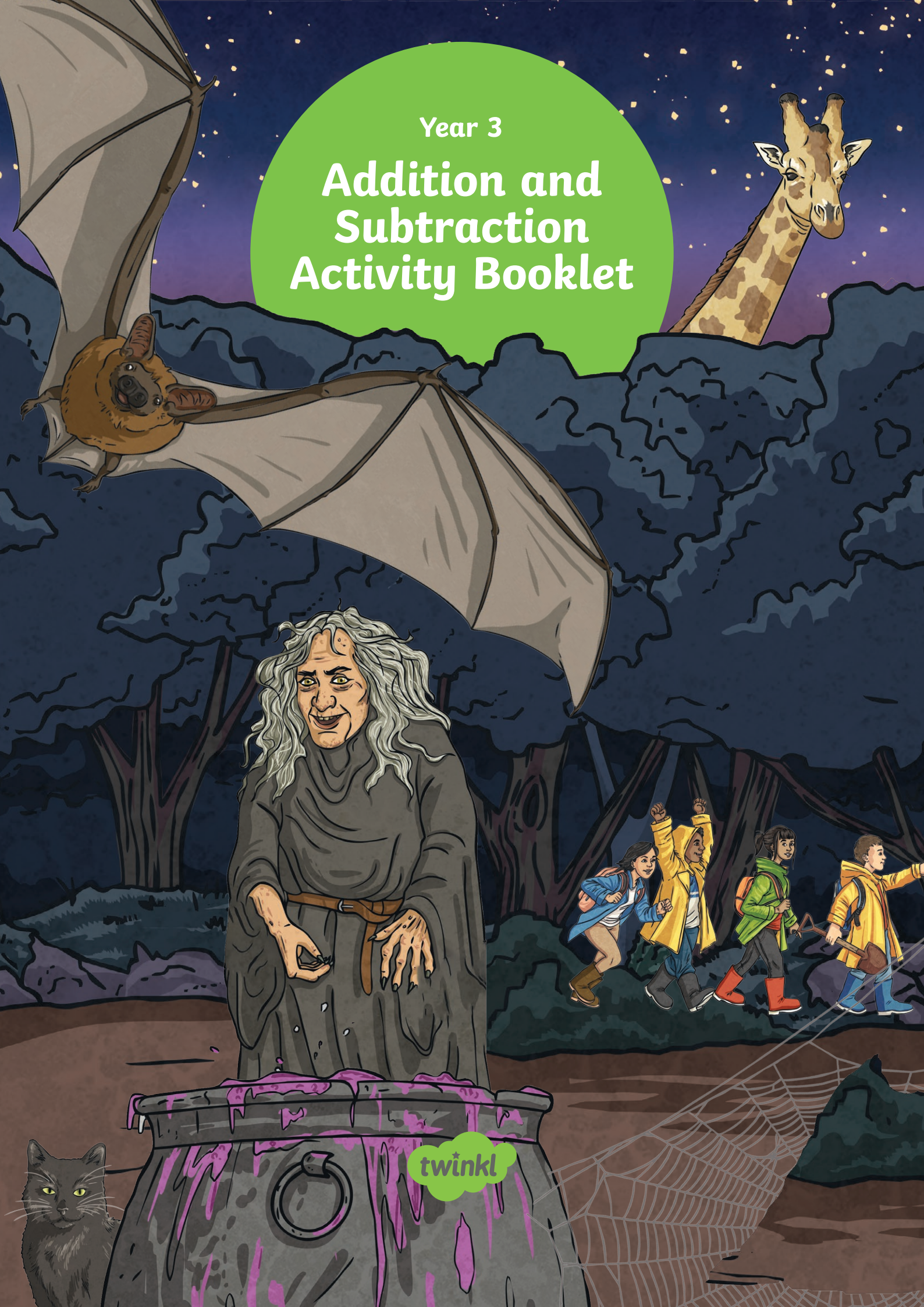
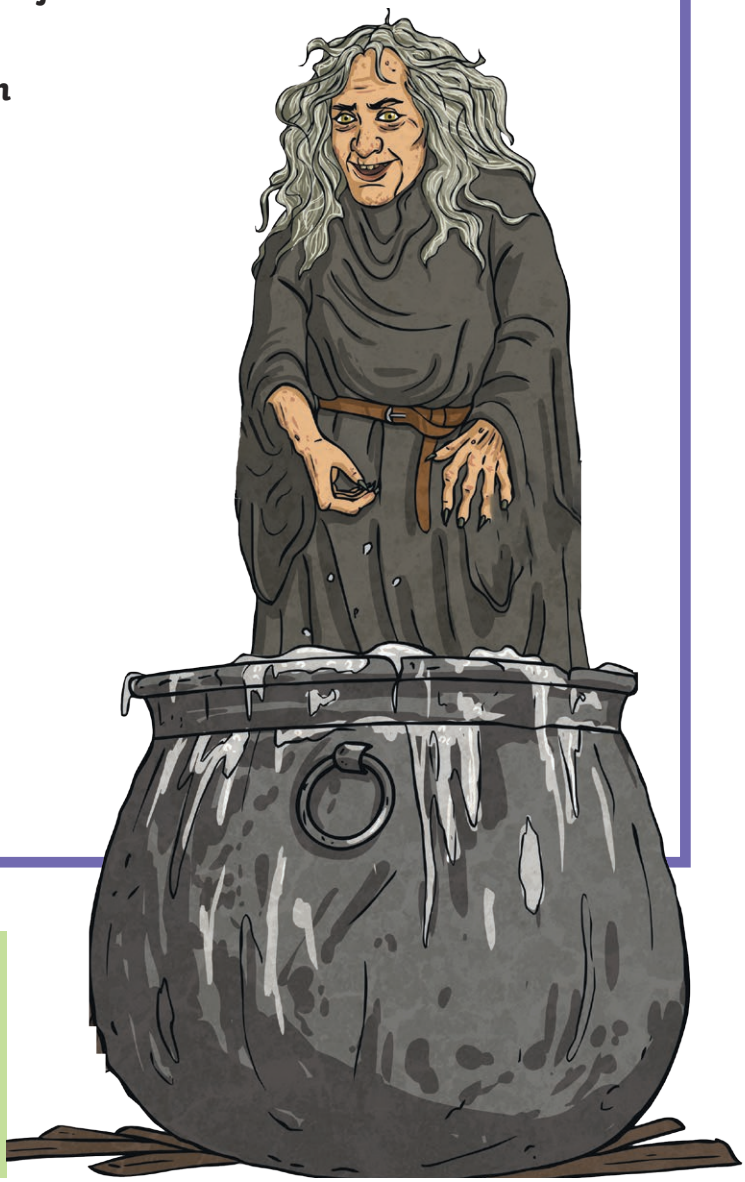

