Maths in the early years

SALTFORD PRIMARY SCHOOL
31ST JANUARY 2019
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This evening’s session will include...

- How children learn number
- The Early Learning Goals
- Supporting your child(ren) at home
Any questions?
Understanding number

DEVELOPING NUMBER SENSE
A new way of counting!

1 = 
2 = 
3 = 
4 = 
5 = 
6 = 
7 = 
8 = 
9 = 

You have 20 seconds to memorise this way of writing numbers.

(P.S You can’t write anything down!)
Task

Write this number using the numeric system you just tried to remember

1 8 7 2 5
Making connections

<table>
<thead>
<tr>
<th>OLD INFORMATION</th>
<th>NEW INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

Thinking is much more fun than memorising!
Bet you can now!

35,927
How can we support children in understanding mathematical concepts?
Numberblocks - CBeebies

1 2 3 4 5 6 7 8 9 10
Ordinality
Cardinality
NCETM Mastery CPD materials
Resources and approaches used in school

Songs

Exploring through play

Numicon
Step 1 - The play stage

- Making pictures
- Play dough
- Sand
- Paint
- Drawing round
- Counting
Step 2 - Structure

With a partner make a number line 1-10 using the shapes.
Step 3 – Linking the counting with structure
Step 4 – ‘Read’ numbers and patterns

Step 5 – Generalising

e.g. $3 + 6 = 9$

Partitioning patterns
Odd and even

Subitize
The Early Learning Goals

Expectations by the end of the Reception year
Early Learning Goals

**Numbers**

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.
Varied fluency
Adding and subtracting

If \( a = 1, \ b = 2, \ldots, \ Z = 26 \), find the following totals and express them as letters.

\[
\begin{align*}
\text{b} + \text{e} &= ? \\
\text{g} + \text{c} &= ? \\
\text{j} - \text{a} &= ?
\end{align*}
\]
Adding and subtracting

If a = 1, b = 2…. Z = 26, find the following totals and express them as letters.

\[
b + e = g \\
g + c = j \\
j - a = i
\]
3 + 4
**Variation:** Showing different representations provides learners with opportunities for deeper understanding.

These are all doubles. True or false? Convince me.
Early Learning Goals

Shape, space and measure

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.
NCETM Mastery CPD materials
**Significant jump by the end of Year 1**

**Number - Place Value**
- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
- given a number, identify one more and one less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- read and write numbers from 1 to 20 in numerals and words.

**Number – Addition and Subtraction**
- read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7=?-9

**Number – Multiplication and Division**
- solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.

**Number - Fractions**
- recognise, find and name a half as one of two equal parts of an object, shape or quantity
- recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.
Supporting at Home
Color by number rainbow

1. red
2. orange
3. yellow
4. green
5. blue
6. purple
The language of growth mindset

Keep trying. You can do it!

Praise the effort, the process and their journey rather than their speed or an accurate answer.

Remember: It’s ok to get things wrong. That’s what helps us learn.

https://www.bbc.co.uk/cbeebies/grownups/help-your-child-try-new-things
https://www.bbc.co.uk/cbeebies/grownups/help-your-child-with-maths