Year 6

Mathematics

Arithmetic: Paper 1

Name	
Date	

/40 total marks

1 1024 - 100 =

1 mark

2 68 x 7 =

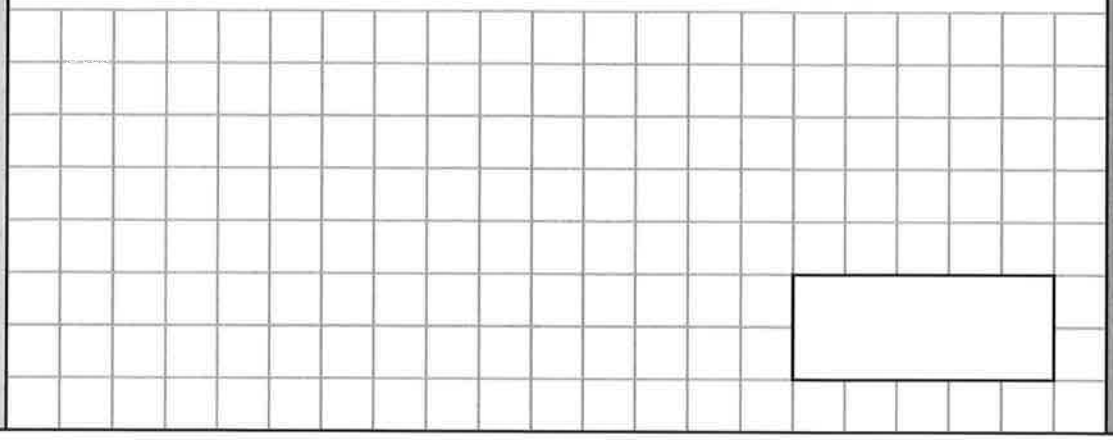
1 mark

3 2.6 + 0.5 =

1 mark

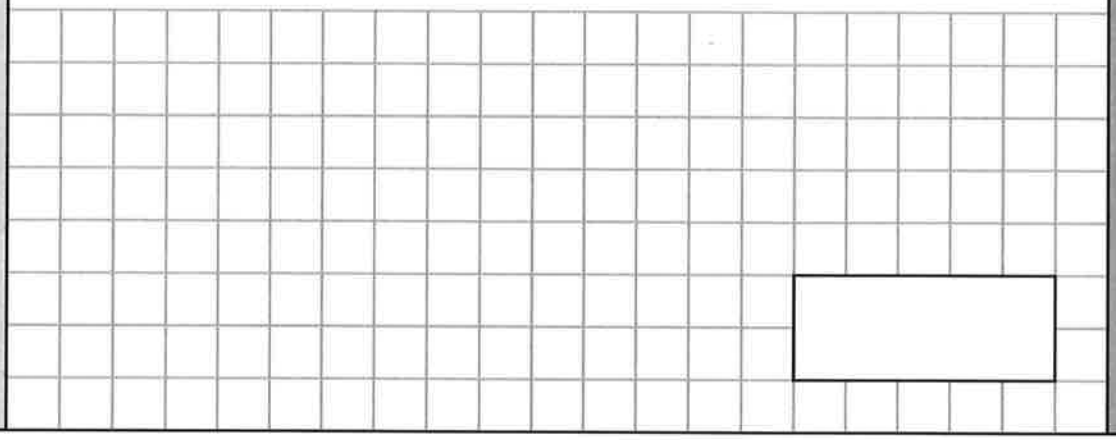
Total for this page

4 $15 \times 5 =$



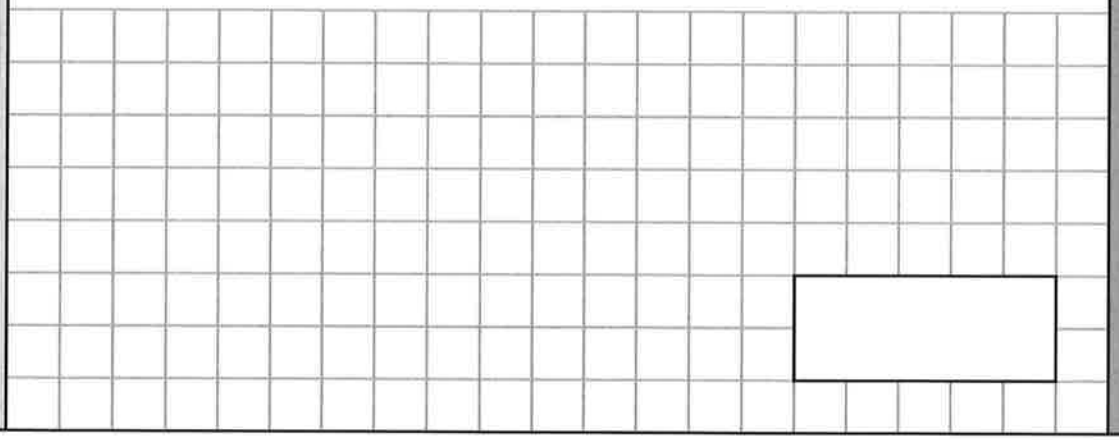
1 mark

5 $\square = 4792 + 836$



1 mark

6 $378 + 60 =$



1 mark

Total for this page

7 $5 \times 9 =$

1 mark

8 $6.012 + 0.7 =$

1 mark

9 $6 \times 3 \times 6 =$

1 mark

Total for this page

10 $\frac{5}{6} - \frac{1}{6} =$

1 mark

11 $70 \times 7 =$

1 mark

12 $6^2 + 7 =$

1 mark

Total for this page

13 7.56 x 100 =

1 mark

14 3980 - 827 =

1 mark

15 1.3 x 1000 =

1 mark

Total for this page

16 $\frac{3}{10} + \frac{4}{10} =$

1 mark

17 25% of 1400 =

1 mark

18 1210 ÷ 11 =

1 mark

Total for this page

19 140 - 68.2 =

1 mark

20 30 000 + 4562 =

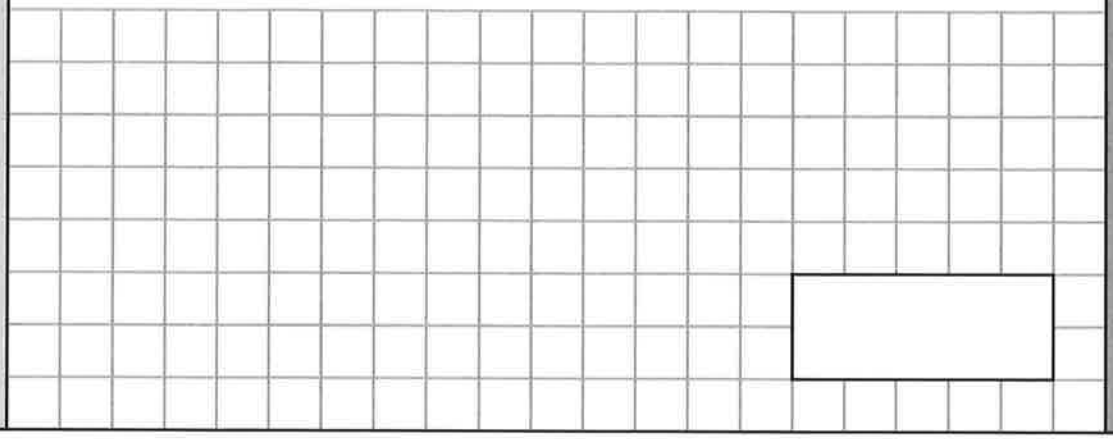
1 mark

21 2.15 x 8 =

1 mark

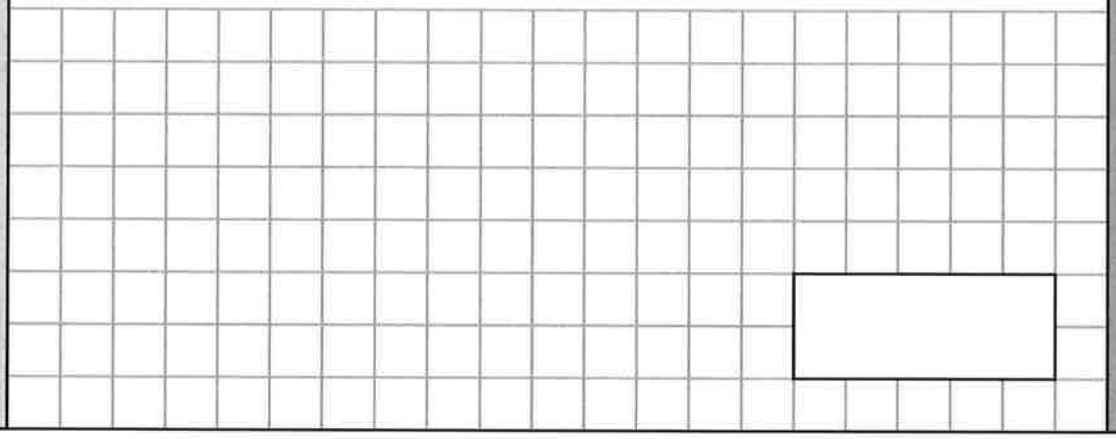
Total for this page

22 $4572 \div 6 =$



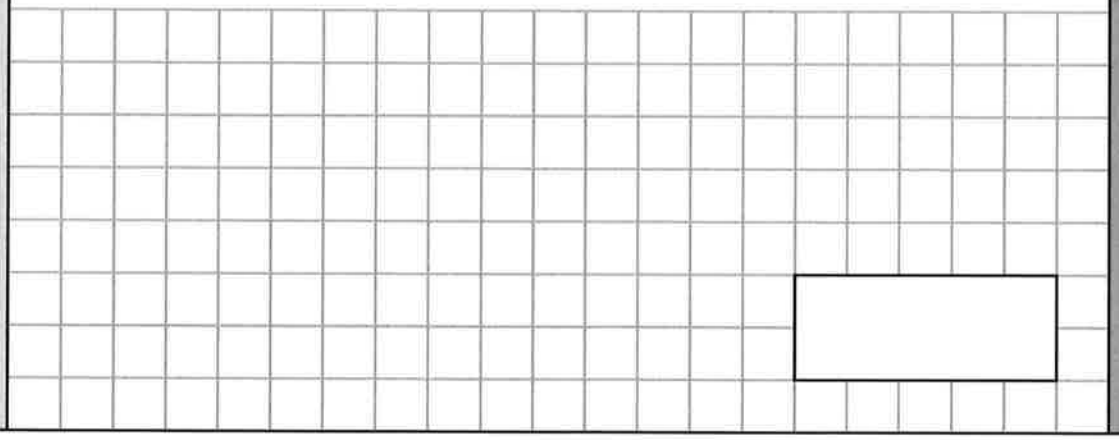
1 mark

23 $22.3 - 6.42 =$



1 mark

24 $670\,381 - 34\,917 =$



1 mark

Total for this page

25 $\frac{1}{3} \times \frac{1}{5} =$

1 mark

26 $45 \times 19 =$

		4	5
x	1	9	

2 marks

Total for this page

27 85% of 280 =

1 mark

28 $9 \times 2\frac{1}{4} =$

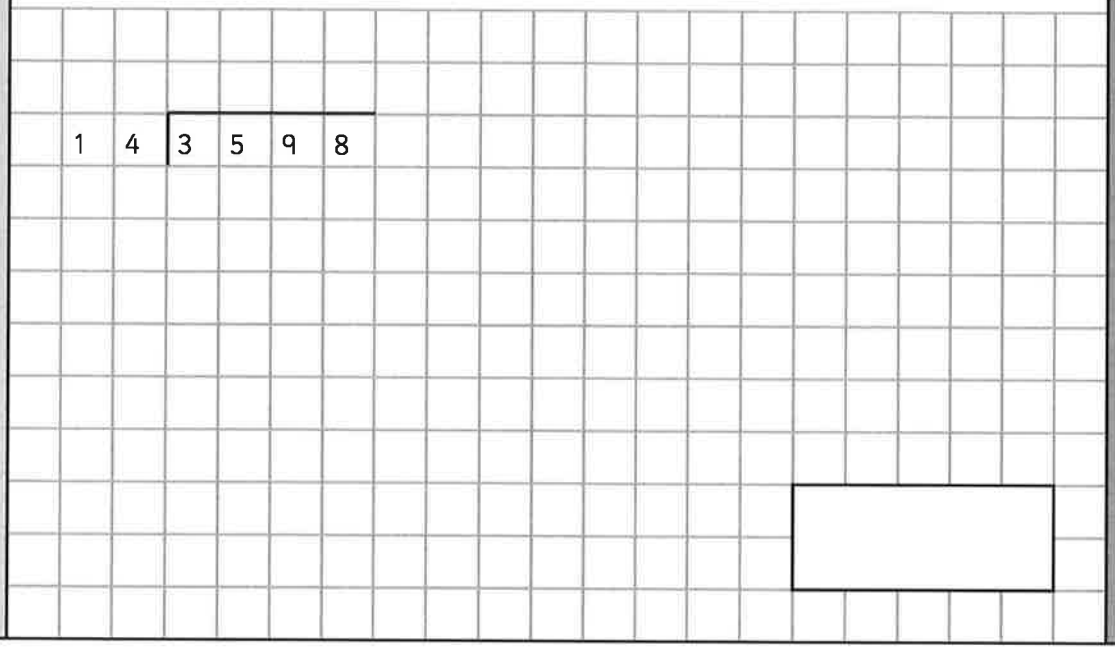
1 mark

29 $\frac{2}{3} + \frac{1}{4} =$

1 mark

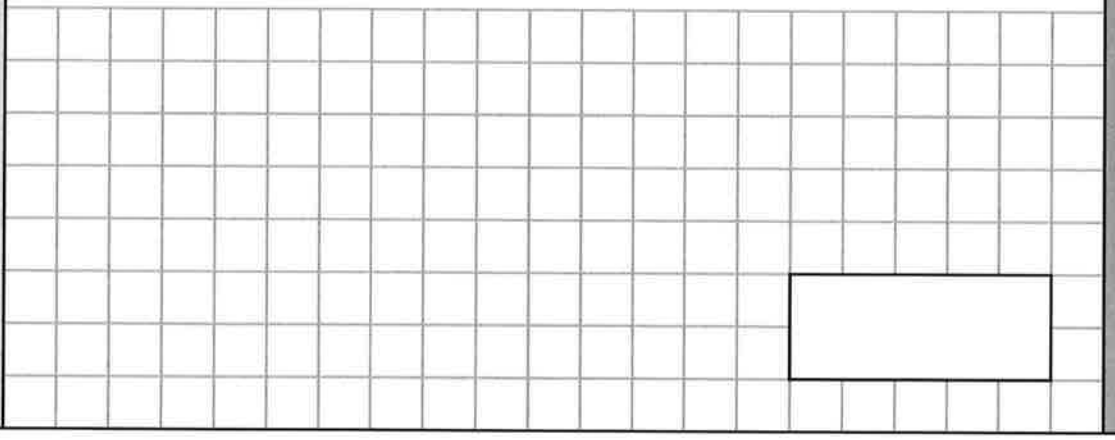
Total for this page

30 $3598 \div 14 =$



2 marks

31 $\frac{3}{8} \div 3 =$



1 mark

Total for this page

32 $2 \times (17 - 6) =$

1 mark

33 $786 \times 56 =$

		7	8	6
x			5	6

2 marks

Total for this page

34 $2\frac{1}{3} - \frac{2}{5} =$

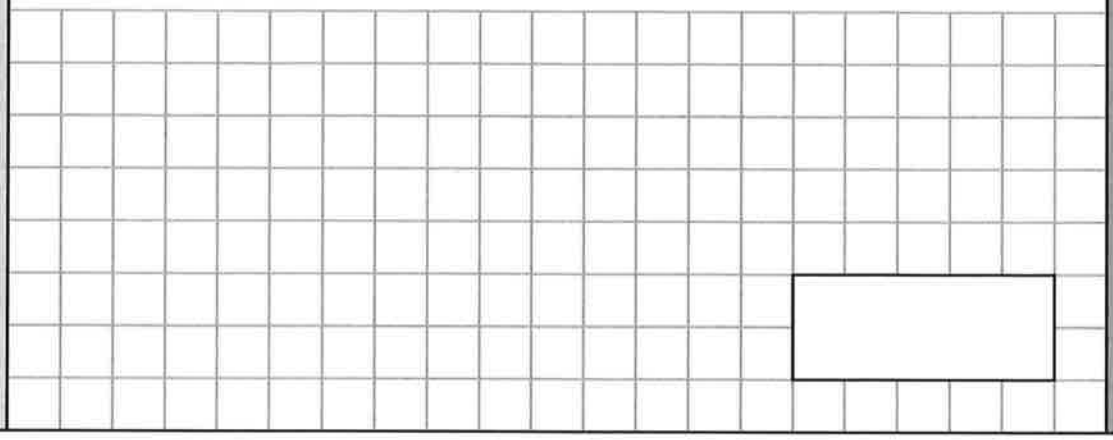
1 mark

35 $2795 \div 43 =$

2 marks

Total for this page

36 $\frac{2}{3} \div 3 =$



1 mark

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Answer Sheet: Key Stage 2: Arithmetic Paper 1

Guidance: Children will have 30 minutes for this test. Long division and long multiplication questions are worth **2 marks** each. Children will be awarded 2 marks for a correct answer. They may get 1 mark for showing a formal method. All other questions are worth 1 mark each.

question	answer	marks
1	**924**	1
2	**476**	1
3	**3.1**	1
4	**75**	1
5	**5628**	1
6	**438**	1
7	**45**	1
8	**6.712**	1
9	**108**	1
10	$\frac{2}{3}$ or $\frac{4}{6}$	1
11	**490**	1
12	**43**	1
13	**756**	1
14	**3153**	1
15	**1300**	1
16	$\frac{7}{10}$	1
17	**350**	1
18	**110**	1
19	**71.8**	1
20	**34 562**	1
21	**17.2**	1

question	answer	marks
22	**762**	1
23	**15.88**	1
24	**635 464**	1
25	$\frac{1}{15}$	1
26	**855**	2
27	**238**	1
28	**20** $\frac{1}{4}$	1
29	$\frac{11}{12}$	1
30	**257**	2
31	$\frac{1}{8}$	1
32	**22**	1
33	**44 016**	2
34	**1** $\frac{14}{15}$	1
35	**65**	2
36	$\frac{2}{9}$	1
		Total 40

Tues 23 Feb
Teaching

Find Pairs of Values (1)

Notes and Guidance

Children use their understanding of substitution to consider what possible values a pair of variables can take.

At this stage we should focus on integer values, but other solutions could be a point for discussion.

Children can find values by trial and improvement, but should be encouraged to work systematically.

Mathematical Talk

Can a and b be the same value?

Is it possible for a or b to be zero?

How many possible integer answers are there? Convince me you have them all.

