

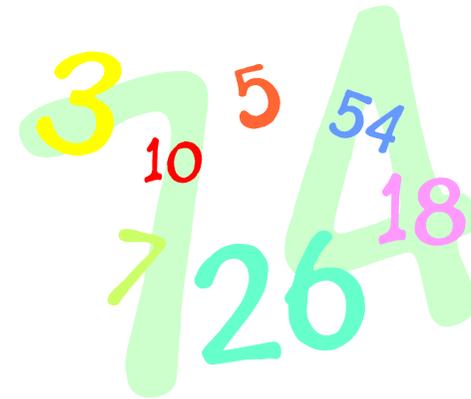
Maths



ST. NORBERT'S
CATHOLIC PRIMARY SCHOOL



Parent Pocket Guide



**Saint Norbert's Catholic
Voluntary Academy**



Saint Norbert's Catholic Primary School

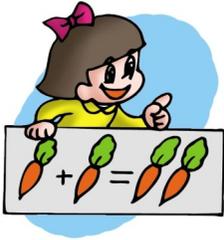
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Article 7: Every child has the right to a legal name and nationality, as well as the right to know and, as far as possible, to be cared for by their parents. and, as far as possible, to be cared for by their parents.

MULTIPLICATION

The Teaching and Learning of Maths from Reception through to Year 6 has moved away from the traditional formal methods and now the emphasis is on teaching Maths through real life experiences, using real objects and making learning more visual and active. Formal, written methods are still taught but the emphasis is on helping your child to understand how Maths works the way it does. There is also a strong emphasis on using mental strategies.

Children experience and begin to learn about the concept of Number from a very early age. You can help your child to develop their understanding by using everyday situations.



E.g counting objects at home when setting the table, looking at the cost of things in the shops, reading number plates on cars when walking to school.

The opportunities for introducing and developing Number are all around us in our everyday lives.

The 2014 National Curriculum for Maths is divided into the following areas:

- Number and place value
- Measurement
- Geometry
- Statistics

With a strong emphasis on developing fluency, problem solving and reasoning mathematically throughout all areas.

One of the main areas of teaching Maths in school is focused on Number and calculating and how your child can use and apply the skills they learn in everyday situations.

This guide provides some of the ways that your child learns Number in school and How you can help your child at home.



MULTIPLICATION

Children are taught to understand Multiplication as repeated addition and scaling.

$2 \times 4 =$

Each child has 2 eyes. How many eyes do 4 children have?



$2 + 2 + 2 + 2$

Using pictures or real life objects is a useful way to develop understanding of multiplication.

$5 \times 3 =$

There are 5 cakes in a pack. How many cakes in 3 packs?

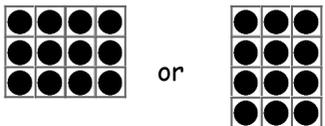


$5 + 5 + 5$

Dots or Tally marks are often drawn in groups. This shows 3 groups of 5

$4 \times 3 =$

A sweet costs 4p. How much do 3 sweets cost?



4×3

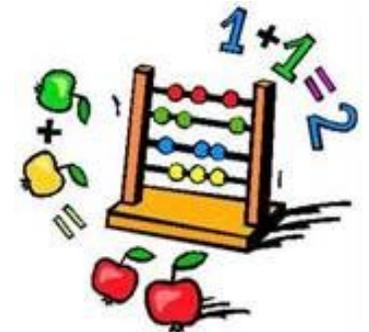
3×4

Drawing 3 rows of 4 or 3 columns of 4 gives children an image of the answer. It also helps develop the understanding that 4×3 is exactly the same as 3×4 .

