

18

It may help you to look through **Y7 Mastery: Unit 12 – Transforming 2D Figures knowledge organiser** before starting this
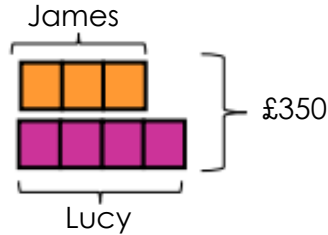
Sharing a Whole into a Given Ratio (a:b)

James and Lucy share £350 in the ratio 3 : 4.
Work out how much each person earns.

Model the Question

James   Lucy
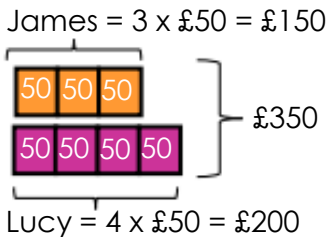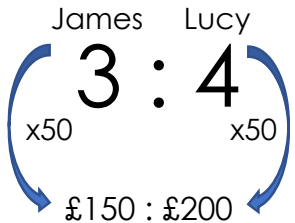
3 : 4

James

Lucy

£350

Find the Value of One Part

Whole £350
7 parts to share between
(3 James, 4 Lucy)

£350 ÷ 7 = £50

□ = one part
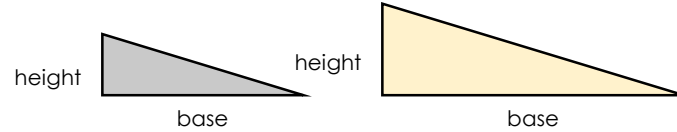= £50

Put Back into the Question

James   Lucy

3 : 4

x50   x50

£150 : £200

James = 3 x £50 = £150

| 50 | 50 | 50 |
| 50 | 50 | 50 | 50 |

£350

Lucy = 4 x £50 = £200

Enlargement & Constant of Proportionality

The larger blue triangle is an enlargement of the smaller yellow triangle.

height   height

base   base

The constant of proportional helps us calculate the corresponding sides.

base	height	Constant of proportionality	base	height
4cm	2cm	x 2	8cm	4cm
6cm	2cm	x 3	18cm	6cm

We can figure this out by comparing the ratios of each triangle.
Example:

base	height	Constant of proportionality	base	height
5cm	3cm	x ___	15cm	__cm

Comparing the sides as ratios:

x3

5cm : 3cm   15cm : __cm
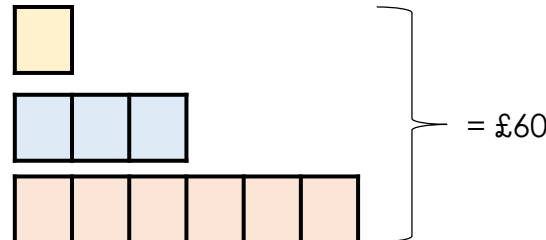5cm : 3cm   15cm : 9cm

x3

Looking at the corresponding sides, you can see the constant of proportionality would be x3.

Sharing a Whole into a Given Ratio (a:b:c)

For dividing a quantity into three parts, we can use the same method as above. Here we will have three sets of bars.

Example:
Charlie wants to divide £60 between three charities in the ratio 1 : 3 : 6

= £60

Altogether there is £60.
There are 10 parts altogether.
1 part = £60 ÷ 10 = £6

Each charity gets:

1 : 3 : 6
x6   x6   x6
6 : 18 : 36

Keyword/Skill	Definition/Tips
Ratio	Ratio compares the size of **one part** to **another part**. Written using the ':' symbol. $3:1$
Proportion	Proportion compares the size of one part to the size of the whole. In a class with 13 boys and 9 girls, the proportion of boys is $\frac{13}{22}$ and the proportion of girls is $\frac{9}{22}$
Share	Split or divide.
Parts	One cube in the bar model represents one part.
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Bar Model	A picture (usually a bar) to represent a known or unknown number $3:1$
Enlargement	Make the object bigger or smaller
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Other Topics/Units this could appear in:
• Ratio & Proportion
• Direct and inverse proportion

19

Percentage

In this diagram, **30** out of **100** squares have been shaded. So, **30%** has been shaded.

What are percentages?

- 1 per cent is **one hundredth**, or 0.01 as a decimal. Per cent is represented by the **%** symbol.

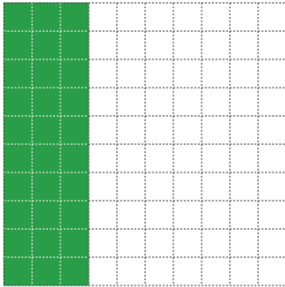- A simple way to think of a percentage as a decimal is to imagine pennies in the pound. Just as 1p can be written £0.01, 1% can be written 0.01. So 2% is 0.02 or 2p, 25% is 0.25 or 25p and so on.

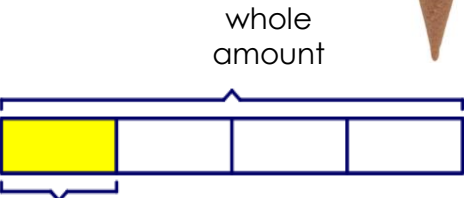*Per cent means 'per 100'. If 70 per cent of the population own a pet, this means that 70 out of every hundred people own a pet. The symbol % means 'per cent'.*

£1 equals 100 × 1p coins

Finding a percentage of a quantity

It's often useful to be able to find a percentage of a quantity.

For example, you might be told that **25%** of children prefer strawberry ice cream.

whole amount

25%

If the whole amount of children is 60, then 25% of that amount is 60 ÷ 4 = 15. So 15 children prefer strawberry ice cream.

Percentage Increase
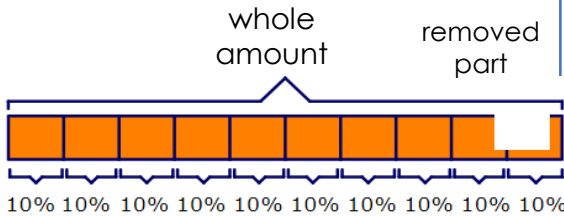
A bar of chocolate has a special offer of **25%** extra for the same price.

whole amount   extra part

25%   25%
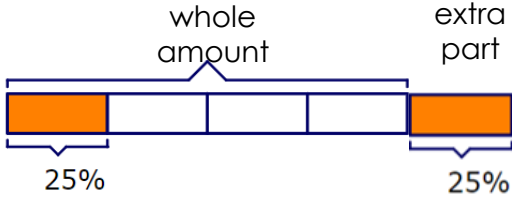
If the whole amount of chocolate is 40g, then 25% of that amount is 40 ÷ 4 = 10. So 10g extra is added on and the special offer bar has 50g of chocolate.

Percentage Decrease

whole amount   removed part

10% 10% 10% 10% 10% 10% 10% 10% 10% 10%

If the whole amount is 90, then 10% of that amount is 90 ÷ 10 = 9. 90 – 9 = 81 So 10% less would mean 81 is left.

One-tenth

0.1 DECIMAL

$\frac{1}{10}$

10% PERCENT

$0\frac{1}{10}$ 1
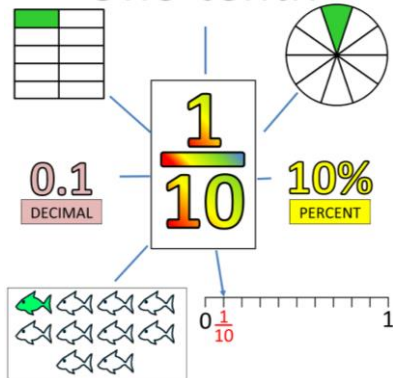
Keyword/Skill	Definition/Tips
Decimal	"Decimal number" is a number that uses a decimal point followed by digits that show a value smaller than one.
Percentage	Parts per 100. The symbol is %. Example: 25% means 25 per 100.
Inverse	Opposite in effect. The reverse of. The inverse of adding 9 is subtracting 9.
Fractions	The top number (the numerator) says how many parts we have. The bottom number (the denominator) says how many equal parts the whole is divided into.
Mixed	A whole number and a fraction combined into one "mixed" number.
Increase	Make something bigger in size.
Decrease	Make something smaller in size.
Improper	A fraction where the numerator (the top number) is greater than the denominator (the bottom number).
Recurring	A decimal number with a digit (or group of digits) that repeats forever.
Integer	A number with no fractional part (no decimals). A whole number.
Terminating	A decimal number that has digits that end. Example: 0.25 (it has two decimal digits)
VAT	**Value-added tax** (**VAT**) is a tax added onto the cost of goods by the government.
Multiplier	The number that you are multiplying by.
Profit	Income minus all expenses.
Loss	A loss occurs when an item is sold for less than it cost.
Tenths	One part in ten equal parts. Example: one tenth of 50 is 5
Hundredths	One part in a hundred equal parts. Example: 1 cent is a hundredth of 1 dollar
Thousandths	One part in a thousand equal parts: Example: 1 meter is a thousandth of 1 kilometre.

Other Topics/Units this could appear in:

Working Towards:
Unit 4 – Fractions and Percentages
Crossover:
Unit 10 – Percentage of an Amount
Unit 11 – Interest and Growth/Depreciation
Unit 13 – Reverse Percentages
Unit 39 – Pie Charts
Unit 40 - Probability
Working Above
Unit 12 – Sampling, Cumulative Frequency, Box Plots & Histograms

20

Year 7 – Science – P1c. Earth and Space

EARTH TILT 23.5°
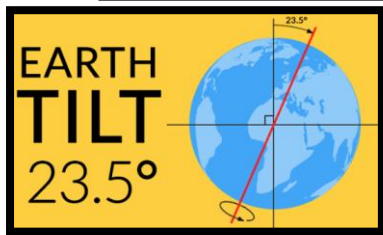
A day is **24 hours** long. This is because it takes 24 hours for the Earth to spin once on its axis.
The half of the Earth facing the Sun is in daylight. The half facing away from the Sun has no sunlight and so becomes night-time.

One year = **365¼ days**

Universe
↓
Galaxy
↓
Milky way
↓
Stars and planets

"**M**y **V**ery **E**ager **M**other **J**ust **S**erved **U**s **N**achos"

| Keyword	Definition
Planet	A planet is a large object the orbits a star. There are eight planets in our solar system, including the Earth, and smaller dwarf planets, such as Pluto, Ceres and Eris.
Satellite	A satellite is an object in orbit around a planet. The Moon is the Earth's natural satellite, but humans have launched many artificial satellites into orbit. The Moon is the Earth's natural satellite.
Seasons	In the United Kingdom we have four seasons (winter, spring, summer and autumn. We get seasons because the Earth's axis is tilted.
Solar system	The solar system consists of the Sun surrounded by planets, comets and asteroids in orbit. Most planets in the solar system have moons in orbit around them.
Star	These are giant spheres of superhot gas made up mostly of hydrogen and helium. Stars get so hot by burning hydrogen and helium. Our Sun is an example of a star.
Tilt	An object being in the sloping position.
Waning	After the Moon gets to its full phrase, we start to see less and less of the Moon.
Waxing	As the Moon begins its orbit, and we see more and more of the Moon.
Universe	Contains billions of galaxies.
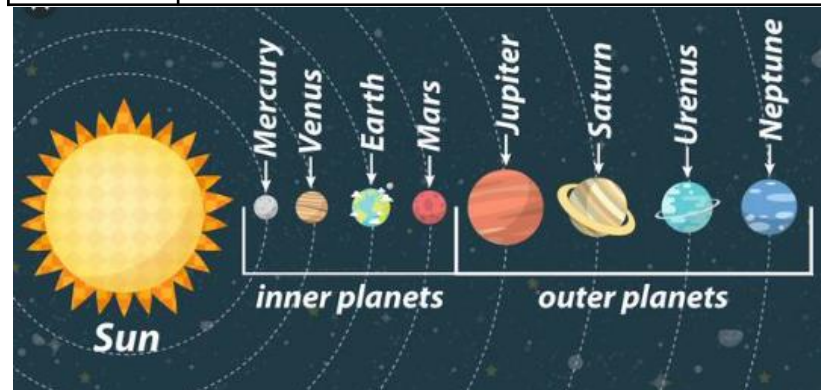
Keyword	Definition
Asteroid	An asteroid is a chunk of rock and metal in outer space that is in orbit around the Sun.
Axis	An imaginary line about which a body rotates.
Comet	Comets are balls of ice and dust in orbit around the Sun
Crescent	A crescent is a thin, curved shape that is thicker in the middle and tapers to thin points at each end, like the little sliver of moon you might notice in the sky.
Days	A day is the time it takes for a planet to turn once on its axis. An Earth day is 24 hours long.
Eclipse	An eclipse occurs when one object blocks another object from being seen. From Earth there are two main types of eclipses: solar eclipses and lunar eclipses.
Ellipse	An oval shape, squashed circle shaped.
Galaxy	Contains millions of stars, geld together by the force of gravity.
Gibbous	Gibbous moon appears to be more than one-half but not fully illuminated by sunlight.
Gravity	Gravity is a force that attracts objects towards each other. We commonly experience gravity by being pulled downwards by the Earth.
Hemisphere	Hemisphere means half (hemi) of the Earth (sphere).
Magnetic field	A force around magnet. The force around a magnet cannot be seen.
Meteoroid/ Meteor	A meteoroid is a small rock or particle of debris in our solar system. A meteoroid that burns up as it passes through the Earth's atmosphere is known as a meteor.
Moon	Satellite to the Earth. It is smaller and has less mass than Earth.
Phases of the moon	The phase of the moon is how much of the moon appears to us on Earth to be lit up by the sun.