What do you notice about the values of c and d?

Varied Fluency

- a and b are variables:

$$a + b = 6$$

There are lots of possible solutions to This equation.
Find 5 different possible integer values for a and b.

a	b

- X and Y are whole numbers.
  - X is a one digit odd number.
  - Y is a two digit even number.
  - $X + Y = 25$

Find all the possible pairs of numbers that satisfy the equation.

- $$c \times d = 48$$

What are the possible integer values of c and d?
How many different pairs of values can you find?

Tues 23 Feb

Find pairs of values (1)

White Rose Maths

1 **a)** Here is an equation.

○ + □ = 12

Find six possible pairs of values for the circle and square.

○						
□						

b) Here is another equation.

$x + y = 12$

Find six possible pairs of values for x and y.

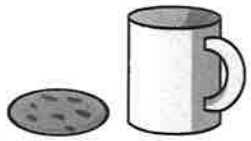
x						
y						

c) What is the same and what is different about part a) and part b)?

_____

_____

2 Kim buys these two items from a cafe.



The total cost is 90p.

a) What could the cost of each item be?

b) Compare answers with a partner.

c)

Is this possible? _____

Explain your answer.

_____

_____

3 a and b are whole numbers.

$a + b = 8$

Complete the table to show different possible values for a and b.

a	0	1	2					
b								
$a + b$	8	8						

What patterns do you notice?

4 c and d are both numbers less than 20

$c - d = 4$

Complete the table to show possible values for c and d.

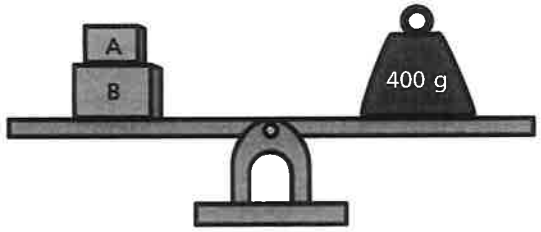
c								
d								
$c - d$								

5 a and b are integers.

$ab = 24$

List all the possible values for a and b.

6 Some scales are balanced.



What could the masses of the boxes be?

A = B =

7 Rosie has three number cards.

- The sum of the cards is 12
- x is greater than y and y is greater than z.
- All the numbers are greater than zero.

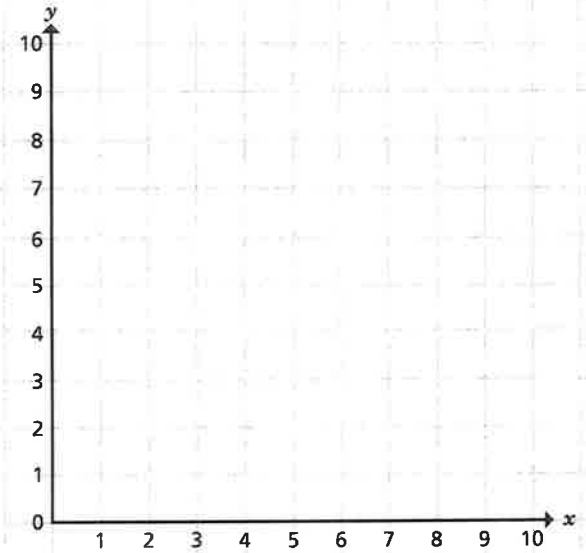
List all the possible values of x, y and z.

x							
y							
z							

8 Eva is plotting co-ordinates (x, y) on a grid.

She is only plotting co-ordinates where $x + y = 10$

Plot all the points Eva can plot on the grid.

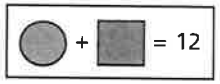


Answers

Find pairs of values (1)

White Rose Maths

1 **a)** Here is an equation.



Find six possible pairs of values for the circle and square.

e.g.

●	1	2	3	4	5	6
■	11	10	9	8	7	6

b) Here is another equation.

$x + y = 12$

Find six possible pairs of values for x and y.

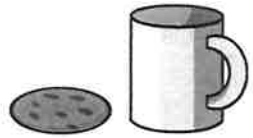
e.g.

x	1	2	3	4	5	6
y	11	10	9	8	7	6

c) What is the same and what is different about part a) and part b)?

Answers are the same, representations are different.

2 Kim buys these two items from a cafe.



The total cost is 90p.

a) What could the cost of each item be?

e.g.

	10p	20p	30p	40p	50p	60p
	80p	70p	60p	50p	40p	30p

b) Compare answers with a partner.

c)

Is this possible? NO

Explain your answer.

The cookie wouldn't cost anything.

3 a and b are whole numbers.

$a + b = 8$

Complete the table to show different possible values for a and b.

a	0	1	2	3	4	5	6	7
b	8	7	6	5	4	3	2	1
$a + b$	8	8	8	8	8	8	8	8

What patterns do you notice?

4 c and d are both numbers less than 20

$$c - d = 4$$

Complete the table to show possible values for c and d.

c	19	18	17	16	15	14	13	12
d	15	14	13	12	11	10	9	8
$c - d$	4	4	4	4	4	4	4	4

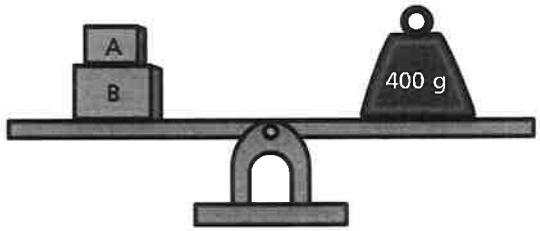
5 a and b are integers.

$$ab = 24$$

List all the possible values for a and b.

a	1	2	3	4	6	8	12	24
b	24	12	8	6	4	3	2	1

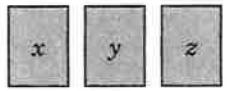
6 Some scales are balanced.



What could the masses of the boxes be?

eg A = 100g B = 300g

7 Rosie has three number cards.



- The sum of the cards is 12
- x is greater than y and y is greater than z.
- All the numbers are greater than zero.

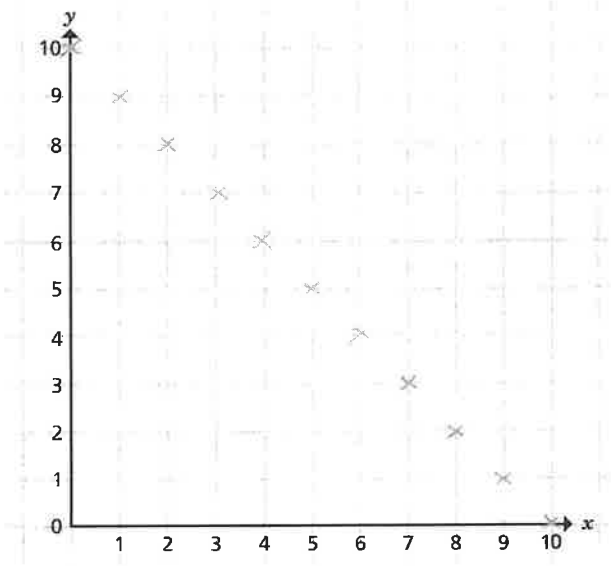
List all the possible values of x, y and z.

x	9	8	7	6	7	6	5
y	2	3	4	5	3	4	4
z	1	1	1	1	2	2	3

8 Eva is plotting co-ordinates (x, y) on a grid.

She is only plotting co-ordinates where $x + y = 10$

Plot all the points Eva can plot on the grid.



Tues 23 Feb
Mastery

Find Pairs of Values (1)

Reasoning and Problem Solving

a, b and c are integers between 0 and 5

$$a + b = 6$$
$$b + c = 4$$

Find the values of a, b and c

How many different possibilities can you find?

Possible answers:

$a = 4 \quad b = 2$
$c = 2$

$a = 3 \quad b = 3$
$c = 1$

$a = 2 \quad b = 4$
$c = 0$

x and y are both positive whole numbers.

$$\frac{x}{y} = 4$$

Dora says,

x will always be a multiple of 4

Jack says,

y will always be a factor of 4

Only one is correct – who is it?
Explain your answer.

Possible answer:

Dora is correct as x will always have to divide into 4 equal parts e.g. $32 \div 8 = 4$, $16 \div 4 = 4$

Jack is incorrect. $40 \div 10 = 4$ and 10 is not a factor of 4

Teaching
Wed 24 Feb

Find Pairs of Values (2)

Notes and Guidance

Building on from the last step, children find possible solutions to equations which involve multiples of one or more unknown.

They should be encouraged to try one number for one of the variables first and then work out the corresponding value of the other variable. Children should then work systematically to test if there are other possible solutions that meet the given conditions.

Mathematical Talk

What does $2a$ mean? (2 multiplied by an unknown number)
What is the greatest/smallest number 'a' can be?

What strategy did you use to find the value of 'b'?

Can you draw a bar model to represent the following equations:
$3f + g = 20$
$7a + 3b = 40$
What could the letters represent?

Varied Fluency

- In this equation, a and b are both whole numbers which are less than 12.

$$2a = b$$

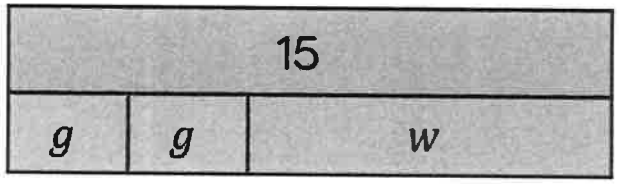
Write the calculations that would show all the possible values for a and b.

- Chose values of x and use the equation to work out the values of y.

$$7x + 4 = y$$

Value of x	Value of y

- $2g + w = 15$
g and w are positive whole numbers.
Write down all the possible values for g and w, show each of them in a bar model.



Wed 24 Feb

Find pairs of values (2)

White Rose Maths

1 Class 6 are trying to solve a number puzzle.

▲ + ▲ + ● = 10

a)

Dexter: The triangle could be 3 and the circle could be 4

Do you agree with Dexter? _____

Explain why.

_____

_____

b)

Dora: The triangle is worth 4

What is the value of the circle in Dora's number puzzle?

● = □

c) Find other pairs of values that the triangle and circle could equal.

Find three pairs.

▲ = □ ● = □ ▲ = □ ● = □

▲ = □ ● = □

2 a and b are whole numbers.

$2a + b = 14$

Complete the table to show different possible values for a and b.

a	0	1	2	3	4	5	6	7
$2a$	0	2						
b	14							
$2a + b$	14	14	14	14				

3 c and d are both integers less than 15 but greater than zero.

$3c - d = 2$

Complete the table to show different possible values for c and d.

c	1	2	3	4	5
$3c$	3				
d	1				
$3c - d$	2	2	2		

b) Explain why there are no other possible values for c and d.

_____

_____

4 x and y are both multiples of 5 less than 100

If $2x = y$, circle the possible values of x and y.

$x = 20, y = 20$

$x = 10, y = 20$

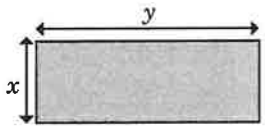
$x = 20, y = 10$

$x = 35, y = 70$

$y = 90, x = 45$

5 Here is a rectangle.

x and y are both integers.



The rectangle has a perimeter of 28 cm.

a) Write an equation to represent the perimeter of the rectangle.

b) List all the possible pairs of values for x and y.

Compare answers with a partner. How do you know you have found all the possible values?

6 Aisha is buying some stationery for school.

She spends exactly £1

List the possible combinations of pencils and pens that Aisha could have bought.

7 Ron has four digit cards.

- Two of the cards have the same value.
- All of the cards are less than 10 but greater than zero.
- All of the cards are odd.
- The sum of the four cards is 24

Find two possible sets of cards.

Set 1 ☐ ☐ ☐ ☐

Set 2 ☐ ☐ ☐ ☐

8 $2ab = 48$

a) Find a pair of possible values for a and b.

$a =$ ☐ $b =$ ☐

b) Work with a partner to find as many pairs of values as you can.

Find pairs of values (2)

Answers

1 Class 6 are trying to solve a number puzzle.

▲ + ▲ + ● = 10

a)

The triangle could be 3 and the circle could be 4

Dexter

Do you agree with Dexter? Yes

Explain why.

3 + 3 + 4 = 10

b)

The triangle is worth 4

Dora

What is the value of the circle in Dora's number puzzle?

● = 2

c) Find other pairs of values that the triangle and circle could equal.

Find three pairs.

▲ = 1 ● = 8

▲ = 2 ● = 6

▲ = 5 ● = 0

2 a and b are whole numbers.

$2a + b = 14$

Complete the table to show different possible values for a and b.

a	0	1	2	3	4	5	6	7
$2a$	0	2	4	6	8	10	12	14
b	14	12	10	8	6	4	2	0
$a + b$	14	14	14	14	14	14	14	14

3 c and d are both integers less than 15 but greater than zero.

$3c - d = 2$

Complete the table to show different possible values for c and d.

c	1	2	3	4	5
$3c$	3	6	9	12	15
d	1	4	7	10	13
$3c - d$	2	2	2	2	2

b) Explain why there are no other possible values for c and d.

If c was 16 it would be greater than 15

4 x and y are both multiples of 5 less than 100

If $2x = y$, circle the possible values of x and y.

$x = 20, y = 20$

$x = 10, y = 20$

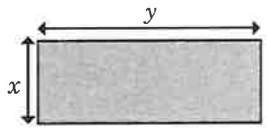
$x = 20, y = 10$

$x = 35, y = 70$

$y = 90, x = 45$

5 Here is a rectangle.

x and y are both integers.



The rectangle has a perimeter of 28 cm.

a) Write an equation to represent the perimeter of the rectangle.

$2x + 2y = 28$

b) List all the possible pairs of values for x and y.

$x = 1 \quad y = 13 \qquad x = 5 \quad y = 9$

$x = 2 \quad y = 12 \qquad x = 6 \quad y = 8$

$x = 3 \quad y = 11$

$x = 4 \quad y = 10$

Compare answers with a partner. How do you know you have found all the possible values?

6 Aisha is buying some stationery for school.

She spends exactly £1

List the possible combinations of pencils and pens that Aisha could have bought.

10 pencils 6 pens & 1 pencil

2 pens & 7 pencils

4 pens & 4 pencils

7 Ron has four digit cards.

- Two of the cards have the same value.
- All of the cards are less than 10 but greater than zero.
- All of the cards are odd.
- The sum of the four cards is 24

Find two possible sets of cards.

Set 1 | 1 | 5 | 9 | 9 |

Set 2 | 1 | 7 | 7 | 9 |

8 $2ab = 48$

a) Find a pair of possible values for a and b.

e.g. $a =$ 6 $\quad b =$ 4

b) Work with a partner to find as many pairs of values as you can.

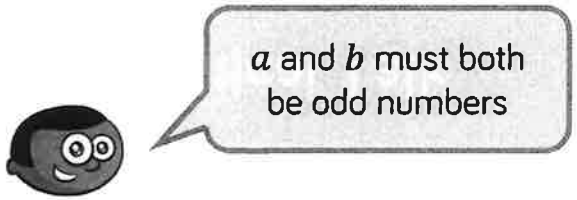
mastery 24 Feb

Find Pairs of Values (2)

Reasoning and Problem Solving

$ab + b = 18$

Mo says,



Is Mo correct?
Explain your answer.

Possible answer:

Mo is incorrect. Children may give examples to prove Mo is correct e.g. if $a = 5$ and $b = 3$, but there are also examples to show he is incorrect e.g. $a = 2$ and $b = 6$ where a and b are both even.

Large beads cost 5p and small beads cost 4p

Rosie has 79p to spend on beads.

4p 5p

How many different combinations of small and large beads can Rosie buy?

Can you write expressions that show all the solutions?

Possible answers:

$3l + 16s$
$7l + 11s$
$11l + 6s$
$15l + s$

Thursday 25 Feb

TARGET To list all possible outcomes of combinations of two variables.

Examples

1. Adult tickets for a concert cost £5. Children's tickets cost £3. A group of people pay £46 for their tickets. Find all the possible combinations of adult and child tickets for this amount.

Answer
2 adult, 12 child
5 adult, 7 child
8 adult, 2 child

2. Find all possible solutions for this equation

$3x + 4y = 53$

Answer
$x = 3, y = 11$ $x = 11, y = 5$
$x = 7, y = 8$ $x = 15, y = 2$

A

1. A class of 25 children are asked to get into groups of 2 or 3. Copy and complete the list showing all the possible ways this can be done.

   2 TWOS, 7 THREES
   5 TWOS, ☐ THREES
   ☐ TWOS, 3 THREES
   ☐ TWOS, ☐ THREES

2. The same 25 children are then asked to get into groups of 3 or 4. List all the possible ways this can be done.

3. Esme has 2p and 5p coins only. She has 39p. List all the possible combinations of 2p and 5p coins which can make 39p.

4. Andy has 46 straws. Find all the possible ways he can use all 46 straws to make squares and triangles.

B

1. A farmer has 86 eggs. The eggs are put into boxes of 6 or 8. Find all the possible ways in which all 86 eggs can be put into boxes.

2. A baker makes 150 cakes. The cakes are packed in boxes of 4 or 9. Find all the possible ways in which all the cakes can be packed.

For each equation list all the possible values of x and y.

3. $2x + y = 10$
4. $3x + 2y = 20$
5. $x + 4y = 22$
6. $5x + 3y = 37$
7. $3x + 4y = 38$
8. $2x + 5y = 43$
9. $6x + y = 34$
10. $4x + 5y = 47$

C

1. The angles of a quadrilateral are all multiples of 5°. Three of the angles are equal and larger than the fourth angle. Find all the possible combinations of angle sizes of the shape.

2. A cinema has 16 or 20 seats in each row. There are 412 seats in the cinema. Find all the possible combinations of rows of 16 and 20 which result in 412 seats.

For each equation list all the possible values of x and y.

3. $7x + 5y = 94$
4. $3x + 8y = 100$
5. $5x + 9y = 132$
6. $10x + 3y = 195$
7. $2x + 11y = 127$
8. $3x + 5y = 81$
9. $4x + 7y = 113$
10. $12x + 5y = 238$

Answers

9 $2s + 6 = 15$ $s = 4{\cdot}5$ cm
10 $4l - 6 = 26$ $l = 8$ cm
11 $4w^2 = 36$ $w = 3$ cm
12 Let y be the longest side.