Year 3
Addition and Subtraction Activity Booklet
twinkl

Contents

Colour in each of the stars as you complete an activity in this addition and subtraction booklet.



Can you count how many black cats there are throughout the booklet from the witch's lair?

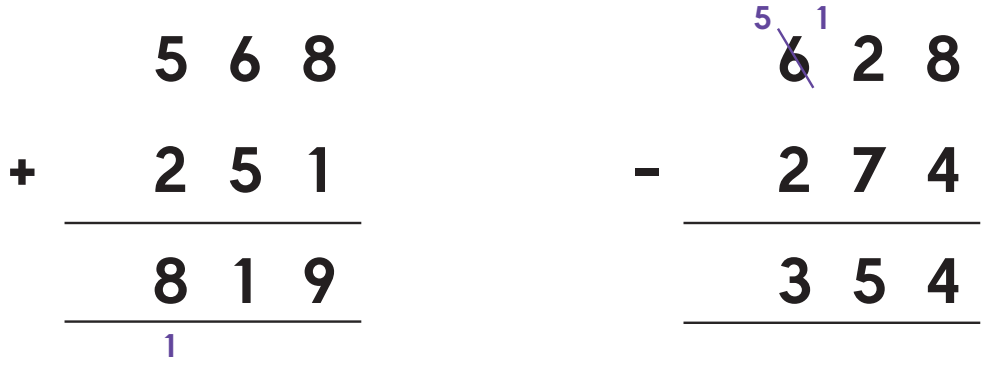
Year 3 Addition and Subtraction Explained for Parents and Carers

In the Year 3 National Curriculum, children are expected to add numbers both mentally and by using a formal method. In schools, they are taught the formal methods of **column addition** and **column subtraction** to add and subtract 3-digit numbers. The curriculum focuses on making children 'masters' of these methods so they can apply them to a range of problems and situations. Therefore, the range of activities in this booklet will help your child develop their **fluency, reasoning** and **problem solving** when using **column addition** and **column subtraction.**

The Column Method

The column method of addition and subtraction is so called because it sets the numbers out in columns based on their place value, i.e. **Hundreds, Tens** and **Ones**. (**Note:** If your child isn't secure with place value, it is best to go over this before completing any column addition and subtraction.) To begin this method, we always start by adding, or subtracting, the numbers in the right column and then work along to the left, adding or subtracting the numbers in that column.