Mercury Venus Earth Mars Jupiter Saturn Urenus Neptune

inner planets   outer planets

Sun

The Earth's axis is tilted as it travels around the Sun, so some parts of the Earth receive more sunlight each day than others.   This changes during the year because the Earth moves about the Sun, which gives rise to the seasons.
The UK is in the top half (**northern hemisphere**) of the Earth. When the northern hemisphere is tilted towards the Sun it is summer in the UK.
Six months later the northern hemisphere is tilted away from the Sun and it is winter.
In Spring, the temperature and day length become longer. In Autumn, they are shorter.
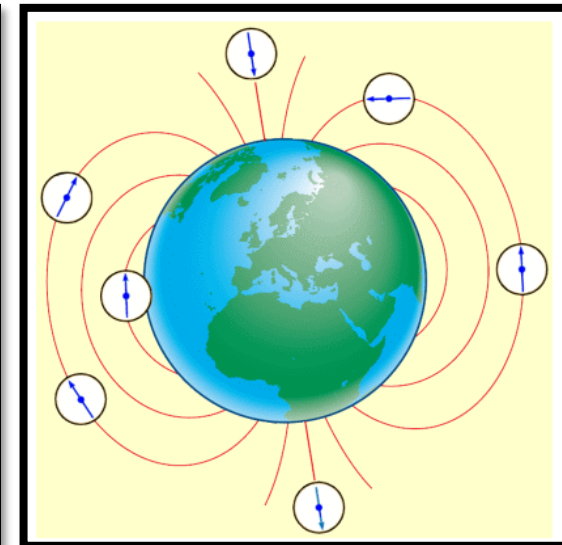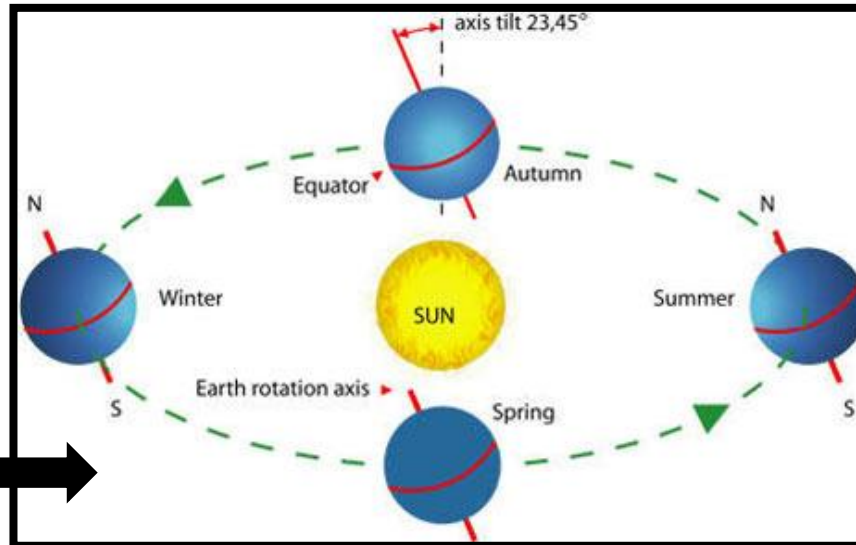
The Earth behaves as if it contains a giant magnet. It produces a magnetic field in which the field lines are most concentrated at the poles. This magnetic field can be detected using magnetic materials or magnets.
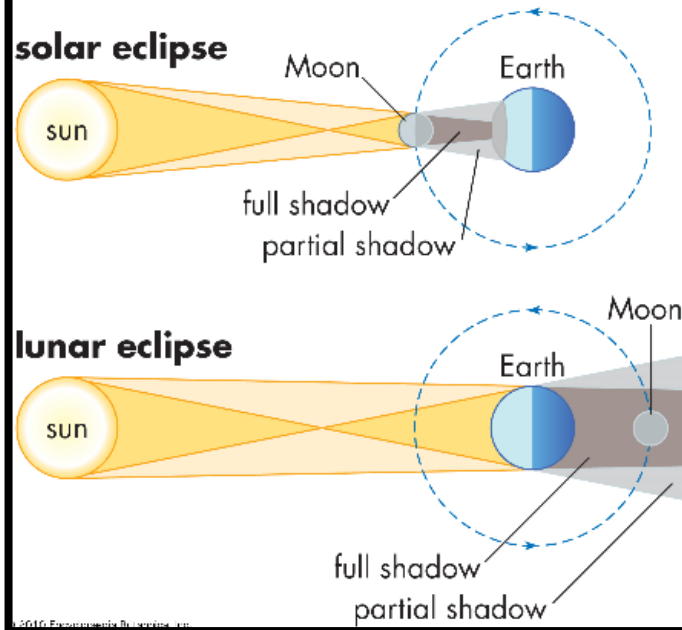
A solar eclipse occurs when the Moon passes in front of the Sun causing a shadow to fall on certain portions of the Earth. A lunar eclipse occurs when the Moon passes through the Earth's shadow.
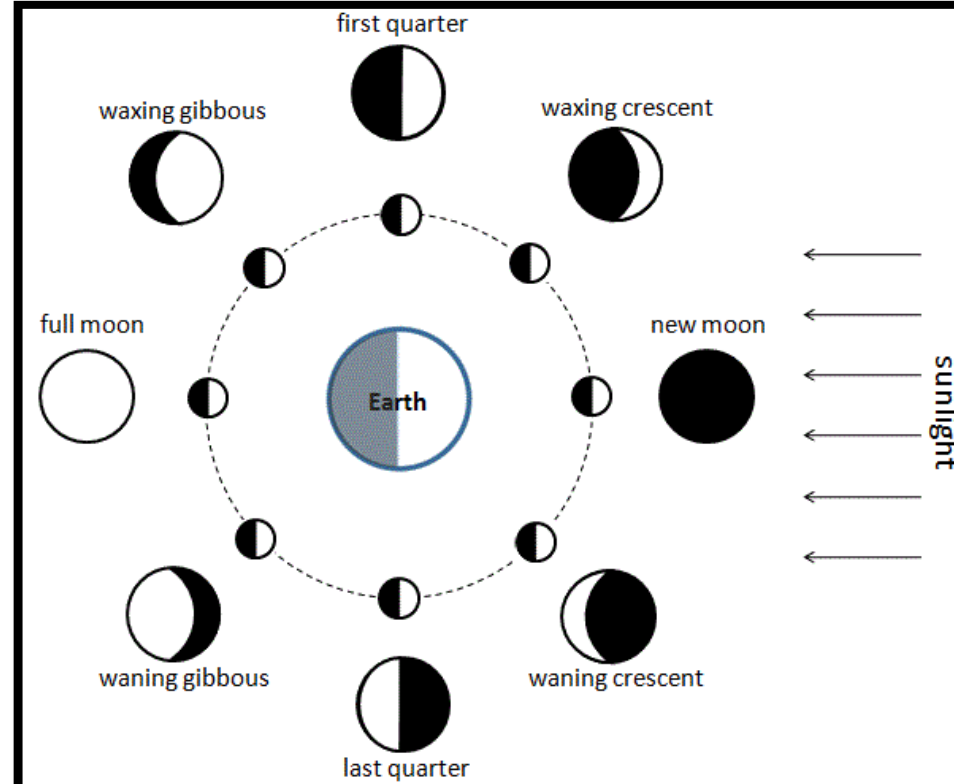
Gravity is a force that attracts objects towards each other. We are pulled down towards the ground because of gravity. The gravitational force pulls in the direction towards the centre of any object. So we are pulled towards the centre of the Earth.
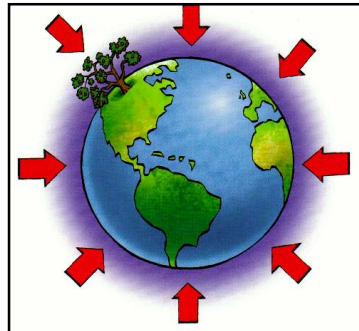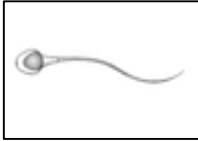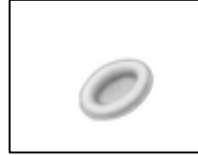
Weight = Mass x Surface Gravity

Weight is a force caused by gravity.
The weight of an object is the **gravitational force** between the object and the Earth.
The more mass the object has the greater its weight will be.
Weight is a force, so it's measured in **newtons**.
 On the surface of the Earth an object with a mass of 1 kg has a weight of about 10 N.

22

Year 7 – Science – B1a. Cells

Animal Cell / Plant Cell
Plant and Animal Cells share these common features: Cell Membrane, Cytoplasm, Nucleus, Mitochondria
Plant Cells contain these extra features: Rigid Cell Wall, Chloroplasts, Vacuole
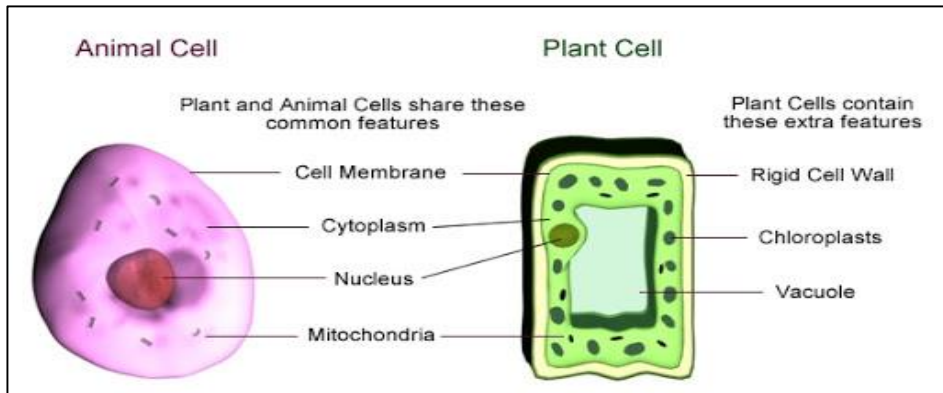
Organelle	Function	Found in animal cells?	Found in plant cells?
Nucleus	An organelle that controls the cell's activities and where genetic information (DNA) is found	✓	✓
Cytoplasm	A jelly-like substance where chemical reactions occur	✓	✓
Cell Membrane	A layer around the cell that controls what enter and leaves it	✓	✓
Mitochondria	An organelle found in cells where respiration occurs	✓	✓
Cell Wall	Outer layer found in plant and bacteria cells that provide support and protection to the cell		✓
Chloroplast	An organelle found in plant cells that absorbs light and is where photosynthesis occurs		✓
Vacuole	A fluid filled sac found in plant cells that contains cell sap		✓

Cells → Tissues → Organ → Organ System → Organism

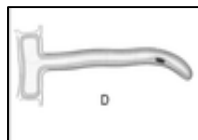| Name of Specialised Cell	Diagram	Adaptations
Sperm Cell		Has a tail so it can swim to the egg cell with genetic information
Red Blood Cell		No nucleus- contains haemoglobin so it can carry oxygen around the body
Root Hair Cell		Has an increased surface area so it can absorb more water and mineral ions
Ciliated Cell		Hair-like projections called cilia that move along mucus and dust
Palisade Cell		Contains many chloroplasts needed for photosynthesis to occur

Keyword	Definition
Movement	Animals move to escape a predator or to find food, shelter or mate. Plants will move to reach sunlight and nutrients
Respiration	A process that happens in mitochondria that releases energy that the cell will use to carry out reactions
Sensitivity	When organisms are aware of their environment e.g., how hot or cold it is, how much light there is
Growth	When organism increases in height, length, mass
Reproduction	When organisms make more of their species
Excretion	When organisms remove waste products that are made during reactions
Nutrition	Animals and plants break down nutrients so they can be more easily used for energy and growth
Organelle	Parts that make up a cell
Cell	The single unit building block of life
Tissue	A group of similar cells working together
Organ	A group of similar tissues working together
Organ system	A group of organs working together
Organism	A living thing
Specialised cell	A cell that has differentiated (changed) to do a particular job
Microscope	Scientific equipment that allows you to see objects you cannot see with the naked eye
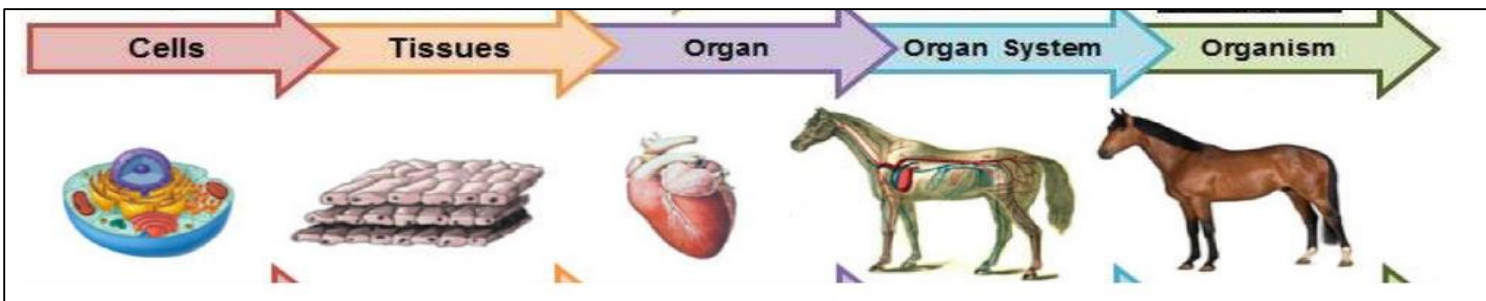
Year 7 – Science – B1b. Body Systems

