Clifton Primary School

A Parent's Guide to Mathematics in the Curriculum

Year 4

Children's numeracy skills can be greatly boosted by help at home, in the same way that regular help with spelling and reading can nurture their literacy skills. Parents are often nervous to help in maths however, worried they may confuse their child by teaching them 'different' methods ("we didn't do it like this in my day…"!).

At Clifton Primary School, we aim to teach children to work with number in lots of different ways. We know that what works for one child will not always make sense to another and that by giving them a range of different methods, they will be well equipped to select one which works for them. So please, be encouraged to talk about maths with your child. You never know, they may even teach you a new thing or two!
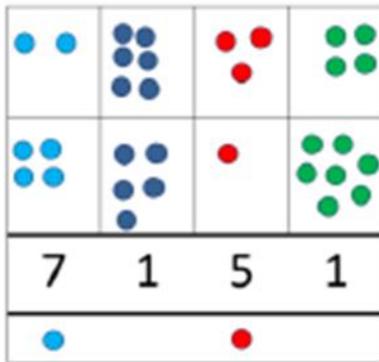
We hope you and your child enjoy this guide.
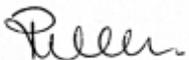
Rachel Wilkes, Head Teacher

Children can draw a pictorial representation of the columns and use place value counters to further support their learning and understanding.

| 7 | 1 | 5 | 1 |

Column addition - Adding numbers up to four digits.

```
  587          3587
+ 475        +  675
 1062          4262
 1 1           1 1 1
```

Using similar methods, children will:
- ✓ add several numbers with different numbers of digits;
- ✓ begin to add two or more decimal fractions with up to three digits and the same number of decimal places;
- ✓ know that decimal points should line up under each other, particularly when adding or subtracting mixed amounts, e.g. 3.2 m – 280 cm.

Adding with PIM – The principle of PIM is that if a child knows that 3 things and 4 things is 7 things, then they can relate that to everyday objects, such as 3 bananas and 4 bananas is 7 bananas.
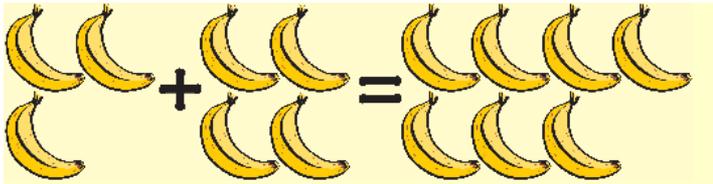
This can then be related to real life calculations, such as 3 + 4 = 7. Once a child knows this, then can then use the 'It's Nothing New' section to know that:

30 + 40 = 70

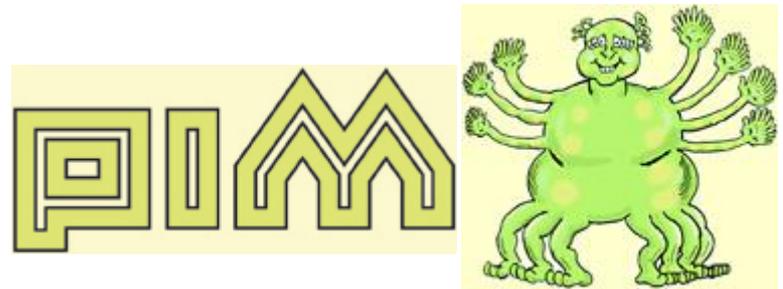300 + 400 = 700

£3.00 + £4.00 = £7.00

0.30 + 0.40 = 0.70

Swap to 100's   300 + 400=700
Swap to 1,000's 3,000 + 4,000 = 7,000

Try at Home!

Add the things around you and then impress your friends by increasing to 100s and 1000s

3 carrots + 8 carrots

Increase 300 carrots + 800 carrots
Increase to 3,000 carrots + 8,000 carrots
Then…
Try adding up costs on the food bill using column addition.
e.g. £2.45
   +£3.39

Remember to keep the decimal point in place !

626 -275 =

Draw the counters onto a place value grid and show what you have taken away by crossing the counters out as well as clearly showing the exchanges you make

Children can start their formal written method by partitioning the number into clear place value columns.

