Year 6: Remote Learning Schedule

W/C 22nd February	Monday	Tuesday	Wednesday	Thursday	Friday
Maths *(approx. 45 mins per lesson)* **This week our focus is:** **Algebra**	**Lesson 1:** *Using simple formulae* *Click on the link here.*	**Lesson 2:** *Forming equations* *Click on the link here.*	**Lesson 3:** *Solving simple one-step equations* *Click on the link here.*	**Lesson 4:** *Solving two-step equations* *Click on the link here.*	**Lesson 5:** **Arithmetic Skills** *Challenge yourself with our weekly number skills check.*
	You will find links to videos produced by White Rose Maths above. The questions and resources can be found below; if you didn't get a particular question correct (and you're not quite sure why) then drop your teacher a message on ClassDojo!				
Remember to log in to TT Rockstars each week to practise your times tables! *Message your teacher on **ClassDojo** if you've forgotten your login details.*					
Remember to share your learning on ClassDojo! *Take a photo of your work and upload it to your Dojo Portfolio or Messaging section for your teacher to see.*					
English *(approx. 45 mins per lesson)* **This week our focus is:** **Narrative**	**Lesson 1:** ***Reading Comprehension:*** *'Friend or Foe' by Michael Morpurgo*	**Lesson 2:** ***Grammar:*** *To use a range of clause structures.*	**Lesson 3:** *To identify historical facts within a narrative*	**Lesson 4:** *To plan a narrative using historically accurate facts*	**Lesson 5:** *To draft the opening of my narrative*
	The questions and resources can be found below; if you didn't get a particular question correct (and you're not quite sure why) then drop your teacher a message on ClassDojo!				
This week's spellings are: curiosity, definite, desperate, determined, disastrous **(Remember to test yourself on Friday!)**					
Reading for Pleasure *is such an important part of our curriculum – follow the link here to watch videos of celebrities discussing their favourite books, understanding the role of an author and a fun quiz to take part in.*					
Reading for Productivity *is a fantastic way for us to expand our knowledge and understanding of our wider curriculum lessons. Read the texts and answer the attached questions.*	**Mon:** **Geography**	**Tues:** **R.E**	**Wed:** **D.T**	**Thurs:** **Science**	**Fri:** **Computing**
Extended Curricular Learning *provides a great opportunity to exercise skills in foundation subjects and science. At the end of this pack, you will find 5 activities that link to our topic: one for each day. Please continue to upload your work to ClassDojo for your teacher to see!*					
Fairtrade fortnight - Fairtrade fortnight starts on Monday. Go to the last page to find out more!					

Year 6 Knowledge Organiser: Algebra

Fat Questions:

- The word "Algebra" comes from the Arabic word "al jabr," which translates to "reunion of broken parts". Explain why you think this is.
- How do we use algebra in every day life?
- Consider the reason why people set an alarm on their phone to wake up at a certain time. Describe how this is an example of algebra.

(Think about calcualtions involving time, money and distance.)

Key vocabulary

term to term rule
variable
unknown
expression
equation
formula
formulae
one-step equation
two-step equation
substitution
pairs of unknowns
enumerate
possibilities
linear number sequence
balance

Intent

We aim to develop and progress our skills in algebra in order to equip us with the ability to solve real world problems that require a mathematical solution. With these skills, we can help to improve the world in which we live.

VIPs:

In algebra we don't use blank boxes, we use a letter (usually an x or y). So we write: $x - 9 = 7$
The letter (in this case an x) just means "we don't know this yet" and is often called the **unknown** or the **variable**. When we solve it we write: $x = 16$

Here is a step-by-step approach to solving algebraic equations:

- Work out **what to remove** to get "x = ..."
- Remove it by **doing the opposite** (e.g. adding is the opposite of subtracting)
- Do that to **both sides**

We want to remove the "-9"

$x - 9 = 7$

To remove it, **do the opposite**, in this case add 9

$x - 9 = 7$
$+9 \quad +9$
0

Do it to **both sides**

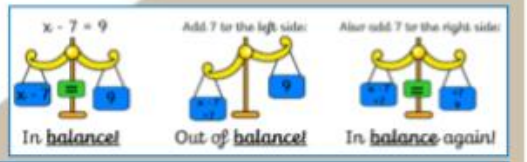
$x - 9 = 7$
$+9 \quad +9$
$0 \quad 16$

SOLVED!

$x = 16$

We must do the same to "both sides" to keep the balance; balance is very important in algebra.

To keep the balance, what we do to one side of the = we should also do to the other side.



Enumerating means making a complete list of answers to a problem.

- Use a system for finding the possibilities
- Organise your findings in an ordered list or table
- Have a way of deciding when all the possibilities have been found.

There are four donut flavours:

You choose 2 donuts to take home; this gives six possible combinations.

- blueberry and strawberry
- blueberry and custard
- blueberry and chocolate
- strawberry and custard
- strawberry and chocolate
- custard and chocolate

How could you write this using letters?

An **expression** is a group of numbers, letters and operation symbols.

Add 14 to a	$a + 14$
Subtract 20 from b	$b - 20$
Multiply c by 4	$4c$
12 more than d	$d + 12$
Multiply e by 3 and subtract 5	$3e - 5$
Add 12 to f and then multiply by 2	$2(f + 12)$

An **equation** is a number statement with an equal sign (=). Expressions on either side of the equal sign are of **equal value**.

$a + 14$	$= 20$
$b - 20$	$= 15$
$4c$	$= 28$
$d + 12$	$= 30$
$3e - 5$	$= 10$
$2(f + 12)$	$= 44$

A **linear number sequence** is a sequence where each value increases or decreases by the same amount each time. To find the "rule" of the **linear number sequence**, find the difference between each adjacent number.

Maths Lesson 1: Use simple formulae (Main, Blue Task)

Formulae

1 Scott builds a pattern using triangles and circles.

a) Draw the next diagram in the pattern.

b) Scott records the number of triangles and circles in a table.

Complete the table.

Number of triangles	1	2	3	4	5
Number of circles	3				

c) c = number of circles and t = number of triangles

Circle the formula that describes the pattern.

$c = t + 3$ | $c = 3t$ | $t = 3c$ | $t = 3 + c$

d) How many circles will there be with 10 triangles?

Show your working.

2 **a)** Complete the table.

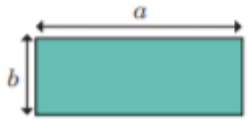
Number of weeks	1	2	3	5	10
Number of days	7				

b) Complete the formula to show the relationship between days (d) and weeks (w).

$d =$ ☐ w

c) How many days are there in 32 weeks?

3 **a)** Write a formula for the area and perimeter of the rectangle.



area = _____

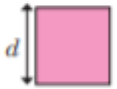
perimeter = _____

b) Work out the area and perimeter of the rectangle if a = 17 cm and b = 8 cm

Show your workings.

area = ☐ perimeter = ☐

4 **a)** Write a formula for the area and perimeter of the square.



area = _____

perimeter = _____

b) Work out the area and perimeter of the square if d = 8.5 cm

Show your workings.

area = ☐ perimeter = ☐

5 Dora makes a square pattern using lolly sticks.

She records the number of squares and sticks in a table.

a) Continue the pattern and complete the table.

Number of squares, s	1	2	3	4	5
Number of lolly sticks, l	4	7			

b)

Eva

You need 35 lolly sticks to make 10 squares. I multiplied the number needed for 2 squares by 5

Show that Eva is wrong.

How many sticks are needed to make 10 squares?

c) Circle the formula that describes the pattern.

$l = 3s + 1$ $l = 4s + 1$ $l = 3(s + 1)$

6 Here are a dog walker's prices.

a) How much does the dog walker charge for a 2-hour job?

b) Write a formula to show the cost (c) for (h) hours.

7 The Wooden Letter Company sells wooden letters for £2 each, plus £1.50 for delivery of each order.

a) Whitney places an order for the letters to spell out her name.

How much does it cost?

£

b) Write a formula to show the cost (c) for the number of letters (n).

Maths Lesson 1: Red Tasks

If you find the main activity a bit too tricky, try these questions instead…

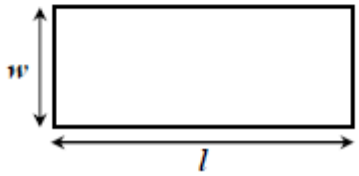
Varied Fluency

1a. Match each box on the left to the correct label.

$p = a + b + c$	formula for perimeter
36 + 56 = 92	calculation

VF

2a. Work out the area (a) of this shape using the formula $a = w \times l$, if w = 5cm and l = 8cm.



Not to scale

VF

3a. Circle the correct formula for doubling a number.

$$d = 2n$$

$$d = n \times n$$

$$d = \frac{n}{2}$$

VF

4a. The number of adults (a) needed to oversee an Early Years trip is calculated as six children (c) to each adult.

Expressed as the formula:

$$a = 6c$$

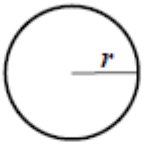
If there are 5 adults, how many children can go on the trip?

VF

Reasoning and Problem Solving

1a. Jordan is calculating the radius of a circle.

He is using the formula $d = 2r$.



He calculates that d = 20cm.

What is the value of r?

Not to scale

PS

2a. Here is a formula for the amount of flour (f) needed to bake brownies.

$$f = c \times 2$$

Hamish has 2 bars of chocolate (c) and 3 bags of flour.

Does Hamish have enough flour? Convince me.

R

3a. Cleaning fluid (c) is made up of 5 cups of water (w) and 2 cups of bleach (b).

Which formula represents this?

A. $c = 5w + 2b$

B. $c = 5 + w + 2 + b$

Explain how you know.

R

Maths Lesson 1: Gold Tasks

If you whizz through the main activity or feel confident and want to challenge yourself further, try these questions…

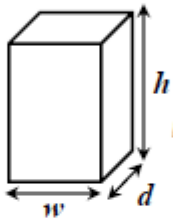
Varied Fluency

9a. Match each box on the left to the correct label.

$5(b - c)$	formula
$v = w \times h \times d$	expression
$a = \pi \times r^2$	calculation
$72 = (12 \times 3) \times 2$	

GD VF

10a. Work out the volume (v) of this cuboid using the formula $v = w \times h \times d$, if w = 3cm, h = 5.5cm and d = 2cm.



Not to scale

GD VF

11a. Circle the correct formula for doubling a number and finding 45%.

$$a = 2n \times 0.45$$

$$a = n \times 2.45$$

$$a = \frac{2n}{0.45}$$

GD VF

12a. To calculate the BMI of a person, you can use their weight in kilograms and height in metres.

Expressed as the formula:

$$b = \frac{w}{h^2}$$

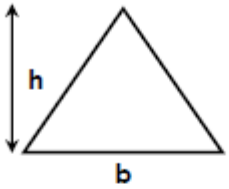
If someone is 2m tall (h) and weighs 92 kg (w), what is their BMI?

GD VF

Reasoning and Problem Solving

7a. Yusuf is calculating the area of a triangle.

He is using the formula $a = \frac{1}{2} b \times h$.



When b = 12cm, he calculates that a = 66cm².

What is the value of h?

GD Not to scale PS

8a. Here is a formula for the minimum amount of exercise in minutes (e) that a puppy needs each day.

$$e = \frac{(w \times a)}{2}$$

A puppy weighs 8kg (w) and is 16 months old (a). Her owner plans to walk her for half an hour each day.

Is this enough? Convince me.

GD R

9a. The height to set a desk (d) for optimum working conditions is half a person's height (h) then subtract 30.5cm.

Which two formulae represent this?

A. $d = (h \div 2) - 30.5$

B. $d = \frac{h - 30.5}{2}$

C. $d = \frac{h}{2} - 30.5$

Explain how you know.

GD R

Maths Lesson 1: Deepen the Moment

Use these figures to find the perimeter and area of rectangles with the following lengths and widths.

a. **l** = 7cm, **w** = 1.6cm

b. **l** = 3cm, **w** = 9cm

c. **l** = 7cm, **w** = 6cm

d. **l** = 3cm, **w** = 2.1cm

e. **l** = 1cm , **w** = 12cm

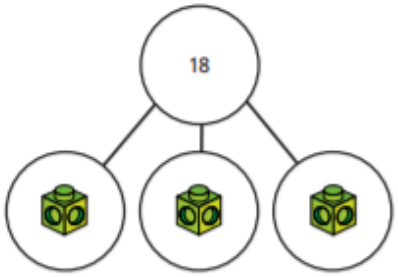
Can you draw these shapes, using accurate measurements?