$\frac{6x}{2} = 24$

$x = 8$ cm

$6 + x + y = 24$

$y = 10$ cm

Page 82

A

1 $p = 2a + b$
2 $p = 2d + 2e$
3 $p = 5c$
4 $p = 4f + 2g$
5 $s = 2p$
6 $c = 100\,000k$
7 $d = 7w$
8 $s = 4h$
9 $g = 1000k$
10 $h = 24d$

11 a) 180 **b)** 720
12 a) 48 cm² **b)** 120 cm²

Page 83

B

1 $a = 180 - b$
2 $a = 360 - 7b$
3 $a = 360 - 2b - c$
4 $a = 180 - 2b$

9 a) 31·5 cm² **b)** 7·5 cm²
10 a) 18 litres **b)** 90 litres

C

1 perimeter $= 2(a + b + c)$
area $= a^2 - c^2$
2 perimeter $= 5a + 2b + c$
area $= ac + ab$
3 30 cm³
4 12 000 cm³
5 540°
6 900°

7 $c = £(25 + 50h)$
8 $p = \left(40 - \frac{m}{10}\right)$ litres

9 a) $m = 2r$ **b)** $m = 100 - 2w$

Page 84

A

1 $x = 1, y = 3$
$x = 2, y = 2$
$x = 3, y = 1$
2 $x = 2, y = 2$
$x = 5, y = 1$
3 $x = 3, y = 1$
$x = 1, y = 5$
$x = 2, y = 3$
4 $x = 6, y = 5$
$x = 4, y = 1$
$x = 8, y = 9$
$x = 5, y = 3$
$x = 7, y = 7$

B

1 $x = 1, y = 3$
$x = 2, y = 1$
2 $x = 2, y = 3$
$x = 1, y = 8$
3 $x = 6, y = 3$
$x = 2, y = 6$
4 $x = 3, y = 3$
$x = 6, y = 1$
5 $a = 4, b = 3$
$a = 2, b = 8$
6 $a = 8, b = 4$
$a = 3, b = 8$
7 $s = 3, t = 5$
$s = 1, t = 12$
8 $s = 5, t = 3$
$s = 2, t = 8$
9 $x = 13, y = 1$
$x = 15, y = 2$
10 $x = 2, y = 2$
$x = 4, y = 5$
11 $x = 3, y = 1$
$x = 4, y = 3$
12 $x = 5, y = 2$
$x = 6, y = 5$
13 $p = 1, q = 3$
$p = 4, q = 13$
14 $c = 4, d = 4$
$c = 8, d = 9$
15 $m = 5, n = 4$
$m = 8, n = 8$
16 $v = 4, w = 5$
$v = 7, w = 10$

C

1 $x = 4, y = 5$
$x = 3, y = 11$
$x = 2, y = 17$
$x = 1, y = 23$
2 $x = 10, y = 1$
$x = 7, y = 5$
$x = 4, y = 9$
$x = 1, y = 13$
3 $x = 8, y = 2$
$x = 6, y = 5$
$x = 4, y = 8$
$x = 2, y = 11$
4 $x = 6, y = 2$
$x = 4, y = 9$
$x = 2, y = 16$
5 $e = 8, f = 7$
$e = 4, f = 16$
6 $y = 9, z = 4$
$y = 6, z = 9$
$y = 3, z = 14$
7 $k = 8, l = 6$
$k = 5, l = 16$
$k = 2, l = 26$
8 $g = 17, h = 1$
$g = 13, h = 6$
$g = 9, h = 11$
$g = 5, h = 16$
$g = 1, h = 21$
9 $p = 4, q = 1$
$p = 9, q = 7$
$p = 14, q = 13$
10 $d = 9, e = 2$
$d = 11, e = 5$
$d = 13, e = 8$
11 $r = 7, s = 2$
$r = 10, s = 6$
$r = 13, s = 10$
12 $g = 5, h = 5$
$g = 9, h = 12$
$g = 13, h = 19$
13 $w = 10, x = 4$
$w = 13, x = 9$
$w = 16, x = 14$
14 $k = 4, m = 4$
$k = 11, m = 14$
$k = 18, m = 24$
15 $t = 3, u = 3$
$t = 6, u = 11$
$t = 9, u = 19$
16 $z = 6, a = 7$
$z = 10, a = 16$
$z = 14, a = 25$

Page 85

A

1 2 TWOS, 7 THREES
5 TWOS, 5 THREES
8 TWOS, 3 THREES
11 TWOS, 1 THREE
2 3 THREES, 4 FOURS
7 THREES, 1 FOUR

3

2ps	*5ps*
2	7
7	5
12	3
17	1

4

SQUARES	*TRIANGLES*
10	2
7	6
4	10
1	14

B

1

SIXES	*EIGHTS*
1	10
5	7
9	4
13	1

2

FOURS	*NINES*
33	2
24	6
15	10
6	14

3

x	y
1	8
2	6
3	4
4	2

4

x	y
6	1
4	4
2	7

5

x	y
2	5
6	4
10	3
14	2
18	1

6

x	y
5	4
2	9

7

x	y
2	8
6	5
10	2

8

x	y
19	1
14	3
9	5
4	7

9

x	y
5	4
4	10
3	16
2	22
1	28

10

x	y
3	7
8	3

P85

C

1

large	*small*
95°	75°
100°	60°
105°	45°
110°	30°
115°	15°

2

16s	*20s*
2	19
7	15
12	11
17	7
22	3

3

x	y
2	16
7	9
12	2

4

x	y
4	11
12	8
20	5
28	2

5

x	y
21	3
12	8
3	13

6

x	y
18	5
15	15
12	25
9	35
6	45
3	55

7

x	y
58	1
47	3
36	5
25	7
14	9
3	11

8

x	y
2	15
7	12
12	9
17	6
22	3

9

x	y
23	3
16	7
9	11
2	15

10

x	y
4	38
9	26
14	14
19	2

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A

1 Pattern 4 16 matches, four in each side
Pattern 5 20 matches, five in each side

2

Pattern	Matches
1	4
2	8
3	12
4	16
5	20

3 ... is four times the number of patterns.

4 a) 28 **b)** 40 **c)** 120 **d)** 200

B

1 Pattern 4 14 dots
Pattern 5 17 dots

2

Pattern	Dots
1	5
2	8
3	11
4	14
5	17

3 ... is three times the number of the pattern plus two.

4 a) 32 **b)** 47 **c)** 131

5 a) 7th **b)** 12th **c)** 18th

C

1 a) 28 **b)** 52 **c)** 85

2 a) 13th **b)** 22nd **c)** 33rd

3 ... is eight times the number of patterns minus four.

4 196

5 a) 8th **b)** 12th

Page 87

A

1 4 14 24 34 44 54
2 38 36 34 32 30 28
3 7 10 13 16 19 22
4 29 25 21 17 13 9
5 0·5 1·5 2·5 3·5 4·5 5·5
6 65 58 51 44 37 30
7 15 35 55 75 95 115
8 110 99 88 77 66 55
9 21 23 25 27 29 31
10 948 847 746 645 544 443
11 26 35 44 53 62 71
12 30 27 24 21 18 15
13 $\frac{1}{2}$ 1 $1\frac{1}{2}$ 2 $2\frac{1}{2}$ 3
14 80 75 70 65 60 55
15 25 50 75 100 125 150

B

1 ... 56 59 62	(add 3)
2 ... 73 69 65	(take 4)
3 ... 215 240 265	(add 25)
4 ... 0·9 1·0 1·1	(add 0·1)
5 ... −8 −10 −12 −14	(take 2)
6 ... 109 104 99 94 89	(take 5)
7 ... −3 0 3 6 9	(add 3)
8 ... 1 $1\frac{1}{5}$ $1\frac{2}{5}$	(add $\frac{1}{5}$)
9 ... 5 3 1 −1 −3 −5 −7	(take 2)
10 ... 37 46 55 64 73 82 91	(add 9)
11 ... 366 316 266 216 166 116 66	(take 50)
12 ... −20 −15 −10 −5 0 5 10	(add 5)
13 ... $1\frac{6}{7}$ $1\frac{4}{7}$ $1\frac{2}{7}$ 1 $\frac{5}{7}$ $\frac{3}{7}$ $\frac{1}{7}$	(take $\frac{2}{7}$)
14 ... 3·5 4 4·5 5 5·5 6 6·5	(add 0·5)
15 ... 83 182 281 380 479 578 677	(add 99)
16 ... 10 6 2 −2 −6 −10 −14	(take 4)

C

1 ... 36 24 12	$96 - 12n$
2 ... 92 99 106	$7n + 57$
3 ... 0·98 0·95 0·92	$1{\cdot}13 - \frac{3n}{100}$
4 ... $2\frac{4}{8}$ $2\frac{1}{8}$ $1\frac{6}{8}$	$4\frac{3}{8} - \frac{3n}{8}$
5 ... 89 70 51	$184 - 19n$
6 ... −1 1 3	$2n - 11$
7 ... 43 35 27	$83 - 8n$
8 ... 0·1 0·12 0·14	$\frac{2n}{100}$
9 ... −1 −5 −9	$19 - 4n$
10 ... 91 103 115	$12n + 31$
11 ... 4 10 16	$6n - 26$
12 ... 3 2·5 2	$5{\cdot}5 - \frac{5n}{10}$
13 ... 219 240 261	$21n + 114$
14 ... 4 −4 −12	$44 - 8n$
15 ... 550 675 800	$125n - 75$
16 ... 2·25 2·5 2·75	$\frac{n}{4} + 1$
17 ... 5 $3\frac{3}{4}$ $2\frac{1}{2}$	$11\frac{1}{4} - \frac{5n}{4}$
18 ... 1 4 7	$3n - 14$

Year 6

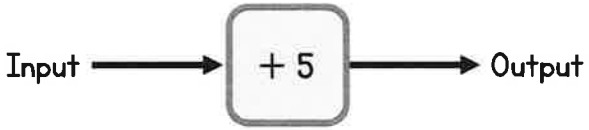
Algebra

Assessment

White Rose Maths

Name _____

1 Here is a function machine.



Complete the sentences.

When the input is 7, the output is _____

When the input is _____, the output is 7

2 marks

2 If ☆ = 6 and ☺ = 8, find the total of each row and column.

☆	☆	☺	
☆	♡	☺	26
♡	♡	☺	
	30		

3 marks

Friday 26 Feb

3 c and d represent positive integer variables.

$c + d = 5$

Complete the table to show possible values of c and d.

c	d

2 mark

4 Solve the equations.

$x + 3 = 9$

$x =$ _____

1 mark

$b - 3 = 9$

$b =$ _____

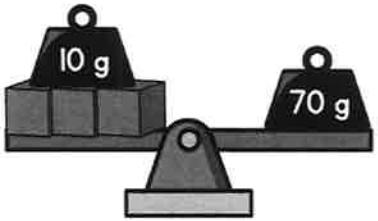
1 mark

$3c = 12$

$c =$ _____

1 mark

5 Hassan is balancing objects.



What is the mass of one of the cubes?

_____ g

2 marks

6 If $p = 7$, what is the value of $2p + 9$?

_____

1 mark

7 Nina uses a bar model to solve $3x + 5 = 38$

x	x	x	5
38			

Solve the equation $3x + 5 = 38$

$x =$ _____

2 marks

8 Solve $10y - 3 = 77$

$y =$ _____

2 marks

9 Dexter is selling ice-creams.
He uses this formula to work out the price.

$$\text{Price} = £1.50s + £0.40t$$

Where s is the number of scoops and t is the number of toppings.

Work out the cost of an ice-cream with 2 scoops and 3 toppings.

£ _____

1 mark

Libby buys an ice-cream that costs £2.30
How many scoops does she have?

_____

1 mark

How many toppings does she have?

_____

1 mark

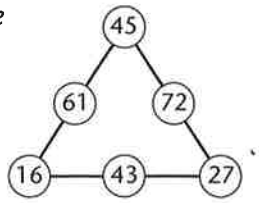
Circle how confident you feel with algebra.

1	2	3	4	5
Not confident				Very confident

TARGET To solve number problems involving addition and subtraction.

In an arithmagon the pair of numbers at the end of each line are added together to give the number between them.

Example

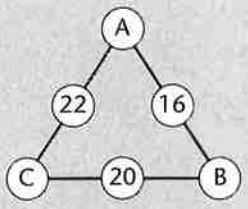


45 + 27 = 72
27 + 16 = 43
16 + 45 = 61

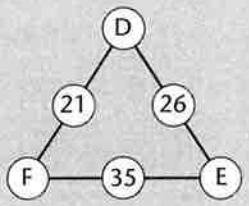
Find the missing numbers in these arithmagons.

A

1



2



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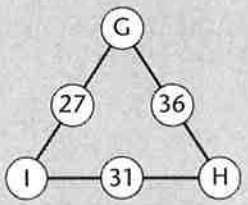

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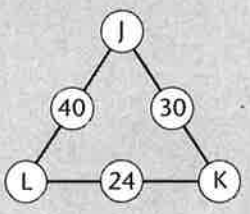
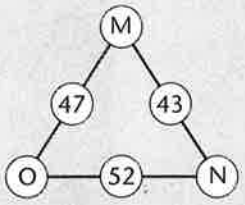
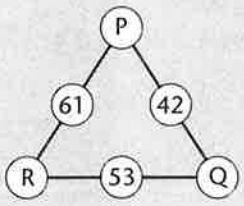


B

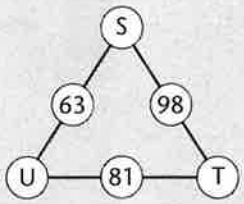
1



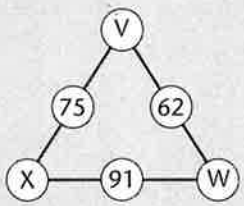
2



3

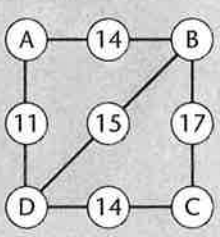


4

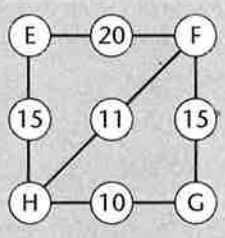


C

1



2



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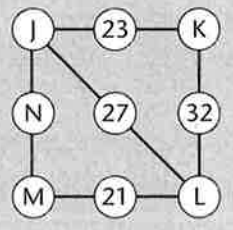
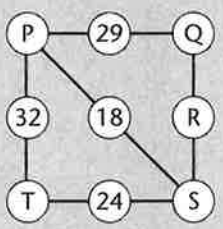


4



Page 146

A

1 100 miles
2 40 miles
3 a) 15:15
b) 16:45
4 30 minutes
5 a) 1 hour 15 mins.
b) 1 hour
6 70 miles
7 16:30
8 40 miles per hour
9 2 hours 45 mins.

Page 147

B

1 a) 17·5 km
b) 25 km
2 a) 19:00
b) 20:15
3 15 mins.
4 a) 1 hour
b) 45 mins
5 a) 30 km per hour
b) 17·5 km per hour

C

1 a) 10:00
b) 9:45
2 120 miles
3 45 mins.
4 a) 20 miles
b) 80 miles
5 a) 40 miles
b) 10 miles
c) 20 miles
6 11:45
7 a) 60 mph
b) 40 mph
c) 80 mph

Page 148

A

1 20°C
2 4 minutes
3 8
4 2 mins., 12 min.
5 5°C
6 a) 40°C
b) 55°C

Page 149

B

1 a) 14°C
b) 5°C
2 a) March
b) August
3 20°C
4 February
5 a) 5°C
b) 2°C
6 a) April–May
b) Sept.–October

C

1 a) 8th
b) 9th
2 a) 3°C
b) 4°C
3 a) 7°C
b) 14°C
4 a) 9th
b) 2nd

Page 150

A

1 9
2 4
3 8
4 5
5 10°C

B

1 97
2 23
3 3
4 2
5 17

C

1 1·4
2 2·5
3 12°C
4 2°C
5 4·4

Page 151

A

1 5
2 7 kg
3 2·5
4 3 books
5 20 lengths
6 17
7 3·5
8 80%

B

1 2400 km
2 2·8 passengers
3 125 apples
4 540 miles
5 113 passengers
6 807 apples
7 10 rides
8 4 trains
9 20 bags

C

1 65·8 kg
2 2·4 mins.
3 £17·75
4 217·5 kg
5 91 mins.
6 £55·50
7 8 fish
8 30 pages
9 57p

Page 152

A

1 a) 27
b) 9
c) 3
2 a) 1150 g
b) 5
c) 230 g
3 a) 385 mph
b) 7
c) 55 mph
4 a) 121
b) 11
c) 11
5 a) 49
b) 7
c) 7

Page 153

B

1 103
2 5
3 1°C

C

1 a) 1·4 m **b)** 4·66 m **2** 3·4 m **3** 90 mm **4** 3·5

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A

1 A 9
B 7
C 13
2 D 6
E 20
F 15
3 G 16
H 20
I 11
4 J 23
K 7
L 17

B

1 M 19
N 24
O 28
2 P 25
Q 17
R 36
3 S 40
T 58
U 23
4 V 23
W 39
X 52

C

1 A 5
B 9
C 8
D 6
2 E 12
F 8
G 7
H 3
3 J 9
K 14
L 18
M 3
N 12
4 P 13
Q 16
R 21
S 5
T 19

Page 155

A

1 720
24 30
8 3 10
2 525
15 35
3 5 7
3 2880
72 40
9 8 5
4 264
22 12
11 2 6
5 384
24 16
6 4 4
6 252
14 18
7 2 9

B

1 768
24 32
6 4 8
3 2 2 4
2 3000
20 150
4 5 30
4 1 5 6
3 3240
60 54
10 6 9
5 2 3 3
4 2880
144 20
36 4 5
9 4 1 5
5 3240
36 90
6 6 15
3 2 3 5

Kingsmoor Lockdown English work: Week 7

Day 1 Monday 22nd Feb	
Reading	Read your assigned book on GetEpic. They are differentiated to match your Reading Range on AR. Class code: wng9901 Take the week to read it through and then have a go at the quiz on Friday.
Spelling and handwriting	Practise the next list of common exception words for years 5 and 6. These are your gold certificate spellings. Mastery: can you find different prefixes and suffixes for these words? Complete Monday's handwriting sheet.
Writing	Look in your new Talk for Writing booklet 'Treasure' and Read the blueprint text. You can listen to it if you find it too tricky. Complete activity 1 and draw a story map. Read activity 2 carefully so you can see how the story has been boxed up.

Day 2 Tuesday 23rd Feb	
Reading	Read your assigned book on GetEpic. They are differentiated to match your Reading Range on AR. Class code: wng9901 Take the week to read it through and then have a go at the quiz on Friday.
Spelling	Practise your common exception words. I have given you a handwriting sheet to practise on. Can you find out the meaning of the words using a dictionary?
Writing	Complete activity 3 in the Treasure booklet. What devices for using suspense have you found? Complete activity 4 with some excellent 'Show, not Tell' sentences.

Day 3 Wednesday 24th Feb	
Reading	Read your assigned book on GetEpic. They are differentiated to match your Reading Range on AR. Class code: wng9901

	Take the week to read it through and then have a go at the quiz on Friday.
Spelling	Practise your common exception words. I have given you a handwriting sheet to practise on. Can you write a sentence for each of the first 9 words in your list? E.g. *The **identity** of the thief was unknown.*
Writing	Complete activities 5, 6 and 7 in the Treasure booklet.

