Maths Parent Workshop

Division

Wednesday 20th May 2015
Mr Clark and Mr Smith

Objectives

Today we will:

- Show you the process of how division is taught at Park through the new calculation policy for each year group.
- Help increase your confidence with division when helping your children at home.

Our Calculation Policy

Teachers at Park teach from our calculation policy.

In here it clearly states the different stages of each of the four operations.

This can be found on our website.

http://www.park.newham.sch.uk/maths.html

Calculation Policy
Park Primary School

(Aligned with the 2014 National Curriculum)

Early Years

Division – Early stages (EYFS)

Children will engage in a wide variety of songs and rhymes, games and activities.
In practical activities and through discussion they will begin to solve problems involving halving and sharing.

Share the apples between two people.

'Half of the apples for you and half of the apples for me.'

Children will start with practical **sharing** using a variety of resources.
They will share objects into **equal groups** in a variety of situations.
They will begin to use the vocabulary associated with division in practical contexts.

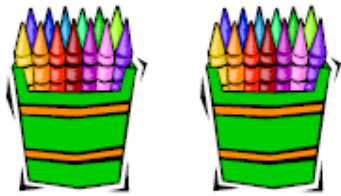'Share these eight apples equally between two children. How many apples will each child have?'
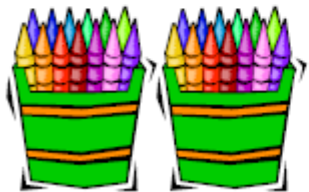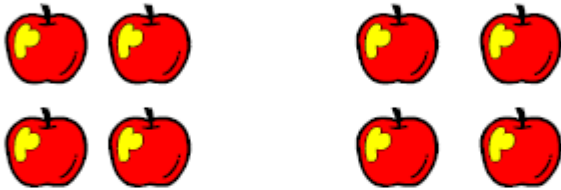
'Share 20 crayons between 2 pots.'

'How many crayons are in each pot?'

Year 1

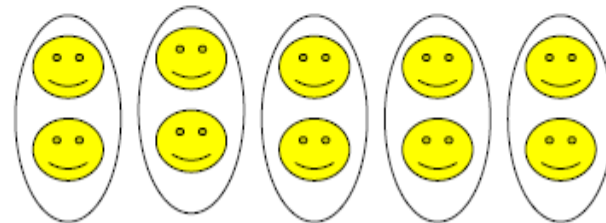Children will move from **sharing** to **grouping** in a practical way

Use **arrays** to support early division

'Put 20 crayons into groups of 10. How many pots do we need?'

'How many faces altogether? How many groups of two?'
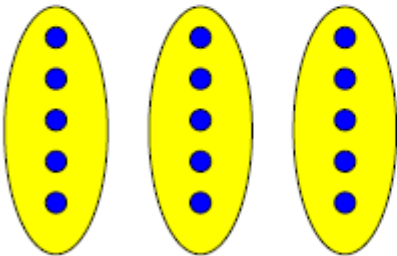
'Five groups of two'

Sharing and grouping:

'30 crayons shared equally between three pots.' (Sharing)
'We have 30 crayons and put ten crayons in each pot. How many pots do we need?' (Grouping)

'30 divided by 10 = 3'
'30 divided by 3= 10'

$30 \div 10 = 3$
$30 \div 3 = 10$

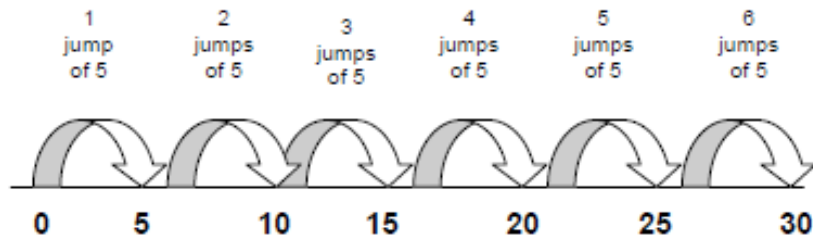'How many groups of 5?'
'15 shared equally between 3 people is…?'

'15 divided by 3 equals 5'
'15 divided by 5 equals 3'

$15 \div 5 = 3$
$15 \div 3 = 5$

30 ÷ 5 = 6

'How many jumps of five make thirty?'

| 1 jump of 5 | 2 jumps of 5 | 3 jumps of 5 | 4 jumps of 5 | 5 jumps of 5 | 6 jumps of 5 |

0   5   10   15   20   25   30

Also jump back to make the link with repeated subtraction:

30 ÷ 5 = 6

'How many groups of five?'