What are the parts of the male reproductive system?

glands — sperm duct

testis — scrotum

urethra — penis
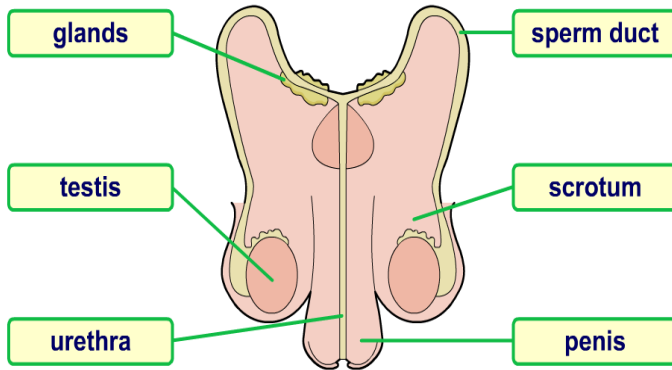
What are the parts of the female reproductive system?

ovary — oviduct

uterus — uterine lining

vagina — cervix

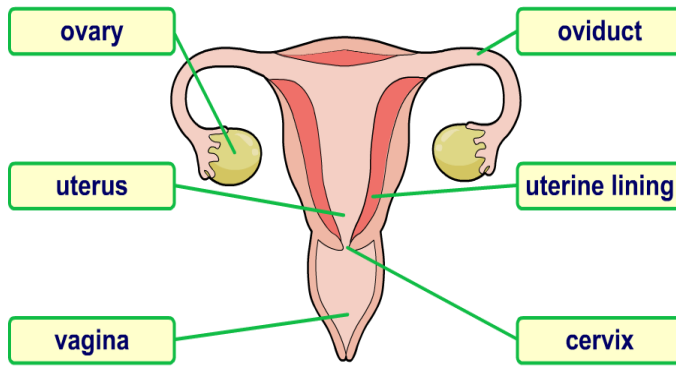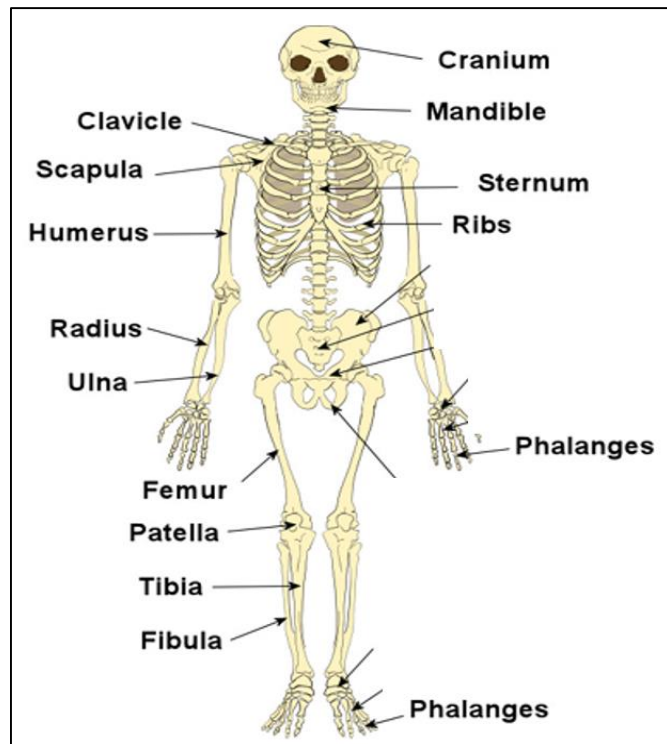| Reproductive Organ	Function
Testis	Where sperm are produced
Scrotum	Sac of skin holding and protecting the testis
Urethra	Carries sperm outside the body
Glands	Adds fluids to the sperm
Sperm Duct	Carries sperm from the testis
Cervix	The opening or the neck of the uterus
Uterus	Large muscular organ where the baby will develop
Uterine Lining	Where the fertilised egg is implanted
Oviduct	Carries the eggs from the ovaries to the uterus
Ovary	Where eggs are matured and released

The Menstrual Cycle

Days of the Average Menstrual Cycle

Ovulation Egg released
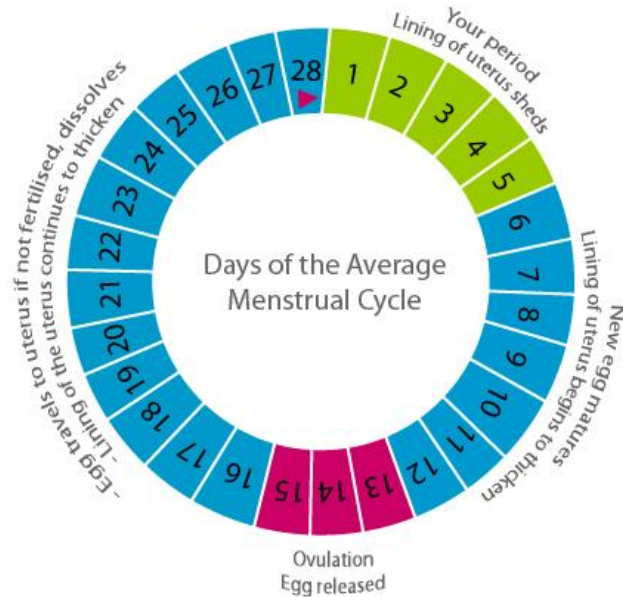
Keyword	Definition
Puberty	The change that occurs in males and females into mature adult bodies ready for reproduction
Menstrual Cycle	A monthly series of changes that occurs in females to prepare for pregnancy, on average the cycle is 28 days long
Menstruation	The stage of the menstrual cycle where the lining of the uterus breaks down. Also known as a 'period'.
Ovulation	Happens around day 14 of the menstrual cycle, this is when an egg cell is released from an ovary
Fertilisation	When the nucleus of a sperm cell enters an egg cell and fuses (joins) with the nucleus of an egg cell, creating a zygote
Embryo	The word used to describe the early stages of baby development
Implantation	When a fertilised egg (zygote) embeds into the wall of the uterus
Placenta	An organ that grows in the uterus during pregnancy where substances are exchanged between the mother and the baby
Gestation	The period of time during which a baby develops and grows. In humans, this is stated as 9 months
Labour	The process of childbirth, beginning with contractions and ending with the delivery of the baby
Infertility	When a baby cannot be conceived naturally
Balanced diet	Eating the right amount of each of the 7 nutrient group
Deficiency disease	A disease caused by not having enough a particular nutrient
Enzymes	Molecules that will break down large food molecules
Digestion	The process of breaking down food into smaller molecules the body can use

ORMISTON SWB ACADEMY

Cranium
Mandible
Clavicle
Scapula
Sternum
Humerus
Ribs
Radius
Ulna
Phalanges
Femur
Patella
Tibia
Fibula
Phalanges

The Skeleton has 4 purposes:

1) It gives the body SHAPE and SUPPORT

2) It allows the body to MOVE

3) Red blood cells are produced in the MARROW

4) It PROTECTS the major organs

Joints - Bones are linked together by joints. Most joints allow different parts of the skeleton to move. The human skeleton has joints called **synovial joints**.

Mouth
Oesophagus
Stomach
Small Intestine
Large Intestine
Rectum
Anus
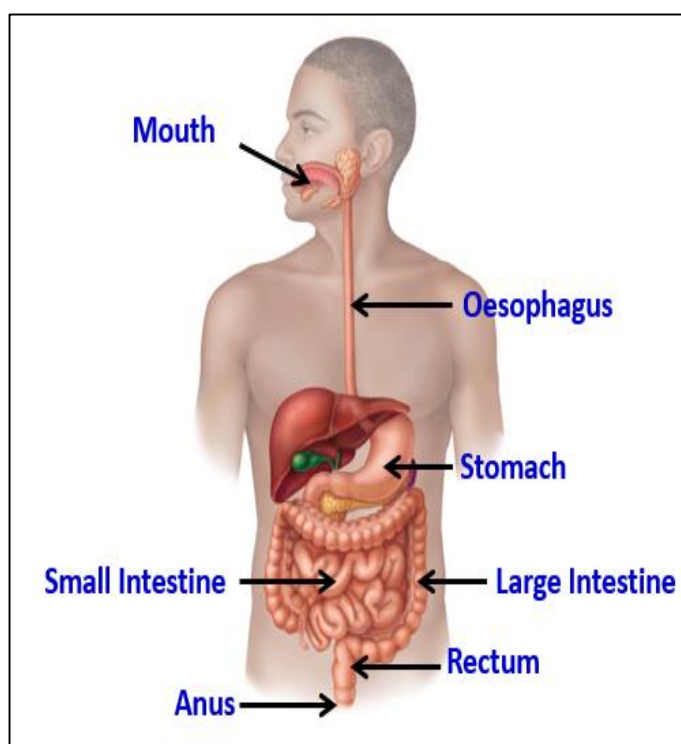
1. Mouth- where food is broken down by teeth

2. Oesophagus- long muscular tube where food is taken from the mouth to the stomach

3. Stomach- where proteins are digested. Contains hydrochloric acid to kill pathogens

4. Small intestine- the final stage of digestion. Glucose, amino acids, fatty acids and glycerol are absorbed into the blood here

5. Large intestine- water is reabsorbed here from undigested food to make faeces

6. Rectum- where faeces are stored

7. Anus- where faeces leaves the body via egestion

Joint Type	Example of Joint	Type of movement joint allows	How the joint is held together
Fixed Joint	Skull	Movement only at certain points	Held by tough, fibrous tissue, developed in childhood
Slightly Moveable Joint	Spine	Slightly moveable joints	Separated by cartilage and held together by tough bands of ligament
Freely Moving Joint	Elbow	Freely moving joints	None - as it would be a severe disadvantage

Enzymes are substances that speed up biological reactions in our bodies.

Enzymes are not living things. They are just special proteins that can break large molecules into small molecules. Different types of enzymes can break down different nutrients:

Protein molecule

Protease Enzyme

Lots of amino acids

Fat (LIPID) molecule

Lipase Enzyme
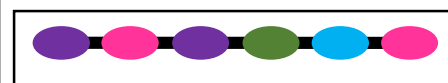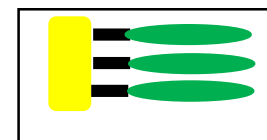
3 fatty acid molecules and 1 glycerol molecule
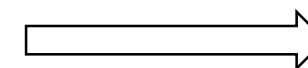
Starch molecule
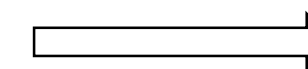
Carbohydrase Enzyme

Lots of glucose molecules

25

Year 7 – Science – B1c. Ecosystems

Adaptations
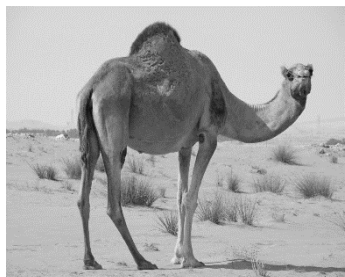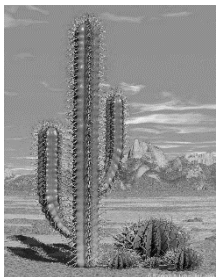
- **Covered in a waxy layer to reduce water loss**
- **Leaves are reduced to spines to reduce water loss**
- **Extensive root network to absorb as much water as possible**
- **Flesh of stem can store a lot of water**
- **Spines protect predators from eating them**

- **Big feet with webbed toes to stop sinking into the sand**
- **Can store a lot of water in their body- NOT IN THE HUMP. Can drink 100l of water in 10 minutes**
- **Only a small amount of urine is produced to reduce water loss**
- **Hump is a fat store when there is nothing available to eat**
- **Sandy coloured for camouflage, especially for young animals**
- **Thick rubber lips that are able to eat through cacti**

- **Thick layer of fur for insulation. The fur is greasy and keeps the animal dry when swimming**
- **White fur for camouflage, especially needed for young cubs**
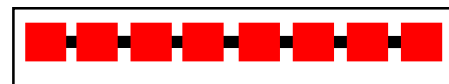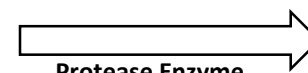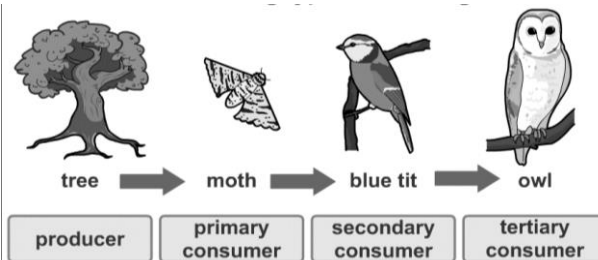- **Thick layer of fat called blubber. Needed for insulation and an energy store**
- **Strong muscular legs to swim fast and run after prey**