Maths Lesson 2: Forming equations (Main, Blue Task)

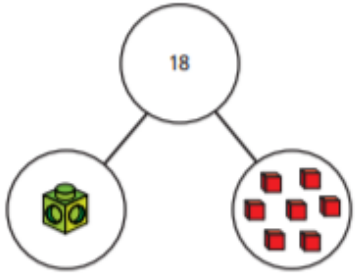
Forming equations

1 Match each equation to the part-whole model it represents.

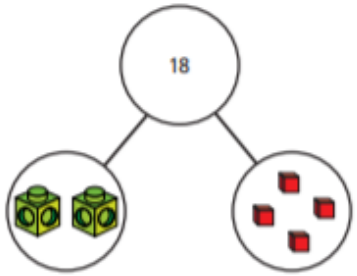
$y + 7 = 18$



$2y + 4 = 18$



$3y = 18$



2 A shop sells these items.

a) The total cost of a scarf and a book is £17

Form an equation to represent this information.

b) The total cost of 2 packets of balloons and a hat is £11

Form an equation to represent this information.

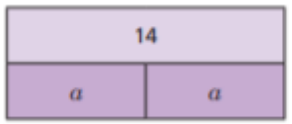
c) The total cost of a pair of headphones, a scarf and 2 boxes of marbles is £39

Form an equation to represent this information.

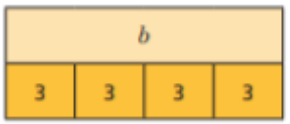
Create your own problem like this for a partner.

3 Write equations to represent the bar models.

a)

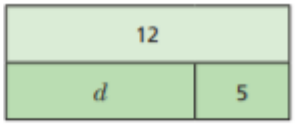


b)



c)

d)



Is there more than one possible equation for each?

4 Draw a bar model to represent each equation.

a) $3a = 21$

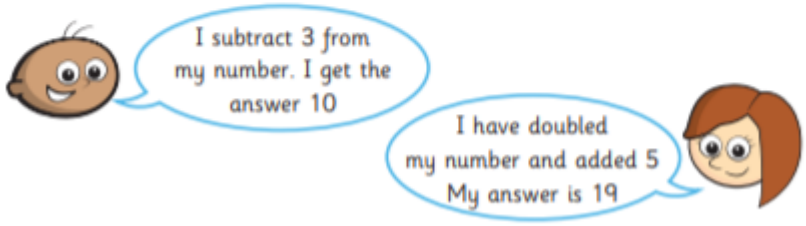
c) $6 + 9 = c$

b) $2b + 6 = 10$

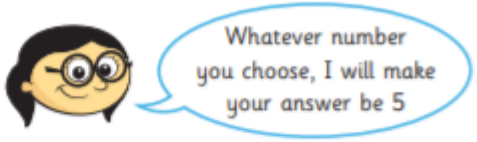
d) $\frac{d}{2} = 7$

5 Tommy and Rosie are thinking of a number each.

Write an equation to represent each problem.



6 Annie has a number trick.



Here is Annie's trick.

Step 1: think of a number
Step 2: double it
Step 3: add 10
Step 4: divide by 2
Step 5: take away the number you first thought of

a) Pick a starting number and follow the steps.

Did you get the answer 5?

b) Use multilink cubes and base 10 ones to represent each step of Annie's trick.

What do you notice?

c) Write an expression for each step of Annie's trick.

d) Create your own problem like this for a friend.

Maths Lesson 2: Red Tasks

If you find the main activity a bit too tricky, try these questions instead…

Varied Fluency

1a. Use the equation below to fill in the gaps in the information.

$p + 3 = 8$

I think of a number. I add ___ to it and my answer is ___.

VF

2a. Circle the equation that matches the information below.

Liam thinks of a number. He multiplies it by 4. His answer is 8.

A. $n - 8 = 4$

B. $8n = 4$

C. $n + 4 = 8$

D. $4n = 8$

VF

3a. I think of a number. I subtract 9 from it. My answer is 4.

The equation below is incorrect. It does not match this information. Circle the error.

$n \div 9 = 4$

VF

4a. Complete the equation below to match the information.

$p \div \square = 2$

There are some pencils in a pot. Ollie shares them equally between 3 pots. There are 2 pencils in each pot.

VF

Reasoning and Problem Solving

1a. Use some of the cards to create an algebraic equation.

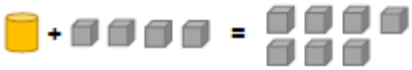
2	–	6	n	8

Draw an image using concrete materials and write a word problem to match the equation created.

PS

2a. Which is the odd one out?

A. I think of a number. I add 4. My answer is 7.

B. 

C. $n - 4 = 7$

Explain your answer.

R

3a. Chris and Elle are creating word problems based on the equation below.

$p + 5 = 13$

Chris

Some people were already at my party. 5 more came. There were 13 people altogether.

I had 13 posters. My sister took some. Now I have 5 posters.

Elle

Who is correct? Explain your answer.

R

Maths Lesson 2: Gold Tasks

If you whizz through the main activity or feel confident and want to challenge yourself further, try these questions…

Varied Fluency

9a. Use the equation below to fill in the gaps in the information.

$c \div 8 - 9 = -6$

I think of a number. I _____ it by ___ and subtract ___. My answer is ___.

GD VF

10a. Circle the equation that matches the information below.

Huey's answer is -1. To get this answer, he multiplies a number by 0.5 and then subtracts 5.

A. $-1 = 0.5n + 5$ B. $-5 = 0.5n - 1$

C. $-1 = 0.5n - 5$ D. $1 = 0.5n - 5$

GD VF

11a. I think of a number. I multiply it by two thirds and then add 1. My answer is 4.

The equation below is incorrect. It does not match this information. Circle the errors.

$\frac{2}{3}n + 4 = 1$

GD VF

12a. Complete the equation below to match the information.

$-3 = \square - \square$

Cole's answer is -3. To get this answer he multiplied a number by 0.25 and then subtracted 10.

GD VF

Reasoning and Problem Solving

7a. Use some of the cards to create an algebraic equation.

-2	14	n	20	0.75	$\frac{1}{4}$

Write a word problem to match the equation created.

GD PS

8a. Which is the odd one out?

A. I think of a number. I multiply it by 2.3. I subtract 3. My answer is 10.

B. 

C. $2n + 3 = 11$

Explain your answer.

GD R

9a. Sophia and Otis are creating word problems based on the equation below.

$-6 = 0.5d - 22$

Sophia: My answer is -6. To get this answer, I divided a number by 0.5 and subtracted 22.

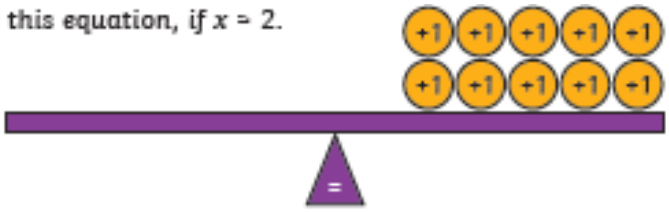
Otis: My answer is -6. To get this answer, I multiplied a number by 0.5 and subtracted 22.

Who is correct? Explain your answer.

GD R

Maths Lesson 2: Deepen the Moment

Write four different expressions involving x that will balance this equation, if $x = 2$.
Use a different operation in each expression.



Could you create your own scales and your own equation to balance them? Continue to use a different operation in each equation.

Maths Lesson 3: Solving simple one-step equations (Main, Blue Task)

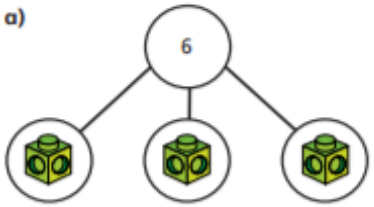
Solve simple one-step equations

Maths

1 Write an equation for each part-whole model.

Work out the value of the multilink cube in each equation.

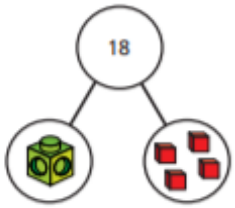
a)



_____

= ☐

b)



_____

= ☐

2 There are some counters under the cup.

There are 10 counters in total.

a) If c is the number of counters under the cup, explain why $c + 6 = 10$

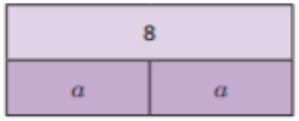
b) Work out the value of c. $c =$ ☐

c) How many counters are under the cup? ☐

3 Write algebraic equations to represent the bar models.

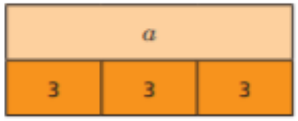
Find the value of a in each one.

a)



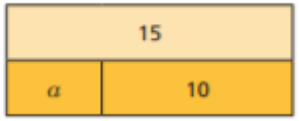
$a =$ ☐

c)



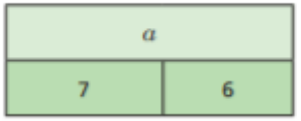
$a =$ ☐

b)



$a =$ ☐

d)



$a =$ ☐

4 Nijah is solving the equation $x - 8 = 20$

$x - 8 = 20$
$x = 20 - 8$
$x = 12$

What mistake has Nijah made?

_____

_____

5 Solve the equations.

a) $x + 7 = 20$

$x =$ ☐

b) $10y = 80$

$y =$ ☐

c) $4m = 22$

$m =$ ☐

d) $g - 3 = 15$

$g =$ ☐

e) $32 = t - 5$

$t =$ ☐

f) $\frac{u}{6} = 3$

$u =$ ☐

6 Filip thinks of a number.

He subtracts 5 from his number.

He ends up with 10

Write an algebraic equation to represent Filip's problem.

_____

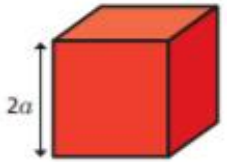
Solve the equation to work out his number.

☐

7 Dexter builds a tower.

Each block is $2a$ high.

He uses 7 blocks.



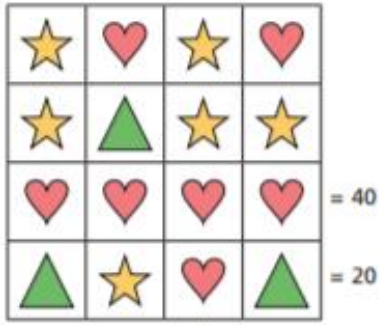
The total height of his tower is 42 cm.

Write an equation to represent the height of Dexter's tower and find the value of a.

$a =$ ☐ cm

8 Work out the value of each shape.

Write the equations that you solved to find the value of each shape.



♥ = ☐ ★ = ☐ ▲ = ☐

Work out the missing total of each row and column.

Compare answers with a partner.

Maths Lesson 3: Red Tasks

If you find the main activity a bit too tricky, try these questions instead…

Varied Fluency

1a. Circle the equation that is the odd one out.

$2b = 20$

$25 - 15 = b$

$11a = 33$

VF

2a. Which representation matches the expression $n + 1$?

A. 

B. 

C. 

VF

3a. Compare the value of the letters in each equation using <, > or =.

$2a = 10$ ☐ $b + 9 = 11$ ☐ $26 - c = 19$

VF

4a. What numbers would balance the equations below?

A. $p + 1 = 30$

B. $d - 4 = 14$

C. $a \div 6 = 3$

VF

Reasoning and Problem Solving

1a. Jonah is solving the equation $2n = 20$.

Jonah says,

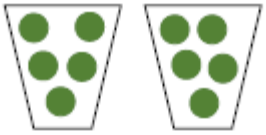
$n = 18$ because $2 + 18 = 20$.

Is he correct? Explain your answer.

R

2a. Greta has created a representation to help her solve the following equation:

$2n = 10$

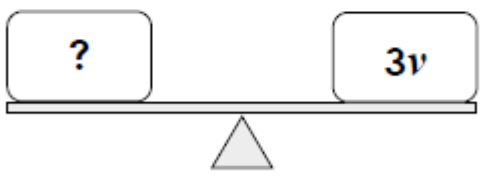


Is Greta correct? Convince me.

R

3a. Create three different equations that will balance the scale when $v = 6$.

Each equation must include a different operation.



PS

Maths Lesson 3: Gold Tasks

If you whizz through the main activity or feel confident and want to challenge yourself further, try these questions…

Varied Fluency

9a. Circle the equation that is the odd one out.

$a^2 = 30\frac{1}{4}$

$25.5 \div 10 = a$

$12a = 30.6$

VF

10a. Which representation matches the expression $2m + 0.5$?

A. 

B.

C. 

VF

11a. Compare the value of the letters in each equation using <, > or =.