PRACTISING NUMBER FACTS

- Find out which number facts your child is learning at school (addition facts to 10, times tables, doubles etc.) Try to practise for a few minutes each day using a range of Vocabulary.
- Have a 'Fact of the Day'. Pin this fact up around the house. Ask your child over the day if they can recall this fact.
- Play 'Ping Pong' to practise bonds with your child. You say a number. They reply with how much more is needed to make 10. You can also play this game with numbers totalling 20, 100 or 1000. Encourage your child to answer quickly, without counting or using fingers.
- Throw 2 dice. Ask your child to find the total of the numbers (+), the difference between (-) or the product (x). Can they do this without counting?
- Use a set of playing cards (no pictures) turn over two cards and ask your child to add or multiply the numbers. If they answer correctly they get to keep the cards. How many cards can they collect in 2 minutes?
- Play Bingo. Each player chooses 5 answers (e.g. numbers to 10 to practise simple addition, multiples of 5 to practise times tables) Ask a question and if a player has the answer, they can cross it off. The winner is the first person to cross off all their answers.
- Give your child an answer. Ask them to write as many addition sentences as they can with this answer (e.g. $10 = 0 + 10$) Try with multiplication or subtraction.

Give your child a number fact (e.g. $5 + 3 = 8$) Ask them what else they can find out from this fact (e.g. $3 + 5 = 8$, $8 - 5 = 3$, $8 - 3 = 5$, $50 + 30 = 80$, $500 + 300 = 800$, $5 + 4 = 9$) Add to the list over the next few days. Try starting with a x



SUBTRACTION

CALCULATION

Talk to your child about how you work things out. Ask your child to explain their thinking.

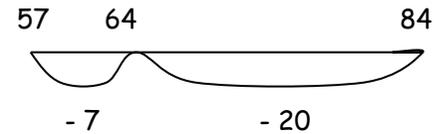
The maths work your child is doing at school may look very different to the kind of 'sums' you remember. This is because children are encouraged to work mentally, where possible, using personal jottings to help support their thinking. Even when children are taught more formal written methods (from late year 3 onwards), they are only encouraged to use these methods for calculations they cannot solve in their heads.



Discussing the efficiency and suitability of different strategies is an important part of maths lessons.

$$84 - 57 =$$

I cut 57cm off a ribbon measuring 84cm. How much is left?



$$\begin{array}{r}
 57 \quad 64 \qquad \qquad \qquad 84 \\
 \hline
 - 3 \quad - 4 \qquad \qquad - 20 \\
 \hline
 57 \quad 60 \qquad \qquad \qquad 80 \quad 84 \\
 \hline
 + 3 \qquad \qquad + 20 \qquad \qquad + 4
 \end{array}$$

Children could use Number tracks or number lines to help them count on and back. This is a really good way for them to record the steps they have taken.

Start on 84, - 20 then -7

Or

Start on 84, -20, -4 then -3

Or

Start on 57, +3 to get to nearest 10 then +20 to get to 80, then +4 to get to 84. Add all of those numbers together

$$3 + 20 + 4 = 27$$

Addition is also a complement to understanding subtraction and can be used to solve subtraction questions.

$$834 - 378 =$$

The library owns 834 books, 378 are out on loan. How many are on the shelves?

$$\begin{array}{r}
 + 22 \qquad \qquad + 400 \qquad \qquad + 34 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 378 \quad 400 \qquad \qquad \qquad 800 \quad 834 \\
 \\
 2 \quad 2 \quad (400) \\
 4 \quad 0 \quad 0 \quad (800) \\
 \underline{3 \quad 4} \quad (834) \\
 4 \quad 5 \quad 6
 \end{array}$$

Children could count on from the smallest number to the biggest using a number line. It is easiest to count on to a multiple of 10 or 100. The steps can also be recorded vertically. This method works well with any numbers, including decimals.

When children are confident using these methods and have a good understanding of subtraction they can move on to exploring other methods of solving and recording.

E.g.

$$\begin{array}{r}
 7 \quad 12 \\
 \begin{array}{r} \diagup \quad \diagdown \\ 8 \quad 3 \end{array} \quad 14 \\
 - 3 \quad 7 \quad 8 \\
 \hline
 4 \quad 5 \quad 6
 \end{array}$$

Remember to use the word EXCHANGE!

SUBTRACTION

Children are taught to understand Subtraction through REAL LIFE PROBLEMS. Subtraction is not just about TAKE AWAY. It is also about finding the difference between, counting back/ on and inverse operations.