Food Chains

tree → moth → blue tit → owl

| producer | primary consumer | secondary consumer | tertiary consumer |

Food Webs- A collection of food chains in the same ecosystem
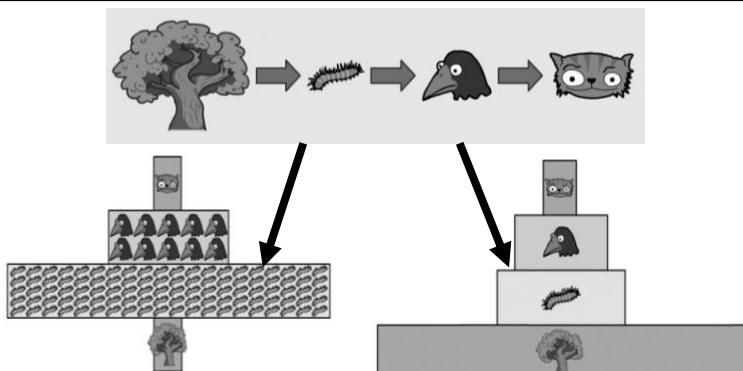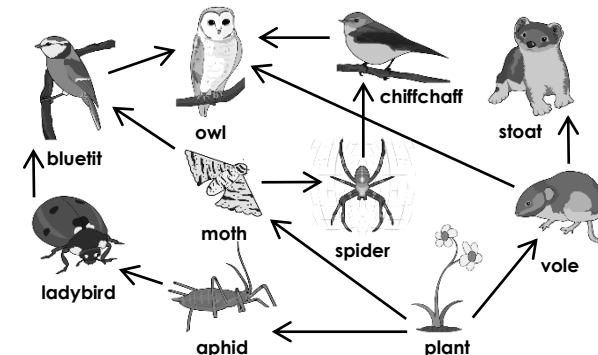
A Pyramid of Numbers (how many organisms are in each trophic level)

A Pyramid of Biomass (how much mass is in each trophic level)

Bioaccumulation

Chemicals such as pesticides (that would be used to kill primary consumers) can build up in a food chain as organisms are consumed in larger numbers the further up the food chain you go. This can lead to toxic levels of the chemical in organisms that were not intended to be killed, like the tertiary consumer

Producer — Primary Consumer — Secondary Consumer — Tertiary Consumer
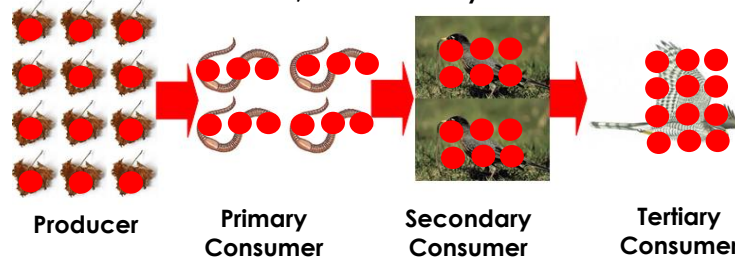
Keyword	Definition
Adaptation	The physical features an organism has so it is suited to live in a particular environment
Variation	Differences within a species. These differences can be due to genetics or the environment
Ecosystem	The habitat and the organisms that live in the habitat
Habitat	Where an organism lives
Population	The total number of a species living in a habitat
Community	The different species of organisms living together in an ecosystem
Food chain	A series of organisms each dependent on the next as a source of food
Food web	A collection of food chains in the same ecosystem
Trophic level	A certain hierarchy level in an ecosystem
Predator	An animal that will hunt and consume other animals
Prey	An animal that is hunted and consumed by other animals
Interdependence	How organisms of many different species in an ecosystem are reliant on each other
Producer	An organism that makes its own food, like plants
Consumer	An organism that will eat another organism for food
Herbivore	An organism that only consumes plants
Bioaccumulation	How pesticides can be built up in a food chain

26

Y7 ART SWARM KNOWLEDGE ORGANISER
Visual Research/Title Page
Using resources – testing out ideas/media.
Making a personal response – final outcome.

How do I investigate the importance of insects and how they have influenced art from different times and cultures?

- Collect a range of information and present as an annotated Title page.
- Different cultures
- Different times/art Movement link.
- What does this research tell you?

A good annotated Title page should include key words and information art vocabulary and a range of collaged visual research.

How do I develop my drawing skills using mark-making techniques?

- Explore hatching, cross hatching, scumbling, and stippling.
- Use mark making to record surface tone, texture and detail.
- Create a copy of Alfred Basha's work.
- Develop skills/knowledge of the Formal Elements.

A good artist copy should show a clear understanding of the artist's use of materials and techniques.

How do I develop my own ideas to create a response to Alfred Basha's work?

- Use the ideas behind his work to inspire you.
- Use his composition style you like the best,
- Make your work as detailed as possible.
- Use Surreal collage blends successfully.

A good artist response should show clear links to your artist's work but be your own idea. You should use materials and techniques with skill and control.

Wider Thinking:
Watch Bugs Life or Ant Bully.

Expert modelling example..

Annotated Title page.
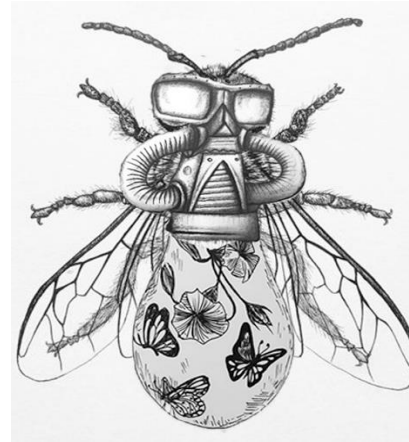
Artist response

Stretch and Challenge:
Youtube: Pen and Ink Shading Techniques + Exploring Mark-Making:
https://www.youtube.com/watch?v=B3xrzxXvn8c

Keyword	Definition
Mark making	The creation of different patterns, lines, textures and shapes.
Formal Elements	Key words that can be applied and used to describe 2D and 3D art and design.
Response	Develop own ideas using chosen artist's style, materials and techniques.
Investigate	Try out the qualities of materials, techniques or processes.
Respond	Develop own ideas by taking inspiration from an artist's work.
Hatching	Shading with closely drawn parallel lines
Cross hatching	The drawing of two layers of **hatching** at right-angles to create a mesh-like pattern.
Scumbling	Layers of small scribbled marks to build up tone and texture.
Stippling	The creation of a pattern by using small dots. Such a pattern may occur in nature
Collage	A piece of art created by combining photos, clippings or small objects onto a surface.
Refine	Improve work by responding to feedback.

27

Developing ideas/artist research
Using resources – testing out ideas/media.
Making a personal response – final outcome.

How do I identify the formal elements of Carolee Clark's work to create a written analysis?

- Artist's information/nationality.
- Inspiration
- Colour
- Pattern
- Composition
- What message is the artist trying to put across?

A good written analysis should include correct art vocabulary and your own opinion of the work.

What needs to be included to create a good copy of Carolee Clark's's work?

- Contour Line and Pattern
- Primary and Secondary Colours
- Warm and Cool Colours
- Tints and Shades
- Scale

A good artist copy should show a clear understanding of the artist's use of materials and techniques.

How do I develop my ideas to create a response to Carolee Clark's work? :

- Use the idea behind her work to inspire you.
- Use her composition style that you like best,
- Make your work as detailed as possible.
- Use Colour Theory to apply colours successfully.

A good artist response should link to the ideas and inspiration behind the artist's work and use her materials and techniques with skill and control.

Wider Thinking:
Look at the other artists' abstract work, for example: Wahyu R., Kent Paulette, Theresa Paden and Gillie & Marc

Artist work example and students' response..

Artist work

Artist response

Stretch and Challenge:
Look into Abstract Art Movement and how artists used colours, shapes and pattern in their artworks.

Keyword	Definition
Analyse	Examine in detail.
Saturated	The intensity of colour in an image.
Apply	Put skills/knowledge/understanding into action.
Describe	Give a clear description that includes all the main features – think of it as 'painting a picture with words'.
Blend/Layer	Mix together – put on top of each other
Abstract	Art style which is not realistic and does not represent images of everyday life.
Investigate	Test the qualities of materials, techniques or processes through practical work.
Pattern	A repeated decorative design.
Contour Line	An outline of an object
Refine	Improve work taking into account feedback and aims.
Colour Wheel • **Primary Colours** • **Secondary Colours** • **Warm and Cool Colours**	A colour wheel illustrates colours around a circle, which shows the relationships between primary colours, secondary colours, warm and cool colours.
Colour	**Colour** has the strongest effect on our emotions. It is the element we use to create the mood or atmosphere of an artwork.

28

Y7 TEXTILES
JENNIFER STRUNGE
KNOWLEDGE ORGANISER

ORMISTON SWB ACADEMY

Running Stitch
Back Stitch
Cross Stitch
Blanket Stitch
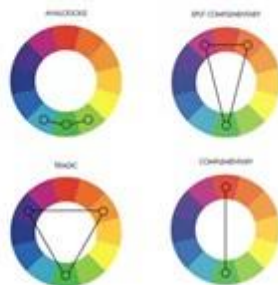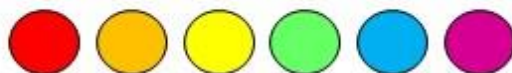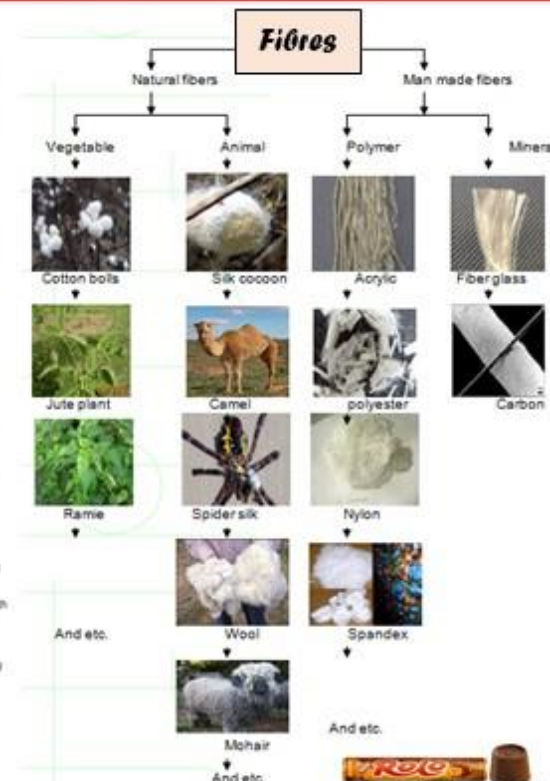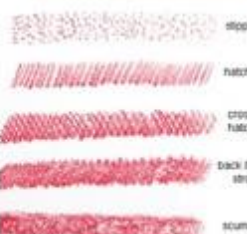
LOWEST LEVEL → HIGHEST LEVEL

Fibres

Natural fibers — Man made fibers

Vegetable | Animal | Polymer | Mineral

Cotton bolls | Silk cocoon | Acrylic | Fiberglass
Jute plant | Camel | polyester | Carbon
Ramie | Spider silk | Nylon
And etc. | Wool | Spandex
| Mohair | And etc.
| And etc.

Shading Techniques

stippling
hatching
cross-hatching
back & forth stroke
scumbling

Fabric Painting

1 Draw your image lightly onto the fabric. Fix your fabric to the table with masking tape.

2 Choose your paint colour. You can mix colours if you wish but don't be wasteful.

3 Choose your brush. A large one is good to fill bigger areas and a smaller brush for fine lines.

4 Dilute the paint slightly with water and start by painting your outline.

5 Paint in your images and try to paint in one direction.

6 When you have finished, wash your equipment and hang your fabric to dry.

Mono - Print

Put a small amount of ink on your white board. *(size of a chocolate rolo!)*

Using your roller, roll out a really thin layer of ink.

Using your roller, roll out a really thin layer of ink.

Place your fabric/paper, lightly on top of the ink. – DO NOT PRESS DOWN.

Place the image you want to print on top and trace.

Keyword	Definition
Fibres	A thread or filament from which a vegetable tissue, mineral substance, or textile is formed. "the basket comes lined with natural coco fibres"
Mono - Print	A monoprint is **a single impression of an image made from a reprintable block.** Materials such as metal plates, litho stones or wood blocks are used for etching upon. ... Monoprints are known as the most painterly method among the printmaking techniques; it is essentially a printed painting.
Influence	Something or someone that influences a person or thing, then, has an influence on that person or thing.
Artist Copy	Analyse an artists' work and replicate the piece using the same techniques, media, colours and style.
Embroidery	**Embroidery** is the craft of decorating fabric or other materials using a needle to apply thread or yarn.
Mono - Transfer	Shade the back of an image, place onto a clear piece of paper or fabric and trace so that the detail imprints.