- 5   - 5   - 5   - 5   - 5   - 5

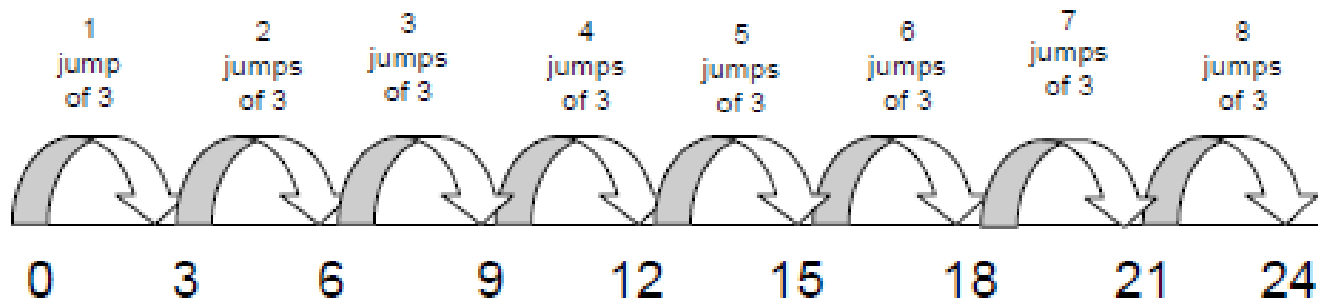0   5   10   15   20   25   30
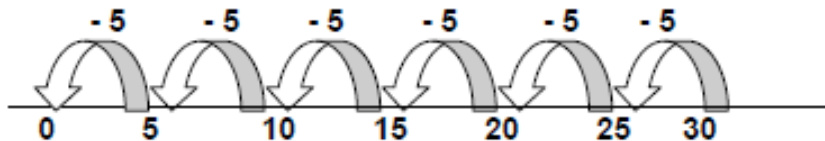
Year 3

Using an empty number line to count forwards…

24 ÷ 3 = 8

'How many threes in 24?'

Year 3

...also jump back from 24 to make the link with repeated subtraction.

| -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |

0   3   6   9   12   15   18   21   24
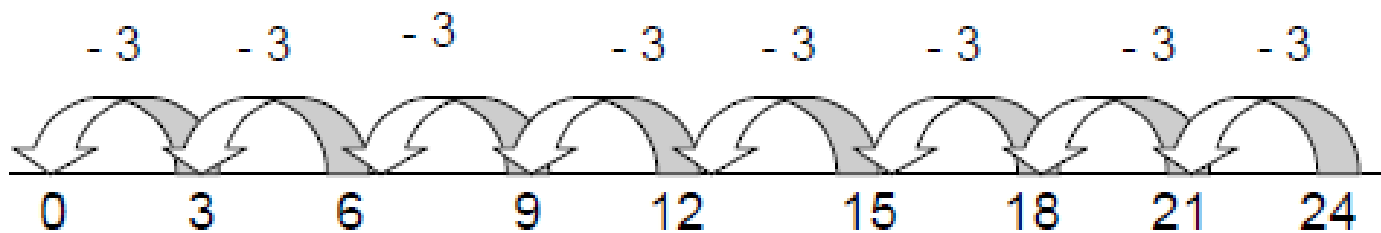
'How many groups of three in 24?'

32 ÷ 8 = 4

Continue using the **formal written layout** for division using multiplication tables that they know:

$$\begin{array}{r} 4 \\ 8 \,\overline{)\,32} \end{array}$$

'How many eights are there in thirty two?'

Continue using the formal written layout, introducing remainders:

25 ÷ 3 = 8 r1

$$\begin{array}{r} 8 \text{ r } 1 \\ 3 \,\overline{)\,25} \end{array}$$

Year 5

Continue to practise the formal written method of short division with whole number answers...

184 ÷ 8 = 23

$$8 \overline{) 1\ 8\ ^2 4}$$
$$\phantom{8 \overline{)}}\ \ 2\ 3$$

Use the language of place value to ensure understanding.

Make the link to the partitioning method (see Y4 guidance).

432 ÷ 5 = 86 r2

$$5 \overline{) 4\ 3\ ^3 2}$$
$$\phantom{5 \overline{)}}\ \ 8\ 6\ r\ 2$$

The remainder can also be expressed as a fraction, $\frac{2}{5}$ (the remainder divided by the divisor): **432 ÷ 5 = 86$\frac{2}{5}$**

This is an alternative way of recording formal long division:

432 ÷ 15 = 28·8

```
              2 8 · 8
        ┌─────────────
  15    )  4 3 2 · 0
           3 0
          ─────
           1 3 2
           1 2 0
          ─────
             1 2  0
             1 2  0
            ──────
                  0
```

NB Only teach this method when children are completely secure with the previous method.

The remainder is expressed as a decimal.