Day 4 Thursday 25th Feb	
Reading	Read your assigned book on GetEpic. They are differentiated to match your Reading Range on AR. Class code: wng9901 Take the week to read it through and then have a go at the quiz on Friday.
Spelling	Practise your common exception words. I have given you a handwriting sheet to practise on. Can you write a sentence for each of the second 8 words in your list? E.g. *The **mischievous** child smiled with delight.*
Writing	Complete activity 8 in the Treasure booklet

Day 5 Friday 26th Feb	
Reading	Read your assigned book on GetEpic. They are differentiated to match your Reading Range on AR. Class code: wng9901 Take the week to read it through and then have a go at the quiz on Friday.
Spelling	Ask an adult to test you on the spelling of the words you have been practising this week.
Writing and handwriting	Complete activity 9 and 10 in the Treasure booklet

Mon 22 Feb

Y5 & Y6 Common Exception Words - Gold

identity
immediately
individual
interfere
interrupt
language
leisure
lightning
marvellous
mischievous
muscle
necessary
neighbour
nuisance
occupy
occur
opportunity

Tuesday 23 Feb

Wed 24 Feb

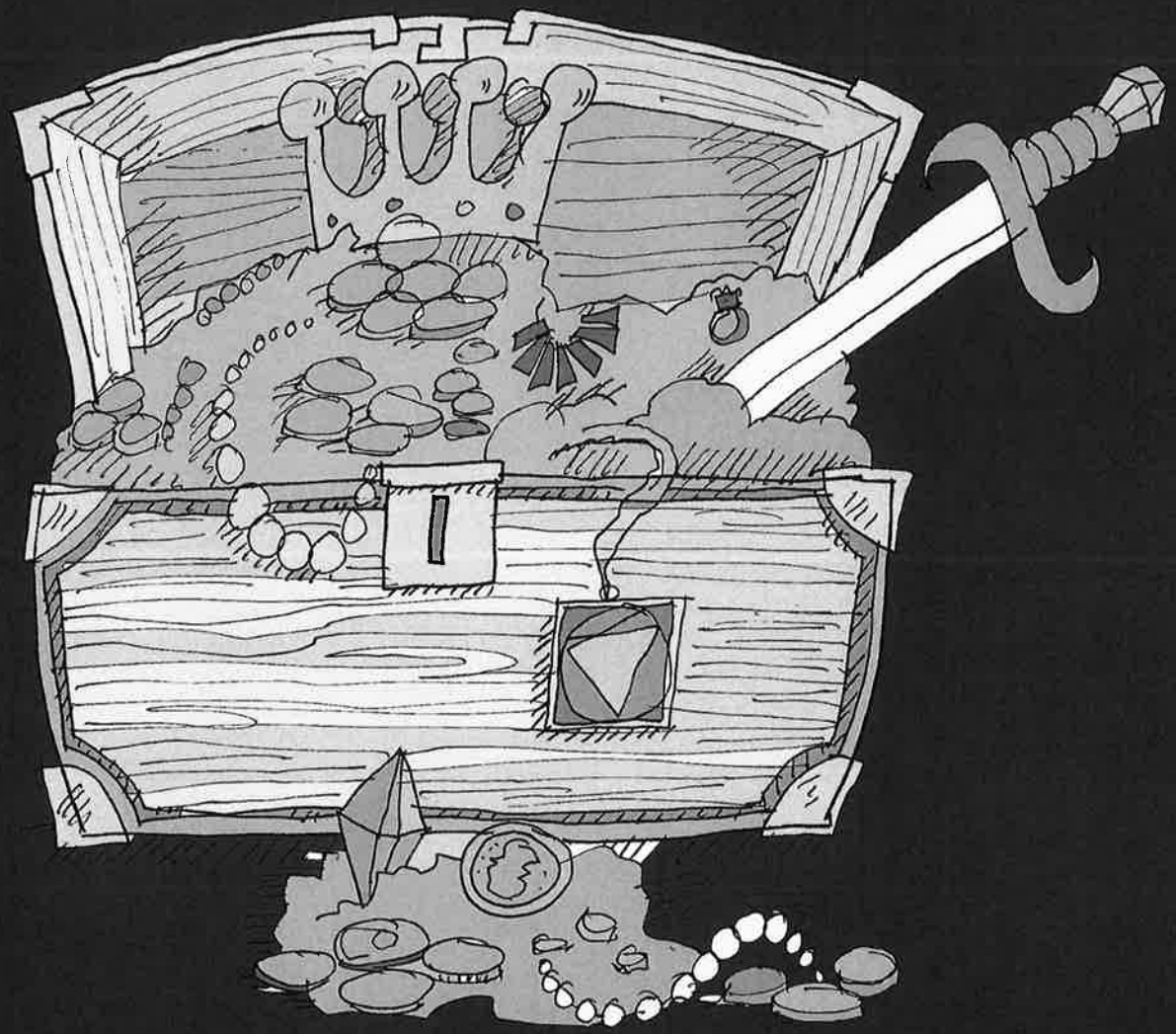
Thurs 25 Feb

TalkforWriting™

Talk for Writing Home-school booklet

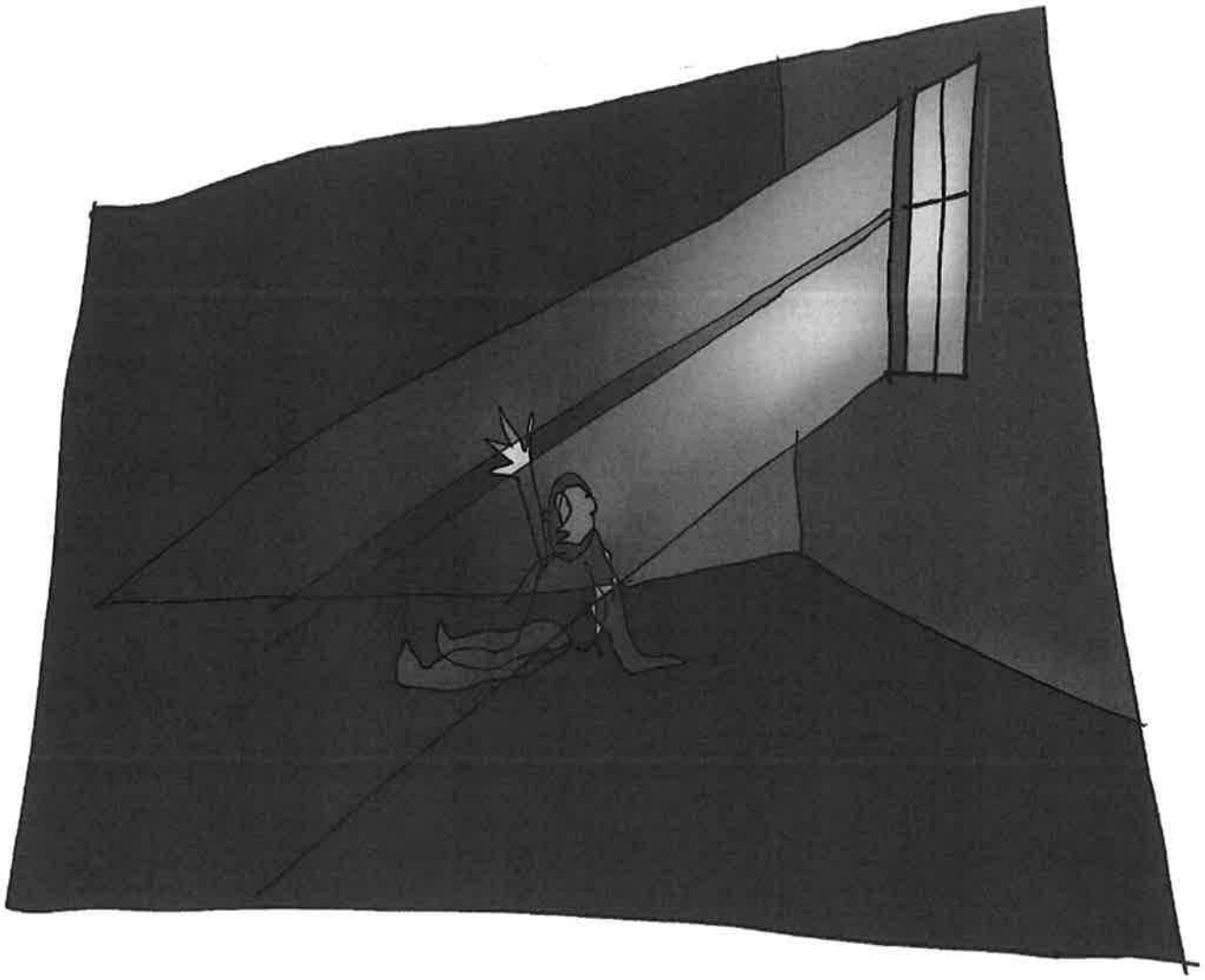
Treasure

by James Walker



Treasure

Imagine stumbling across hidden treasure the next time you are out on the beach or in the woods with your friends. What would you do? Open the treasure chest? Keep it all to yourself? Hand it in to the police? Show it to your family? I think we have probably all thought about this! Treasure or precious objects are often used in myth, legend, cartoons, books and films. In our unit, we will use treasure and interesting objects as the stimulus to write fantastic adventure stories.



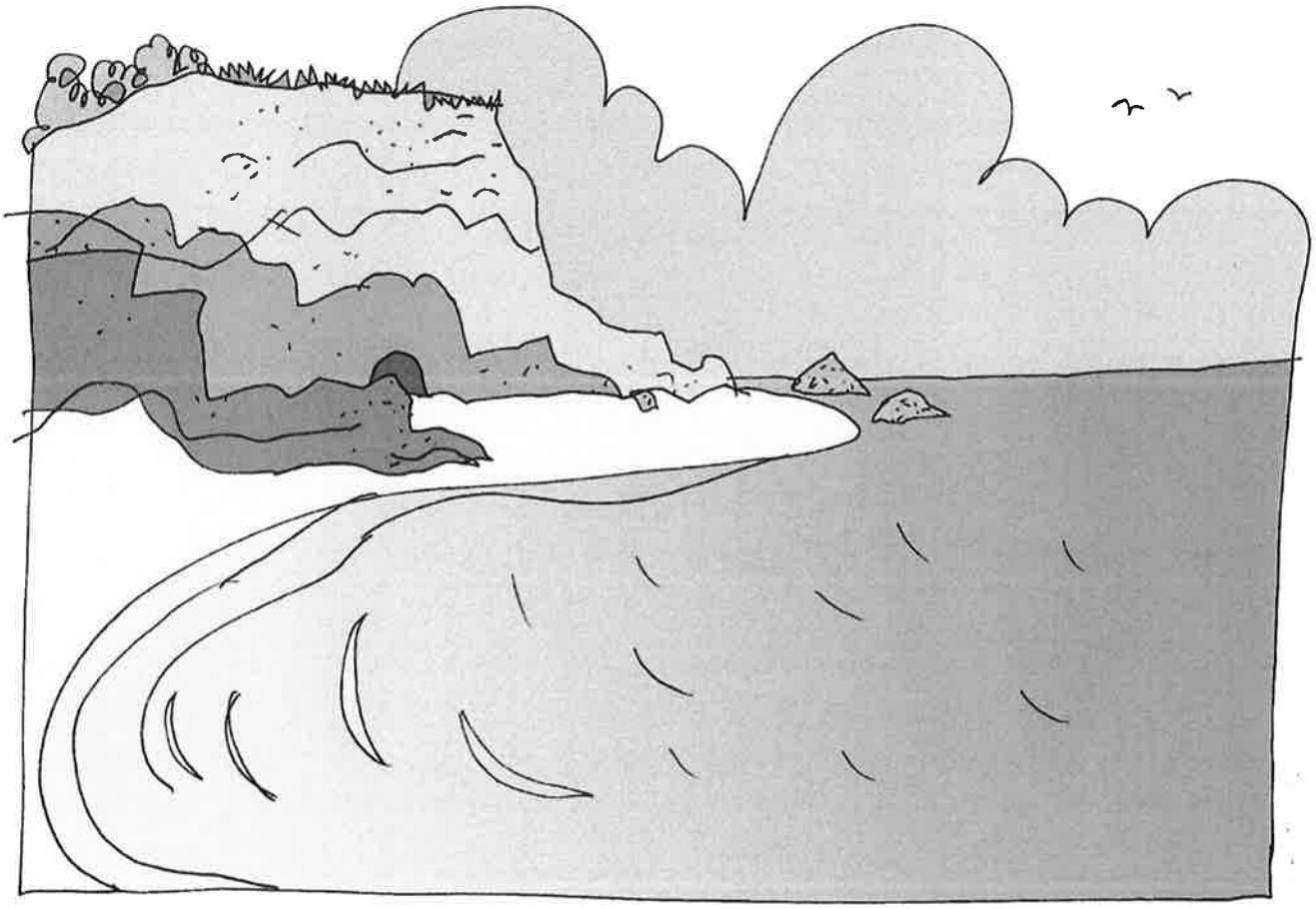
Introducing suspense

In this workbook, we are going to be writing ***FINDING TALES*** and our main focus is going to be ***suspense*** writing. You may have done some of this in school so try to tap back into the learning you have done about how to write effective suspense stories.

Model text - Adventure at Sandy Cove

Here is our model text: *Adventure at Sandy Cove by Pie Corbett*. It is a good example of a finding tale that uses suspense. Read below and have a listen here: https://soundcloud.com/talkforwriting/sandy/s-cpd0mheQjwP

Adventure at Sandy Cove



"Hurry up," shouted Joe as he climbed over the rocks. Carefully, Rahul followed. The two boys stopped at a rock pool and began to search for shells. "Hey, what's this?" shouted Joe to Rahul. In the rock pool was a small, black box wrapped in plastic. The boys tugged it loose. What was inside? Joe pressed the silver catch and the lid popped open. The box was full of sparkling jewels!

At that moment, a scruffy old man shouted at the boys. His wolf-like dog barked menacingly. Joe snapped the lid down, picked up the box and the two boys began to scramble over the rocks. They slipped and struggled towards the cliffs.

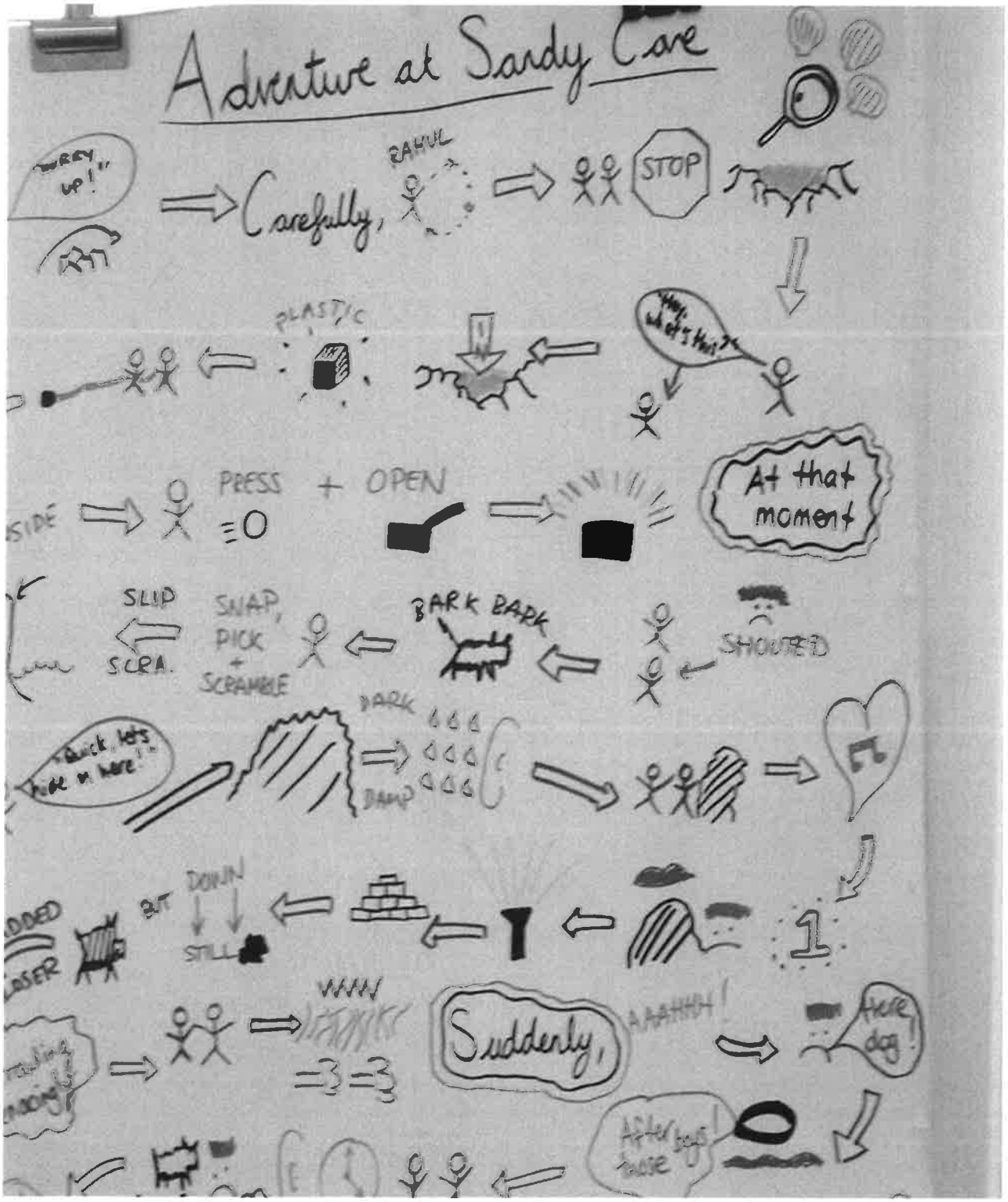
"Quick! Let's hide in here," said Joe, rushing into a cave. It was dark and damp inside and they could hear water dripping. They felt their way further in and crouched behind a rock. Rahul's heart pounded like a bass guitar. All at once, the scruffy man appeared at the cave mouth. He shone a torch around. The light cast shadows on the cave wall. The children ducked down and kept as still as stone, but the dog could sense them. It padded closer and closer, growling menacingly. Rahul gripped Joe's arm. They could see its white teeth, smell its damp hair and feel its hot meaty breath.

Suddenly, there was a distant shout. "Here, dog!" hissed the man, roughly grabbing its collar. "Those boys have got away - quick, after them!" Joe and Rahul held their breath until they could hear the sound of the man and his dog stumbling back across the rocks. They waited for a long while before creeping out. Even though the beach was empty, the boys ran home as fast as they could.