Year 7 – Computing – Micro:Bits

Key vocab	
Micro:bit	A small computer designed by the BBC for use in computer education in the UK.
Processor	Receives inputs from the computer and produces outputs.
USB	The form of power supply used by the Micro:bit – power is transmitted from the computer via a micro-USB cable.
Buttons	Input devices used within the Micro:bit to control or alter programs whilst running.
LED (Light emitting diodes)	(LEDs) – used on the Micro:bit as a screen in a 5x5 grid to display information.
Accelerometer	An input device within the Micro:bit to control or alter programs by tilting or moving the device.
Microsoft Block Editor	The visual programming language used to create
Algorithm	A set of instructions to be followed to complete a given task or solve a problem.
Program	A sequence of instructions used by a computer.
Sequence	The order which the computer will run code in, one line at a time.
Selection	A decision made by a computer, choosing what code should be run only when certain conditions are met.
Condition	Checking to see whether a statement or sum is true or false.
Iteration	When a section of code is repeated several times – also known as looping.
Variable	Something which can be changed in a computer. Made up of a name and some data to be saved.
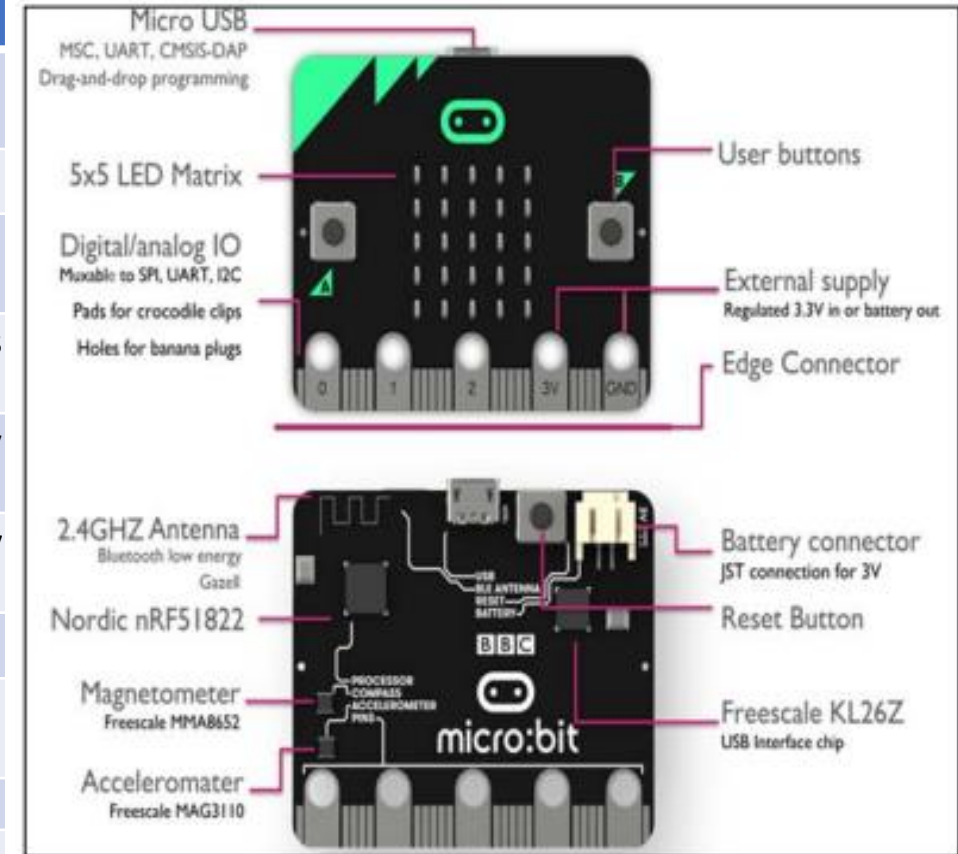
Website: www.microbit.org –
Here you can research, code and find out more about what your microbit can do.

Year 7 – Computing – Micro:Bits

Key blocks

For	Repeat	While	Forever
for index from 0 to 4 do	repeat 4 times do	while true do	forever

On button pressed	On Shake	Show string	Show LED's
on button A pressed	on shake	show string "Hello!"	show leds
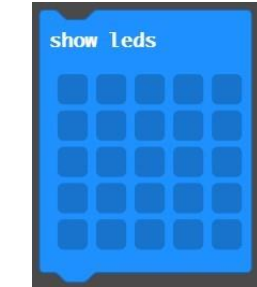
If	If – Else	Show Number	Boolean
if true then	if true then else	show number 0	and / or / not / true / false

31
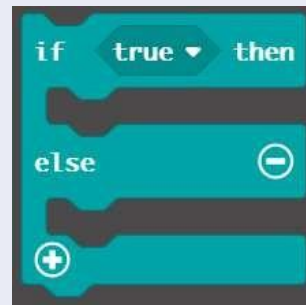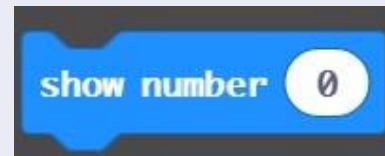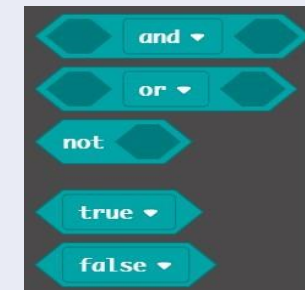
Variables
- **Variables are for storing values in memory.**
- **A variable is declared (set up) and values are assigned.**
- **Variables are assigned a value using the = operator.**
- **It chooses the bets data type for the value.**

- **No spaces in names but can use under_score or camelCase.**
- **No numbers at start of variable names.**

```python
myvariable = 28

x = 3

name = "Bob"

my_wage = 3.5

favCol = "red"
```

Comments
- **Comments are for explaining lines of code or while sections.**

```python
x = 3   #can comment at the side

#or comment above
house = "open"
```

Print
- **Print information to the screen.**
- **Can be text, numbers or values in variables.**

```python
print("hello world")

print(12)

print(name)
```

Input
- **Allows user to type in data and store in a variable.**
- **User prompt requires the " ".**

- **May need to convert data type.**

```python
variable = input("message")

name = input("please enter your name")

age = int(input("please enter your age"))
```

Data Types

Real /Float
Number with decimal Point
Integer
Number without a decimal Point
String
A series of characters/TEXT
Character
A single letter or symbol
Date/Time
Date and Time in any format
Boolean
Yes no, true false value

Comparative Operators

==	Equal to
!=	Not equal to
>	Greater than
<	Less than
>=	Greater than or equal to
<=	Less than or equal to

32

If and elseif statement
- **Allows SELECTION of different paths.**
- **Use of THEN & ENDIF.**
- **MUST include indent of 4 spaces or TAB**
- **ELSE is optional.**

- **Conditions are set using different comparison operators.**

==	Equal to
!=	Not equal to
<	Less than
<=	Less than or equal to
>	Greater than
>=	Greater than or equal to

- **Can use more than 1 condition using Boolean operators.**

AND	Both conditions are True
OR	Either of the conditions is True
NOT	If condition not True

- **Use of ELSEIF allows for further selection.**
- **Can have as many as wanted.**
- **ELSE still optional.**

```python
if password ==  "pa55word1":
    print("you may enter")
```

```python
if score > 80:
    print ("grade A")
elif score > 70:
    print ("grade B")
elif score > 60:
    print ("grade C")
else:
    print ("redo")
```

```python
if password !=  "password1" or tries < 3:
    print("you shall not pass")
else:
    print ("please enter")
```

Sequence: Completing steps in the order which they must happen

Selection: Where a choice is made in a program depending on a condition or outcome

Iteration: Act of repeating or lopping specific sections of code

Count controlled Iteration: Repeats a set number of times
Condition controlled Iteration: Repeats until a condition is met or something in the program changes

33

What is Computational thinking?

The thought processes involved in formulating a problem and its solution(s), so that a computer, human or machine can effectively carry out

How do you think computationally?

To effectively solve problems you need to....

- Decompose
- Abstract
- Algorithmic thinking
- Create algorithms

KEY TERMS

Algorithm: Steps to provide a solution to a problem, usually represented in flowcharts or pseudocode

Decompose: Breaking down a large problem into smaller sub-problems

Abstraction: Representing 'real world' problems in a computer using variables and symbols and removing unnecessary elements from the problem

Pattern Recognition: Identifying similarities.

Sequence: Completing steps in the order which they must happen

Selection: Where a choice is made in a program depending on a condition or outcome

Iteration: Act of repeating or lopping specific sections of code

Careers

- Software development
- Programing

Computational thinking

Decomposition Abstraction

Pattern recognition Algorithms
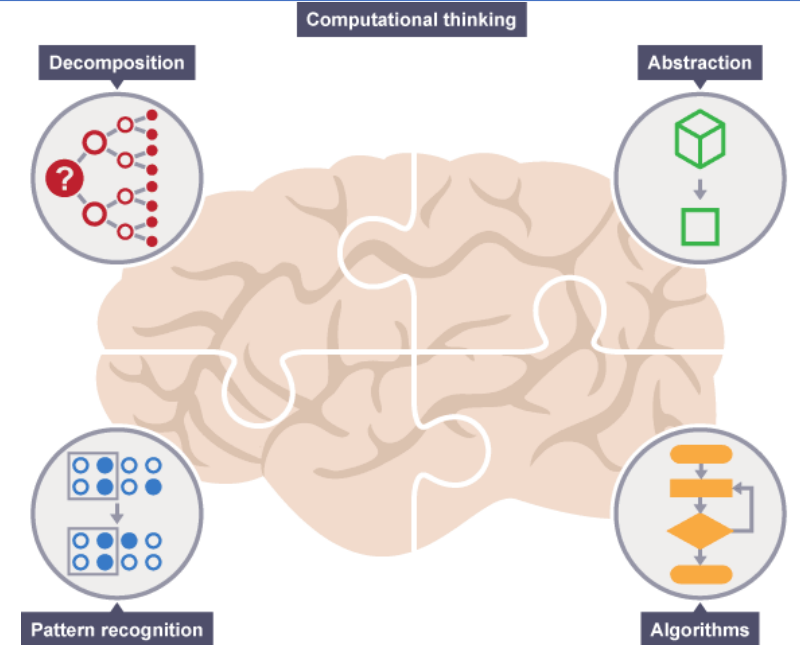
Flowcharts

Displays an algorithm in diagram form using symbols and arrows to show to flow of information

Pseudocode

A structured use of English used to define the steps needed to solve a problem.

34

Year 7 – Computing – Python Basics

Careers
- Software development
- Programing
- Software Engineering

Boolean Operators
There are used to make comparisons within decisions

Operator	Meaning
>	Greater than
<	Less than
=	Equal to
≠	Not equal to
AND	Both conditions are TRUE
OR	At least one condition is TRUE

START/STOP

Always start and end with this

INPUT/OUTPUT

Use when there is an input or output required e.g. user inputs their name, program displays their name

Decision

Is A>10 ?

No

YES

When a **choice** has to be made in the program

SUB ROUTINE

Sequence that performs a specific task. You can use this within your flowchart to show more detail in a specific section

PROCESS

To do something in the program e.g a calculation

Flow lines – show the flow of information in the algorithm

Selection (IF then else)
START
True — Decision — False
Action 1   Action 2
END
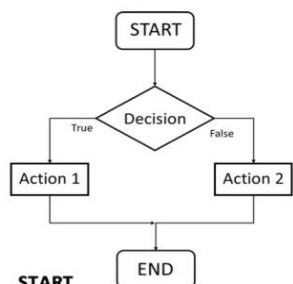
START
IF Decision = TRUE
   Go to Action 1
ELSE
   Go to Action 2
END IF
END

While Loop
START
Decision — False
True
Action 1
END
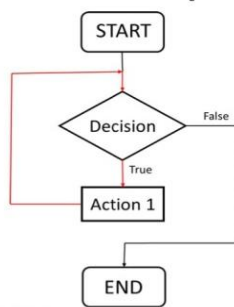
START
WHILE Decision = TRUE
   Go to Action 1
END WHILE
END

Counting Loop
START
Count
Count = Count + 1
Decision — False
Action 1 — True
END
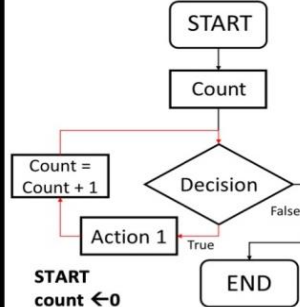
START
count ←0
REPEAT
   Go to Action 1
   count ← count + 1
UNTIL Decision is TRUE
END

35

Year 7 – Drama – Basic Drama Skills- Silent Movies

What needs to be included in a good **freeze frame**? :
- Facial expressions
- Body Language
- Gestures
- Stillness
- Silence

A good Freeze frame should freeze at a key moment of the story.

What needs to be included in a good **thought track**? :
- Projection
- Vocal tone
- Focus

A good thought track should be detailed.
"I feel………….because……….."
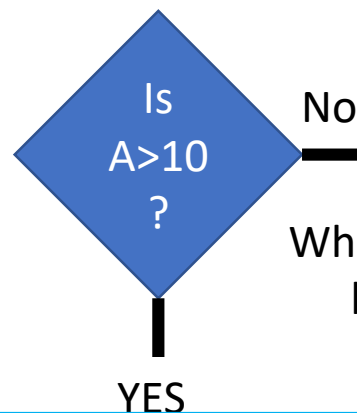
What needs to be included in a good **narration**? :
- Projection
- Vocal tone
- Focus
- Introduction of characters
- Introduction of setting

A good narration should be detailed and tell the audience what has happened prior to the scene.

