Developing Critical Thinkers and

Young Problem Solvers

at Acresfield

Year 3

Our Approach to Maths

This booklet is designed to give parents an overview of expectations in Year 3 linked to the maths curriculum.

It outlines the following:

- ✓ Curriculum expectations in number for children in Year 3
  - ✓ Approaches to learning used by staff at Acresfield
    - ✓ Ways you can support your child at home

- In Year 3, children should be continuing to use their addition and subtraction facts to add mentally. They will also be using more formal methods as the year progresses. The children develop their learning from Year 2
e.g. 146 = 100 + 40 and 6, 146 = 130 + 16

-They will continue to practise their mental recall of multiplication tables to improve their fluency. Through doubling they connect the 2, 4 and 8 multiplication tables.

-The pupils also develop efficient methods e.g 4 x 12 x 5 = 4 x 5 x 12 = 20 x 12 = 240 and use multiplication and division facts e.g. 3 x 2 = 6, 6 ÷ 3 = 2 and 2 = 6 ÷ 3 and use this to derive related facts e.g. 30 x 2= 60, 60 ÷ 3 = 20 and 20 = 60 ÷ 3
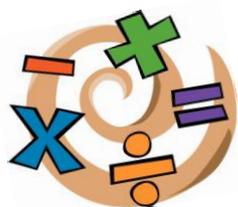
At Acresfield, we develop the children's confidence with number mentally first. It is important the children have acquired this before they begin to record written methods. The children in Year 3 build on the work begun in Year 2 and move towards more formal written methods for their calculations. However their mental skills are still very important and will continue to be focused on in Year 3. The children are also shown different models and images to support them with their calculations.

General Number and Place Value

[What the national curriculum expects children to be able to do in Year 3]

- ✓ Recognise the place value of each digit in a three digit number [hundreds, tens, ones].
- ✓ Compare and order numbers up to 1000 and read and write numbers up to 1000 in numerals and words
- ✓ Count from 0 in multiples of 4, 8, 50 and 100
- ✓ Find 10 or 100 more or less than a given number
- ✓ Learn their 2, 5 and 10 multiplication tables
- ✓ Solve number problems and practical problems involving these ideas

How might this look? Sort these numbers into ascending order: 95, 163, 8, 740, 25, 0, 400, 303

For each of these numbers: 428, 205, 130, 25, 7, 909. Tell me:
How many hundreds? How many tens it has? How many ones?

Addition and Subtraction

- ✓ Add and subtract mentally including a 3 digit number and ones, a 3 digit number and tens, a 3 digit number and hundreds.
- ✓ Add and subtract numbers with up to 3 digits using formal written methods of column addition and subtraction
- ✓ Estimate the answer to a calculation and use inverse operations to check
- ✓ Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction e.g. $3\square + \square2 = 85$

How might this look?   Paul says 172 – 15 = 163. Write down an addition calculation that you could do to check this. Paul's working is: 170 – 10 = 160 and 5 – 2 = 3 so 172 – 15 = 163
Can you identify where Paul has gone wrong?

Josh buys one coconut and half a kilogram of bananas. What does he pay?

Coconut   Bananas
78p   £1.50 per kg

Multiplication and Division

✓ Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.
✓ Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two digit numbers times one digit numbers, using mental and progressing to formal written methods
✓ Solve problems, including missing number problems, involving multiplication and division including problems in which n objects are connected to m objects.

How might this look? Circle three numbers that add to make a multiple of 4 from the following numbers -   11 12 13 14 15 16 17 18 19

Miss West needs 28 paper cups. She has to buy them in packs of 6

How many packs does she have to buy?

Fractions

✓ Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
✓ Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
✓ Recognise and use fractions as numbers: unit fractions non-unit fractions with small denominators
✓ Recognise and show, using diagrams, equivalent fractions with small denominators
✓ Add and subtract fractions with the same denominator within one whole [for example 5/7 + 1/7 = 6/7]
✓ Compare and order unit fractions and fractions with the same denominators
✓ Solve problems that involve all of the above

How might this look? Fill in the missing numbers
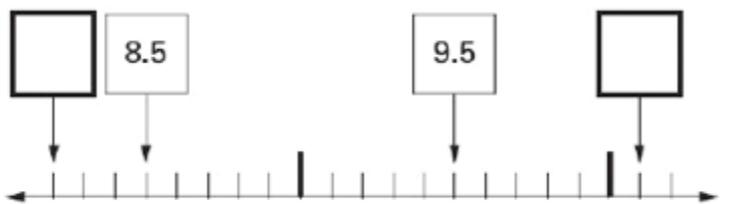
Here are 21 apples. Put a ring around one third of them.

How Parents Can Help at Home

✓ Build maths into everyday life

✓ Support the methods used in school

✓ Use objects to help your child to see the number

✓ Shape and measures work

In Year 3 the children are introduced to more regular homework and have a maths task every other week. 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. But there are also opportunities linked to number, for example reinforcing fractions by cutting up a pizza or looking for opportunities to reinforce multiplication tables.

Many children still benefit from visual reinforcement, to support their learning. Therefore, when they are introduced to tenths it is important they can see a whole amount [or object] being split into ten smaller parts to create one tenth.

The children will also be building on their **measures** work from previous years. They will need to be confident with measuring, comparing, adding and subtracting lengths [m/cm/mm]; mass [kg/g]; volume/capacity [l/ml]

The children will also be measuring the **perimeter of simple 2D shapes**. In **money** they will be adding and subtracting amounts of money to give change using both £ and p. This is another good opportunity for parents to reinforce learning through practical opportunities at home.

 In **time** the children tell should be able to tell and write the time with increasing accuracy to the nearest minute. They should also be able to record and compare time in terms of seconds, minutes and hours and use vocabulary such as o'clock, a.m/p.m, morning, afternoon, noon and midnight. The children also need to know the number of seconds in a minute and the number of days in each month, year and leap year. They also need to be able to compare the durations of events for example by calculating the time taken by an event or task.