$c^2 = 169$ ☐ $d - 0.5 = 2$ ☐ $e - 10 = -7.5$

VF

12a. What numbers would balance the equations below?

A. $c \div 8 = 6.5$

B. $b = 81 \div b$

C. $7n = 1.4$

VF

Reasoning and Problem Solving

7a. Graham is solving the equation $d^2 = 1$.

Graham says,

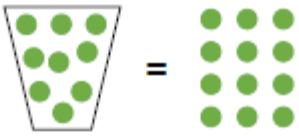
$d = 0.5$ because $0.5 + 0.5 = 1$.

Is he correct? Explain your answer.

R

8a. Amina has created a representation to help her solve the following equation:

$b + 3 = 12$

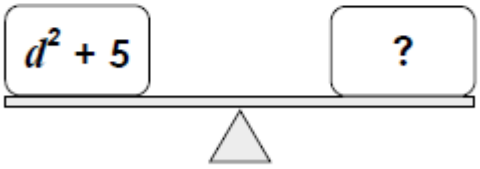


Is Amina correct? Convince me.

R

9a. Create three different equations that will balance the scale when $d = 7$.

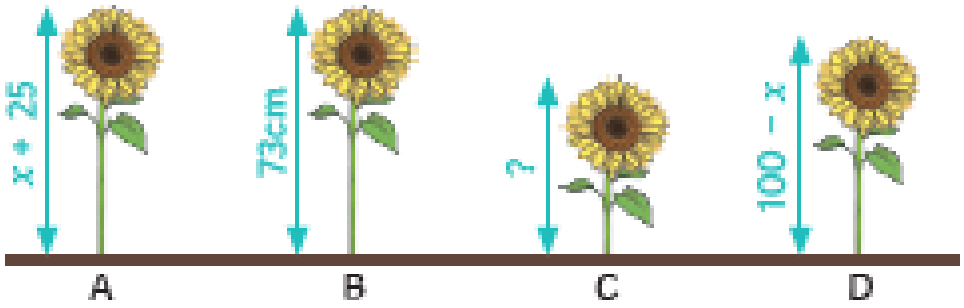
Each equation must include a decimal number or fraction.



PS

Maths Lesson 3: Deepen the Moment

The total height of four sunflowers is 2.35m.
Sunflowers A and B are the same height.
Find the height of sunflower C.

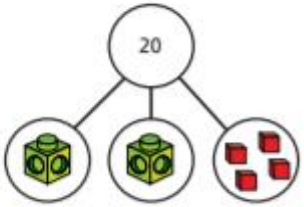


Maths Lesson 4: Solving two-step equations (Main, Blue Task)

Solve two-step equations

Maths

1 Here is a part-whole model.



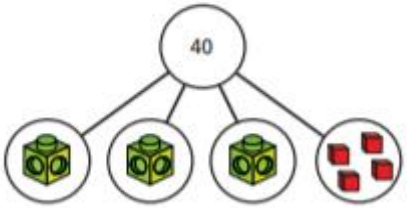
a) Write an equation for the part-whole model.

_____

b) Solve the equation to work out the value of 

 = ☐

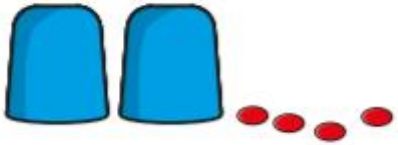
2 If each multilink cube represents x, form and solve an equation to find the value x.



x = ☐

3 There is the same number of counters under each cup.

There are 16 counters in total.



a) Use y to represent the number of counters under each cup.

Write an equation in terms of y.

_____

b) Solve the equation to find the value of y.

y = ☐

c) How many counters are under each cup? ☐

4 Write an algebraic equation to represent each bar model.

Find the values of a and b.

a)

21		
a	a	9

b)

46	
$3b$	10

a = ☐ b = ☐

5 Solve the equations.

a) $5x + 1 = 31$

$x =$ ☐

b) $3x - 3 = 9$

$x =$ ☐

c) $4p - 11 = 3$

$p =$ ☐

d) $9 = 2y + 8$

$y =$ ☐

e) $10g - 2 = 46$

$g =$ ☐

f) $4 + 3y = 28$

$y =$ ☐

6 Dani thinks of a number.

She doubles it and adds 3

She gets the answer 15

a) Write an equation to represent Dani's problem.

b) Solve the equation to find her number.

☐

7 Alex is y years old.

Her friend Brett is 3 years older.

The total of their ages is 25

How old are Alex and Brett?

Alex is ☐ Brett is ☐

8

a) Work out the cost of one banana and one orange.

One banana costs ☐ One orange costs ☐

b) Compare methods with a partner.

Maths Lesson 4: Red Tasks

If you find the main activity a bit too tricky, try these questions instead…

Varied Fluency

1a. Are the following statements true or false?

A. If $x = 4$, then $2x + 1 = 9$

9		
x	x	1

B. If $y = 5$, then $4y + 1 = 20$

20				
y	y	y	y	1

VF

2a. What is the value of c?

$5c - 11 = 39$

39					
c	c	c	c	c	-11

9 10 11

VF

3a. Match each equation to the bar model to find the value of a.

$5a + 2 = 32$

?				
5	5	5	5	3

$6a - 9 = 15$

?						
4	4	4	4	4	4	−9

$23 = 3 + 4a$

?					
6	6	6	6	6	2

VF

4a. Fill in the missing operations to show how to solve the equation below.

$3x + 4 = 22$

22			
x	x	x	4

?

$3x = 18$

18		
x	x	x

?

$x = 6$

6
x

VF

Reasoning and Problem Solving

1a. Use the cards below to create three balanced equations where $x = 6$. You must use a different operation in each equation.

$6x$ 21 x 4 3 9 $2x$

PS

2a. Choose a value for y and find three possibilities to complete the following equation.

$2y - \square = \square$

7		
y	y	$-?$

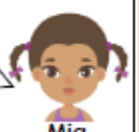
PS

3a. Scott and Mia are solving the following algebraic equation.

$2x + 6 = 19 + 5$

Scott: x must be 6 for this equation to be balanced.

Mia: x must be 9 for this equation to be balanced.



Who is correct? Prove it.

R

Maths Lesson 4: Gold Tasks

If you whizz through the main activity or feel confident and want to challenge yourself further, try these questions…

Varied Fluency

9a. Are the following statements true or false?

A. If $x = 12$, then $0.75x = 9$

B. If $y = 7$, then $3y \div y = 5$

C. If $z = 4$, then $7 - z = -1$

VF

10a. What is the value of c?

$\frac{1}{5}c + 48 = 60$

12 | 30 | 60

VF

11a. Match each equation to the value of a.

$16a + 24 = 28$	$a = 4$
$9a + 17 = 21.5$	$a = \frac{1}{4}$
$-5 = 6a - 29$	$a = 0.5$

VF

12a. Fill in the missing operations to show how to solve the equation below.

$28x + 6.3 = 10.3$

↓ ?

$28x = 4$

↓ ?

$x = \frac{1}{7}$

VF

Reasoning and Problem Solving

7a. Use the cards below to create three balanced equations where $x = 0.2$. You must use a different operation in each equation.

-0.25 | 2.5 | $5x$ | -0.5 | 1.5 | $10x$ | $1\frac{1}{2}$

PS

8a. Choose a value for y and find three possibilities for each of the following equations.

A. $\square y \div \square = 6.5$

B. $\square y - \square = -2.5$

PS

9a. Alex and Priya are solving the following algebraic equation.

$21x - 11.5 = -1$

Alex: This equation is impossible as the answer is a whole number.

Priya: x must be 0.5 for this equation to be balanced.

Who is correct? Prove it.

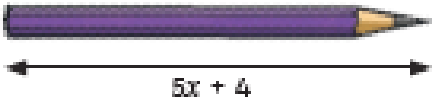
R

Maths Lesson 4: Deepen the Moment

The total length of all four pencils is 139cm. Pencils A and B are the same length. Find the length of pencil C.

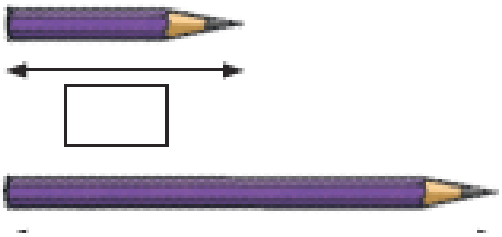
A

B



C

D



Maths Lesson 5: Arithmetic Test Paper 3

You have 30 minutes to complete your arithmetic test; set a timer so you know how much time is remaining. Remember to highlight symbols and to **show your working out**. When you have finished, use the answer sheet to mark your test and record your score out of 40. If you have any corrections, do these again in a different colour beside your previous answer

1 $37 + 749 =$

2 $\frac{6}{7} - \frac{2}{7} =$

3 $2 \times 35 =$

4 $908 \div 1 =$

5 $55 \div 11 =$

6 $8 \times 3 \times 10 =$

7 7,015 - 403 =

8 10 - 3^2 =

9 39.55 + 8.7 =

10 ? - 20 = 286

11 320 ÷ 4 =

12 8,100 ÷ 9 =

13 $90 \div 30 =$

14 $? = 2{,}863 - 457$

15 $3{,}700{,}009 = 3{,}000{,}000 + ? + 9$

16 $10 - 5.9 =$

17 $\frac{2}{7} + \frac{15}{28} =$

18 $0.7 \div 100 =$

19 $\frac{3}{4}$ of 1,600 =

20 528 × 26 =

$$\begin{array}{r} 5\ 2\ 8 \\ \times\ 2\ 6 \\ \hline \end{array}$$

21 15% of 1,300 =

22 874 ÷ 46 =

$$46\overline{)8\ 7\ 4}$$

23 0.2 × 35 =

24 $\frac{2}{3} + \frac{1}{4}$ =

25 $1\frac{5}{8} + \frac{1}{2} =$

26 $8 - 7.109 =$

27 $3.7 \times 70 =$

28 $1\frac{1}{6} - \frac{7}{12} =$

29 $6{,}926 \times 64 =$

6	9	2	6
	×	6	4

30 99% of 600 =

31 $\frac{1}{4} \div 3 =$

32 $5 \times 7 - 4^2 =$

33 $1\frac{1}{3} \times 30 =$

34 62% of 340 =

35 $5\frac{5}{6} - 3\frac{3}{4} =$

36 6,916 ÷ 76 =

	7	6	6	9	1	6

Deepen the Moment: Write a set of top tips for question number 32.

How would you tell someone else to answer this?

English – Practise your spellings

Remember to ... **Look, cover, say, write and then check!**

curiosity			
definite			
desperate			
determined			
disastrous			

Use the first column example words to go over the letters and practise your handwriting joins.
Can you write sentences for each of your spellings?

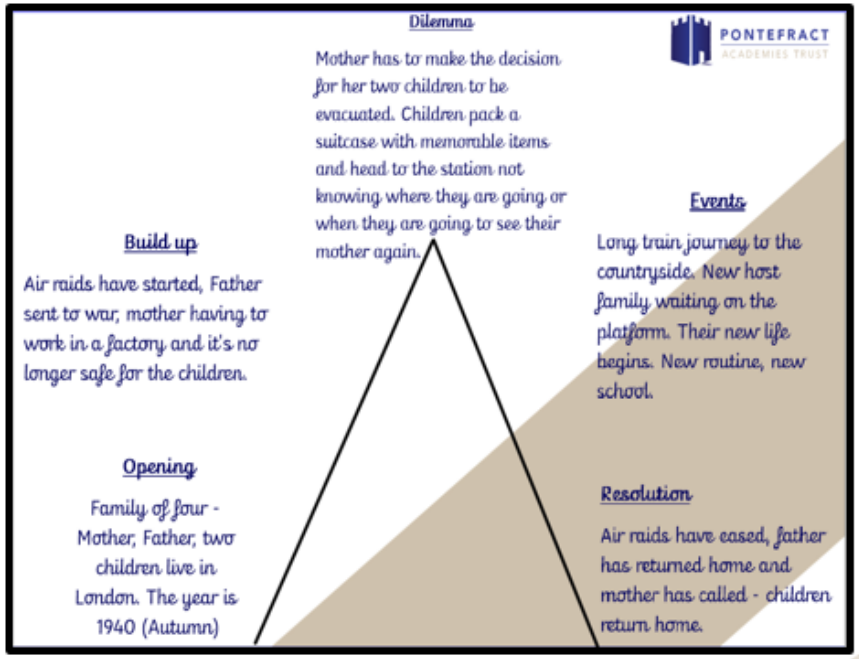
Knowledge Organiser – Year 6

English – Writing a narrative based on evacuation.