Steps to a good performance.

Collaborate as a group and discuss initial ideas

↓
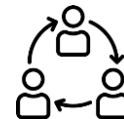
Create a **freeze frame** to show the audience your key idea.

↓

Add **mime** to show the audience your story

↓

Perform to the rest of your group to ensure your storyline is clear.

Keyword	Definition
Body Language	Using posture or movement to communicate how your character is feeling.
Collaboration	Working together as a group to create something new
Communication	Exchanging information through speaking, writing, or non-verbal communication.
Concentration	Focussing on the set task.
Facial Expressions	Showing your emotion through your face.
Focus	Not laughing while you are on stage and staying in character.
Freeze Frame	A frozen snapshot in time showing a key moment in a story.
Gestures	Using your hands to show the audience where to look through pointing, waving etc.
Mime	Movement without sound to show a story
Narration	Telling the audience key moments of the story. Example: settings and characters.
Projection	Using a loud volume to make sure you are heard.

Year 7 Music – What Makes a Good Song?

SONG STRUCTURE – How a song is made up of or divided into different sections (see below) and the order in which these sections occur. To work out the structure of a song, it's helpful to analyse the LYRICS <u>and</u> listen to a recording for the song (for instrumental sections).

INTRO – often shortened to 'intro', the first section of a song which sets the mood of the song and is sometimes, but not always, an instrumental section using the song's chord pattern.

VERSES – songs normally have several verses. Verses introduce the song's theme and have the same melody but different lyrics for each verse which helps develop the song's narrative and story. Songs made up entirely of verses are called STROPHIC.

CHORUS – occurs several times within a song and contains the most memorable HOOK/RIFF. The chorus relays the message of the song and is repeated with the same melody and lyrics each time it is heard. In popular songs, the chorus is often repeated several times towards the end of the song.

MIDDLE 8/BRIDGE – a section (often 8 bars in length) that provides contrasting musical material often featuring an instrumental or vocal solo using new musical material allowing the performer to display their technical skill on their instrument or voice.

Key Words

LYRICS – The words of a song, usually consisting of VERSES and a CHORUS.

HOOK – A 'musical hook' is usually the 'catchy bit' of the song that you will remember. It is often short and used and repeated in different places throughout the piece. Hooks can be either MELODIC, RHYTHMIC or VERBAL/LYRICAL.

RIFF – A repeated musical pattern often used in the introduction and instrumental breaks in a song or piece of music. Riffs can be rhythmic, melodic or lyrical, short and repeated.

MELODY – The main tune of the song often sung by the LEAD SINGER.

COUNTER-MELODY – An 'extra' melody often performed 'on top of' the main melody that 'fits' with it
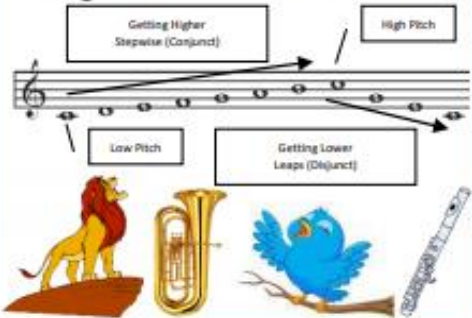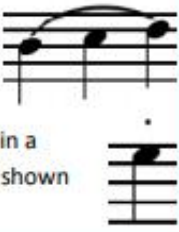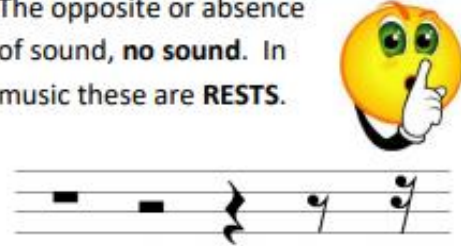
TEXTURE – The layers that make up a song e.g., Melody, Counter-Melody, Hooks/Riffs, Chords, Accompaniment, Bass Line.

ORMISTON SWB ACADEMY

BUILDING BRICKS

Exploring the Elements of Music

A. Pitch
The **highness** or **lowness** of a sound.

Getting Higher Stepwise (Conjunct) — High Pitch

Low Pitch — Getting Lower Leaps (Disjunct)

B. Tempo
The **speed** of a sound or piece of music.

FAST: Allegro, Vivace, Presto

SLOW: Andante, Adagio, Lento

GETTING FASTER – Accelerando (accel.)

GETTING SLOWER – Ritardando (rit.) or Rallentando (rall.)

C. Dynamics
The **volume** of a sound or piece of music.

VERY LOUD: Fortissimo (ff)

LOUD: Forte (f)

QUITE LOUD: Mezzo Forte (mf)

QUITE SOFT: Mezzo Piano (mp)

SOFT: Piano (p)

VERY SOFT: Pianissimo (pp)

GETTING LOUDER: Crescendo (cresc.)

GETTING SOFTER: Diminuendo (dim.)

D. Duration
The **length** of a sound.

SHORT ⟶ LONG

E. Texture
How much sound we hear.

THIN TEXTURE: (sparse/solo) – small amount of instruments or melodies.

THICK TEXTURE: (dense/layered) – lots of instruments or melodies.

F. Timbre or Sonority
Describes the **unique sound or tone quality** of different instruments voices or sounds.

Velvety, Screechy, Throaty, Rattling, Mellow, Chirpy, Brassy, Sharp, Heavy, Buzzing, Crisp, Metallic, Wooden etc.

G. Articulation
How individual notes or sounds are **played/techniques**.

LEGATO – playing notes in a long, smooth way shown by a **SLUR**.

STACCATO – playing notes in a short, detached, spiky way shown by a **DOT**.

H. Silence
The opposite or absence of sound, **no sound**. In music these are **RESTS**.

I. Notation
How music is **written** down.

STAFF NOTATION – music written on a **STAVE** (5 lines and spaces)

GRAPHIC NOTATION/SCORE – music written down using shapes and symbols to represent sounds.

Year 7 What is Design Technology?

Design and technology gives young people the skills and abilities to engage positively with the designed and made world and to harness the benefits of technology.

Tools and Equipment

	Marking knife Used to mark out on woods		**Sand paper** Used to remove cut lines from wood
	Tenon Hacksaw Used to cut straight lines into wood		**Disk sander** Used to create a nice finish on wood
	Coping Saw Used to cut curved lines into wood		**File** Used to shape and flatten materials

Health and safety

Machine guard	Floor marking	Safety signs	Table Vice
Protects from flying debris	Creates a safe zone around the machine	Warning and advisory signs	Hold your work steady

Materials

Pine wood	High impact polystyrene	Oak wood	Neoprene
A common wood used in construction	Cheap plastic used for most plastic products	An expensive wood used for furniture	A thermal plastic that helps insulate

Processes

Drilling	Sanding	Gluing and clamping	Marking out
A process of cutting away material to create a hole	Removing saw lines to improve the surface texture	Securely joining materials together using adhesives	Using different tools to mark out measurements onto materials

Keywords	Tools and Machines	Materials
Analysing	Metal files	Acrylic
Investigating	Pillar drill	Aluminium
Collate	Wet & dry paper	Ferrous
Develop	Vacuum former	Non-ferrous
Improve	Wire wool	Metal
Manufacture	Laser Cutter	Alloy
Evaluate	2D Design	Polyvinyl chloride (PVC)
Explain	Bench Vice	High-density
Technical	Junior Hacksaw	polyethylene ABS
Dimension	Safety ruler	Copper
Tolerance	Pliers	Mild steel
Quality check	Engraver	Polypropylene

39

Year 7 What is Engineering?

Engineering is the application of science and math to solve problems. Engineers figure out how things work and find practical uses for scientific discoveries.

Tools and Equipment

	Scribe Used to mark out on metals		**Emery cloth** Used to remove burrs and sharp edges
	Junior Hacksaw Used to cut into metals		**Pillar Drill** Used to cut circular holes into materials.
	Engraver Used to scratch designs into metal		**File** Used to shape and flatten materials

Processes

Sawing	Filing	Engraving	Brazing
Using a sharp serrated edge to part materials	Removing material to create a better surface finish or a different shape	To create a pattern or marking in a material, using small scratches	Using heat to permanently joining pieces of material together

Health and safety

Goggle Protect your eyes	Apron Protect your clothing	Hair tie Protect your hair from entanglement	Vice Hold your work steady

Materials

Mild steel A common material used in construction	Acrylic A recyclable type of plastic	Aluminium A light-weight metal used in drinks cans	Urea Formaldehyde A plastic used for tougher products

Keywords	Tools and Machines	Materials
Analysing	Metal files	Acrylic
Investigating	Pillar drill	Aluminium
Collate	Wet & dry paper	Ferrous
Develop	Vacuum former	Non-ferrous
Improve	Wire wool	Metal
Manufacture	Laser Cutter	Alloy
Evaluate	2D Design	Polyvinyl chloride (PVC)
Explain	Bench Vice	High-density
Technical	Junior Hacksaw	polyethylene ABS
Dimension	Safety ruler	Copper
Tolerance	Pliers	Mild steel
Quality check	Engraver	Polypropylene

Equipment:

Weighing Scale
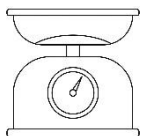
Each line represents 20g.

Oven Gloves

Personal safety, to protect our hands from heat.

Cooker
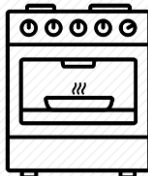
Hob
Grill
Oven

Chopping Board
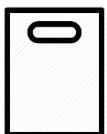
Used for different foods to prevent spread of bacteria.

Chef's Knife

Used to prepare a range of ingredients

Knife Techniques:

Bridge Hold

An arch of a thumb and fingers.

Claw Grip

Tuck in fingers, use knuckles as a guide.

These knife techniques are used to keep us safe and to prevent cuts.

Knife Safety Rules:

1. Store knives in a knife block
2. Keep knives sharp, not blunt
3. Slice away from your hand and keep for your fingers clear of the blade
4. Carry a knife with the blade pointing downwards
5. Put knives on the draining board, not in the sink
6. Handle knives carefully when washing up
7. Use the bridge hold and claw grip when preparing ingredients

Personal Hygiene and Safety:

1. Wear an apron
2. Tie hair back
3. Remove jewellery
4. Cover cuts with a blue waterproof plaster
5. Wash hands with soap and warm water
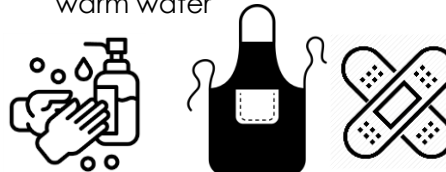
Kitchen Hygiene and Safety:

1. Stack stools and remove hazards
2. Turn saucepan handles facing outwards
3. Use a damp dish cloth and anti-bacterial spray to wipe surface
4. Wear oven gloves

Food Hygiene and Safety:

1. Wash fruit and vegetables with cold water
2. Check best before and use by dates
3. In a fridge, store raw meat on bottom shelf, cooked meats and ready-to-eat foods.

Keyword	Definition
Personal hygiene and Safety	Maintenance of ourselves to prevent cross-contamination
Kitchen hygiene and Safety	Maintenance of high standards of cleanliness and sanitation to prevent food contamination
Food hygiene and safety	Handling, preparation, and storage of food in ways that prevent food-borne illnesses
Hazard	A danger or risk
Control Measure	An action to prevent a hazard
Utensils	Tools we use commonly in a kitchen like a knife and fork
Bacteria	Organisms that are microscopic which can be harmful
Creaming	Combination of fat and sugar
Enzymic browning	Oxidation reactions that causes food to turn brown
Dextrinizarion	Starch is broken down into sugars, causing a brown colour when heated

Why do we need to eat a **balanced diet**?

1. To achieve and maintain a healthy body weight.
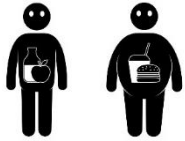
2. For growth and repair

3. To build a strong immune system, prevent disease and infection.

4. To provide energy.

5. To keep us warm.
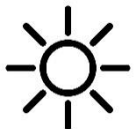
How do we achieve a balanced diet? **Eight Healthy Tips:**

1. Base your meals on starchy foods.

2. Eat lots of fruit and vegetables.

3. Eat more fish – including a portion of oily fish each week.

4. Cut down on saturated fat and sugar.

5. Eat less salt – no more than 4g a day for children.

6. Get active and try to be a healthy weight.

7. Drink plenty of water.

8. Do not skip breakfast.
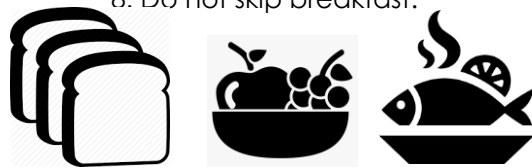
Eatwell Guide: The Eatwell Guide outlines the recommendations for eating a healthy balanced diet. The guide shows the different types of foods and drinks you should consume – and in what proportions – every day or over a week. The Eatwell Guide shows how much of what you eat overall should come from each food group

Green Section:
Fruit and vegetables are a good source of vitamins, minerals and fibre, needed to build a strong immune system.