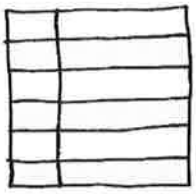
At first, Mum didn't believe them. It was only when Joe opened the box that she decided to call the police. When the police arrived, they told Mum that the big house up the road had been burgled only the night before. They had spent all day searching for a trace of the jewels. Their only clue had been the footprints of a large dog. Joe shut his eyes. He could imagine the headlines: 'PRICELESS JEWELS FOUND BY SCHOOLBOY DETECTIVES. And there was a reward too.

Activity 1 - Storytelling and mapping

If you are used to retelling stories from story maps, then you could have a go at retelling the model text. Drawing a map to follow is a great idea plus identifying key actions for words like ***suddenly, at that moment, carefully, at first.*** If you have never drawn story maps to help you retell stories, look at the map as you listen to the story again and see if you can see how the images help you remember the story. Then see if you can retell it in your own words by just looking at the images. You could even draw your own map.



Activity 2: Underlying pattern of finding tales



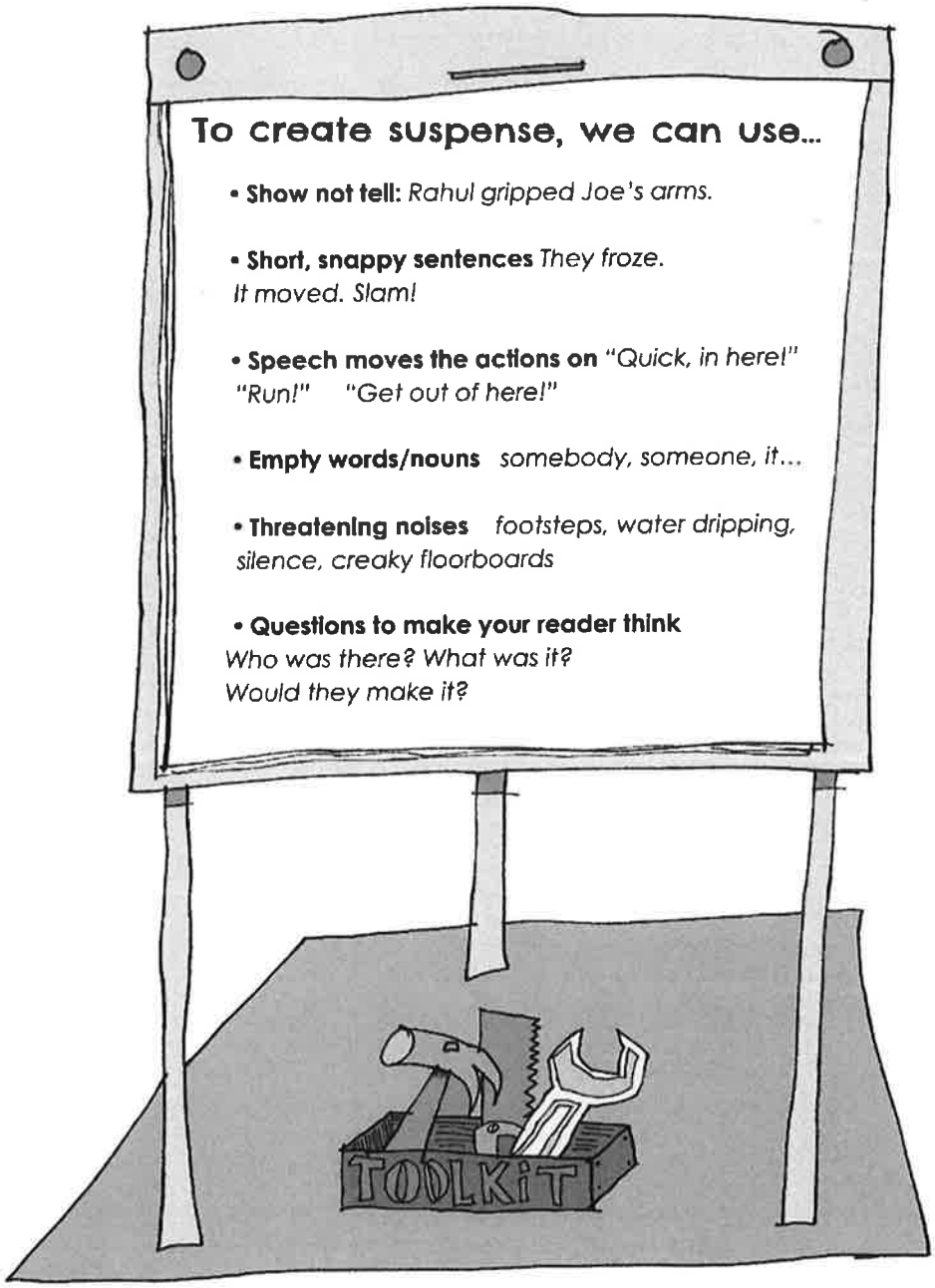
Below, I have picked out the underlying pattern of the model text by boxing it up. This gives you the basic plan for writing your own finding tale, but remember you can change, adapt, add in more sections and change the ending if you like. It is just a guide.

Title	Adventure at Sandy Cove
Opening *Main characters in an everyday setting* *Find an interesting object*	"Hurry up," shouted Joe as he climbed over the rocks. Carefully, Rahul followed. The two boys stopped at a rock pool and began to search for shells. "Hey, what's this?" shouted Joe to Rahul. In the rock pool was a small, black box wrapped in plastic. The boys tugged it loose. What was inside? Joe pressed the silver catch and the lid popped open. The box was full of sparkling jewels.
Build up *Danger arrives*	At that moment, a scruffy old man shouted at the boys. His wolf-like dog barked menacingly. Joe snapped the lid down, picked up the box and the two boys began to scramble over the rocks. They slipped and struggled towards the cliffs.
Dilemma *Danger increases and it looks like there is no escape*	"Quick! Let's hide in here," said Joe, rushing into a cave. It was dark and damp inside and they could hear water dripping. They felt their way further in and crouched behind a rock. Rahul's heart pounded like a bass guitar. All at once, the scruffy man appeared at the cave mouth. He shone a torch around. The light cast shadows on the cave wall. The children ducked down and kept as still as stone, but the dog could sense them. It padded closer and closer, growling menacingly. Rahul gripped Joe's arm. They could see its white teeth, smell its damp hair and feel its hot meaty breath.
Resolution *Danger overcome in some way*	Suddenly, there was a distant shout. 'Here Dog!' hissed the man, roughly grabbing its collar. "Those boys have got away - quick, after them!" Joe and Rahul held their breath until they could hear the sound of the man and his dog stumbling back across the rocks. They waited for a long while before creeping out. Even though the beach was empty, the boys ran home as fast as they could.
Ending *Main characters safe* *More information revealed about the object/rewards*	At first, Mum didn't believe them. It was only when Joe opened the box that she decided to call the police. When the police arrived, they told Mum that the big house up the road had been burgled only the night before. They had spent all day searching for a trace of the jewels. Their only clue had been the footprints of a large dog. Joe shut his eyes. He could imagine the headlines: 'PRICELESS JEWELS FOUND BY SCHOOLBOY DETECTIVES. And there was a reward too!

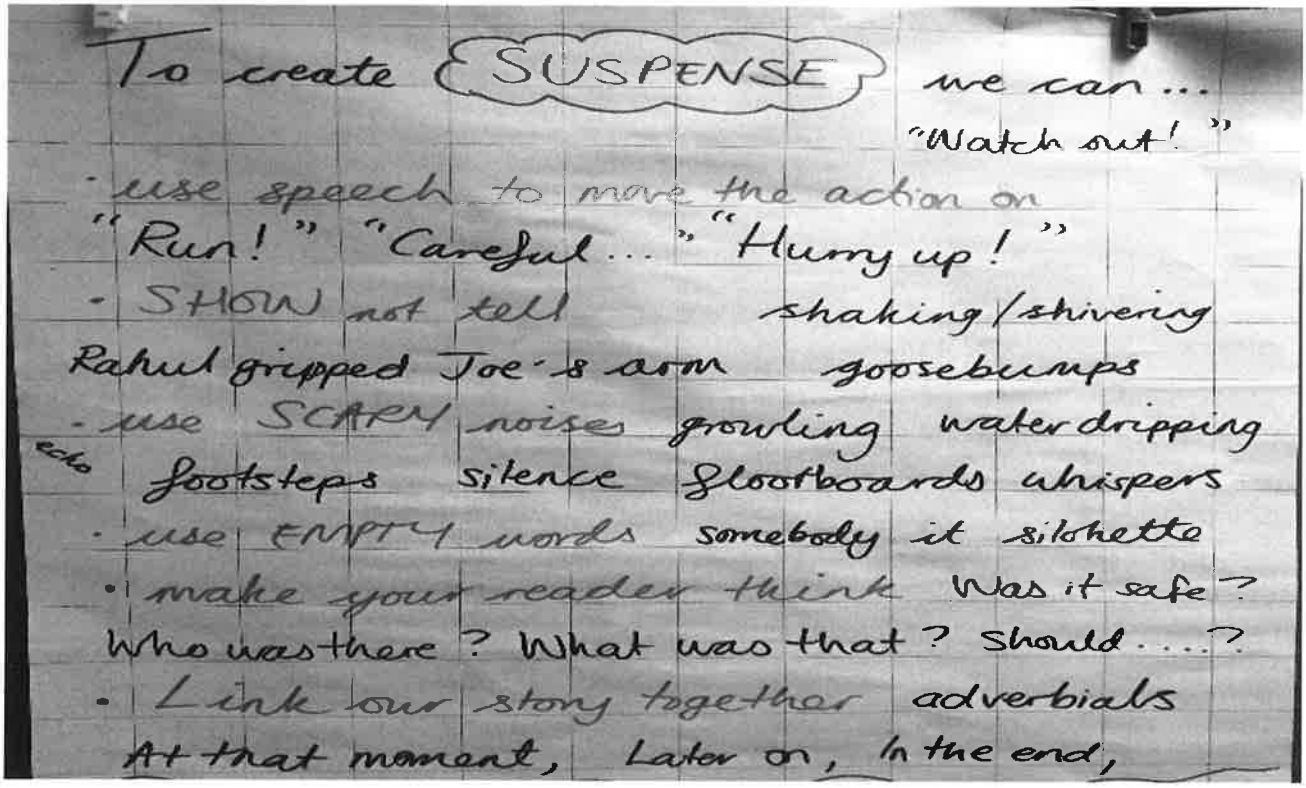
Activity 3: Making a toolkit for suspense

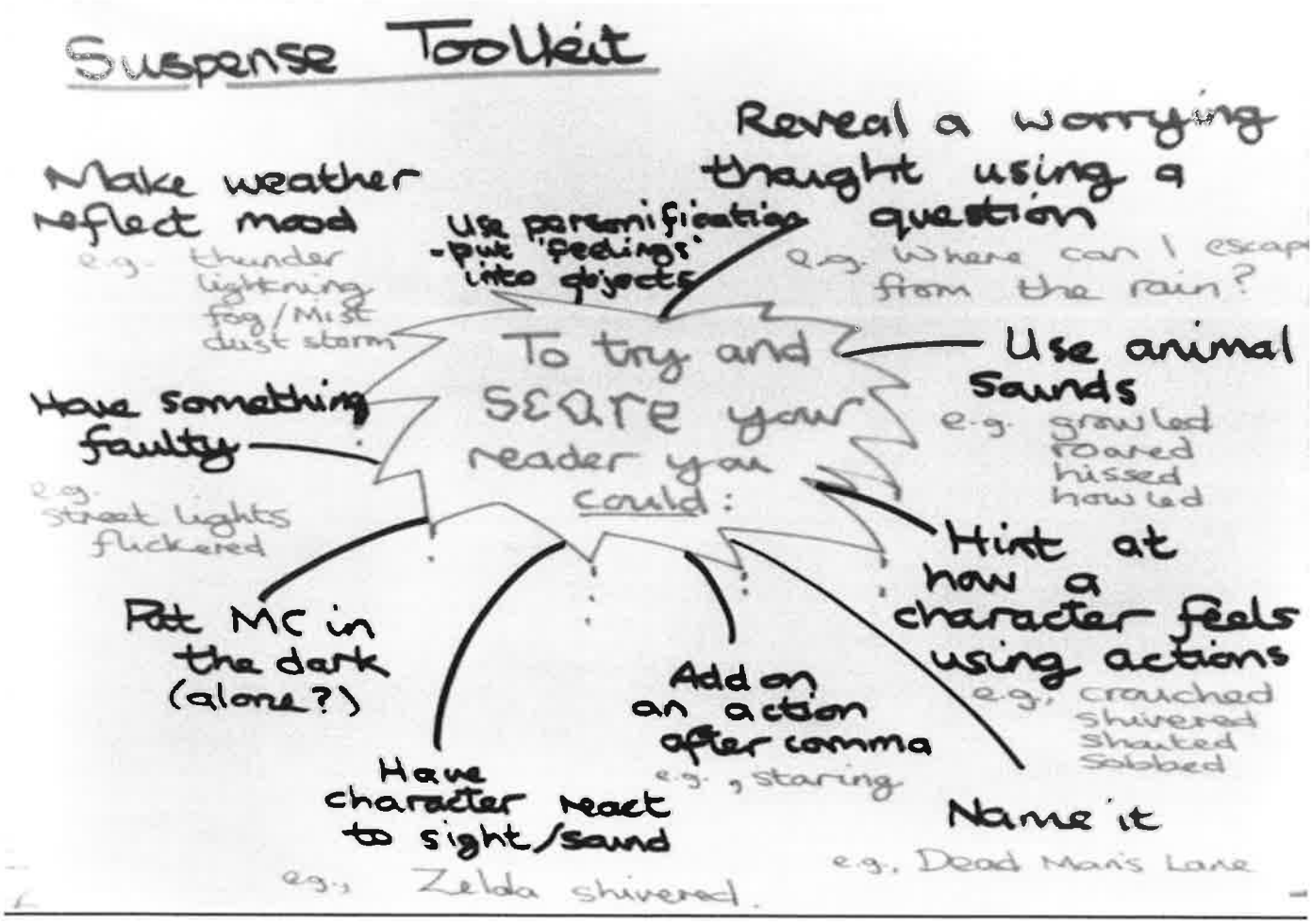
Before we start thinking about our own ideas for our story, we need to look closely at the text and see what writing tools/tips/tricks the authors has used to create suspense. You may know some of your own too.

★ **I've focussed just on the dilemma paragraph (no 3 in the box) to see what tools I could find that create suspense or a threatening mood**



Now have a go yourself at seeing if you can spot any of these tools again in the next paragraph – the resolution one. There may be some additional ones – see if you can spot them. Use these two posters of suspense toolkits to help you.





Activity 4: Show-not-tell practice

This is a great tool to use not only for suspense but for characterisation. We don't just want to ***TELL*** the reader how the character is feeling. We want to ***SHOW*** them by what is happening to their body, how they are talking, how they are moving or how they treat people.

For example:	**Telling**	**Showing**
	Joe was scared.	*Joe froze.* *The hair on the back of his neck stood up.* *Joe's heart raced*

★ **Now it's your turn! I want you to change the telling emotions to showing. You could act out the emotions yourself or think of a time when you felt like that. What was happening to your body? Voice? Breathing?**

★ **Try and write 2 or 3 idea down under showing – you might be able to use this in your writing later on.**

Telling	**Showing**
Zara was sad.	
Jonah felt shy.	
Tom was angry.	
He was frightened.	
Remi was nervous.	

Activity 5: Empty words

Which has more suspense?

The scary monster came up the stairs

OR

It crept up the stairs

Hopefully you can see it is the 2nd one and the reason why is that we are hiding the threat from the reader. This means they have to imagine what '*it*' is. Every reader will imagine something different that is really scary for them.

List of empty words to use:

someone	*somewhere*	*something*
no-one	*nowhere*	*nobody*
it	*shadow*	*silhouette*
figure	*object*	*premonition*

Activity 6: Can you spot effective suspense sentences?

Have a look at the four sentences below. Which do you think builds the most suspense and why? Remember to look back at the toolkit to see what tools help with suspense.

Lenny was petrified as the monster was scary.

Thud. He froze. Panic filled his chest. There was no escape. Would he survive?

The door in front of her screeched open. Footsteps moved towards her but she could see nothing.

This was it. They held onto each other tightly and prayed. Why did they come here?

★ **Choose the sentence with the most effective suspense and say why!**

Activity 7: Short-burst writing

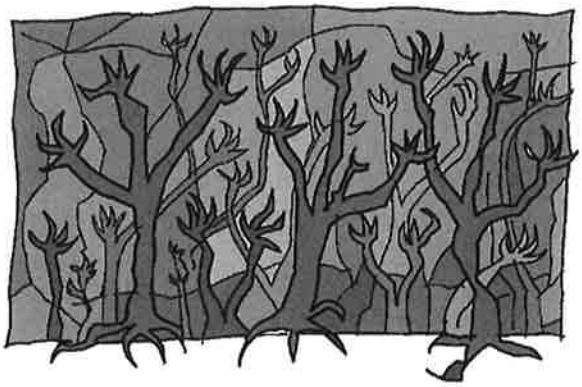
Now we have seen the model and looked at some of the tools, I want you to have a go at a paragraph or two of suspense writing. Try to use a few tools like *empty words, threatening noises or show not tell.* Try doing this as a short-burst of writing without doing too much planning or thinking. Try and let the writing flow and tell the story of someone in a dark scary place. 5 to 10 minutes is enough and then read it back through and see if it is working.

Activity 8: New ideas for your story

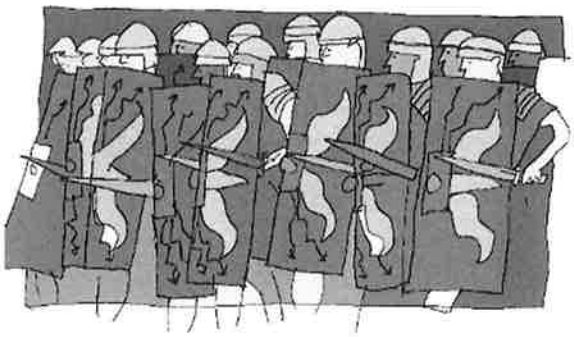
Now comes the fun part! You might already have the beginnings of an idea for your story from what you have read so far. If not, don't worry we are going to generate our ideas one step at a time.