Context: To write a narrative using previous historical knowledge about evacuation in World War 2. Using ideas and thoughts from the canon text 'Goodnight Mister Tom'

Very Important Points (VIPs):

- Third person is the use of the pronouns he, she, it, they etc.
- Past tense places an action or state of being in past time.
- Carefully chosen vocabulary - adjectives, verbs, adverbs chosen must be suitable and appropriate.
- Five senses are used to create an overall sense of your surroundings by describing what you can see, hear, smell, touch, taste.
- Figurative language (Similes, personification and onomatopoeia) is used to describe different settings.
- Carefully selected adjectives to describe the tone and mood.
- Fronted adverbials are words or phrases at the start of a sentence to describe the action that follows.
- Semi-colons to be used in lists and to replace conjunctions.
- Cohesive devices are used to ensure sentences and paragraphs flow.
- A full range of higher level punctuation: ; ( ) - … is used throughout the story.



Fat Questions

What long lasting impact did evacuation have on young people?

Did a family's social class have an impact on evacuation?

How did the families already living in the countryside feel about evacuees joining them?

Useful genre vocabulary

Evacuation	Transportation
Evacuee	Departure
Host family	Countryside
Billeting Officer	Air raid
Blackout	Blitzkrieg

Examples of sentences describing the mood:

Dark clouds packed the sky, creating a churning knot of cement above the city. Central London was now consumed in thick smoke, making it unbearable to breathe and see.

During a dull, dark, and soundless day in autumn, the clouds hung oppressively low in the heavens.

Semi-colons used in a list

You will need to bring the following: sleeping bag, pillow, and pyjamas for the overnight stay; water bottle, waterproof jacket, sweatshirt, and walking boots for the afternoon trek; and a swimming kit for the river activities.

Here, a colon introduces the list and semicolons indicate which parts of the list are grouped together.

English Lesson 1 – Reading Comprehension:

Extract from Friend or Foe by Michael Morpurgo

It was still dark up in the street, and fine drizzle sprayed their faces as they walked away from the house. David looked back over his shoulder as they came to the post-box at the corner and caught a last glimpse of the front steps. He felt his mother's hand on his elbow, and then they were round the corner.

Ahead of them there was a glow of fire in the sky. "South of the river," his mother said. "Battersea, I should say. Poor devils. At least you'll be away from all that, David, away from the bombs, away from the war. At least they won't get you as well." He was surprised by the grim tone in her voice.

"Where will you go, Mum?"

"Wherever they send me. Probably to the coast – Kent or somewhere like that. Somewhere where there's anti-aircraft guns, that's all I know. Don't worry, I'll write."

Their footsteps sounded hollow in the empty street. They had to step off the pavement to pick their way round the edge of a pile of rubble that was still scattered halfway across the street. That was where the Perkins family had lived. They had been bombed out only a week before; they were all killed. Special prayers were said at school assembly for Brian and Garry Perkins, but no one ever mentioned them after that. They were dead, after all.

In the gloom outside Highbury and Islington Underground Station there was already a crowd of people. Miss Evers' voice rang out above the hubbub and the crying. She was calling out names. His mother pulled at his hand and they ran the last few yards.

"Tony Tucker. Tony Tucker." Miss Evers' voice rose to a shriek. "Where's Tucky. Has anyone seen Tucky?"

"He's coming, miss. I saw him."

"And what about David Carey? Is he here yet?"

"Yes, miss. I'm here, miss." David spoke out, pleased at the strength in his voice.

"Here's Tucky, miss. He's just coming."

"Right then." Miss Evers folded her piece of paper. "We're all here, and it's time to go. Say goodbye as quick as ever you can. The train leaves Paddington at half past eight, and we have to be there at least an hour before. So hurry it up now – and don't forget your gas masks."

David felt the case being handed to him. "Goodbye, David. And don't worry. It'll be all right. I'll send a letter as soon as I can. God bless." She kissed him quickly on the cheek and turned away. He watched her until she disappeared at the end of the street. All around him there was crying: boys he'd never dreamt could cry, weeping openly, and mothers holding on to each other as they walked away. He was glad his mother hadn't cried, and it helped him to see so many of his friends as miserable as he felt himself. He blinked back the tears that had gathered in his eyes and wiped his face before turning towards the station.

The warmth of the Underground came up to meet them as the school trooped down the silent, unmoving escalator. They followed Miss Everts along the tunnels, down the stairways and out on to the platform. Tucky came up alongside David and dropped his suitcase.

"H'lo, Davey."

"H'lo, Tucky." They were old friends and there was nothing more to be said.

They did not have long to wait. There was a distant rumble and then a rush of warm, oily wind that blew their eyes closed as it rushed into the platform. Miss Evers counted them as they pushed and jostled into the carriage, herding them in like sheep, so that every corner of the carriage was filled. The doors clicked and hissed shut, and the train jerked forward, throwing everyone against each other.

David watched the last Highbury and Islington sign as long as he could, craning his neck until the carriage plunged into the darkness of the tunnel and it was gone.

You may want to use this link to listen to other extracts from the same story:
https://www.bbc.co.uk/teach/school-radio/english-ks2-friend-or-foe-michael-morpurgo-index/znb78xs

Questions:

1. What time of day was it when David and his mother walked away from their house? Explain your answer.
2. Why does David's mum say, 'Poor devils' in the second paragraph?
3. What does the phrase 'They were dead after all', suggest about the amount of people dying in London?
4. Why was David glad he had seen so many other children crying?
5. The train was calm and peaceful. Do you agree or disagree with this statement? Support your answer using evidence from the text.
6. Based on the entire text, describe how David might have been feeling as the train 'plunged into the darkness of the tunnel'. Use evidence from the text to support your answer.

Deepen the Moment:

Put yourself in David's shoes. What emotions do you think you would be feeling throughout this short extract?

Think about walking past the rubble, arriving at the station, Mum turning away and leaving and being on the train.

Use your inference skills to help you.

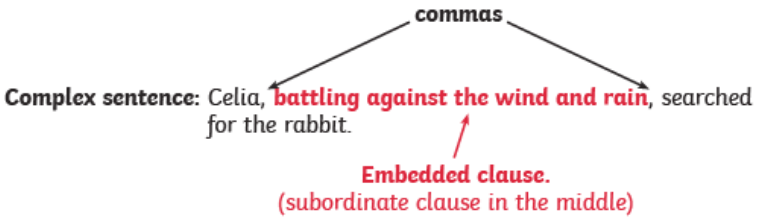
English Lesson 2 – To use a range of clause structures:

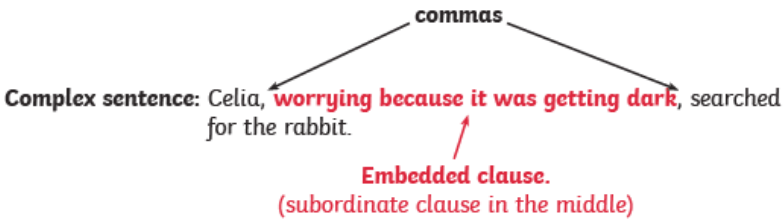
In this lesson, you will be learning how to use embedded clauses. Alongside this, you will progress to identifying the differences between embedded and relative clauses.

Embedded Clauses

How to Make a Complex Sentence

Embedded means 'within'.
Any embedded clause is another way of using a subordinate clause by dropping it into the middle of a sentence. This time you need two commas, one at either side of the clause.



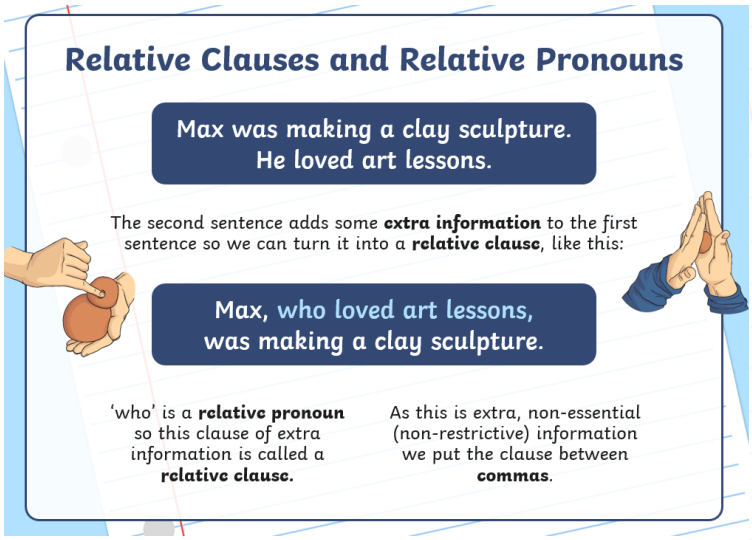


An embedded clause doesn't make sense on its own. You can't just say: battling against the wind and rain. You need the main clause as well!

Task 1

Complete each of these complex sentences by adding an embedded clause.

Main Clause	Embedded Clause	Main Clause
The boy	who was thirteen years old and multi-talented,	could play the piano.
The beach		was hotter than ever
The ball		flew through the air.
The music		gave me a headache.
The old lady		waited for a taxi.



Embedded Clauses

Luke, as soon as he heard the news, rushed to the hospital.

This is **not** a **relative clause** because it doesn't start with a **relative pronoun**.

It can still be called an **embedded clause** as it adds additional detail in the middle of the main clause.

Can you decide if the clauses in the following sentences are relative embedded clauses or just embedded clauses?

Task 2

Select whether each sentence includes an embedded clause or a relative embedded clause:

	Embedded	Relative
Reece, even though he hated films, still went to the cinema.		
The crocodile, which had been lurking under the water, pounced on its prey.		
The Eiffel Tower, which is one of the most famous landmarks in the world, is in Paris.		
The boy, as fast as he pedalled, could not catch up with his friends.		
Liverpool FC, who are the current Premiership champions, are struggling this year.		

Deepen the moment

For each of these statements, say whether you agree or disagree and give a reason to support your answer.

1. *All embedded clauses are subordinate clauses.*
2. *Relative clauses can be embedded clauses.*
3. *Subordinate clauses are the same as embedded clauses.*
4. *Subordinate clauses are always relative clauses*
5. *Relative clauses are always subordinate clauses.*

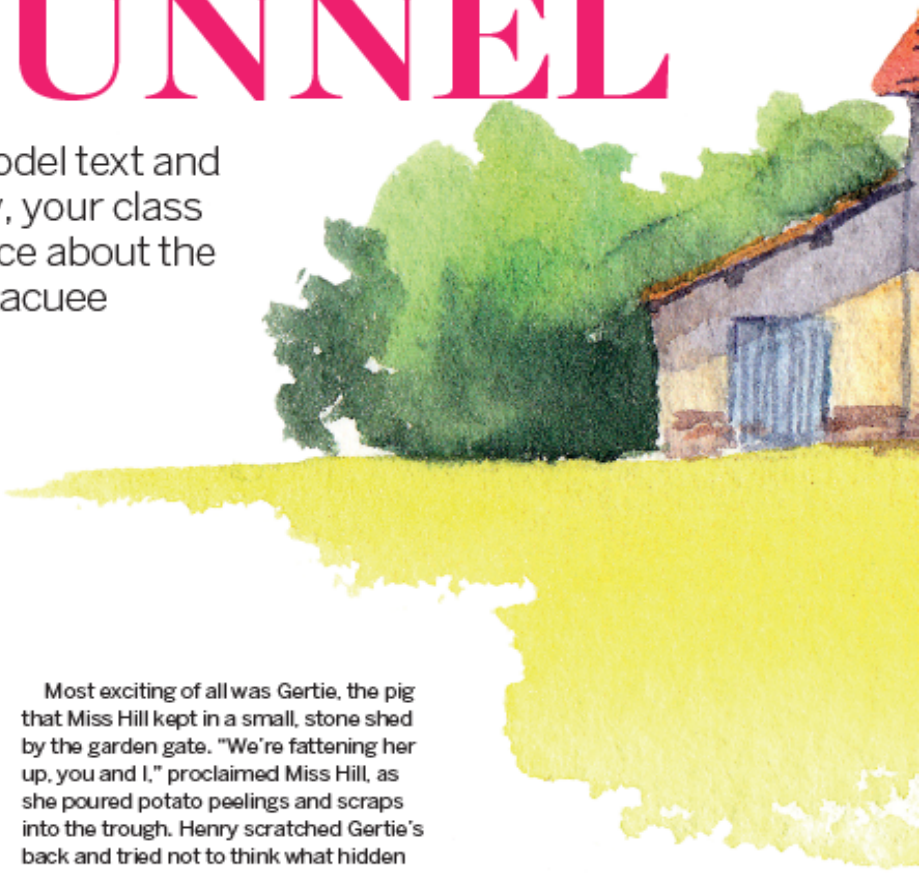
English Lesson 3 – To identify historical facts within a narrative:

During today's lesson, you will read one fiction text and one non-fiction text. Your task is to identify and record historical facts in the texts. Historical facts help to make fiction texts more believable as they build a real life context for fictional characters to exist in.

