# Milford Maths

Helping your child with Maths.

In Milford N.S. we endorse the aims of the Primary School Curriculum for Mathematics which are:

- To develop a positive attitude towards Mathematics and an appreciation of both its practical and aesthetics aspects.
- To develop problem-solving abilities and a facility for the application of mathematics to everyday life
- To enable the child to use mathematical language effectively and accurately
- To enable the child to acquire proficiency in fundamental mathematical skills and in recalling basic number facts.
- To enable the child to acquire an understanding of mathematical concepts and processes to his/her appropriate level of development and ability.

## Strands and Strand Units

All teachers are familiar with the strands, strand units and content objectives in the Maths Curriculum and refer to them regularly when planning for their classes ensuring all strands and strand units are covered.

| STRANDS | STRAND UNITS |
|---|---|
| **Early Mathematical Activities (Infants)** | Classifying, Matching, Comparing Ordering |
| **Number** | Counting, Comparing and Ordering, Analysis of Number (introduced in Infants )<br>Numeration, Place Value, Operations: Addition, Subtraction, Fractions (introduced in 1st 2nd)<br>Multiplication, Division, Decimals (introduced in 3rd/4th )<br>Percentages, Number theory (introduced in 5th/6th) |
| **Algebra** | Extending patterns (introduced in Infants)<br>Extending and using patterns (introduced in 1st/2nd)<br>Number patterns and sequences, Number sentences (introduced in 3rd/4th )<br>Directed numbers, Rules and properties, Variables, Equations (introduced in 5th/6th) |
| **Shape and Space** | Spatial Awareness, 2D shapes 3D shapes (introduced in Infants)<br>Symmetry, Angles (introduced in 1st/2nd)<br>Lines and angles (introduced in 3rd/4th ) |
| **Measures** | Length, Weight, Capacity, Time, Money (introduced in infants)<br>Area (introduced in 1st/2nd) |

| | |
|---|---|
| **Data** | Recognising and interpreting data (introduced in Infants)<br>Chance (introduced in 3rd /4th ) |

## Language and the number operations

- **Addition**

Juniors:

"and", "makes", "altogether"

2 and 2 makes 4

Start on 2, go on 4

"plus" and "equals"

Seniors:

Introduction of signs +, =

When adding all operations start from the top

4

+ 2 = Four plus two makes / equals / is equal to /is the same as

- **Subtraction**

5

- 2 = Minus / subtract / take away / difference

3 + 0 = 3  (three plus zero equals three, is the same as )

10 – 5 = 5  (ten minus / subtract / take away five equals five)

- **Multiplication**

  **2 x 3 = 6**

  2 multiplied by 3

  2 groups of 3

  2 times 3

  The product of 2 and 3

  2 **3**'s are

- **Division**

  6 ÷ 2 = 3

  6 divided by 3

  How many 2's in 6

  2 into 6 goes

  6 sweets shared among 2 children equally

  The factors of 6 are 3 and 2

- **Tables**

Adding: Say

0 + 2 = 2  0 plus 2 equals 2

1 + 2 = 3  1 plus 2 equals 3

2 + 2 = 4  2 plus 2 equals 4

Subtraction: Say

2 – 2 = 0  2 take away 2 equals 0

3 – 2 = 1  3 take away 2 equals 1

4 – 2 = 2  4 take away 2 equals 2

Multiplication: Say

1 x 2 = 2  1 two is 2

2 x 2 = 4  2 twos are 4

3 x 2 = 6  3 twos are 6

Division: Say

2 ÷ 2 = 1  2 divided by 2 is 1

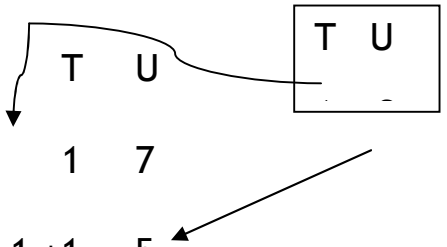
4 ÷ 2 = 2  4 divided by 2 is 2

8 ÷ 2 = 4  8 divided by 2 is 4

## The Four Operations

- **Addition** – double digit addition with regrouping

  When adding all operations **START FROM THE TOP**




* This method is used to introduce regrouping in First Class

7 plus 5 equals 12

Put down the 2 and carry / bring / take over the ten (on bottom)

- **Subtraction**

  When subtracting all operations **START FROM THE TOP**

  5

  -  2  = five “minus” / “take away” two

Do not use the term “from” - 2 from 5

| T | U | |
|---|---|---|
| 2 ~~3~~ | 1 0 | |
| -1 | 4 | = zero minus four I cannot do |
| | | 3 tens become 2 tens |
| | | (He was called ‘3’, now he is called ‘2’) |
| | | Take over 1 ten and it becomes 10 units |

Subtraction rhymes may be used to consolidate
Mathematical process.