3 MAIN CHOICES

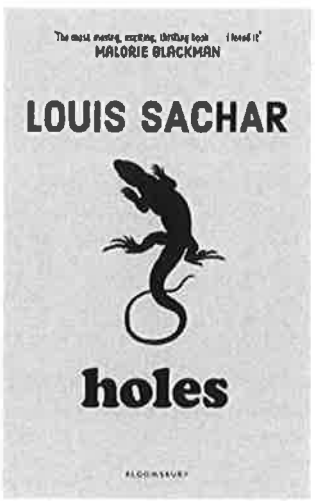
1) **A realistic story based on Sandy Cove that could happen to you e.g.** *in the woods, in the park, on holiday, at a new house …*

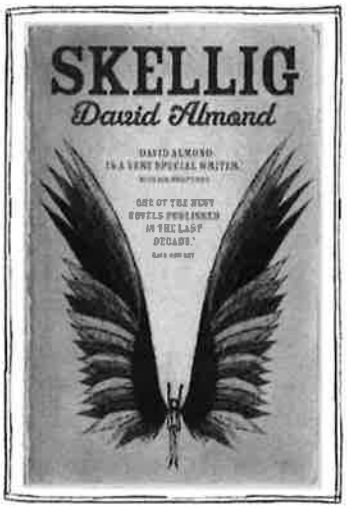


2) **A story based on a topic you know a lot about: e.g.** *Romans, Space, Vikings…*

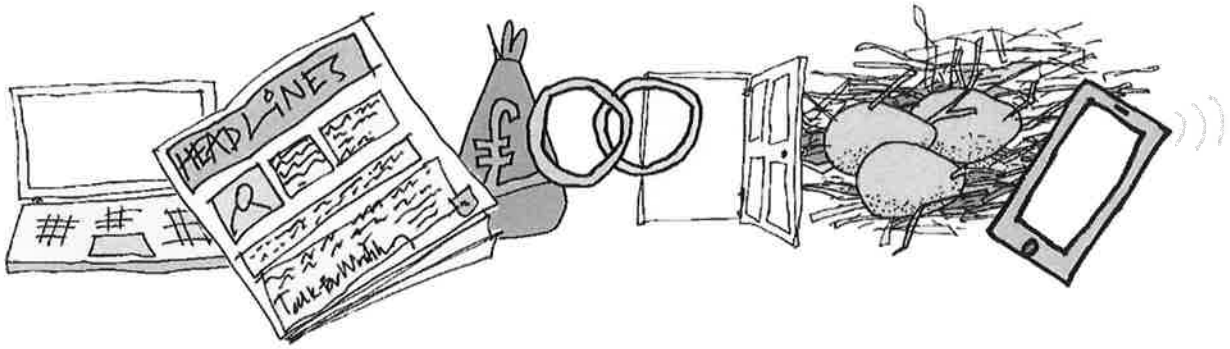


3) **A story based on/set in the world of a book you know. You can take some of the characters, settings and objects from the story e.g.** *Holes, Harry Potter, Skellig …*





STEP 1: Treasure/object



For a cracking finding tale you are going to need an object that interests both the characters in your story and your reader. Here are some categories and examples of objects to choose from:

Treasure
gold, money, jewels, locket, coins ...

Technology
mobile phone, laptop ...

Writing
scroll, letter, newspaper, book, coded message ...

Bags
suitcase, rucksack ...

Locked
door, locker, chest ...

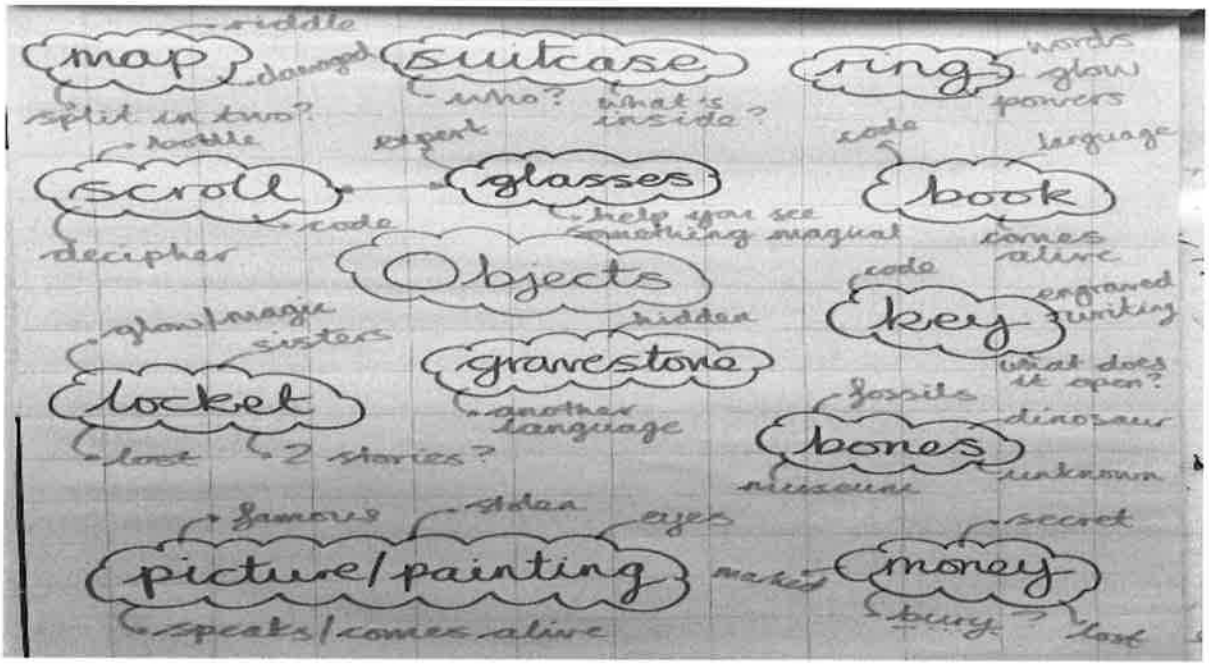
History
medals, time capsule ...

Images
painting, photograph ...

Possessions
glasses, locket, ring ...

Living
egg, bones, fossils ...

Here is a photo of the list I made with my class:



Now repeat the process for these key areas for your story – remember to think how they all link together. Jot down your ideas so you have some things to choose from.

STEP 1: MY OBJECT:

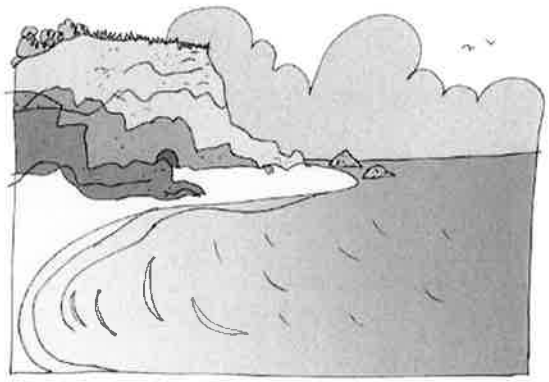
STEP 2: Main Characters *(one pereson, brothers, sisters, friends, twins, a group)*

STEP 3: Danger (*weather, lost, trap, enemy)*

STEP 4: Setting *(woods, junkyard, abandoned fairground)*

STEP 5: Reward/Next Day *(in the paper, exhibit named after you in the museum, money)*

Activity 9: Drawing your setting



After listening to many authors interviews on RadioBlogging, many of them – especially Abi Elphinstone – said that they drew pictures of their settings, main characters and scenes from the stories.

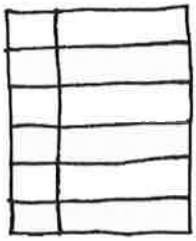
To really help picture your main scene, have a go at sketching it out below. It doesn't really matter what it looks like (this isn't an art lesson!) but it may help you to really picture what is going on and give you a reference point to look back on when writing.

Here are some things you might want to include in your drawing:

Where is your treasure/object?

- Where are your main characters and what are they doing?
- Where or what is your danger?
- What is the weather/time of the day like?

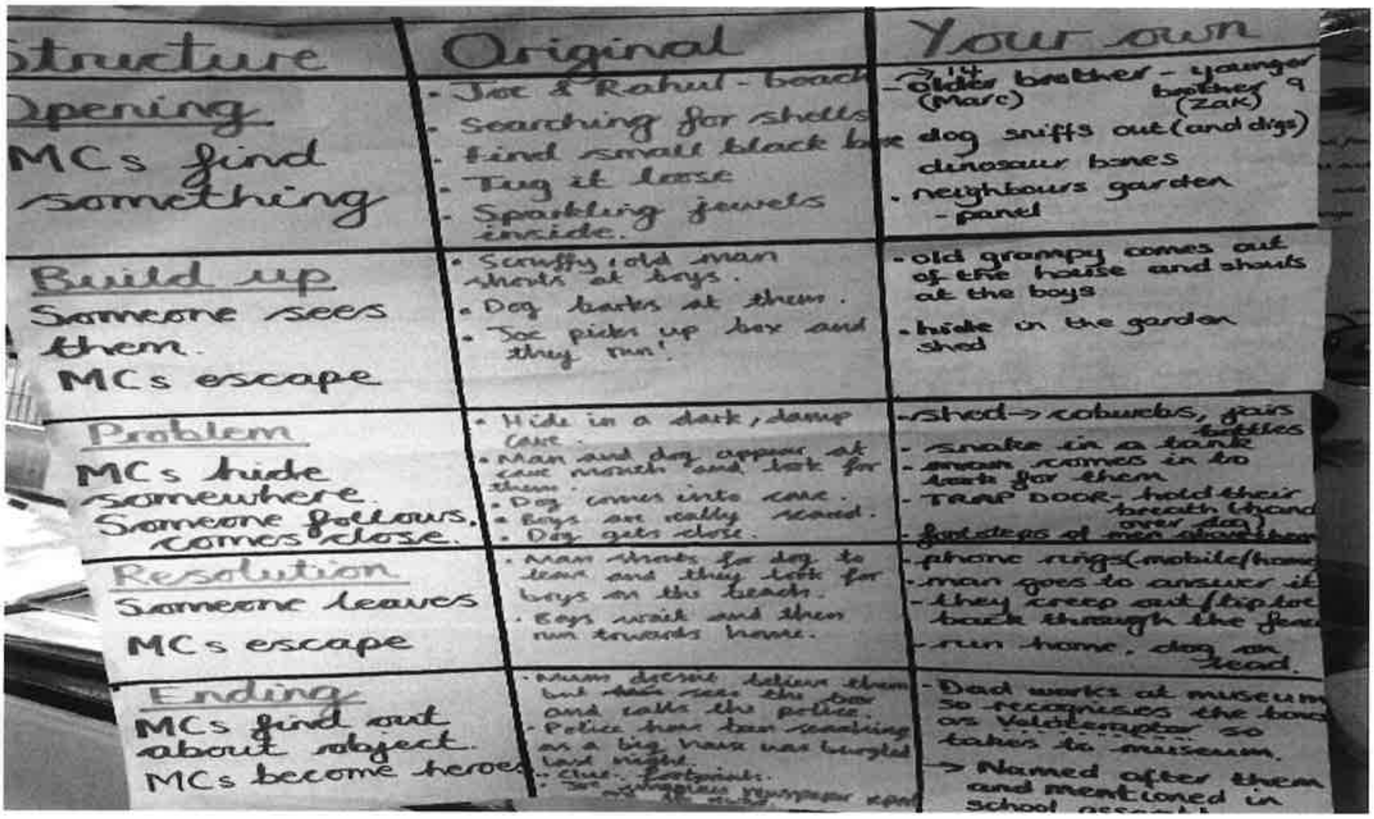
Activity 10: Planning



Now it is time to do! You can just write your ideas in bullet points or try to draft your writing in sentences. The more your get on your plan, the easier your writing will be! If you want more paragraphs or sections you could split some of the boxes in two.

Underlying pattern of a FINDING TALE	Plan of your ideas/innovation
Opening *Main characters in an everyday setting* *Find an interesting object*	
Build up *Danger arrives*	
Dilemma *Danger increases and it looks like there is no escape*	
Resolution *Danger overcome in some way*	
Ending *Main characters safe* *More information revealed about the object/rewards.*	

Here's an example of a plan that I did with my Year 6 pupils:



Activity 11: Talk your plan through

It is really important to have a good read through your plan to make sure that it makes sense. Why not read it aloud to someone in your house and see if they have any suggestions for how to improve it.

Activity 12: It's time to write your story

To help you with your writing, you have lots of different things to help you now:

- ✓ The model text – *Adventure at Sandy Cove*
- ✓ The toolkit for suspense
- ✓ The grammar/toolkit games
- ✓ Your ideas page
- ✓ The drawing you did of your setting
- ✓ And, most importantly, your plan!

Activity 13: INVENTION/EXTENSION WRITING

If you are up for a challenge, then have a look at this next section as we are going to start tinkering with the structure/underlying pattern of our story. Below is a story mountain which has been changed to:

- **DILEMMA**
- **FLASHBACK**
- **OPENING**
- **BUILD UP**
- **FLASH FORWARD**
- **DILEMMA (continued)**
- **RESOLUTION**
- **ENDING**

The reason this works is that we jump straight into the action! The reader is left wondering how the characters got into that situation. Then you flashback to the opening to then explain the back story. Films and books often do this to interest and excite the reader rather than just the normal story arc:

- opening
- build-up
- dilemma
- resolution
- ending.

Have a go at planning such a story and then see if you can write it.

Activity 14: Discussion writing

Below is a model of a piece of discussion writing based on *Adventure at Sandy Cove*. It presents the reasons on both sides of the debate:
Should you keep a box of sparkling jewels for yourself or hand them in?

Is honesty the best policy?

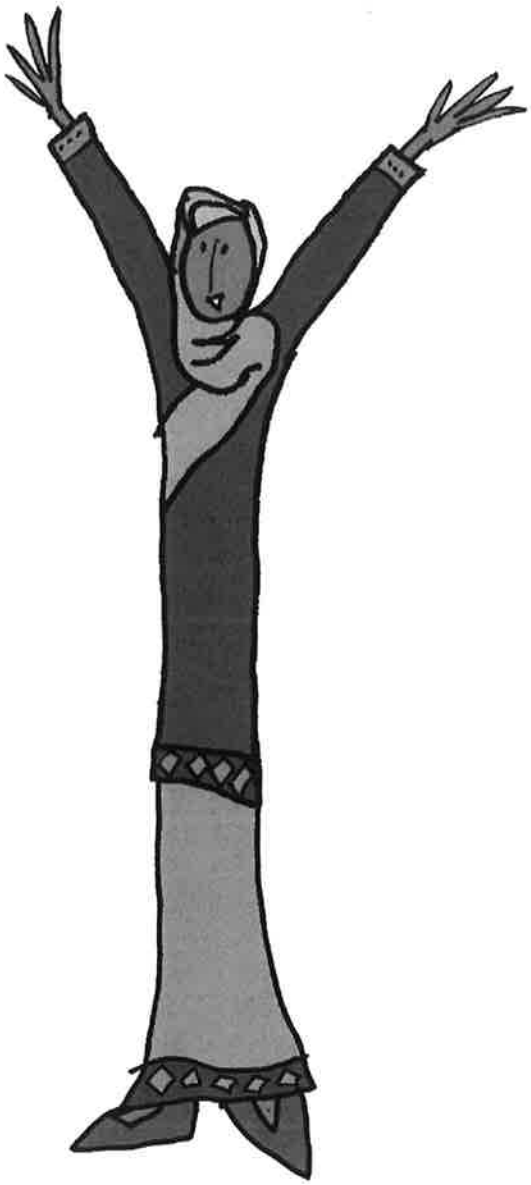
Have you heard about the boys who found a box full of sparkling jewels? Their mum phoned the police and it was returned to its rightful owner; should they have kept it for themselves? We all agree that stealing is wrong but what about finding? Some people still believe in the old saying, 'finders keepers, losers weepers'. However, there are others who argue, 'honesty is the best policy'. What would you do?

Many people, including Rahul, believe that taking property that doesn't belong to you is wrong. Firstly, they argue that if you didn't pay for it then it isn't yours. Furthermore, they advise that mislaid property should be returned to the owner – or even to the police. Finally, and most importantly, just think of the owners who have lost their precious property. How would you feel if that was you?

On the other hand, others believe that if you find something, you should keep it. Additionally, many state that it is impossible to return a lost item; you don't know who it belongs to. Joe Smith (aged 10 from Devon) gave us his opinion: "I found those jewels and possession is nine tenths of the law." Ultimately, it could be argued that it is the owner's fault for losing the item in the first place!

Having weighed up the points both for and against, it is clear missing objects should be returned to their rightful owners. Therefore, their mum made the right decision. If you were to lose a precious item, wouldn't you want it to be returned?

★ Now have a go at writing a discussion either based on *Adventure at Sandy Cove* or, even better, the story that you have written.



Activity 15: Performing your writing

Top tips for performing your writing:

a. **Know your writing really well so you can focus on the performance – practise a few times before you record it.**

b. **As we are trying to create suspense in our writing, you could use some music or sounds to increase the tension! This could be footsteps, a drum, or anything else you think might make a creepy sound.**

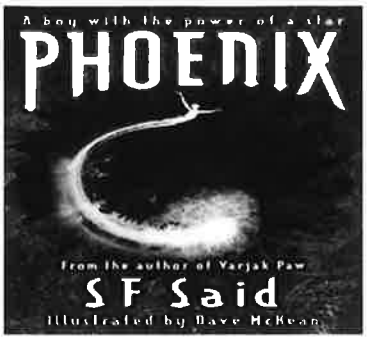
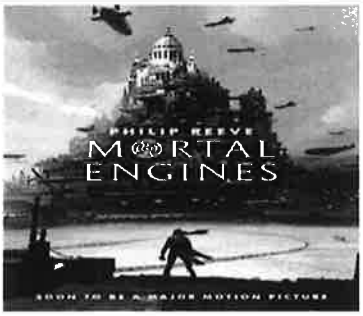
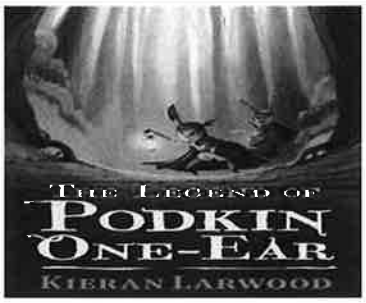
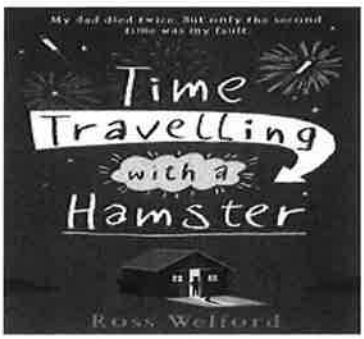
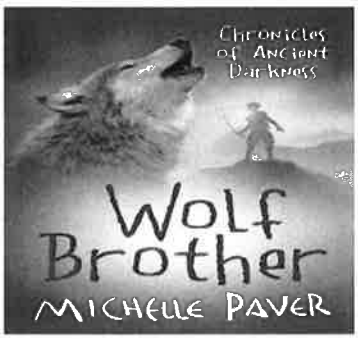
c. **Think about the tone of voice you are going to use on certain words or lines. Remember the threat level is different at different parts of the story so you can slow down your reading or speed it up when things get tense!**

d. **If you have more than one character in your story, you could use different voices, like your teachers do in class, or convince a family member or school friend to help you out.**

e. **Be confident and enjoy it! Try not to re-record yourself 1,000 times trying to make it perfect.**

Book recommendations

Below are some books that I would recommend for anyone in Years 5, 6 or 7 who likes an adventure story or one that has treasure in it.