Text 1

The TUNNEL

Using **Pie Corbett's** model text and digging into local history, your class can write a powerful piece about the experience of a WWII evacuee



Henry had always hated the dark.

At night, Miss Hill put up the blackout curtains. When the light was off, the gloom descended and you couldn't see a thing. He had to learn to feel his way to bed. The stairs were unfamiliar, so too, the creaking boards and the smell of lye soap from the metal tub that was dragged out on a Saturday for his bath.

Oakridge Lynch village was nothing like the grimy London tenement block where Henry had spent his first ten years. Here, the valleys were a lush green: not a single street lamp and, at night, the darkness was full of owls, badgers digging for worms and foxes yelping. Every morning, Henry woke to the sound of a cockerel. At home, the streets had been packed with people rushing to work, cars and buses trundling by and the air was full of street cries. Here, chickens scratched in the backyard, rows of vegetables sprouted in gardens and only the odd cart and donkey passed the little cottage.

Most exciting of all was Gertie, the pig that Miss Hill kept in a small, stone shed by the garden gate. "We're fattening her up, you and I," proclaimed Miss Hill, as she poured potato peelings and scraps into the trough. Henry scratched Gertie's back and tried not to think what hidden fate awaited the pig.

That misty morning, the 15th July 1940, Miss Hill checked that Henry had his gas mask packed and walked him up the lane to the village school. There they sang a hymn, prayed for the country and Henry sat squeezed onto a bench at the back of the schoolroom, clutching his copybook. Later, at lunchtime, he deposited himself on the grass outside and ate his bread and dripping sandwich. Miss Hill had tucked in a slice of beetroot as a treat. Some of the boys munched on turnips that they had dug up on the way to school, washed in a puddle and dried on the tufted grass at the side of the road.

The afternoon stretched ahead; Henry's pen scratched as he tried his hand at copperplate. The schoolroom was silent as everyone worked. In the distance, they could hear planes and the sound grew closer until everyone stopped and looked up at the ceiling; the approaching engines roared and spluttered. Mr Weston yelled, "Under your desks!"

High above in the clouds, a Spitfire from Aston Down and a Hurricane from Kemble fought with a German bomber – a Junkers 88. Henry squeezed under a wooden desk next to Grace, closed his eyes and began to count. He had learned that trick in London when they sheltered in the underground. Counting backwards from a thousand kept your mind busy.

With engines screaming, the bomber shuddered overhead, scraping the school's bell tower. Mr Weston grabbed the wooden window pole and rushed outside to help capture the airman in Mrs Le Bailly's garden. Later, they heard that three of the airmen had managed to parachute down and had been taken willingly, but the pilot had stayed in the plane for too long, trying to guide it clear of the village. Miss Hill stated that the school had been missed: 'by a wing and a prayer'.

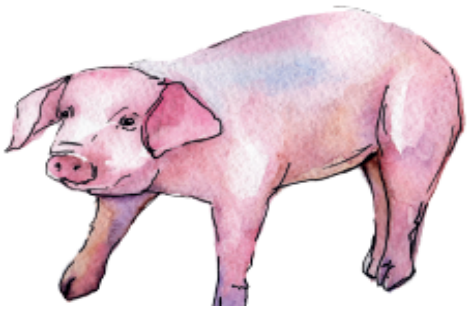
Over the next few weeks, what had been an obscure village became famous and people travelled for miles to see the wreckage. In London, bombings had been nightly but here in the sleepy valleys, dogfights were a rare sight.

Mr Weston posted Henry at the gate to Strawberry Banks where the wreckage lay, to collect money for the troops. It was there, in early August, that Henry, full of longing and loneliness, decided to head for home, back to London.

He had been standing by the gate all afternoon but no one had come to view the wreckage. A skylark fluttered up and a warm wind swept down the valley, ruffling the grass and calling to him. He daydreamed, remembering his Mum standing on Paddington station, her thin coat flapping as the train steamed out, carrying Henry and his gas mask away from everything he knew and loved.

In the valley, below the village, ran the railway. Half an hour later, Henry walked along the tracks, his mind fixed on home. He could hear trains coming a long way off. The rails seemed to buzz a warning so that he could scramble up the bank and hide. The plan worked well enough until he came to Sapperton. Here, the train tracks disappeared into the dark mouth of the tunnel.

Henry stopped. To go back meant terrible trouble. School had ended a long time ago. Miss Hill would be fretting. At first, Henry didn't feel too bad. Behind him, he had the light from the tunnel's opening but, half way down, the tunnel curved: increasingly, the dark and cold closed round him like a poacher's steel trap. He pulled his piece of sacking cloth to him, stood and listened: his breathing



echoed, his heart thumped and, somewhere ahead, water dripped and something scuttled. Suddenly it hit him, and it all seemed too much: the bomber screaming overhead, the school shuddering as it scraped the bell tower, the tangled, smoking wreckage and the strangeness of trees and green fields. He sat down and waited, rocking as he cried.

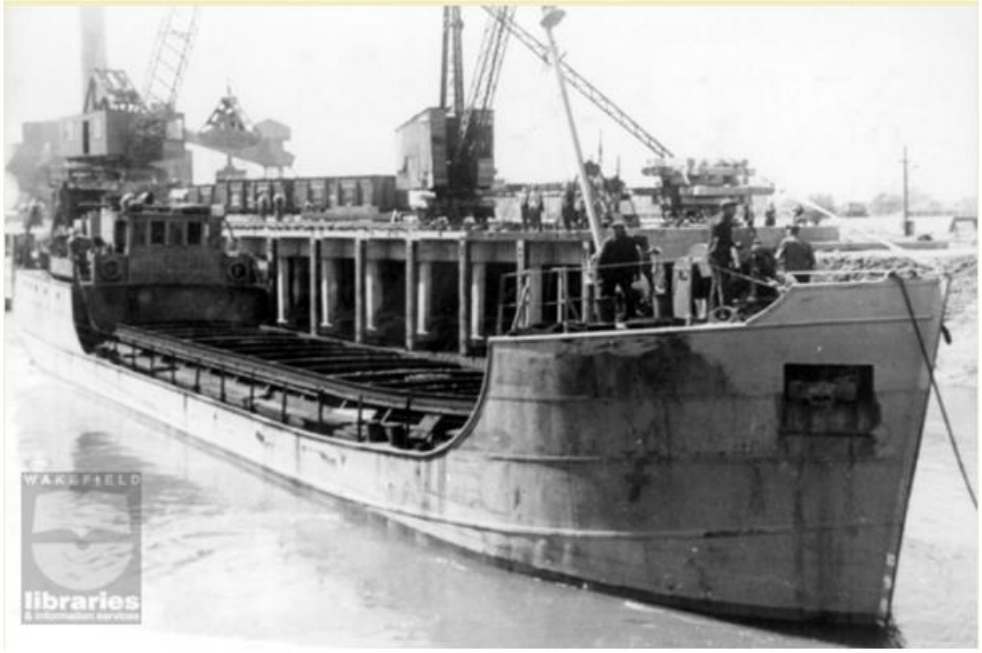
Thomas Restall, a railway ganger, found the little boy, crouched in the darkness. Henry had tried to walk home but his shoes, resoled with an old tyre, had worn thin and, besides, the darkness had held him fast in its shadows.

Early in the evening dusk, as the stars started to freckle the sky, Thomas brought Henry back to Winsley Cottage. To his surprise, Miss Hill drew him close and whispered, "Oh Henry," as she gently stroked his hair. Inside, the kitchen lamp glowed.

Text 2

Target -The Five Towns: 1

The Second World War began in September 1939 when the German Leader, Adolf Hitler, invaded Poland. Britain and France went to war to help Poland, but by July 1940 German armies had overrun most of Europe, forcing the British army to evacuate from Dunkirk to England. From airfields in Norway, Denmark and France, Hitler was now able to launch air attacks on British towns and cities. Even before the war, the Germans had prepared target maps and photographs of the objectives they wished to attack - not only army camps, airfields and naval dockyards but also industries that helped the British war effort. The chemical works in Castleford shown here was one such target for air attack.



Target -The Five Towns: 2

Not only factories, but also methods of transport were targets for the bombers. Britain's railways, canals and rivers were all used for transport much more in the 1940's than they are today, and so they, and everything associated with them, became a target. The ship 'Empire Rancher' in this picture was built in Knottingley in 1943, and designed to carry coal from South Wales to help fuel war factories in Gloucester. Among the biggest ships built by Harker's Shipyard, she, and other ships made by Harkers, would have made the area a prime target for attack.

Defending the People

Particularly important to the people of the Five Towns was the ARP, or Air Raid Precautions. Set up before the war, and controlled by the local councils, there were over 5,000 people in ARP across the whole of our area, most of them part-time volunteers, working in rescue services, ambulances and first-aid, emergency feeding teams and as air-raid wardens (people in every street who helped prepare shelters and summoned help when needed). Shown here are the ARP rescue services of Pontefract. In addition, there were the volunteers of the Auxiliary Fire Service, who aided the Fire Brigades, and Special Constables who aided the Police. These people usually had their own jobs to do as well as this voluntary work. The rescue teams could be posted to help cities that had suffered heavy attacks, and the local teams went to the aid of Sheffield, Hull and Salford at different times.

Read the two texts, 'The Tunnel' and 'Real life Stories' and highlight historical information linked to the war and evacuation. For example, children leaving London to travel to the countryside, living with a host family, leaving family members behind and the impact this would have on children. Make note of the historically factual information you find as this will support you when you are writing your own evacuation narrative set during the Second World War.

Deepen the Moment: What impact do you think evacuation had on children of different ages?

Write a short paragraph explaining and comparing the effect evacuation had on children below the age of 7 and children aged 7 and above.

English Lesson 4 – To plan a narrative using historically accurate facts:

In today's lesson, you will start to bring your own ideas, as well as the historical facts from yesterday's lesson, together on a planning sheet. The key events of the story have been provided for you, however, you can choose to change or tweak these but be careful to keep the events within the historical factual context of evacuees during the Second World War.

Task 1:

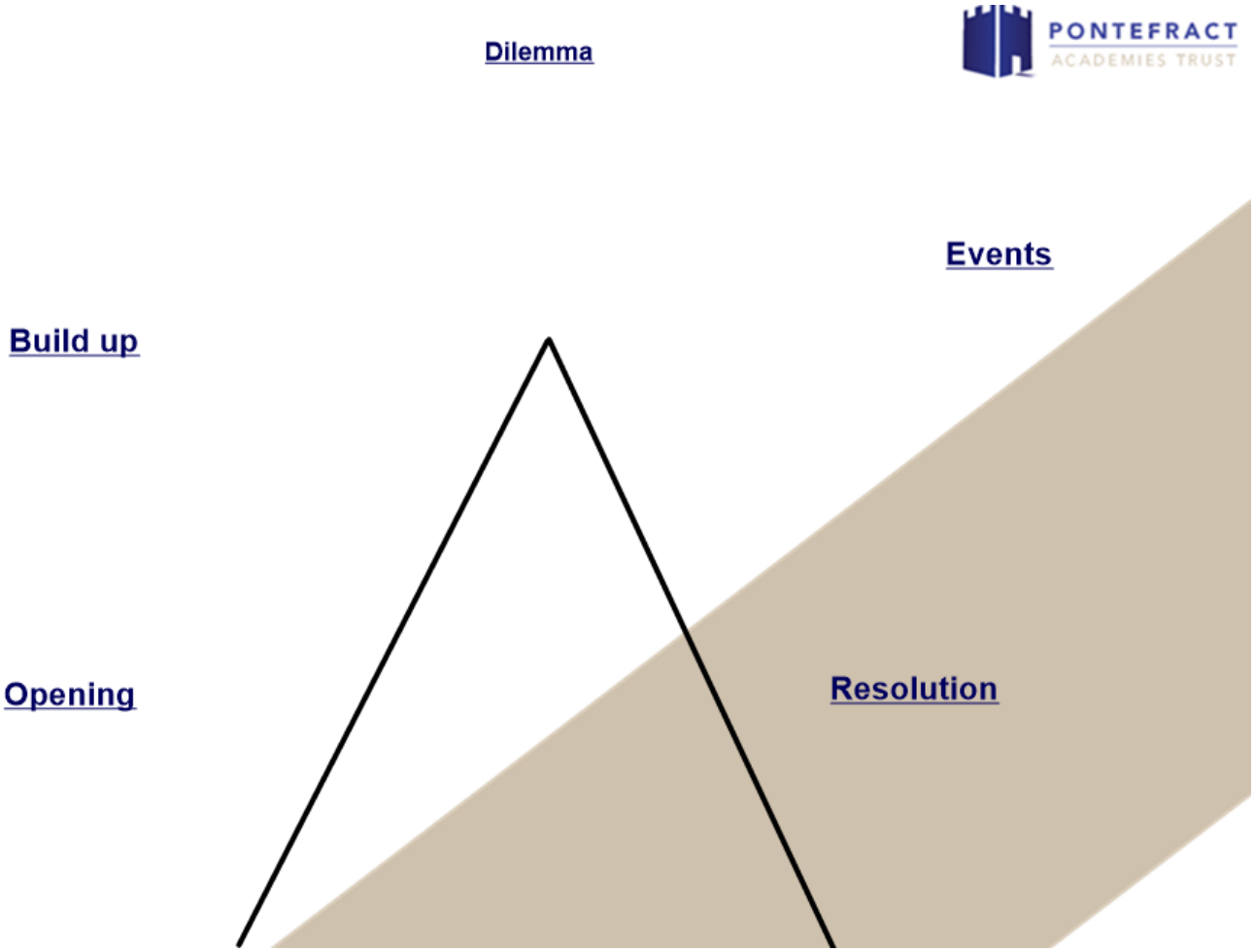
Complete the planning sheet by adding in details and historical facts as well as ideas from your own imagination.