**1st / 2nd class**

More on the top

No need to stop.

More on the floor

Go next door

Get ten more.

Number's the same

Zero's the game.

**3rd / 4th class** eg. T U

2 3 1 0

\- 1 4

6

0 take away 4, I cannot do

Cross out my 3, make it a 2

Bring over my 10 and start again

10 take away 4 is 6

H T U

3 4 9 1 0 1 0

\- 2 4 5

0 take away 5, I cannot do.

Cross out my zero…but I can't do that.

Cross out my 4, make it a three,

Bring over my 10 and start again.

Begin the sum again – 0 take away 5, I cannot do.

Cross out my 10, make it a 9

Bring over my 10 and start again.

- **Multiplication**

  45 x 26

  6 multiplied by five equals 30

  Put down my zero and carry my 3

  (When multiplying by the units carry on the top line and for multiplying the tens carry on the second line)

| Th | H | T | U |
|---|---|---|---|
| | | ③4 | 5 |
| | X | ①2 | 6 |
| | 2 | 7 | 0 |
| + | 9 | 0 | 0 |
| 1 | 1 | 7 | 0 |

  * Put a circle around the number that you carry up

- **Division**

Children should be familiar with the four different ways of short division

$6\overline{)4567}$ $\qquad$ $\frac{4567}{6}$ $\qquad$ $6\overline{\vert 4567}$ $\qquad$ $4567 \div 6$

**Long Division**

526 ÷ 25 =

Firstly, you divide 5 by 25 and you get an answer of 0.
Then you divide 52 by 25. In this case we know that 25 will divide into 52 2 times but sometimes you will have to estimate (multiply 25 by a few numbers to see which answer is closest).
You write your 2 on top of the line.
25 x 2 = 50, write down 50 under the 52.
You then take it away (52 – 50 = 2). Write down your 2.

The 6 from the top is then brought down to join the 2 making it 26.

Now you are dividing 25 into 26.

The answer is 1 which you put on top of the line.

Then we take away the 25 from the 26 and we are left with 1 which is a remainder.

So the answer is 21 r1.

```
      21
   ┌─────
25 │ 526
     - 50 ↓
       26
      -25
        1
```

Ans. 21 r 1

- **Fractions**

Here are some maths language terms that your child will be using at school:

Fraction – any part of a whole, a group or a number

Numerator – showing the number of parts of the whole
(number on top) **⅔**

Denominator – the number of parts the whole is divided into
(number on bottom) **¼**

Proper fraction – numerator is less than the denominator **⅝**

Improper fraction – numerator is greater than or equal to the denominator 6/4

Equivalent fraction – fractions that have the same value or amount 2/4 = 4/8

Mixed numbers – a whole number and a fraction 2**⅔**

The **PDST** manual for the teaching of fractions will be used from First to Sixth class.

- **Problem Solving**

Problem solving strategies

**RUDE** Method

- **R**ead Pupils are encouraged to read the problem twice
- **U**nderline Key numbers and words are underlined
- **D**raw Pupils draw a picture/table/graph of the information being presented
- **E**stimate Pupils estimate what the answer might be. They write an equation / sum for the problem and calculate the answer

Children are encouraged to use their own ideas as a context for problem solving. They are encouraged to find many different approaches to solving one problem. Children explain how they got their answer and discuss alternative ways of doing the sum. They are encouraged to listen to the views of others when solving problems and accept the reasoning of others in order to solve problems

co-operatively. Discussing the suitability and efficiency of different strategies is an integral part of Maths and will develop appropriate mathematical vocabulary.

**Useful Websites and Apps**

www.pdst.ie

www.mangahigh.com

www.mathplayground.com

www.scoilnet.ie

www.mathsisfun.net

www.mathsisgoodforyou.com

www.math-drills.com

www.numeracyworkout.co.uk

www.mathsweek.ie

www.seomraranga.com

www.ncca.ie

www.khanacademy.org

Mathmaster Free

Squeebles Times Tables

Symmetry School

Numerosity

Mathmateer Free

Kids Math Ace Games Lite Free

Number Monster

Operation Math

Math Bingo