 Cogheart by Peter Bunzl	 Phoenix by S F Said	 Orphans of the Tide by Struan Murray
 Mortal Engines by Philip Reeve	 The Lost Magician by Piers Torday	 Rumblestar by Abi Elphinstone
 Brightstorm by Vashti Hardy	 Podkin One-Ear by Kieran Larwood	 Rooftoppers by Katherine Rundell
 Time Travelling with a Hamster by Ross Welford	 Wolf Brother by Michelle Paver	 The Invention of Hugo Cabret by Brian Selnick

I hope you have enjoyed working through this workbook. Please share any work produced by tweeting me @MrWalkerPrimary

James Walker is a Year 6 teacher from Bristol who also works as a trainer with Talk for Writing to help schools develop the approach.

Edited and designed by Julia Strong
Prepared for online distribution by Nick Batty

To find out more about Talk for Writing, visit www.talk4writing.com.

Thanks to Jon Ralphs for the cartoons: jonralphs.com

Huish Episcopi

Kingsmoor online links for Pack 7 WC 22 February 2021

Accelerated reader: If you would like to take quizzes on the books you have read over lockdown, please log on to our school AR URL. This is a temporary address that you will be able to access during lockdown.
https://ukhosted22.renlearn.co.uk/2231930

Monday
For maths: www.ttrockstars.com www.mymaths.com
For English: https://www.activelearnprimary.co.uk/login https://www.getepic.com/

Tuesday
For maths:www.ttrockstars.com www.mymaths.com Y5 https://vimeo.com/480246937
Y6 https://vimeo.com/502664420
For English: https://www.activelearnprimary.co.uk/login https://www.getepic.com/

Wednesday
For maths:www.ttrockstars.com www.mymaths.com Y6
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For English: https://www.activelearnprimary.co.uk/login https://www.getepic.com/
For Science: https://www.bbc.co.uk/bitesize/clips/ztr3cdm

Thursday
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For English: https://www.activelearnprimary.co.uk/login https://www.getepic.com/

Friday
For maths:www.ttrockstars.com www.mymaths.com Y5
https://vimeo.com/462718768
For English: https://www.activelearnprimary.co.uk/login https://www.getepic.com/

Kingsmoor additional enrichment activities and links if you choose

For those of you looking for extra activities that your children could be doing throughout the week try these:

Writing
https://authorfy.com/10minutechallenges/
There are lots of authors reading their extracts of their books online in short videos on this website. They set 10 minutes writing or illustration activities to complete.

Reading
www.getepic.com
Our Class Code is: wng9901
This site has hundreds of books to read online and also has a feature where you can follow the text and listen at the same time. There are fiction and non-fiction, poetry and playscripts to enjoy. The books are linked up to AR levels so your child can select from their current reading range. The children have written their reading ranges in their planners so it should be easy to locate books at their reading level. Open from 9am – 4pm every day.

Huish Episcopi

Maths

https://www.topmarks.co.uk/maths-games/hit-the-button

This website is great for practising key skills of halving, doubling, multiplying and dividing. It's fast and fun.

Other Enrichment Ideas:

Look at BBC Bitesize which has updated its website with lessons and activities for each and every subject at school, from French to DT!

https://www.bbc.co.uk/bitesize/levels/zbr9wmn

https://www.bbc.co.uk/iplayer/group/p089njzd?xtor=CS8-1000-[Discovery_Cards]-[Multi_Site]-[SL08]-[PS_IPLAYER~N~~P_BitesizeDaily]

BiteSize Daily is a series of videos on IPlayer that are designed to support our children through lockdown. They have guest presenters on everything from performing magic tricks to PE lessons

History

https://www.britishmuseum.org/collection

Have a look at the different collections that can be seen at the museum. You can even go on a virtual tour to look at some of the exhibitions.

Geography

https://www.natgeokids.com/uk/category/discover/

Discover some cool facts about our world with National Geographic Kids website.

Art

https://www.tate.org.uk/kids https://www.louvre.fr/en

Look at The Tate Gallery Kids website for fun things to do and make based on real works of art. Have a look at some of the artists and play games and quizzes. Or take a walk around the Louvre in Paris.

PSHE

https://www.parliament.uk/visiting/visiting-and-tours/tours-of-parliament/

Visit the Houses of Parliament

PE

www.youtube.com

Log in to do a daily Joe Wicks workout or Cosmic Kids Yoga.

Science

https://www.nhm.ac.uk/take-part/try-this-at-home.html

Try looking at the Natural History Museum website for ideas on how to get creative with our natural world.

RE https://www.bbc.co.uk/bitesize/subjects/z7hs34j This website has information about six of the main religions and also humanism. Watch the videos and take part in the activities.


#HEPS
athome

Name:_____ Date: Tues 23 Feb

Reacting to Music

Title of the piece:_____

Performer(s):_____

Genre/Type of music:_____

Score out of 10:

Why?

How do you know it is this genre?_____

1. When I listen, it makes me feel...

_____

2. Colours I imagine when I listen...

_____

3. This music makes me think...

_____

4. Does it have a catchy part (a riff or a refrain)? Will you be humming it later? Why?

_____

5. Who do you think would like this piece and why?

_____

_____

_____

Wed 24 Feb ~~02/02/2021~~

Why Do We Need Nutrients?

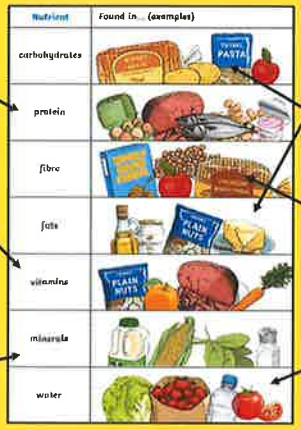
Whole Class

Match the type of nutrient with the job that it does.

Help the body to grow and repair itself.

Help the body to stay healthy. For example Vitamin C helps wounds to heal.

Keep the body healthy. For example: calcium keeps our teeth strong and iron is needed to help circulate oxygen around the body.



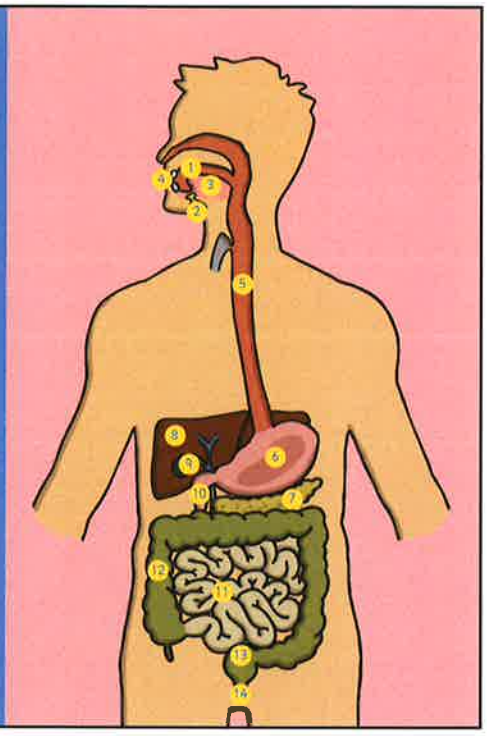
Gives the body energy so we can be active.

Gives the body energy, stores energy and helps insulate against the cold.

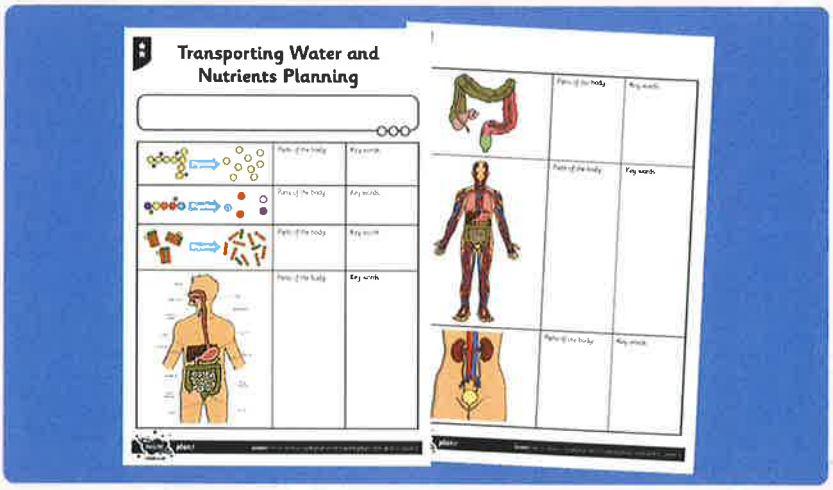
Helps keep food moving through the colon and intestines.

Needed for bodily fluids and normal cell function.

1. **Mouth**: Food enters the system.
2. **Salivary glands**: Produce saliva which contain an enzyme called amylase. This breaks down starch in carbohydrates.
3. **Tongue**: Mixes food with saliva.
4. **Teeth**: Tear, cut and grind food.
5. **Oesophagus**: Tubes that 'carts food to the stomach.
6. **Stomach**: Produces enzymes and acids to break food down. Churns food into small pieces. The mixture of stomach acids, enzymes and food is called 'chyme'.
7. **Pancreas**: Produces enzymes to break down fats, carbohydrates and proteins which are released into the duodenum.
8. **Liver**: Produces bile that breaks down fats.
9. **Gall Bladder**: Stores bile and releases it to the Duodenum when needed.
10. **Duodenum**: First part of the small intestine. Food is broken down by bile and enzymes.
11. **Small Intestine**: Nutrients are absorbed into the bloodstream here. Remaining food is passed to the large intestine.
12. **Large Intestine**: Absorbs water from remaining food. This food forms into stools.
13. **Rectum**: Stores stools and signals to the brain that there are stools that need releasing.
14. **Anus**: Stools are released out of the body.

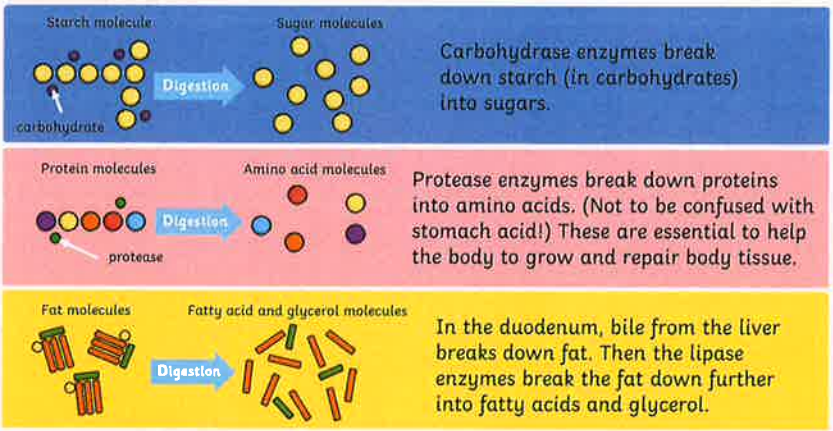


How Does It Work?



How Does It Work?

How Are Nutrients Broken Down?
Stomach acids break food down into a substance called chyme. This passes through to the duodenum where bile and enzymes break up larger molecules into their smaller parts.

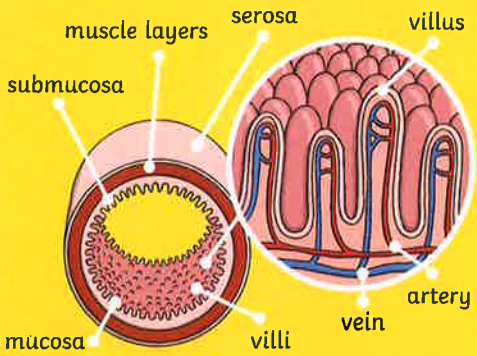


How Does It Work?

A Closer Look

After the nutrients have been broken down into smaller separate molecules in the duodenum, they can then pass through to the rest of the small intestine, where they are absorbed into the blood stream.

Inside the Small Intestine



The small intestine is a muscular tube with several layers. It is lined with tiny hair like villi which are attached to arteries and veins.

The chyme (which now contains smaller broken down nutrient molecules) is moved back and forth in the small intestine. The nutrients pass through the villi and are absorbed into the blood vessels.

Bacteria in the large intestine break down waste food for any more nutrients which are absorbed. This process also leads to gas which is eventually passed through the anus.

How Does It Work?

What about Water?

Water enters the body in the mouth. Unlike other nutrients it is not broken down by enzymes or bile.

A small amount of water is absorbed through the stomach but the majority passes through to the small intestine.

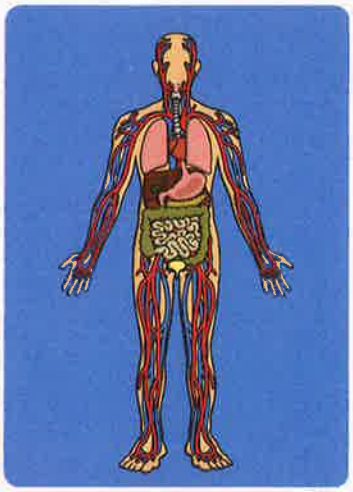
Water is absorbed in the small intestine in the exact same way as other nutrients are absorbed – through the villi into bloodstream via the blood vessels.

The large intestine (also called the colon) is similar to the small intestine in structure except that it does not contain villi. By the time waste material reaches the large intestine, 90% of water has already been absorbed.

The waste food enters into the cecum which is the first part of the large intestine. It moves through the large intestine through a series of **mass movements**. These are long, slow moving waves of muscles contracting and relaxing. The rest of the water in the waste food is absorbed in all the different parts of the colon. The resulting stool and any gases are moved to the sigmoid colon. It is this part of the large intestine that enables gases to be released without releasing stools at the same time. The stools then enter the rectum before expulsion through the anus.

How Does It Work?

How Does It All Fit?



Nutrients and water are absorbed in the system in the stomach, small and large intestines.

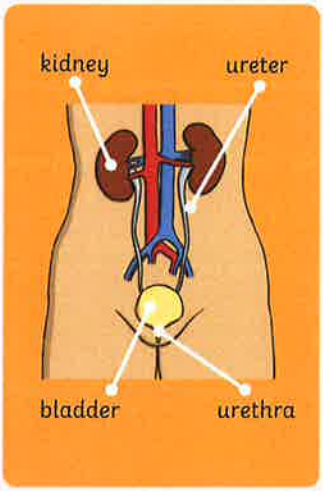
They enter the blood stream via the capillaries where they are passed through to the arteries.

The blood is circulated throughout the body (including being oxygenated in the lungs and the heart).

Nutrients are absorbed by the cells that need them and water is absorbed by all cells.

How Does It Work?

How Is Waste Expelled from the Body?



There are kidneys are responsible for getting rid of waste from blood in two ways.

1. Veins collect waste from cells. Most of the waste is released into the liver. The liver then uses it to create bile. This goes into the duodenum to break down food into chyme. The waste that is not turned into bile is made water soluble (dissolves in water) and goes to your kidneys.
2. The kidneys perform a function called **filtration**. The renal vein delivers blood to the kidneys which it filters for waste. This is called ultrafiltrate and is turned into urine which is passed through to the bladder.

The bladder serves the same function as the rectum, in that it sends signals to the brain. It sends signals to indicate that urine needs to be expelled.

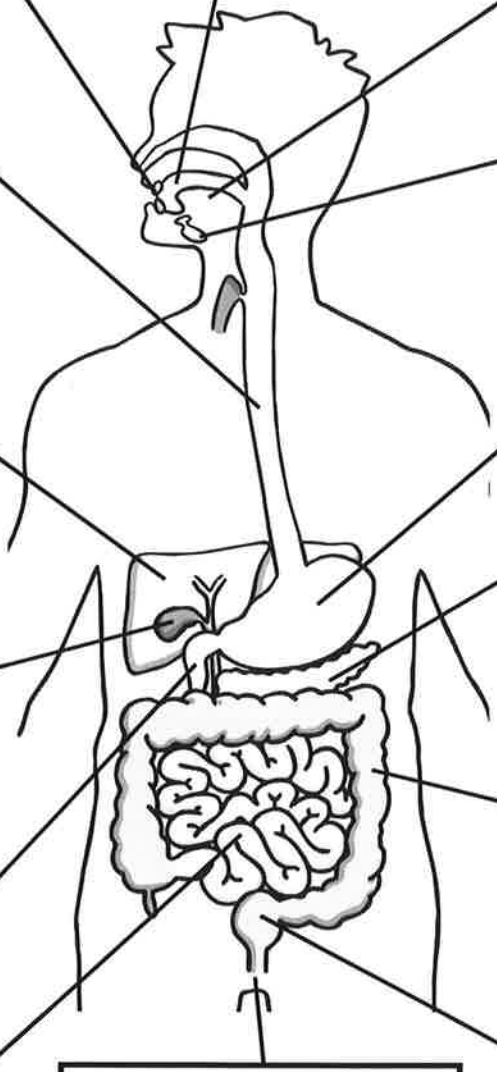
Urine is then released through the urethra.