Feature	Our Story	Your Story
Title	Escape to the Country	
Setting	Large City In England	
Characters	Mother Father Two children New host family	
Key event 1	Air Raids have been taking place for months, Father is away, and mother is having to work. Two children are being evacuated.	
Key event 2	Mother takes children to the railway station with minimum belongings. Children ready to depart out of the city and head to the countryside.	
Key event 3	Children find themselves in a new location. Host family ready to greet them.	
Key event 4	Children adjust to their new life. New school. New chores	
Key event 5	Mother gets in touch. Bombing has eased. Father has returned. Safe for children to return.	

Task 2:

Now you have the details and facts on your plan, your next task is to place the events of your story on a story mountain.

Use the blank story mountain to position the events in order to see the 'arc' of your story.



Deepen the moment:

Can you incorporate historical facts into your plan such as the food children ate e.g. extra milk was provided for children? How children were better fed in the countryside and were allowed foods such as fresh fruit and vegetables and dairy products. Children did not have sweets due to sugar being rationed.

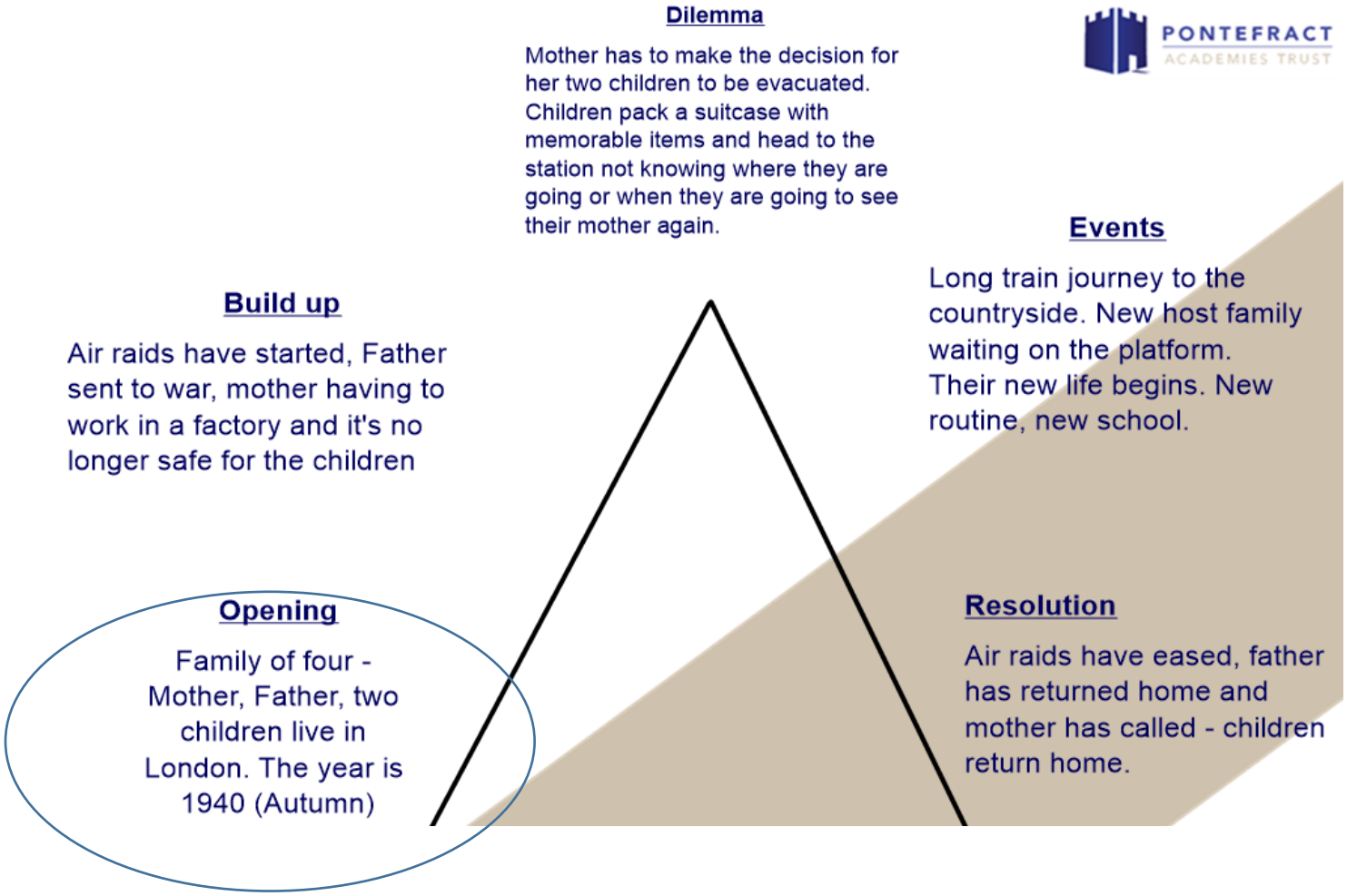
Can you include the items children were allowed to pack such as: a gas mask (and the importance of this), a change of clothes, slippers, stockings or socks, plimsolls etc?

English Lesson 5 – To draft the opening section of my narrative:

In today's lesson, you will be writing the opening part of your evacuee story. You will be using your plan and your existing knowledge and understanding of evacuees based on all of your learning so far this term. There are also useful and helpful resources, such as your knowledge organiser, Year 5 and 6 statutory spelling list and a number of videos and photographs.

Task:

Your opening should include a detailed setting description of London (or another big city targeted by German air raids), as well as an introduction to the characters of involved.



Use the pictures (below) and this video to help with your opening section:
https://www.youtube.com/watch?v=clKxrDza1d8

WAGOLL – You may want to use the WAGOLL to help with your opening.

It was still dark up in the street, and fine drizzle sprayed their faces as they walked away from the house. David looked back over his shoulder as they came to the post-box at the corner and caught a last glimpse of the front steps. He felt his mother's hand on his elbow, and then they were round the corner.

Ahead of them there was a glow of fire in the sky. "South of the river," his mother said. "Battersea, I should say. Poor devils. At least you'll be away from all that, David, away from the bombs, away from the war. At least they won't get you as well." He was surprised by the grim tone in her voice.

Year 5 and 6 Statutory Spellings

accommodate	category	determined	forty	marvellous	programme	soldier
accompany	cemetery	develop	frequently	mischievous	pronunciation	stomach
according	committee	dictionary	government	muscle	queue	sufficient
achieve	communicate	disastrous	guarantee	necessary	recognise	suggest
aggressive	community	embarrass	harass	neighbour	recommend	symbol
amateur	competition	environment	hindrance	nuisance	relevant	system
ancient	conscience	equipment	identity	occupy	restaurant	temperature
apparent	conscious	equipped	immediate	occur	rhyme	thorough
appreciate	controversy	especially	immediately	opportunity	rhythm	twelfth
attached	convenience	exaggerate	individual	parliament	sacrifice	variety
available	correspond	excellent	interfere	persuade	secretary	vegetable
average	criticise	existence	interrupt	physical	shoulder	vehicle
awkward	curiosity	explanation	language	prejudice	signature	yacht
bargain	definite	familiar	leisure	privilege	sincere	
bruise	desperate	foreign	lightning	profession	sincerely	

Deepen the Moment:

Can you include examples of figurative language (similes, metaphors, personification) to enhance the description you have written? Remember, show don't tell!

Reading for Productivity Lesson 1:

Plastic Pollution

When people think about plastic, they may think of a range of everyday objects that serve to make our lives easier: containers in which to store food, toys and gadgets that we play with and even the pipes that carry water to and from our homes. In fact, plastic is so popular in the UK today that it is almost impossible to imagine life without it.

However, while plastic makes human lives easier, it makes the lives of Britain's wildlife much harder and could be endangering the existence of some of our much-loved species.

Plastic Waste Facts

160,000 plastic bags are used around the world every second.

By 2015, 6,300 million metric tonnes of plastic waste had been created.

79% of plastic produced over the last 70 years has been thrown away.

Of this:
9% recycled,
12% burned, 79% in landfills or the natural environment.

Plastic and the Environment

There are many different ways that plastic can enter the environment:

- not disposing of it properly, e.g. littering;
- washed down drains from face washes and clothing;
- spilled overboard by ships;
- escaped from factories and warehouses;
- blown out of bins or landfills by the wind;
- abandoned, e.g. fishing nets.

So much plastic enters the environment each year that it can be found in fresh water, soil, air and oceans around the world.

Plastic Pollution

The Problem with Plastic

Although few forms of plastic can be classed as biodegradable – meaning that they will break down completely over time if exposed to the right conditions – most types of plastic are neither biodegradable nor compostable. Therefore, any plastic that ends up in the local environment will not break down over time, unlike paper, fruit peel or natural fabrics. They will simply remain indefinitely until they are removed by humans or mistakenly consumed by wildlife.

A huge problem with the plastic that ends up in the environment is the chemicals it releases. Over time, pieces of plastic litter will break into smaller pieces. When plastic breaks into tiny pieces, known as microplastics, it is consumed by wildlife that mistake it for food. Alarmingly, these microplastics contain toxic chemicals and heavy metals – poisonous and deadly to local wildlife. These make their way into the food chain, affecting not only the creature who ate the plastic but any animal that goes on to consume them.

'Female Mallard By Water With Rubbish' by Martin Kessel

Threats to Wildlife

The largest threats to wildlife from plastic waste in the environment are:

- death or injury caused by becoming tangled in plastic waste, for example, birds becoming trapped in fishing nets or hedgehogs caught in plastic can holders;
- mistakenly eating plastic waste thinking that it is food, for example, birds eating plastic bags that float in a pond, mistaking them for fish;
- poisoning from the chemicals contained within the plastic which can lead to illness and death.

How We Can Help

The plastic problem we face today has not been created by one single place. It is a problem that has been created by every country and it is one which cannot be solved overnight. The key way to prevent any further harm to wildlife is by changing our attitude towards plastic. Some helpful tips are:

- Instead of using plastic items, such as straws and plastic bags, buy reusable items, e.g. flasks for hot drinks and canvas shopping bags.
- Glitter (which is often made of plastic) and balloons can also be damaging to the environment and dangerous to animals, who may mistake them for food.
- Recycle as much of your waste as possible.
- Safely pick up litter you see in the environment.

Questions

1. ...they will simple remain indefinitely until removed by humans ...
   Which of these is the most accurate definition for the word indefinitely? Tick one.
   - ☐ Globally problematic
   - ☐ For the foreseeable future
   - ☐ Restricted from view
   - ☐ Negatively impactful

2. Match the sub-heading to the best summary of its contents.

Plastic and the Environment	A visual representation of facts and figures regarding plastic use and disposal.
Plastic Waste Facts	An explanation of different ways plastic enters natural habitats.
Threats to Wildlife	An exploration of the damaging impact plastic pollution has on creatures and their habitats.