When using column subtraction, the **largest number** is always placed above the **smaller number**. Also, you must always subtract the digit below from the number above; this is sometimes a common misconception with children as they sometimes just calculate the difference between the two numbers.



Borrowing vs Exchanging

During school, you were probably taught to 'borrow' from the next column if you couldn't subtract the bottom number from the top number in a column. However, the current term used for this procedure is **exchanging**. Ask your child what the teacher calls it in school to ensure you are consistent with what is taught in their classroom.

For a fully detailed explanation of column addition and subtraction, please use the following resources on the Twinkl website:

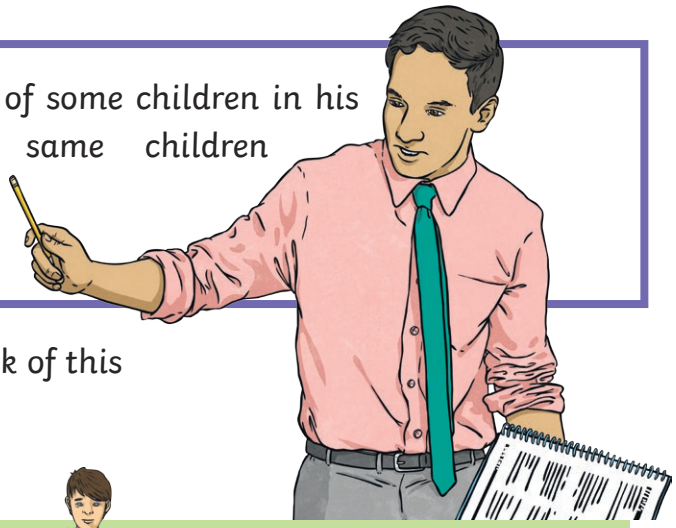
Year 3 Addition and Subtraction Lesson 3b Adding 3 and 3 Digit Numbers Without Carrying Powerpoint

Year 3 Addition and Subtraction Lesson 4d Subtracting 3 Digit Numbers from 3 Digit Numbers (Exchanging Once) Powerpoint

Mr Roach's Class

Add a 1-Digit Number to a 3-Digit Number

For a maths task, Mr Roach recorded the height of some children in his class at the start of the year. He measured the same children again at the end of the year. Calculate the new height of each child at the end of the year.



Tip – if you need help, use the 100 square at the back of this booklet to help you add by counting on.

1

Recorded Height: 125cm

Height Increase: 9cm

New Height:

2

Recorded Height: 128cm

Height Increase: 7cm

New Height:

3

Recorded Height: 134cm

Height Increase: 6cm

New Height:

4

Recorded Height: 108cm

Height Increase: 8cm

New Height:

5

Recorded Height: 112cm

Height Increase: 8cm

New Height:

6

Recorded Height: 141cm

Height Increase: 3cm

New Height:

7

Recorded Height: 112cm

Height Increase: 6cm

New Height:

8

Recorded Height: 138cm

Height Increase: 4cm

New Height:

The Witch's Magic Cauldrons

Mentally Add and Subtract Numbers

Below, there are some witch's cauldrons. Each cauldron has a specific calculation that it does to each number that is placed in it. Complete the calculations on each cauldron and then write the answer in the bubbles on the other side. The first has been done for you.