5-2 =
I had five balloons. Two burst.
How many did I have left?



Take Away

A teddy bear costs £5 and a doll costs £2. How much more does the bear cost?



Difference Between

Drawing a picture helps children to Visualise the problem.
Using everyday objects and practically Solving the problem also helps Children to understand the concept of subtraction.

7-3 =
Mum baked 7 biscuits. I ate 3.
How many were left?



Take away

Lisa has 7 felt tip pens and Tim has 3
How many more does Lisa have?



Find the difference

Using dots of tally marks is quicker Than drawing Pictures.

When faced with a calculation problem, encourage your child to ask...

- Can I do this in my head?
- Could I do this in my head using drawings or jottings to help me?
- Do I need to use a written method?
- Should I use a calculator?



Also help your child to estimate and then check the answer. Encourage them to ask...

Is the answer sensible?

ADDITION

Children are taught to understand addition REAL LIFE PROBLEMS as combining two sets, counting all and counting on.

<p>$2 + 3 =$</p> <p>At a party I eat 2 cakes and my Friend eats 3. How many cakes did we eat altogether?</p> <div style="text-align: center;">  </div>	<p>Children could draw a picture to help them work out the answer.</p>																		
<p>$7 + 4 =$</p> <p>7 people are on a bus, 4 more get on On at the next stop. How many people Are on the bus now?</p> <div style="text-align: center;">  </div>	<p>Children could use dots or Tally marks to represent objects.</p>																		
<p>$47 + 25 =$</p> <p>My Sunflower is 47cm tall. It grows another 25cm How tall is it now?</p> <div style="text-align: center;"> <table style="margin: auto;"> <tr> <td style="text-align: right;">+20</td> <td style="text-align: right;">+5</td> <td></td> </tr> <tr> <td colspan="3"><hr style="width: 100%;"/></td> </tr> <tr> <td style="text-align: right;">47</td> <td style="text-align: right;">67</td> <td style="text-align: right;">72</td> </tr> </table> <table style="margin: auto;"> <tr> <td style="text-align: right;">+20</td> <td style="text-align: right;">+3</td> <td style="text-align: right;">+2</td> </tr> <tr> <td colspan="3"><hr style="width: 100%;"/></td> </tr> <tr> <td style="text-align: right;">47</td> <td style="text-align: right;">67</td> <td style="text-align: right;">70 72</td> </tr> </table> </div>	+20	+5		<hr style="width: 100%;"/>			47	67	72	+20	+3	+2	<hr style="width: 100%;"/>			47	67	70 72	<p>Drawing an empty number line helps children to record the steps they have taken in a Calculation (start on 47, +20 then +5)</p> <p>This is much more efficient than counting on in ones.</p>
+20	+5																		
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47	67	70 72																	

ADDITION

<p>$487 + 546 =$</p> <p>There are 487 boys and 546 girls in a School.</p> <p>How many children are there altogether?</p> <div style="text-align: center;"> $\begin{array}{r} 546 \\ + 487 \\ \hline 1033 \end{array}$ </div>	<p>Children will be taught written methods for those calculations they Cannot do 'in their heads'.</p> <p>Expanded methods build on Mental Methods and make the value of the Digits clear to children. The language used is very important. (6 + 7, 40 + 80, 500 + 400, then 900 + 120 + 13 - add this mentally not in columns)</p>
<p>$12786 + 2568 =$</p> <p>12786 people visited the museum Last year. The numbers increased by 2568 this year.</p> <p>How many people altogether visited This year?</p> <div style="text-align: center;"> $\begin{array}{r} 12786 \\ + 2568 \\ \hline 15354 \\ \hline 111 \end{array}$ </div>	<p>When children are confident using the expanded method, this can be 'squashed' into the traditional compact Method.</p> <p>When we use this method we DO NOT Use the language of borrowing and Carrying but we use the language of EXCHANGE (e.g. we exchange 1 ten for 10 ones)</p>