Moving forward the children use a more compact method. This can be extended to include 4 digit – 4 digit numbers

What is 160 − 16?
Use the number line to carry out the subtraction
(count back 10 from 160 to 150 and then 6 to 144).
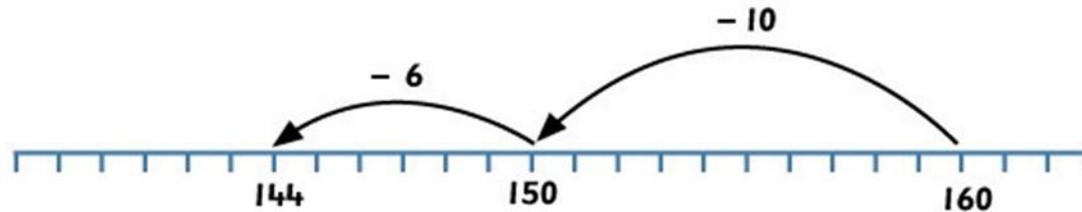
160 − 10 = 150
150 − 6   = 144

Try at Home!

Find the difference between bus numbers, door numbers etc.

Short multiplication

TU X T

```
      38
    X  7
    ────
    266
    2 5
```

HTU X T

342 × 7 becomes

```
      3   4   2
  ×           7
  ─────────────
  2   3   9   4
      2   1
```
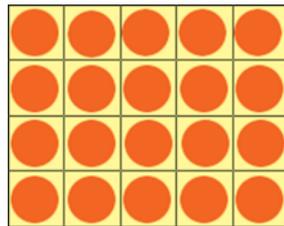
Answer: 2394

Children count in multiples
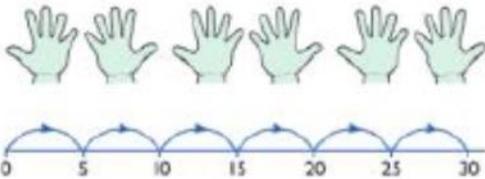
Draw arrays in different rotations to find commutative multiplication sentences.

$4 \times 2 = 8$

$2 \times 4 = 8$

$2 \times 4 = 8$

$4 \times 2 = 8$

Link arrays to area of rectangles

Try at Home!
Try to calculate :

If chocolates come in a pack of 28 , how many would
we have if we had 6 packets?

Begin with divisions that divide equally with no remainder.

```
    2   1   8
              3
  ─────────────
4 │ 8   7   2
```
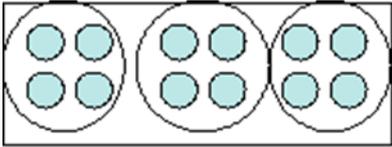
Move onto divisions with a remainder

```
      8   6   r   2
            3
  ─────────────
5 │ 4   3   2
```

Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.

Encourage them to move towards counting in multiples to divide more efficiently.

Try at Home!

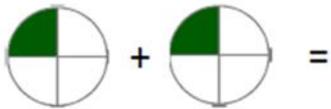Try sharing 36 pasta shells between 6 people etc

Fractions

Children should be able to count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.

0   **0.1**   **0.2**

- Fill in the gaps to find the missing numbers.

0.15		0.35	

0.17	

			0.22

Children should be able to add and subtract fractions with the same denominator.

- If the arrow is pointing to 4.56, what could the start and end numbers be? Can you find more than one option?

- Calculate:

 + =

Use diagrams and bar modelling to solve the problems below.
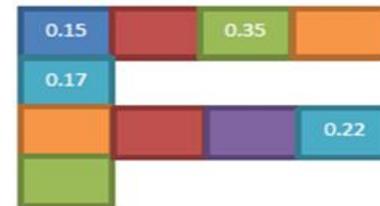
$\frac{3}{8} + \frac{2}{8} =$ $\frac{1}{6} + \frac{2}{6} =$

$\frac{7}{8} - \frac{2}{8} =$ $\frac{5}{7} - \frac{2}{7} =$

Measurement

Children should be able to convert between different units of measure e.g. hour to minute.

• Fill in the gaps:

1 hour = __ minutes
1 minute = __ seconds
2 hours = __ minutes
__ minutes = 180 seconds

• Katie goes swimming for 1 hour and 42 minutes. How many minutes was she swimming for?
Kelsey is 7 and a half years old. How many months old is she?

• Match the cards together to make a
loop where correct answers are next to each other.

• Children should be able to solve simple measure and money problems involving fractions and decimals to two decimal places.

• A box of chocolates costs £1.25. Hannah and Thomas want to buy 4 boxes of chocolates. If Hannah pays £2.45, how much must Thomas pay?

Useful Websites

- ictgames.com
- www.woodlands-junior.kent.sch.uk – Woodlands resources for maths.
- topmarks.com
- kidsmathgamesonline.com
- bbc.co.uk/skillswise/maths
- http://www.mathschamps.co.uk/