325
278
134

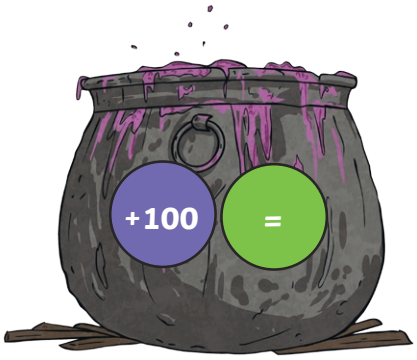
330
283
139

364
723
417

535
936
301

657
348
321

378
942
491



638
524
938

The Witch's Magic Cauldrons 2

Mentally Add and Subtract Numbers

632
148
201

652
823
586

746
837
538

164
642
872

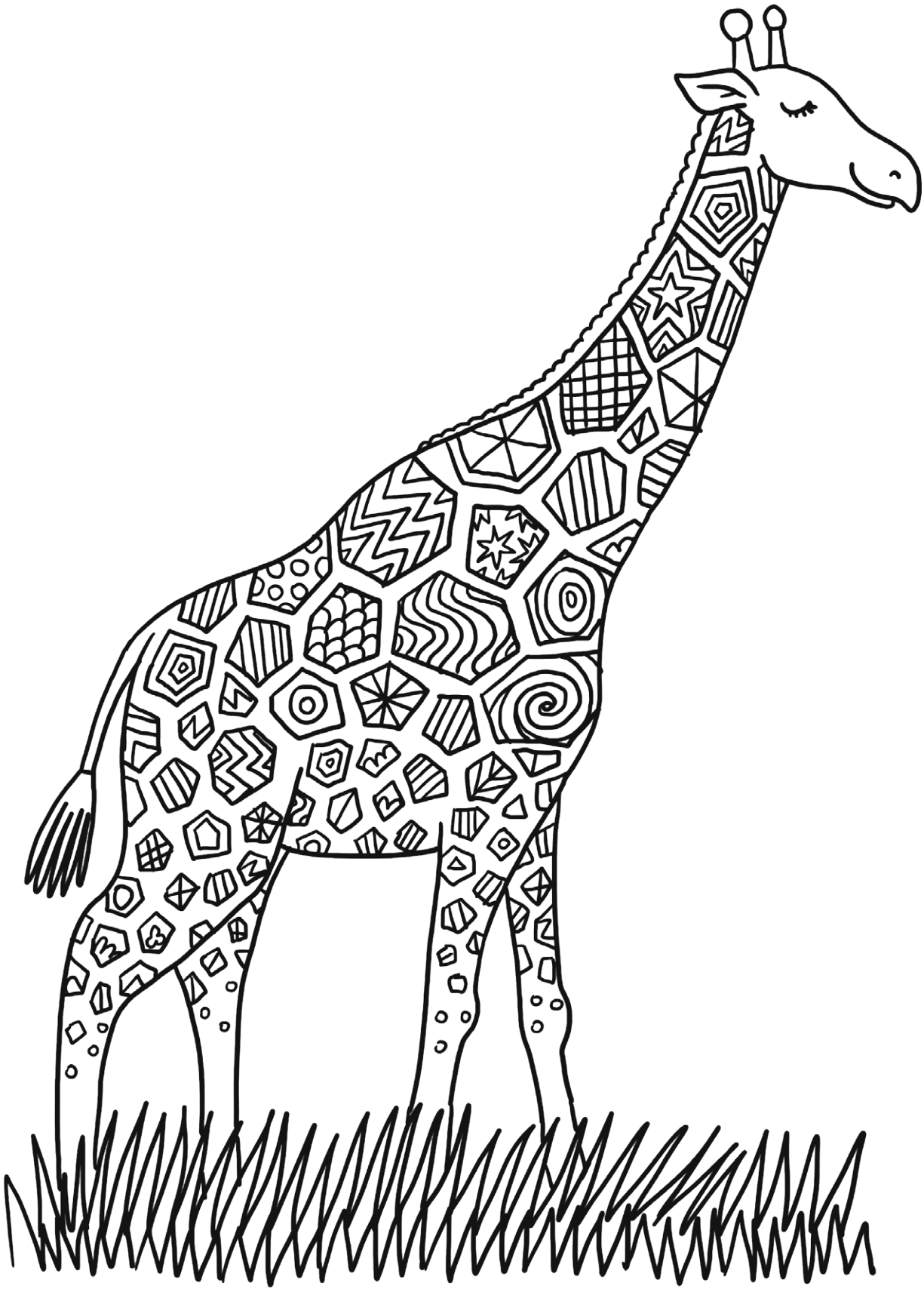
783
649
276

623
604
940

Challenge

Create your own maths cauldron by writing 3-digit numbers on the left side of the cauldron and the answers on the right after they have been placed in the maths magic cauldron.

Brain Break: Mindfulness Colouring Safari



Sophie's Homework: Column Addition

Sophie has been set the following calculations to complete by her teacher. However, she is struggling to solve the calculations. Help Sophie by completing each of the column additions below.