3. ***...and could be endangering the existence of some of our much-loved species.***
   Define the word endangering based on its use in this sentence.

_____

4. What percentage of plastic produced over the last 70 years has been thrown away?

_____

5. Which creature may birds mistake plastic bags for?

_____

6. Fully explain how plastic pollution endangers Britain's wildlife.

_____
_____
_____

7. Plastic pollution is a global problem. Propose three steps which could be taken globally to reduce plastic pollution.

_____
_____
_____

8. Summarise what is meant by microplastics in 15 words or less.

_____
_____
_____

9. Comment on one change you have already made and one change you will make in the future in order to reduce plastic pollution.

_____
_____
_____

10. Summarise the purpose of this text and its intended audience.

_____
_____
_____

Deepen the Moment:

Plastic pollution is a global issue. However, consider the positive impact you can have on your local environment by making small changes.

List five ways in which you can have a positive impact in your local area.

Year 6 Extended Curricular Learning

Geography – Plastic Pollution

Monday 22nd February 2021 – Activity 1

VIPs:

- Renewable Resources are those which come from a source that can continue to replenish itself. E.g. wind, sunlight, wood, paper and leather.
- Non-renewable resources are things that are not able to replenish themselves; there is a set amount of the resource available and once it is used, there is none left on Earth. E.g. gasoline (petrol), diesel, coal and natural gas.
- Although many plastics can be recycled, most are created using 'petro-chemical' processing (using similar components to petrol) so they are non-renewable.

Sustainability means ensuring that the planet and all of its resources can continue to provide a home for the humans, animals and plants that live here. It is our job to take care of the planet to ensure that future generations of people and animals can live and thrive on Earth.
Since the 1960s, plastic has been used in huge amounts of products. Today we are surrounded by more plastic than ever before; Plastic production has surged over the past 50 years, from 15 million tonnes in 1964 to 311 million tonnes in 2014, and is expected to double again over the next 20 years.

As outlined in the Reading for Productivity, plastic pollution can be incredibly harmful to the ecosystem. However, every one of us can do something to stop plastics pollution.

Task: Write a speech to convince people to reduce their own effects on plastic pollution. You should ensure your speech is persuasive as well as informative.

Your speech could include the following:

1 Avoid plastic where possible, for example buy cotton buds made with card instead of plastic.
2 Use a reusable bottle for your drinks.
3 Say no to plastic bags and drinking straws.
4 Buy unpackaged food and grow your own.
5 Avoid using wet wipes.
6 Avoid buying balloons for parties, or releasing balloons into the sky.

Reading for Productivity Lesson 2:

The Sheep and the Goats, Matthew 25:31-46

In this parable, Jesus uses the example of a shepherd who separates his sheep from his goats in order to help his followers understand what judgement will be like. Jesus explains that people will be separated into two groups:

1) Those who have lived good lives and believed in God will be put on one side and have a place in Heaven.
2) Those who have rejected the belief in God and sinned in their lives will be placed on the other side and will go to Hell.

When the Son of Man comes in his glory, and all the angels with him, he will sit on his glorious throne. All the nations will be gathered before him, and he will separate the people one from another as a shepherd separates the sheep from the goats. He will put the sheep on his right and the goats on his left.

Then the King will say to those on his right, 'Come, you who are blessed by my Father; take your inheritance, the kingdom prepared for you since the creation of the world. For I was hungry and you gave me something to eat, I was thirsty and you gave me something to drink, I was a stranger and you invited me in, I needed clothes and you clothed me, I was sick and you looked after me, I was in prison and you came to visit me.'

Then the righteous will answer him, 'Lord, when did we see you hungry and feed you, or thirsty and give you something to drink? When did we see you a stranger and invite you in, or needing clothes and clothe you? When did we see you sick or in prison and go to visit you?'

The King will reply, 'Truly I tell you, whatever you did for one of the least of these brothers and sisters of mine, you did for me.'

Then he will say to those on his left, 'Depart from me, you who are cursed, into the eternal fire prepared for the devil and his angels. For I was hungry and you gave me nothing to eat, I was thirsty and you gave me nothing to drink, I was a stranger and you did not invite me in, I needed clothes and you did not clothe me, I was sick and in prison and you did not look after me.'

They also will answer, 'Lord, when did we see you hungry or thirsty or a stranger or needing clothes or sick or in prison, and did not help you?'

He will reply, 'Truly I tell you, whatever you did not do for one of the least of these, you did not do for me.'

Why sheep and goats? God often describes his people as sheep in scripture. Sheep listen to their shepherd, and follow him. They look to him for all their needs and will suffer without him. What are goats like? Goats are stubborn. They resist being told what to do.

Questions

1) What will happen to those who have lived good lives and believed in God?

2) Where will the Son of Man sit?

3) Which of these is closest in meaning to the **eternal fire**?

Heaven Hell Earth Jerusalem

4) According to the text, what are goats like?

5) What do you think is meant by 'The kingdom prepared for you since the creation of the world.'

6) Answer these true or false questions.
   a) The sheep are put on the right and the goats on the left.
   b) The sheep will go to Hell.
   c) The Goats are the ones that helped others in their lives.
   d) In the story, it is better to be a sheep than a goat.

7) Why are God's people often described as sheep?

8) What are the similarities between God and a shepherd?

Deepen the Moment:

Do you think the decision about the fate of the goats and the sheep is fair?

Fully justify your answer in a short paragraph.

Year 6 Extended Curricular Learning

R.E. – Judgement – the sheep and the goats

Tuesday 23rd February 2021 – Activity 2

VIPs:

Jesus taught his followers that when they died, they would be judged fairly upon the way that they had lived their lives.

Think about what the words justice and fairness mean to you. What are some of the things you think are unjust or unfair? Have you ever acted unjustly or unfairly to others? How did they respond?

In the parable from the Reading for Productivity, Jesus separates his people into those who have lived good lives and believed in God to be given a place in Heaven, and those who have rejected the belief in God and sinned in their lives who will be placed on the other side and will go to Hell.

Task: For your main task today, you will pretend that you were in the crowd of people judged by Jesus and found to be either a 'sheep' or a 'goat'. Write a diary entry to explain your view of what has happened.

Think about:

- What happened?
- How did people react at the time?
- Did Jesus respond to you as you expected?
- Was it fair? (Why/why not - how did your character live their life?)
- How do you feel about those who were treated differently to you?
- Were all of the people you cared about the same as you?
- What have you learned from this?

If you're not feeling confident about what to write, the following words may help:

justice/just	fairness/fair	parable	deserving	undeserving
reward	punishment	Jesus	teachings	lesson

Deepen the moment...

Does this story fit in with the Christian concept of forgiveness?

Reading for Productivity Lesson 3:

Rationing

Rationing was a means of ensuring the fair distribution of food and commodities when they were scarce. It began after the start of WW2 with petrol and later included other goods such as butter, sugar and bacon. Eventually, most foods were covered by the rationing system with the exception of fruit and vegetables.

Rationing was introduced to make sure that everyone had a fair share of the items that were hard to get hold of during the war. When was rationing introduced? Rationing was introduced at the beginning of 1940.

Food rationing lasted for 14 years in Britain, from 1940 until 1954. Rationing continued even after the war ended: Meat rationing continued for 10 years after D-Day (June 1954)

When the Second World War began in September 1939 petrol was the first commodity to be controlled. On 8 January 1940 bacon, butter and sugar were rationed. Meat, tea, jam, biscuits, breakfast cereals, cheese, eggs, lard, milk, canned and dried fruit were rationed subsequently but not all at once.

Meat was the last item to be de-rationed and food rationing ended completely in 1954. One way to get rationed items without coupons, usually at greatly inflated prices, was on the black market.

Bread was never rationed during WW2 in Britain, although it was for a short period after the war. Wheat was in short supply, and to meet this, the extraction rate on flour was raised to produce the wholemeal 'National Loaf'.

What were ration books?

They were books which contained coupons that shopkeepers cut out or signed when people bought food and other items. (People still paid for the goods with money.)

Why were there different colour ration books?

'The colour of your ration book was very important as it made sure you go the right amount and types of food needed for your health.

Buff-coloured ration books - Most adults had this colour

Green ration books - Pregnant women, nursing mothers and children under 5. They had first choice of fruit, a daily pint of milk and a double supply of eggs.

Blue ration books - Children between 5 and 16 years of age. It was felt important that children had fruit, the full meat ration and half a pint of milk a day.

Why did the government issue ration books?

To make sure that everybody got a fair share of the food available.

The government was worried that as food and other items became scarcer, prices would rise and poorer people might not be able to afford things. There was also a danger that some people might hoard items, leaving none for others.

Questions

1. What was the first item to be rationed in WW2?
2. Which food types were exempt from rationing? Why do you think this is?
3. Why was rationing introduced?
4. How long did rationing in the UK last for?
5. What was the final item to be rationed in 1954?
6. What is a commodity?
7. Find and copy a phrase which means to increase the price
8. What colour book did pregnant women have? How was their ration different from others?

Deepen the Moment:

How would you feel if rationing was introduced now? What impact would it have on your day-to-day life?

Year 6 Extended Curricular Learning

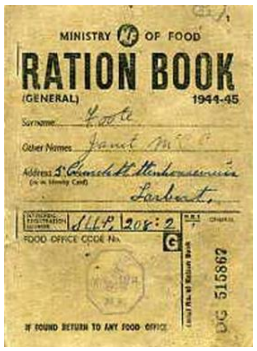
D.T. – Rationing

Wednesday 24th February 2021 – Activity 3

VIPs:

- Britain stopped importing food when the war started because ships bringing the food were destroyed by German submarines.
- The government knew that this would lead to a shortage of food, so rationing was introduced in January 1940.

During rationing, people had to get their ration book stamped by the shopkeeper.
Why do you think this was?



People were asked to save leftover food, which was collected in big bins. Why do you think this was?

WW2 was a worrying time for many people in Great Britain. A lot changed and it was the Government's job to keep people informed whilst at the same time, reassuring them and making them feel safe.

Task: Imagine you work for the Ministry of Food in 1940; use your knowledge about rationing to create a leaflet that could be distributed to the people of Great Britain.

Make sure the leaflet explains: What rationing is, How it will work and Why we need it.

You should include historical facts taken from the Reading for Productivity to make your leaflet realistic and accurate.

Think about your audience and how to get your message across in a clear and simple way.
How will it make them fell safe and reassured?
(You could even use an old tea bag to stain the paper so it looks old)

Deepen the moment…

Butter, sugar, tea, meat, eggs, cheese, chocolate, jam, sweets and milk were all rationed, whilst potatoes, fruit and fish were not.
How do you think rationing changed the British diet?

Reading for Productivity Lesson 4:

What is Water Resistance?

Water resistance is a type of force that uses **friction** to slow things down that are moving through water. It is often called **drag**. Water resistance doesn't have to be just water, it can happen to objects moving through any type of **fluid**. Water resistance happens because of the **particles** in water or the fluid. As the object moves through it **collides** with the particles which try to **slow** it down.

There are a number of factors that affect this force:

- Different shaped objects have different levels of **water resistance**, **streamlined** shapes have less water resistance and can therefore move through water much more easily. If an object is turned sideways, it will likely be easier to push it through the water. This is why fish are shaped the way they are. The **area** is one of the biggest **factors affecting water resistance**. If an object has a larger area, it will collide more with water particles and therefore have a bigger drag force. If you spread out your body jumping into water you will encounter more water resistance.
- **Velocity** can affect this force too. This is how fast the object initially travels through the water. If an object has a bigger velocity, it will have a stronger drag force. The faster it is going, the stronger the drag force.
- The **texture** of the object is another common factor affecting the force.
- The **density** of the fluid it is moving through can also affect it. Density is how much matter is packed into a substance, how tightly packed the particles are. The more dense the water, the greater the drag force.

Examples of using Water Resistance

A similar force to **water resistance** is **air resistance** which is a type of friction between the air and another object, like an aeroplane. The air particles hit the aeroplane making it harder to move through the air. **Water resistance** is the same as this but with objects moving through the water. For example, if you go swimming, you have to push the water out of the way in order to move forward. This is because there is friction between your skin and the water particles.

Science of Swimming - The level of **water resistance** increases if your body is completely submerged in the water and therefore it is harder to move. This is why swimmers tend to go towards the surface as much as possible because moving through air resistance allows a better speed of movement than water resistance.

Penguins and Water Resistance - Penguins are able to glide through the water with little water resistance because they are slim and have bullet-shaped bodies. Although, their feathers do slow them down. To change their direction, they can stick out their flippers which steer them against the water.

Questions

1) What does the word drag mean?

2) Which word describes how the particles make contact?