Yellow Section:
Starchy foods are a good source of energy. Choose wholegrains for increased fibre, needed to prevent constipation
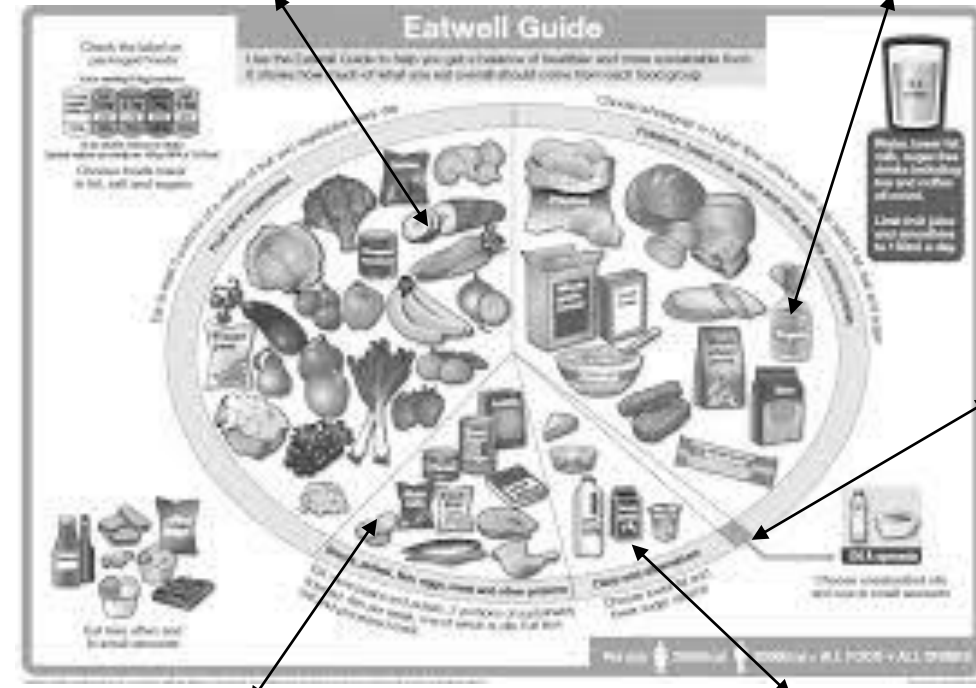
Purple Section:
Fats, oils and spreads should be eaten sparingly. These do provide energy.

Pink Section:
Beans, pulses, eggs, meat and fish are a good source of protein needed for growth, repair.

Blue Section:
Dairy foods provide a good source of calcium and vitamin D needed for strong bones and teeth.

42

A. Qu'est-ce que tu fais quand il fait beau ? What do you do when the weather is nice?

Weather phrase	Present tense verb	Opinion phrase	Verb	Quantifier	Adjective
Quand il fait beau When the weather is nice **Quand il fait mauvais** When the weather is bad **Quand il fait chaud** When it is hot **Quand il fait froid** When it is cold **Quand il y a du soleil** When it is sunny **Quand il y a du vent** When it is windy **Quand il neige** When it snows **Quand il pleut** When it rains	**j'écoute de la musique.** I listen to music. **je fais de la boxe.** I do boxing. **je fais de la danse.** I do dancing. **je fais de la natation.** I do swimming. **je fais du jogging.** I do jogging. **je fais du shopping.** I do shopping. **je joue au basket.** I play basketball. **je joue au tennis.** I play tennis. **je joue aux jeux-vidéos.** I play video games. **je regarde la télé.** I watch TV. **je sors avec des amis.** I go out with friends. **je vais au cinéma.** I go to the cinema. **je vais au parc.** I go to the park.	**À mon avis** In my opinion **Selon moi** As I see it	**c'est** it is	**assez** quite **très** very **trop** too **un peu** a bit **vraiment** really	**amusant** fun **génial** great **incroyable** incredible **relaxant** relaxing **barbant** boring **fatigant** tiring **nul** rubbish
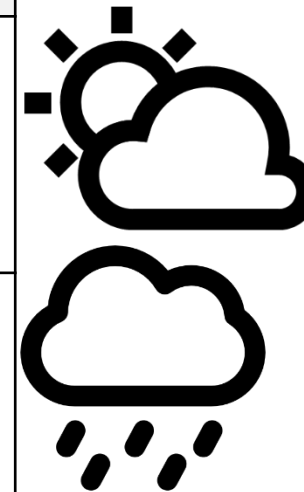
B. Qu'est-ce que tu vas faire ce weekend ? What are you going to do this weekend?

Future time phrase	Part of 'aller'	Infinitive phrase	Verb	Quantifier	Adjective
Ce soir This evening **Demain** Tomorrow **Ce weekend** This weekend	**je vais** I am going to **nous allons** we are going to	**écouter de la musique.** to listen to music. **faire de la boxe.** to do boxing. **faire de la danse.** to do dancing. **faire de la natation.** to do swimming. **faire du shopping.** to do shopping. **faire du jogging.** to do jogging. **jouer au basket.** to play basketball. **jouer au tennis.** to play tennis. **jouer aux jeux-vidéos.** to play video games. **regarder la télé.** to watch TV. **sortir avec des amis.** to go out with friends. **aller au parc.** to go to the park **aller au cinéma.** to go to the cinema.	**Ce sera** It will be	**assez** quite **très** very **trop** too **un peu** a bit **vraiment** really	**divertissant** entertaining **incroyable** incredible **passionnant** exciting **affreux** awful **barbant** boring **insupportable** unbearable

43

A. Qu'est-ce que tu manges normalement ? What do you eat normally?

Time phrase	Meal time	Verb	Article + noun	Connective	Verb	Quantifier	Adjective
Normalement Normally **Souvent** Often **Quelquefois** Sometimes **En Angleterre** In England **En France** In France	**pour le petit-déjeuner** for breakfast **pour le déjeuner** for lunch **pour le diner** for dinner	**je mange** I eat **nous mangeons** we eat **j'aime manger** I like to eat **je déteste manger** I hate to eat	**de la pizza** pizza **du gâteau** cake **du poisson** fish **du poulet** chicken **du riz** rice **des frites** fries **des fruits** fruit **des légumes** vegetables **des pâtes** pasta	**et** and **mais** but **cependant** however **car/ parce que** because	**c'est** it's **ce n'est pas** it isn't	**assez** quite **très** very **trop** too **un peu** a little **vraiment** really	**bon (pour la santé)** good (for your health) **délicieux** delicious **salé** salty **sucré** sweet **dégoûtant** disgusting **gras** fatty **mauvais (pour la santé)** bad (for your health)
		je bois I drink **nous buvons** we drink **j'aime boire** I like to drink **je déteste boire** I hate to drink	**de la limonade** lemonade **de l'eau** water **du café** coffee **du chocolat chaud** hot chocolate **du coca** coke **du jus d'orange** orange juice **du thé** tea				
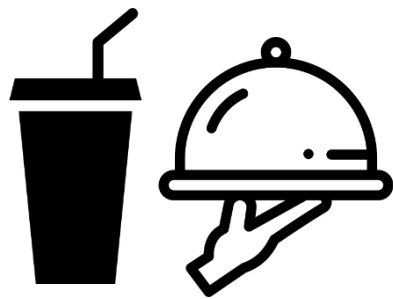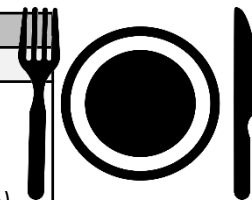
B. Qu'est-ce que tu voudrais manger ? What would you like to eat?

Course	Conditional verb	Noun	Drink	Conditional verb	Noun
Comme entrée For a starter **Comme plat principal** For a main course	**j'aimerais manger** I would like to eat **je voudrais manger** I would like to eat	**une baguette** a baguette **un croque-monsieur** **des escargots** snails **de la quiche** quiche **de la ratatouille** **de la salade niçoise** Niçoise salad **du bœuf bourguignon** beef bourguignon **du gratin dauphinois** potato gratin **du steak-frites** steak and fries	**et comme boisson** and to drink	**j'aimerais boire** I would like to drink **je voudrais boire** I would like to drink	**de la bière** beer **du champagne** champagne **du coca** coke **de l'eau** water **de la limonade** lemonade **du vin** wine
Comme dessert For dessert		**de la crème brulée** **des crêpes** **de la dacquoise noisette** hazelnut dacquoise **du soufflé au chocolat** chocolate souffle **de la tarte au citron** lemon pie			

Year 7 – Geography – Opportunities and challenges of the UK

The UK economy

- The UK has huge social and economic inequalities. In general, people in the south earn more money and have a higher life expectancy than those in the north.
- There are various solutions to tackling the inequalities of the north/south divide in the UK including relocating businesses in the north. For example, BBC built Media City UK in Manchester and moved many of its offices there in 2011.
- Due its distance from London and good transport links, population and economic activity in Elmbridge have both increased.
- Increased economic activity in Elmbridge has impacted the area both positively and negatively. These impacts include many younger families moving to the area and house prices increases.

A changing population

- The growing population of Birmingham has been caused by regeneration, affordable property, new career opportunities and five universities.
- An increasing population in Birmingham has created many benefits including cultural diversity.
- The Bullring in Birmingham includes 140 shops and attracts 39 million people every year.
- Deindustrialisation has caused urban decline in many UK cities.
- Urban decline in Glasgow has led to a lower life expectancy in the city, this is known as the 'Glasgow effect'.
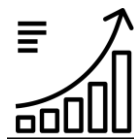
Poverty in the UK

- There are two main ways of defining poverty. This includes absolute (cannot afford basic needs) and relative (cannot afford anything above the basic needs) poverty.
- The poverty cycle means a person without a job will struggle to afford food and healthcare which would lower their health. This can lead to a lack of education and not being able to get a well-paid job
- We can reduce the number of people living in poverty in the UK through minimum wages, food banks and affordable housing. There are also many UK charities with the aim to reduce homelessness in the UK.
- The number of food parcels in the UK is increasing, but this could also mean poverty in the UK is rising.

Resources

- Fossil fuels are coal, oil and natural gas, they are made over millions of years from living things and have negative impacts on the environment
- Fossil fuels release greenhouse gases such as carbon dioxide and methane, mining and quarrying also destroys habitats
- Renewable energy means it can be used again such as solar, wind and hydro-electric power and have both advantages and disadvantages for the use of each
- The UK would benefit most from wind power as it is an island and has a lot of potential wind energy, but views on wind energy vary
- Fracking is a very controversial method of extracting shale gas from the ground
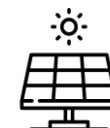
Keyword	Definition
Absolute poverty	When someone cannot afford basic human needs such as food and shelter
Deindustrialisation	Manufacturing has been exported abroad and therefore factories in the UK are not used and have closed.
Economic Activity	The making/providing/purchasing or selling of goods and services.
Fossil Fuels	A fuel made in the ground over millions of years. They are coal, oil and natural gas.
Fracking	A method of pumping shale gas from the ground for fuel. It's very controversial.
Greenhouse gas	A gas, such as carbon dioxide, that traps heat in our atmosphere and heats up Earth.
Inequalities	A lack of equality with something.
Life expectancy	The average age someone will live to in a certain country or area.
Minimum wage	The lowest employers are allowed to pay workers of different ages.
North/South Divide	The social and economic inequality between the north and south of the UK
Poverty cycle	People are trapped in a cycle of struggling to get jobs which means they are unable to afford food and healthcare
Relative poverty	When someone cannot afford anything above the basic salary needs
Renewable energy	An energy source that can be re-used or remade again such as solar and wind.
Urban decline	Urban decline is the deterioration of the inner city often caused by lack of investment and maintenance

Year 7 – Geography – Opportunities and challenges of the UK

Waste management

- Landfill is the disposal of waste material by burying it, especially as a method of filling in and reclaiming excavated pits.
- Landfill sites are bad for our environment.
- High levels of methane gas and carbon dioxide are generated by the rotting rubbish in the ground. These are greenhouse gases, which contribute greatly to the process of global warming.
- Toxic substances end up in landfills, which leach into the earth and groundwater over time.
- Recycling is one way we can reduce the amount of waste going to landfill.
- Recycling materials saves a lot of energy as something new does not need to be made.
- Recycling also creates jobs for people, in the UK alone 50,000 people work in the recycling industry.
- Recycling helps protect wildlife. In the process of taking resources from the earth, we often disrupt and damage habitats.

Pollution

- Air pollution occurs in the UK. It is caused by many things such as our use of cars.
- Air pollution has many negative impacts on our economy, the environment and people.
- Pollution can cause breathing problems for people.
- The release of greenhouse gases trap heat in our atmosphere and increase the temperature which contributes to global warming.
- We can reduce air pollution by using electric vehicles, encouraging the use of public transport and cycling or walking.
- Light pollution is when there is too much artificial light in an area.
- Light pollution can alter humans sleeping patterns and cause headaches.