Without Regrouping

273 + 514 =	382 + 117 =	615 + 172 =	340 + 643 =
153 + 716 =	805 + 173 =	572 + 327 =	632 + 253 =

With Regrouping

323 + 518 =	607 + 228 =	507 + 443 =	328 + 142 =
254 + 708 =	515 + 129 =	653 + 153 =	591 + 346 =

The Hermes Shoe Factory

The statistics for the amount of sports trainers made in one week at the Hermes Shoe Factory are shown below. Use the statistics below to answer the questions. Complete your working out in the boxes provided.

Day of the Week	Number of Red Trainers Made	Number of Green Trainers Made
Monday	652	258
Tuesday	431	379
Wednesday	254	816
Thursday	435	624
Friday	843	894

How many trainers were made altogether on Tuesday?

How many green trainers were made altogether on Monday and Tuesday?

The Hermes Shoe Factory

How many red trainers were made altogether on Wednesday and Thursday?

On which day was the largest amount of trainers made in total?

Challenge

Write your own addition problem about the data and try to solve it below. Show your working out.

Brain Break: Fun Craft Activity (Slime)

Cornflour Slime

You will need:

450g cornflour

475ml water

food colouring (optional)

Instructions:

1. Place the cornflour in a large mixing bowl.
2. Slowly pour in the water and mix thoroughly with your hands. You could add a few drops of food colouring if you wish to make colourful slime.
3. Keep mixing until the water and cornflour are fully blended together and the slime has the consistency of honey. You can add more cornflour to make the slime thicker or more water to make it runnier. Now have fun with your slime!

Things You Can Do with This Non-Newtonian Fluid

This slime is a non-Newtonian fluid, which means it acts differently to how we expect a liquid to behave. Try doing these things with your slime and see what happens:

1. In the mixing bowl, punch the slime but withdraw your fist back very quickly.
2. Scoop some of the slime into your hand and roll it into a ball.

Non-Newtonian Fluids

Why can you roll this slime into a ball and punch it to make it harder?

When you mix cornflour in water, the large cornflour particles remain suspended in the water. The slime is thick because, whilst the particles are packed very close together, they can still move past each other. If you stir the liquid slowly, the suspended particles have time to move past each other. However, when sudden pressure is applied, like a punch, the water flows out of the area but the particles do not have time to move away. The cornflour particles momentarily stay packed together and act like a solid until they have time to move away.

Important

Do not pour the slime down the sink when finished as this could block pipes. Instead, spoon the mixture into a food bag, seal it securely and place it in the bin.

Column Subtraction

Use column subtraction to complete these calculations. Remember to always subtract the number below from the number above in each column. If the number above is smaller, you need to exchange.