Digestive System Functions

Wed 24th Feb

Name of digestive system part:	Name of digestive system part:	Name of digestive system part:
Function:	Function:	Function:

Name of digestive system part:	Name of digestive system part:
Function:	Function:



Name of digestive system part:	Name of digestive system part:
Function:	Function:

Name of digestive system part:	Name of digestive system part:
Function:	Function:

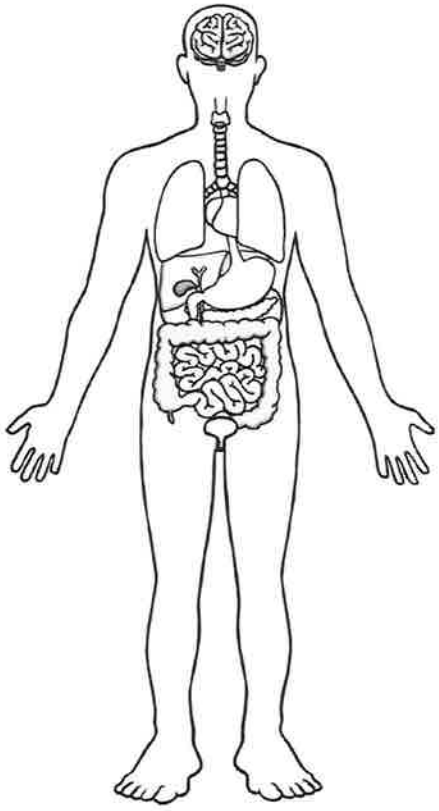
Name of digestive system part:	Name of digestive system part:
Function:	Function:

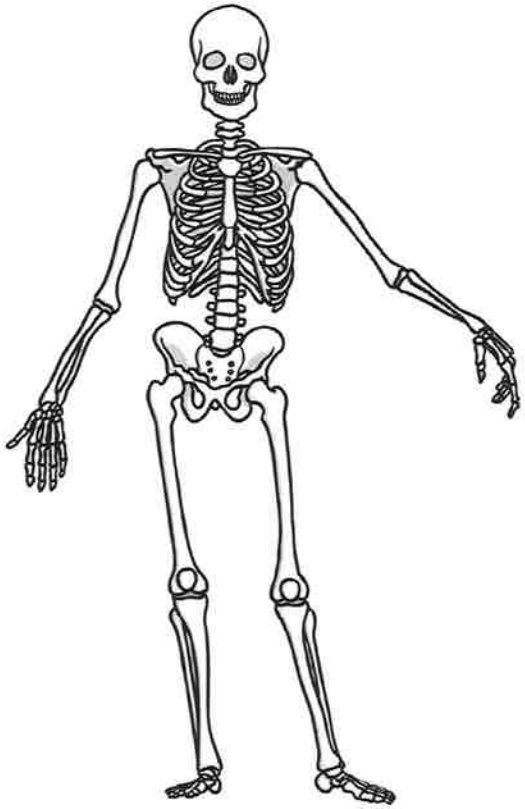
Name of digestive system part:	Name of digestive system part:	Name of digestive system part:
Function:	Function:	Function:

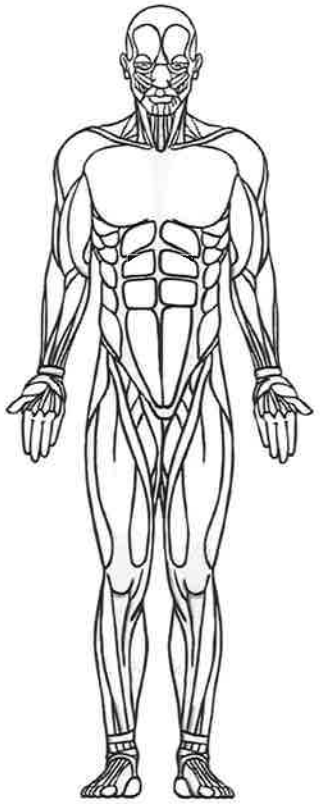
Where Are Nutrients Needed?

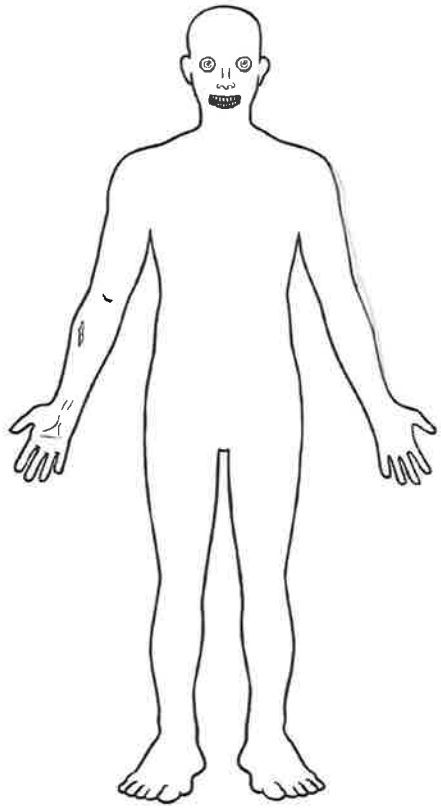
Wed 24th Feb

Research the nutrients needed by different parts of the body. Then label these on the appropriate diagram showing that body part.









Thurs 25 Feb

Word Check!

Let's check your understanding of these key words:

Internet
source
avatar
messaging
email
online
app
advert

Who Can Use the Internet?

- Many people across the world use the Internet every day.
- By the end of 2019, four and a half billion (4,500,000,000) people were using the Internet. That is nearly 6 out of every 10 people in the whole world.

What Is Safer Internet Day?

- Safer Internet Day is celebrated in over one hundred countries across the world on Tuesday 9th February 2021.
- The theme this year is 'An Internet we trust: exploring reliability in the online world'.

How Do We Access the Internet?

- We can use lots of different devices to access the Internet. How many can you think of?

Did you think of all these?

What Do You Use the Internet For?

- The Internet is an amazing place!
- In our real lives, it provides us with entertainment, allows us to communicate and helps us learn new things.

How Would You Feel if the Internet Was Turned Off?

What Is Your Online Identity?

- When we go online, we have an online identity.
- This is information about ourselves, our likes, what we share and how we talk to others.
- On some apps, we can make an avatar or a profile that other people online can see.

Sarah Bailey

London

sarah.l.bailey@email.mail

News or Fake News?

There are ways we can investigate if the information we read is fact or fiction.

The online world can influence, persuade and manipulate our decisions and opinions. It's important we find out what is fact and what is fiction. Sometimes fake news can even be harmful.

What can I do?

- **Ask myself who wrote this?**
- **Investigate why is was written.**
- **Support my friends if fake news upsets them.**
- **Only share things I have checked are true.**

This Is Me

- What do you like to do online?
- Who likes to do the same/different?
- Is it OK for people to like different things online?
- **What could we do to make the Internet better?**

An Internet We Trust

There are ways we can investigate if the information we read is fact or fiction.

question what you see

check other sources online

check sources offline

ask for help

An Internet We Trust

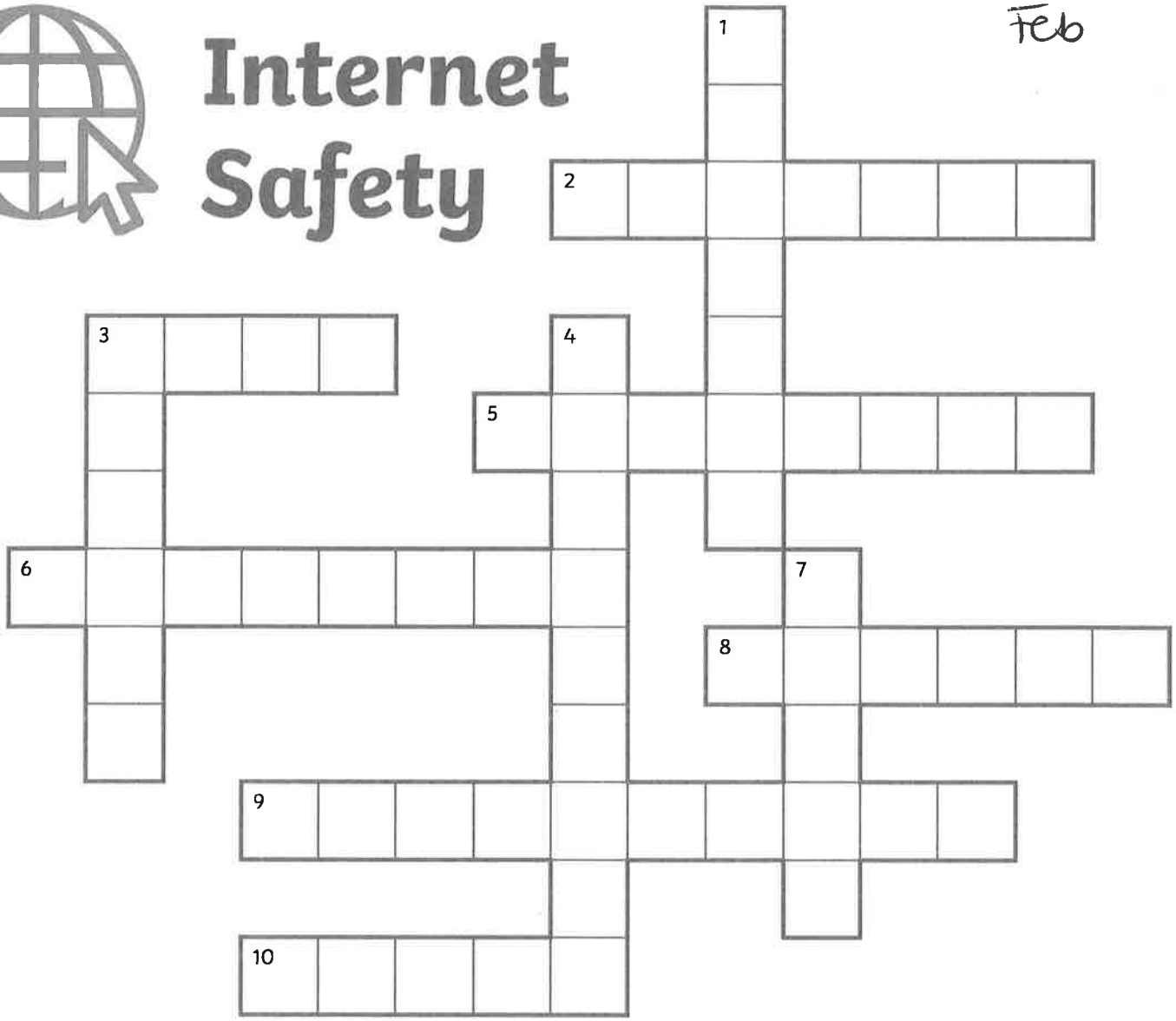
- The theme this year asks us to think about how we can know what to trust online.
- We need to learn how we separate fact from fiction.
- How do we know if we can trust something online?

What Would You Do If...

- You see an advert pop up saying you have won a prize?
- You saw a link for a video to an amazing new football trick?
- Someone you play games with online asks to meet in person?

Thurs 25 Feb

Internet Safety



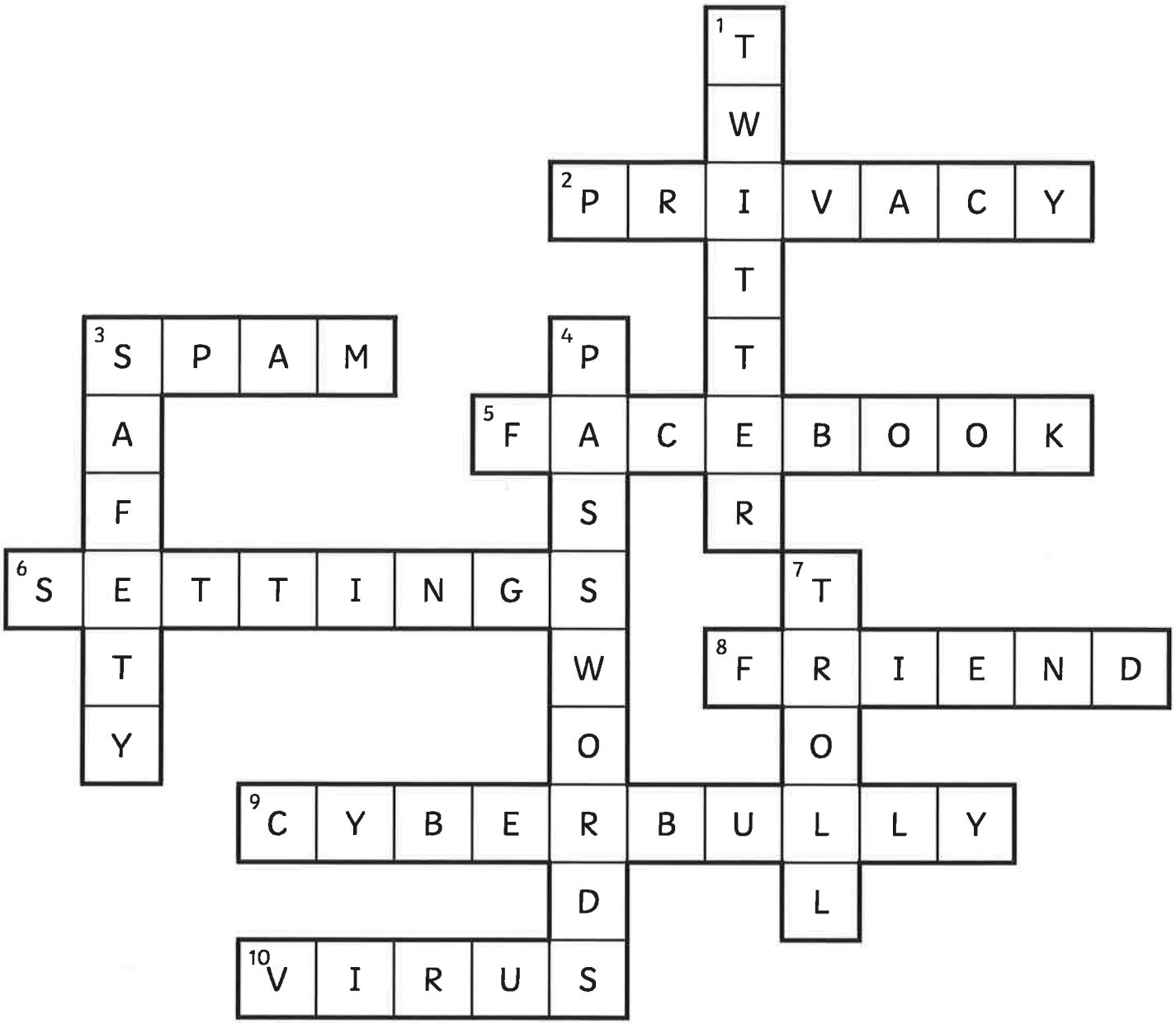
Across

2	So that strangers can't talk to me, I have my _____ settings restricted.
3	All of my _____ email goes into my junk mail.
5	I like to go on my _____ account to catch up with old friends.
6	I adjust my _____ to what I prefer.
8	My _____ and I keep in touch through Facebook.
9	I would call somebody a _____ who says horrible things online.
10	I constantly check my computer so I don't get a _____.

Down

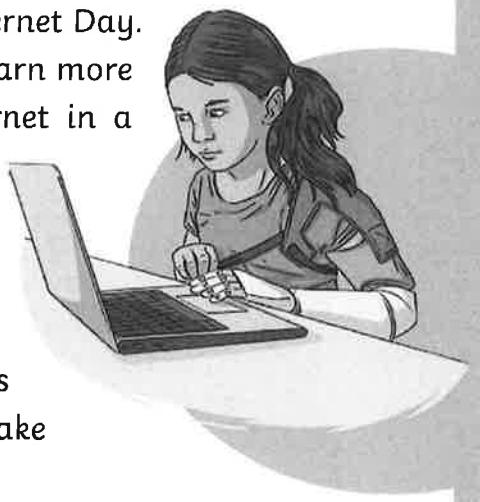
1	I like to follow celebrities on my _____ account.
3	I have to be careful of my _____ when I am on the internet.
4	I have many different _____ just in case somebody finds one of them out.
7	A _____ hides behind the anonymity of the internet and winds people up.

Internet Safety **Answers**



Safer Internet Day 2021

Mon 25 Feb



Every year, schools across the world support Safer Internet Day. The aim of the day is to help children and adults to learn more about how to stay safe online and to use the Internet in a responsible way. This year's event is being held on Tuesday 9th February.

Each year, Safer Internet Day has a different, themed focus. The theme this year is 'An Internet we trust: exploring reliability in the online world', which focuses on being able to decide what we can trust and to make the best decisions while online.

An Internet We Trust: Exploring Reliability in the Online World

The online world is a great source of information and offers opportunities to research, learn new facts or skills and even develop people's views and opinions. The Internet is also an important way for young people to enjoy positive relationships with their peers, such as through gaming and social media sites. But how do we know what or who we can trust?

As we explore the online world, we are constantly having to make decisions about who and what to trust. The 2021 Safer Internet Day campaign focuses on supporting young people to question and challenge what they see online. It hopes to give them the skills and strategies they need to be able to spot and speak out against any harmful and misleading content they might come across.

How Do You Use the Internet?

We all use the Internet differently. For example, here are some online activities that people like to do:

- listening to music
- watching funny videos
- chatting with friends
- contacting family who live far away
- gaming
- researching for homework

How do you like to use the Internet?

Everything Is Not Always as It Seems

Photos

Photos can often exaggerate real life. People usually pick the prettiest and happiest pictures of themselves to share online. These images of other people's (carefully chosen) so-called perfect lives can sometimes leave you feeling low. Try not to compare yourself though and remember that the photos probably don't tell the whole story.

Fake News

Although the Internet is a great source of information for young people, unfortunately not everything is always as it seems. The online world also contains misleading content and fake news. Fake news is false information that is published, claiming to be true and reliable news.

Fake and imprecise content is harmful because it can impact young people's decisions, views and opinions and cause them to act on false information. It also breaks the trust we have of people in the media, many of whom are in fact reporting honestly.

Safer Internet Day 2021 will look at why inaccurate content exists, where it comes from and how young people can manage it.

Reducing Screen Time

Make sure you take regular breaks away from electronic devices. If you find yourself spending a lot of time online and even thinking about it when you're offline, then it's probably time to cut down your screen time.

Did You Know...?

Globally, over 4.6 billion people are regular Internet users according to a study from October 2020. This is about 59% of the worldwide population.

Staying Safe Online

The Internet is an incredibly powerful tool. However, we must think about how to use it safely. Sometimes, if we are in a group chat or playing an online game, we might see or hear something that worries, confuses or upsets us. There are ways to report this so that it is less likely to happen again. For example, many apps and games have 'Report', 'Help' or 'Block' buttons. 'Report' can help us to report anything that makes us feel unsafe or unhappy. 'Help' is if you have a problem with an app and 'Block' is useful if you don't want to get any more messages from someone. It can also be a good idea to save evidence (such as a picture or a message).

Most importantly, we should tell an adult about what has happened.

Safer Internet Day 2021 celebrates what an amazing place the Internet is to be creative, chat with friends and find out interesting information. It's important to make the most of it while also being safe, sensible and able to separate fact from fiction.

Questions

Thurs 25 Feb

1. What is the aim of Safer Internet Day?

2. Mark whether the statements are true or false.

	True	False
Safer Internet Day is happening on February 19th 2021.	☐	☐
The Internet offers opportunities to research and learn new facts or skills.	☐	☐
The Internet is an important way for young people to enjoy positive relationships with their peers, such as through gaming and social media sites.	☐	☐
You should believe everything you read on the Internet.	☐	☐

3. Discuss why you should try not to compare yourselves to photos you see of other people online?

4. What is fake news?

5. Look at the How Do You Use the Internet? section. Find and copy one word which means 'speaking to or communicating with someone'.

6. Click on the correct action to take to match the situations.

Sid tries but he can't log on to his game.	Select
A stranger keeps sending Luca annoying messages.	Select
Abdulrahman saw a video that worried him.	Select
Something has made you feel unsafe, worried or unhappy.	Select

7. What advice would you give to someone spending too much time online?

8. Do you think Safer Internet Day is important? Explain your answer.