Tourism

- The UK has many opportunities for tourism and there are various reasons people may travel including:
- To see and experience new places.
- Education.
- Celebrating a birthday.
- A break from work.
- Creating new memories with family and friends.
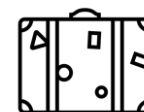
Connectivity

- The UK is connected to the rest of Europe with the Eurotunnel, also known as the channel tunnel.
- The Eurotunnel is the longest undersea channel in the world.
- The Eurotunnel has many social, economic and environmental benefits including:
- Since 1994 the equivalent of six times the population of the UK has travelled through the tunnel.
- £12 billion of fresh fruit and vegetables are carried through the tunnel every year.
- 13,000 engineers, technicians and workers helped construct the tunnel.
- 4.9 million cubic metres of chalk marl and shale were removed during construction and used to create a nature reserve in Kent.

Keyword	Definition
Connectivity	A state of being connected or joined.
Economic	Relating to money.
Environmental	Relating to land, sea or air.
Global warming	A gradual increase in the overall temperature of earth.
Groundwater	Water held underground by soils or rocks.
Habitats	The natural home or environment of an animal or plant.
Leaching	Drain away from soil, ash by rainwater
Pollution	The presence in or introduction into the environment of substance which has harmful or poisonous effects.
Recycling	The process of taking materials ready to be thrown away and changing them into reusable materials.
Social	Relating to people.
Tourism	The commercial organisation and operation of holidays and visits to places of interest.
Tourist	A person who is travelling to or visiting a place for pleasure.

46

Who killed the princes in the tower?

The battle for the throne

The War of the Roses
In 1459 there was a battle for the throne between two rival factions. The House of Lancaster had the red rose and were supporters of the King, led by his wife Margaret. The other side was the House of York who had the **white rose** and was led by Richard Duke of York.

The princes in the tower
After Edward IV death his son was next in line for the throne. But both disappeared before one could be crowned.

Richard III
Richard was the uncle to the boys and would be next in line to the throne if they boys were murdered.

Henry Tudor
Henry Tudor felt he had a claim to the throne because his bloodline led back to the House of Lancaster.

Who would be king?

The Battle of Bosworth
Henry Tudor fought Richard III at the Battle of Bosworth. Richard charged at Henry but fell off his horse. He became surrounded by Henry's men and was killed. Henry Tudor won the Battle.

House of Lancaster
Henry VI was the king of England and the head of the House of Lancaster. Henry hated the idea of war he preferred books and churches. This caused him to have a mental breakdown in 1453.

VS
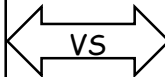
House of York
A wealthy nobleman called Richard Duke of York helped ruled after Henry's breakdown. He would lead a Yorkist rebellion for the throne. Known as the start of the War of the Roses.

The Tudors
Henry Tudor's win at the battle meant that the Tudor dynasty was now on the throne. Henry created the Tudor rose. A combination of the Lancaster and York rose to symbolise the end of the War of the Roses.

Outbreak of the war
Margaret hated the powerful Duke of York and declared him a traitor. This is when the war broke out between the two sides. There was many battles which resulted in the death of Richard and his son **Edward IV** becoming leader of the Yorkist's. Edward was crowned King of England and Henry fled.

1453	1459	1461	1483	1485	1485	
Henry VI has mental breakdown	The War of the Roses began	Edward IV became king	The princes went missing	The battle of Bosworth	Henry Tudor became King	The start of Tudor rule

47

Year 7 – History – The Tutors

Henry VII

Henry VII (Tudor) became King after winning the Battle of Bosworth. However, he had a lot to do to make sure the Tudor dynasty would continue for the next 100 or so years.

Was Henry VII a gangster?

- He banned private armies
- He forced the rich to give him money.
- He forced the poor to give him money.
- Henry threatened to go to war with France if they didn't pay.
- He made sure that he had the best cannons

Henry VIII

The son of Henry VII, Henry VIII became King in 1509 when his older brother died unexpectedly. Meaning he was next in line for the throne after his father's death.
He is most famous for having 6 wives in his desperation for a son.

Mary I

- Her mother was Catherine of Aragon
- Mary was a Catholic
- She became queen after her brother Edward died at a young age
- Mary did not have any children/heirs
- Due to her harsh treatment of Protestants she was called 'Bloody Mary'

Elizabeth I

- Her mother was Anne Boleyn
- Elizabeth was a Protestant
- Some believed she was unfit to been queen because her mother was not Henry VIII's first wife
- Elizabeth never married or had any children – her nickname was 'the Virgin Queen'
- She had a major war with Spain

Catholic	A main branch of Christianity led from Rome by the Pope
Protestant	A form of Christianity in opposition to Catholicism
Lancastrian	A supporter of the king during the War of the Roses
Yorkist	A supporter of Richard Duke of York during the War of the Roses
Tudor	A royal dynasty that ruled England from 1485 to 1603
Protector	A nobleman ruling on behalf of the King until they become of age
dynasty	A line of hereditary rulers of a country
Heretic	Someone with beliefs that question or contradict the established church
Corruption	The misuse of power for dishonest purposes, often wealth
Reformation	A movement to reform the Christian church
Monasteries	A building occupied by monks
Dissolution	An act to end or dismiss
Heir	A person next in the line for the throne through bloodline
Rebellion	An act of armed resistance to an established government or leader.
Taxes	The government demand money from the people.
Act of Supremacy	A law that created the Church of England
Latin	The language of Ancient Rome
The Six Articles	Set out the religious beliefs of the Church of England.

Was Henry VIII a player?

Divorced	**Beheaded**	**Died**	**Divorced**	**Beheaded**	**Survived**
				Katherine Howard	Katherine Parr
Catherine of Aragon	Anne Boleyn	Jane Seymour	Anne of Cleaves	Had an affair	Outlived Henry who died in 1548
Failed to provide a male heir	Executed for treason	Died after giving Henry his only male heir	Marriage was annulled after only 4 months.		

Year 7 – History – Local Study – Dudley Castle

Timeline:

- **1066** William wins the Battle of Hastings
- **1070** The first castle in built in wood
- **1086** The castle is recorded in the Domesday Book
- **1138** The castle is rebuilt in stone
- **1264** Castle is re-fortified after being involved in the Barons War
- **Early 1500s** John Dudley gets the Sharrington Range built
- **1575** Elizabeth I visits the castle
- **Early 1500s** John Dudley gets the Sharrington Range built
- **1646** The second siege of Dudley castle is lost during the English Civil war
- **1647** The castle is de-fortified for the last time after taking the losing side in the English Civil War
- **1750** The Sharrington Range is destroyed by a fire
- **1937** The zoo opens
- **1937** Queen Elizabeth II visits

Owners

Owners
The De Picquigny's
The Paganell's
The De Somery's
The De Suttons
The Dudley's
Dudley Council

Term	Definition
Motte	A large mound of earth/hill
Bailey	The area of a castle where people lived
Moat	A deep ditch sometimes filled with water that goes around a castle
Norman Conquest	When William won the Battle of Hastings and took over England
Tudor Period	The period of time from Henry VII to Elizabeth I
Sharrington Range	A large apartment building built by William Sharrington
Romantic ruin	A description of Dudley castle when it was damaged before it became a zoo
Turning point	An event that changes something for better or worse
Baron	A rich person who owned land
De-fortified	When a castle is no longer used for war/battles
Triple gate	3 gates at the entrance of the castle for extra protection
Priory	A religious building

49

Key Words

Faith: complete trust or confidence in someone or something.
Gurdwara: the place where Sikhs come together for congregational worship.
Idolatry: the worship of a physical object as a god.
Imam: someone who leads Muslim worshippers in prayer.
Karah parshad: a sweet food offered to all visitors of the gurdwara.
Khanda: symbol of Sikhism.
Langar: free kitchen in a gurdwara.
Madrasah: A school within the mosque where reading the Qur'an is taught.
Minaret: a slender tower, typically part of a mosque, with a balcony from which a muezzin calls Muslims to prayer.
Minbar: a pulpit in a mosque where the imam (leader of prayers) stands to deliver sermons.
Muezzin: a man who calls Muslims to prayer from the minaret of a mosque.
Nishan Sahib: a Sikh flag which hangs outside a gurdwara.
Vegetarian : someone who does not eat meat.
Waheguru: a word used in Sikhism to refer to God.
Wudu: ritual washing to be performed in preparation for prayer and worship in Islam.
Baptism: the sacrament through which people become members of the Church. It involves the use of water as a symbol of the washing away of sin.
Church: 1) The People of God/Body of Christ, among whom Christ is believed to be present and active.
2) Members of a particular Christian denomination/tradition, e.g. Roman Catholic, Methodist.
3) A building in which Christians worship.
Food banks: Places in local communities where people in need can go to collect food; often run/supported by local churches and religious charities.
Private worship: A believer giving God praise and worship on their own.
Sacred: Holy/ special

Does the celebration of our beliefs have to take place in a building?

- Some people, whether they are religious or not, believe that **grand religious buildings should be sold**, and the money used to **help the poor**.
- They may feel that there is no need for believers to gather in such buildings and that alternatives should be found; perhaps simple, inexpensive meeting places, community halls or even each other's houses.
- Others feel that such buildings are necessary **to reflect their beliefs or the greatness of God**, and to **give thanks and praise.**
- With declining numbers of people attending places of worship, is it time to start thinking about alternatives? Some religious communities are already finding different ways to gather, without the need for a special building to worship.

How did the Coronavirus pandemic affect the use of holy buildings?
- The lengthy period of lockdown and the necessity for people to stay at home or isolate, was very difficult for everyone.
- Many religious people took part in **outdoor praise and worship** during that time, for example noticing and being thankful for God's creation, and noticing the trees, plants, birds, and insects around them.
- For many people of all faith groups, the question they asked during the pandemic was **'Do we need a building to worship in, or can we worship elsewhere?**
- Places of worship set up **online services** so that people could still meet in community with one another.
- Many people then questioned whether holy buildings could be better used if people were able to worship at home.

Is the Mosque still a significant part of a Muslim's life?

- The Mosque is at the centre of an Islamic community, being a place of prayer and study.
- **Friday** is the most important day of the week at any Mosque, this is the day when the main service is held.
- The Prophet Muhammad (PBUH) said that **any** clean place could be used for worship.
- A mosque can be highly decorated or very simple and plain. Most have a dome to represent the universe.
- Mosques have a **minaret,** which is a tall tower from where a male official will call the people to prayer.
- The man who does this is called a **muezzin.**
- Mosques are often beautifully decorated with tiles and patterns. There are no statues, in order to avoid **idolatry.**
- There are no seats in a mosque but rich carpets where prayer mats are laid.
- Some mosques will have a **minbar** (pulpit) from which the **Imam** (a respected person) will lead prayers and preach-especially on a Friday.
- Before prayer, a Muslim must wash (**Wudu**).
- They must face the direction of Mecca, birth place of Muhammad (PBUH), when they pray.
- Apart from prayer, a mosque is used as a **Midrash** (a mosque school) where Muslims learn the general teachings of Islam. They will learn to recite the Qur'an and join with other Muslims in their community to talk, offer support and discuss any problems they might have.

Christianity: The Church

- When the Bible talks about church, it isn't really talking about a building.
- 'Church' is the name given to people who follow Jesus, who meet together to worship God and learn to do what God asks them to. It is the people in the building who are the real Church (with a capital 'C') – although buildings are also known as churches.
- The very first churches were built around communities of people who met in each other's houses.
- They would read the Holy Scriptures together, pray together and sing songs together as a way of worshipping God.
- There are man denominations (groups) of Christians. E.g: Catholics and Methodists both of which may worship in a Church.

Features of a Church
- Churches contain are full of **sacred** features and symbols that tell Christians about their past - their history - and inform their faith. Features that are included : Stained glass windows, a cross/crucifix, candles, an alter, a font (Holy water basin used in Baptism).

What is the purpose of holy buildings?

- A place to worship God as a community
- A place to celebrate **life's big events**, such as **births, weddings and funerals**.
- The poorest in society can turn to them at times of their greatest need.
- A place for the community to gather
- A place where works of charity are carried out
- a place of healing
- As a place of communication with God

How important is the gurdwara to Sikhs?

- There are four doors in every gurdwara, representing the four points of the compass, showing that anyone from anywhere and any religion is welcome.
- Outside the gurdwara is a flag called the **Nishan Sahib**. It is triangular and orange in colour. It has a symbol on it called the **Khanda**
- There is always a light left on at the gurdwara, again to show everyone is welcome.

- Before entering the gurdwara, both worshippers and visitors must remove their shoes and cover their heads
- Everyone sits on the floor to symbolise that everyone is equal but humble compared to **Waheguru**.
- Men and women sit separately and an equal distance from the Guru Granth Sahib to show their equality.
- As a mark of respect, Sikhs point their feet away from the Guru Granth Sahib (holy book)

How important is the langar for the community today?

- The **langar** is a special community kitchen connected to the gurdwara.
- It provides a free, simple meal for anyone who would like one – whatever their religion or position in society.
- The meal is always **vegetarian** so that most visitors will be able to eat and share their hospitality.
- There is also a room in the gurdwara where members of the community gather to carry out charity work for the local area or world wide aid.
- A blessed sweet food is served to all visitors. It is called **karah parshad.** It should be received in cupped hands while sitting as it is considered as a gift from Waheguru. The karah parshad is made from equal amounts of butter, sugar and flour which symbolises **equality**. It is also served in equal portions.
- In times of emergency, Sikhs have distributed the langar to those who have needed it the most. For example, during the Coronavirus pandemic, many gurdwaras used their langar kitchens to feed NHS workers and those most in need.

50