Column Subtraction without Exchanging

569	346	774	652
- 315	- 125	- 453	- 420
628	893	652	667
- 423	- 382	- 341	- 454

Column Subtraction with Exchanging

451	841	462	825
- 218	- 527	- 271	- 362
690	726	427	721
- 526	- 419	- 233	- 334

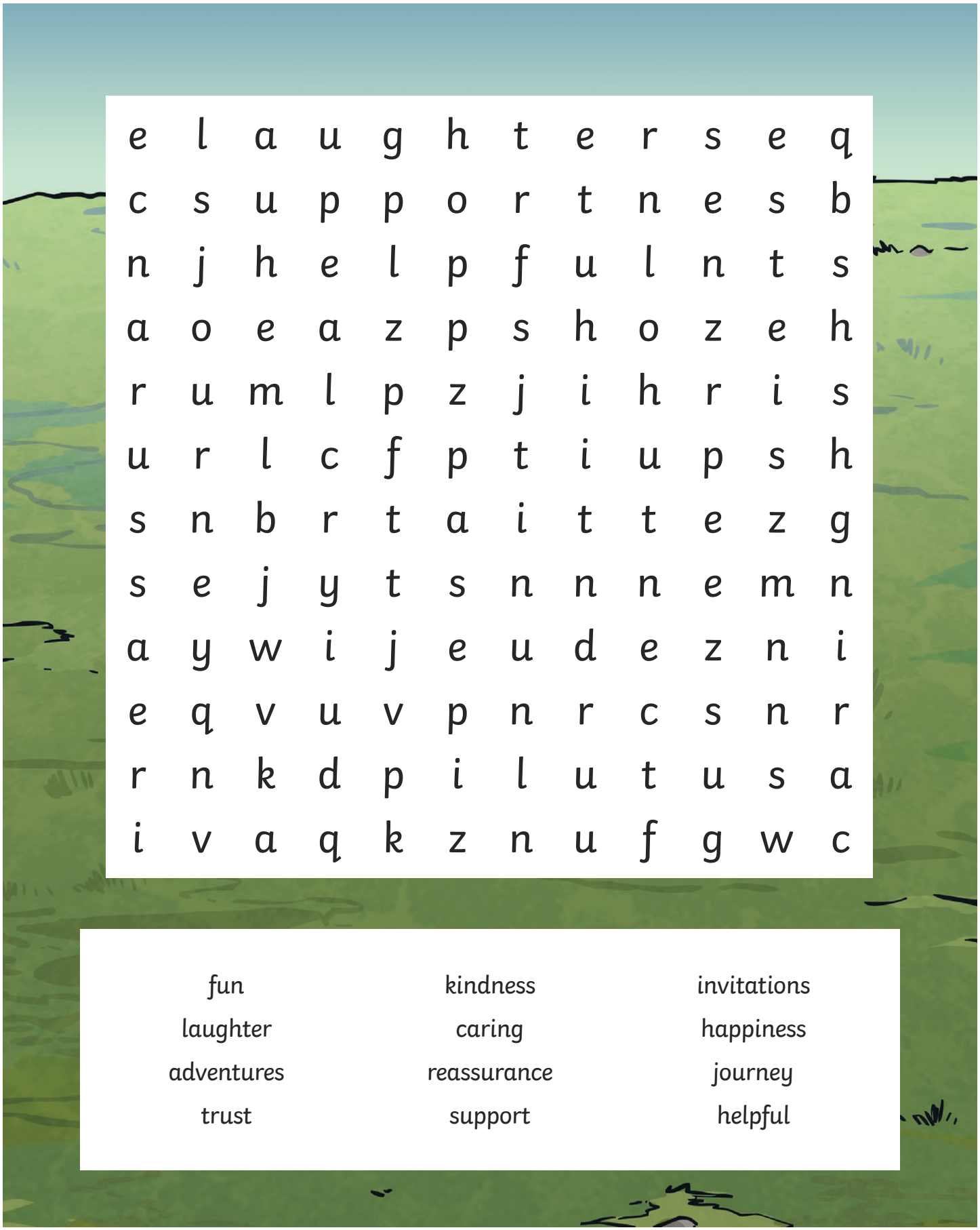
Subway Subtraction

Below is a list of trains which travel through the subway system in New York. Use column subtraction to calculate how much further each train has to travel to reach the end of its journey by subtracting the length travelled from the total length of the journey. Do your working out in the space provided and then place the correct answer in the table.

Train	Length of Journey (metres)	Distance Travelled so Far (metres)	Remaining Journey (metres)
Train A	425	284	
Train B	367	218	
Train C	896	427	
Train D	584	352	
Train E	982	241	

Complete your working out here.

Brain Break: Friendship Word Search



e	l	a	u	g	h	t	e	r	s	e	q
c	s	u	p	p	o	r	t	n	e	s	b
n	j	h	e	l	p	f	u	l	n	t	s
a	o	e	a	z	p	s	h	o	z	e	h
r	u	m	l	p	z	j	i	h	r	i	s
u	r	l	c	f	p	t	i	u	p	s	h
s	n	b	r	t	a	i	t	t	e	z	g
s	e	j	y	t	s	n	n	n	e	m	n
a	y	w	i	j	e	u	d	e	z	n	i
e	q	v	u	v	p	n	r	c	s	n	r
r	n	k	d	p	i	l	u	t	u	s	a
i	v	a	q	k	z	n	u	f	g	w	c

fun	kindness	invitations
laughter	caring	happiness
adventures	reassurance	journey
trust	support	helpful

Solve the Problems

Use your knowledge of addition and subtraction to solve the problems below. Use the space in the boxes to complete your working out.

1. A theatre sold 257 tickets for a play. Then, on the night of the play, another 147 tickets were sold. How many tickets were sold altogether? _____

2. I think of a number. I add 73 and then subtract 154. The answer I get is 358. What number did I start with? _____

3. John says that 248 + 156 = 404. Fill in the boxes below to show a subtraction calculation to check that John is correct.