Collide

3) How does the density of the water affect the movement of an object in water?

4) Why do you think that **water resistance** increases if your body is completely submerged in the water?

5) Why do penguins find it easy to swim through the water?

6) Name another animal which is able to glide through the water with little water resistance. Explain why this is.

Deepen the Moment:

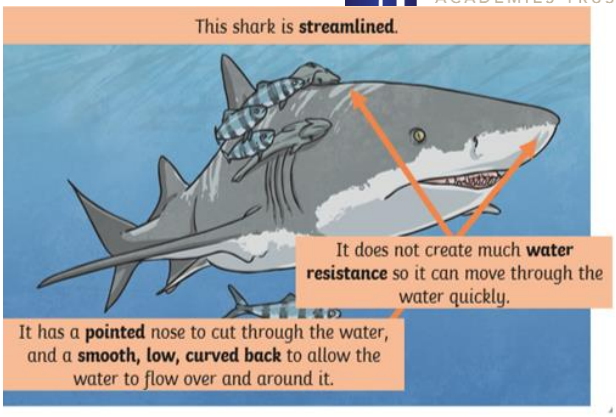
Can water resistance be a good thing?

Think about your own experiences. When was water resistance useful and when did hinder you?

Year 6 Extended Curricular Learning

Science – Water Resistance

Thursday 25th February – Activity 4



VIPs:

- Water resistance is a force that tries to slow things down that are moving through water. It is a type of friction and is sometimes called drag.
- The more streamlined an object is, the less water resistance will occur.
- Streamlined objects have the smallest surface area at the front possible, therefore they are usually long and thin to move through water more easily.

Today, you are going to create your own investigation in order to answer the following question:

How does the shape of an object effect the time taken to travel through water?

When planning your experiment, think about these questions:

What equipment will you need?
What method will you use?
How will you make it a fair test?
What is the dependent/independent variable?
What is your prediction?

The following video shows one method for how, with a clear container and a blob of blue-tac / play-doh, you could consider investigating how the shape of an object affects how streamlined it is and how quickly it travels through water: https://www.youtube.com/watch?v=a85Qepkt6J0

You could investigate which shapes fall most quickly through water and which shape is slowest.

Once you have concluded the results of your experiment, draw a diagram to represent how water resistance worked against the objects in your experiment.

You should also include a labelled diagram of the shapes which were most, and least, streamlined.

Deepen the moment...

True or false?

The thinner a shape is, the more streamlined it will be.

Reading for Productivity Lesson 5:

Steve Jobs

Steven Paul Jobs (February 24th 1955 – October 5th 2011) was an American business magnate and investor. He was best known for his time as chairman and co-founder of Apple. Jobs is widely recognized as a pioneer of the computer revolution of the 1970s and 1980s, along with Apple co-founder Steve Wozniak.

Steve Jobs was born in San Francisco, California, and was put up for adoption. He was then raised in the San Francisco Bay Area and attended Reed College; however in 1972 he dropped out. Two years later, he traveled through India seeking enlightenment and studying Buddhism.

Jobs co-founded Apple in 1976 with Steve Wozniak. Together the duo gained fame and wealth a year later with their Apple II computer. It was followed, in 1984, by the successful Macintosh computer. However, Jobs was forced out of Apple in 1985 after a long power struggle with the company's board. That same year, he founded NeXT, a company that specialized in computers for higher-education and business. In addition, he helped to develop the visual effects industry when he founded the computer graphics division of Lucasfilm in 1986. This new company was called Pixar. Pixar went on to produce the first 3D computer animated film in 1995 called Toy Story.

NeXT merged with Apple in 1997, and Jobs became the head of his former company within a few months. He was largely responsible for helping to revive Apple, which had been on the verge of bankruptcy. He worked closely with designer Jony Ive to develop a line of products that led to the iMac, iTunes, the iPod, the iPhone and the iPad.

Unfortunately, Jobs was diagnosed with a pancreatic neuroendocrine tumor in 2003. He died from factors relating to the tumor at the age of 56 on October 5th 2011.

Questions

1 – Between what years did he live? (1)

2 – How is he best known? (1)

3 – How is he widely recognized? (1)

4 – What year did he travel through India and why? (2)

5 – Explain how Apple started and how the company developed from 1976 until he was forced out in 1985. (2)

6 – How was Jobs forced out of Apple in 1985? (2)

7 – Which two companies did he go on to found? (1)

8 – How did Jobs return to being the head of Apple once again? (1)

9 – Which products were developed to bring Apple back from the verge of bankruptcy? (1)

10 – What was he diagnosed with in 2003? (1)

11 – How did he die and on what date? (1)

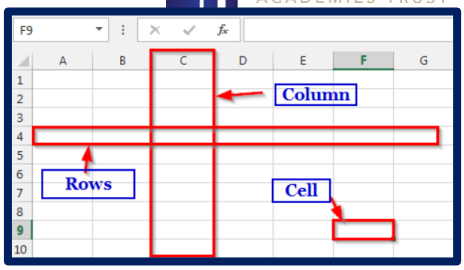
Deepen the Moment:

Write two paragraphs to explain to younger students who Steve Jobs was; remember to keep your language simple and to use the correct punctuation throughout. (3)

Year 6 Extended Curricular Learning

Computing – Steve Jobs

Friday 26th February 2021 – Activity 5



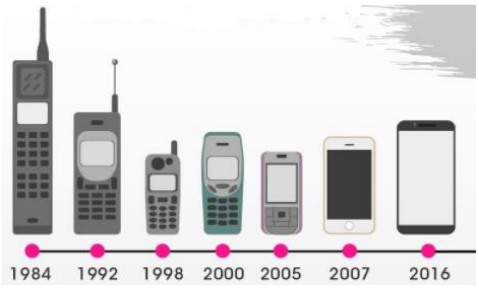
Option 1: Design outcome

VIPs:

- Hardware refers to the machines, wiring, and other physical components of a computer or other electronic system.
- Software refers to the programs and other operating information used by a computer or electronic system.

Steve Jobs was one of the founders of Apple Inc. who, amongst a wealth of other products, produced the iPhone – a product which many of you and your parents will use.

Phones have changed dramatically over the last 40 years, to almost unrecongisable degrees.



Task: Think about how you see the phone changing over the next 40 years of your lifetime. Design a phone which will be used in the future. *Remember to label your design, including what hardware and software features it includes.*

You should write an explanation of how its new features will benefit the user.

What will it be able to do? Where will people keep them? Will it even look like a phone?

Deepen the moment…

True or False: Phones have helped people in society? Explain your thoughts.

Option 2: Computing outcome

If you would like to try a Computer-based task at home, and have a computer which has access to a spreadsheet software (like Microsoft Excel), you may want to try completing this formatting task instead.

VIPs:

- Information on a spreadsheet goes into a cell.
- Each cell is named by the column and row in which it is located.

The following website has a good summary of using Excel to format
https://www.schoolsofkingedwardvi.co.uk/ks2-computing-information-technology-5-spreadsheets-charts/

Task: Create a spreadsheet which you can use to automatically calculate some data you put in. e.g. the average colour of cars which pass your window in 10 minutes.

This Week's Very Important Principles (VIPs):

- When we think that someone or something can put a feeling in us or take away our wellbeing, this is an illogical thought.
- When we don't think that someone or something can put a feeling in us or take away our wellbeing, this is a logical thought.

Previous Very Important Principles (VIPs):

- When we think that someone or something can put a feeling in us or take away our wellbeing, this is an illogical thought.
- When we don't think that someone or something can put a feeling in us or take away our wellbeing, this is a logical thought.

What advice would you give to your friend who didn't feel their 'best self'?

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Can you write a definition of 'logic' and 'false logic'?

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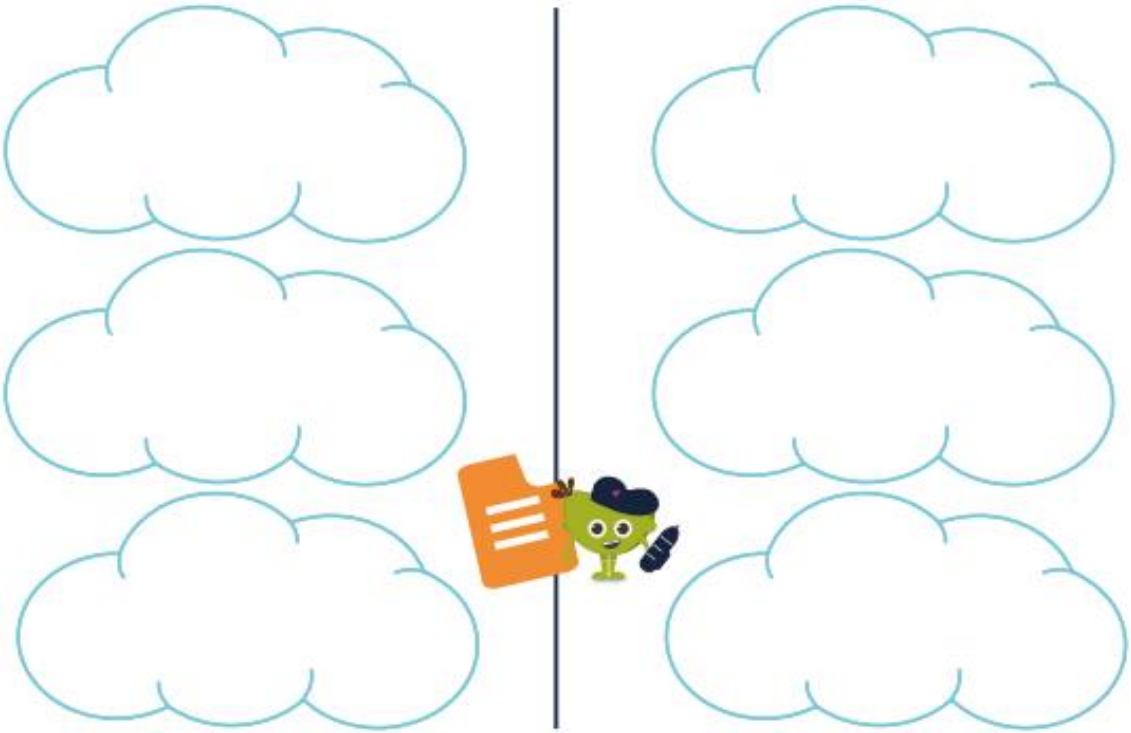
Join this week's iheart session to find out more about logic and false logic thoughts before completing this task.

Session 2
Worksheet

Round earth Vs Flat earth

Instructions - Jot down some implications of how people thought, felt and behaved when they believed that the earth was flat, and when they realised it was round.



Fairtrade Fortnight

Monday 22nd February - Sunday 7th March 2021

Monday 22nd February marks the beginning of Fairtrade fortnight . This Fairtrade Fortnight we are thinking about what we want the world to be and the ways in which we can make choices to shape the world.

To make a choice that is good for us, we need to know a bit about what our options are. But the choices we make don't just affect us. Many of our choices will have an effect on other people. Sometimes they will have a big effect.

Today, you have already made choices that impact the lives of many other people around the world.The things we buy and enjoy have a big effect on the lives of other people. Everything we eat, wear or play with has been grown or made by someone somewhere, and the products we buy will make a difference to the sort of lives those people have.The more we learn about the people we rely upon, the more likely we are to want to make good choices.

Task 1 : To join in with some of the activities you can do to understand fairtrade better, why not follow some of the links below:

Come on in to Coobana: a board game to help students learn about Fairtrade, Coobana and the banana trade: https://schools.fairtrade.org.uk/teaching-resources/come-coobana-board-game/

The journey of a Fairtrade football: a presentation explaining the process of how footballs are made and how Fairtrade can help: https://schools.fairtrade.org.uk/teaching-resources/journey-fairtrade-football/

A faritrade quiz: https://schools.fairtrade.org.uk/teaching-resources/primary-school-quiz-for-fairtrade-fortnight-2021/

Or, Visit: https://schools.fairtrade.org.uk/teaching-resources/climate-fairtrade-and-you-education-pack-for-primary-schools/ for the full Primary Schools pack.

Task 2: Watch this video to find out more about the things you can do to live a fairtrade-conscious lifestyle: https://schools.fairtrade.org.uk/teaching-resources/change-the-world-through-your-choices/

Task 3: Make a poster outlining some of the ways people can help to make the world a fairer place by being conscious of fairtrade.

Why not share some of the Fairtrade activities you've enjoyed with your teachers on Class Dojo or post them on to your school's social media platforms. You can tag @FairtradeUKEd and use the hashtag #FairtradeTogether on social media posts!