

Developing Critical Thinkers and Young Problem Solvers at Acresfield

Year 4

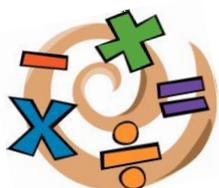
Our Approach to Maths

This booklet is designed to give parents an overview of expectations in Year 4 linked to the maths curriculum.

It outlines the following:

- ✓ Curriculum expectations in number for children in Year 4
 - ✓ Approaches to learning used by staff at Acresfield
 - ✓ Ways you can support your child at home

- In Year 4, children should become fluent in the order and place value of numbers beyond 1000. They will also explore negative numbers and confidently count in multiples of different amounts. The children will build on their learning from year 3.
- They will continue to recall their multiplication facts up to 12×12 and begin to derive other known facts that will help them with their mental calculations.
- The pupils will also build on the efficient written methods that were introduced in year 3 and work with larger numbers showing greater confidence.
- Children will explore the relationship between fractions and decimals in year 4 understanding the links between them using models and images for support.



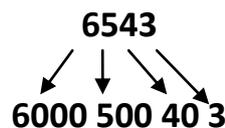
At Acresfield, we continue to develop the children's confidence with their mental strategies and also with their formal written methods. The children in year 4 build on the work begun in year 3 and become increasingly confident with their written methods for calculation. Children in year four are able to derive quickly other known facts and are given lots of opportunities to develop their mental calculations. Children are introduced to decimals and they explore the relationship between these and fractions.

General Number and Place Value

[What the national curriculum expects children to be able to do in Year 4]

- ✓ Count in multiples of 6, 7, 9, 25 and 1000
- ✓ Find 1000 more or less than a given number
- ✓ Count backwards through zero to include negative numbers
- ✓ Recognise the place value of each digit in a four digit number

How might this look?



- ✓ Order and compare numbers beyond 1000
- ✓ Identify, represent and estimate numbers using different representations
- ✓ Round any number to the nearest 10,100 or 1000
- ✓ Solve number and practical problems that involve all of the above and with increasingly large positive numbers
- ✓ Read Roman numerals to 100 [I to C] and know that over time, the numeral system changed to include the concept of place value and zero.

Addition and Subtraction

- ✓ Add and subtract with numbers up to 4 digits using the formal written methods of column addition and subtraction where appropriate

How might this look?

$\begin{array}{r} 789 \\ + 642 \\ \hline 1431 \\ \hline \end{array}$ <p style="font-size: small;">Answer: 1431</p>	$\begin{array}{r} 874 \\ - 523 \\ \hline 351 \\ \hline \end{array}$ <p style="font-size: small;">Answer: 351</p>	$\begin{array}{r} 8121 \\ - 457 \\ \hline 475 \\ \hline \end{array}$ <p style="font-size: small;">Answer: 475</p>	$\begin{array}{r} 111 \\ 932 \\ - 457 \\ \hline 475 \\ \hline \end{array}$ <p style="font-size: small;">Answer: 475</p>
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- ✓ Estimate and use inverse operations to check answers to a calculation
- ✓ Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why



How might this look?

		
grapes £2.50 for 1 kg	pineapples £1.40 each	peaches £1.99 for a box

Amir buys 2 pineapples and a box of peaches. How much does he pay?
Lara buys half a kilogram of grapes and one pineapple. How much change does she get from £5?
A shop sells sun hats.



Ryan buys some sunglasses for £4.69 and a sun hat. How much change does he get from £10?

Multiplication and Division

- ✓ Recall multiplication and division facts for multiplication tables up to 12 x12
- ✓ Use place value, known and derived facts to multiply and divide mentally including multiplying by 0 and 1, dividing by 1 and also multiplying together three numbers

How might this look?

$$6 \times 4 \times 2 = 48$$

First calculate 6×4 then multiply your answer by 2.

- ✓ Recognise and use factor pairs and commutivity in mental calculations e.g $7 \times 4 = 28$, $4 \times 7 = 28$
- ✓ Multiply two digit and three digit numbers by a one digit number using a formal written method

How might this look?

Eg. $136 \times 5 = 680$

X	100	30	6
5	500	150	30

500
150
+ 30
680



	3	2	7
X			4
	1	3	0
			8

The Grid Method will be used during the Autumn And Spring term.

Children will move onto a more formal column method in the Summer term.

- ✓ Divide a two digit number by a one digit number using a formal written method

	3	2
3	9	6

How might this look?

- ✓ Solve problems involving multiplying and adding.

How might this look?

185 people go to the school concert. They pay £1.35 each. How much ticket money is collected?



Fractions and Decimals

- ✓ Recognise and show using diagrams families of common equivalent fractions
- ✓ Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten

How might this look? The model below represents 3 hundredths and children will look to record this as $\frac{3}{100}$ or 0.03

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

- ✓ Solve problems involving increasingly harder fractions to calculate quantities and fractions to divide quantities, including non-unit fractions where the answer is a whole number
 - ✓ Add and subtract fractions with the same denominator
- ✓ Recognise and write decimal equivalents of any number of tenths or hundredths e.g. 0.4 is $\frac{4}{10}$
 - ✓ Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$
- ✓ Find the effect of dividing a one or two digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths

How might this look?



- ✓ Round decimals with one decimal place to the nearest whole number
- ✓ Compare numbers with the same number of decimal places up to two decimal places
- ✓ Solve simple measure and money problems involving fractions and decimals to two decimal places

How Parents Can Help at Home

- ✓ Build maths into everyday life
- ✓ Support the written methods used in school
- ✓ Use models and images to help your child to see the number
 - ✓ Shape and measures work

In Year 4 the children generally have a weekly piece of maths homework. These are usually activities designed to reinforce learning in the classroom.

During the year, parents can look for ways to reinforce learning in everyday situations. There are lots of opportunities linked to the measures work below. As children need to learn all of their multiplication tables in Year 4, support with this at home is invaluable.

The children will also be building on their **measures** work from previous years. They will need to convert between different units of measure [for example, kilometre to metre; hour to minute].

The children will also be measuring the **perimeter of a rectilinear figures** [including squares] in centimetres and metres and finding their area by counting squares. The children will need to estimate, compare and calculate different measures, including money in pounds and pence.

In **time** the children should read, write and convert time between analogue and digital 12 and 24 hour clocks. They will also need to solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. As part of the curriculum, the children will also look at properties of shapes, look at **position and direction** on coordinate grids and interpret and present **statistics**.