	−		=	156

4. Gemma has collected 425 pennies. Her grandmother then gives her another 356 pennies. How many pennies does she have now? _____

Hundred Square

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Answers

Page 1

1. 134cm
2. 135cm
3. 140cm
4. 116cm
5. 120cm
6. 144cm
7. 118cm
8. 142cm

Page 2

1. 359, 718 and 412
2. 545, 946 and 311
3. 647, 338 and 311
4. 478, 1042 and 591
5. 538, 424 and 838

Page 3

1. 623, 139 and 192
2. 659, 830 and 593
3. 446, 537 and 238
4. 564, 1042 and 1272
5. 743, 609 and 236
6. 693, 674 and 1010

Page 5

Without Carrying

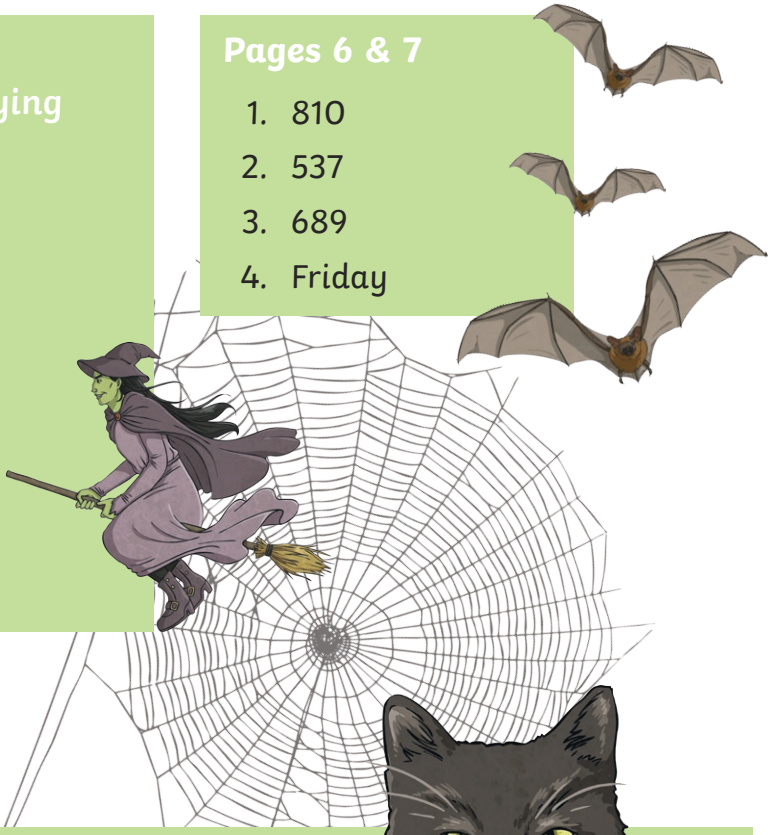
1. 787
2. 499
3. 787
4. 983
5. 869
6. 978
7. 899
8. 885

With Carrying

9. 841
10. 835
11. 950
12. 470
13. 962
14. 644
15. 806
16. 937

Pages 6 & 7

1. 810
2. 537
3. 689
4. Friday



There were 8 black cats all together!
How many did you find?

Answers

Page 9

Without Exchanging

1. 233
2. 221
3. 321
4. 232
5. 205
6. 511
7. 311
8. 213

With Exchanging

9. 253
10. 314
11. 191
12. 463
13. 164
14. 307
15. 194
16. 387

Page 10

1. 141
2. 149
3. 469
4. 232
5. 741

Page 11

e	l	a	u	g	h	t	e	r	s	e	q
c	s	u	p	p	o	r	t	n	e	s	b
n	j	h	e	l	p	f	u	l	n	t	s
a	o	e	a	z	p	s	h	o	z	e	h
r	u	m	l	p	z	j	i	h	r	i	s
u	r	l	c	f	p	t	i	u	p	s	h
s	n	b	r	t	a	i	t	t	e	z	g
s	e	j	y	t	s	n	n	n	e	m	n
a	y	w	i	j	e	u	d	e	z	n	i
e	q	v	u	v	p	n	r	c	s	n	r
r	n	k	d	p	i	l	u	t	u	s	a
i	v	a	q	k	z	n	u	f	g	w	c

Page 12

1. 404 tickets
2. 439
3. 404 - 248 = 156
4. 781 pennies