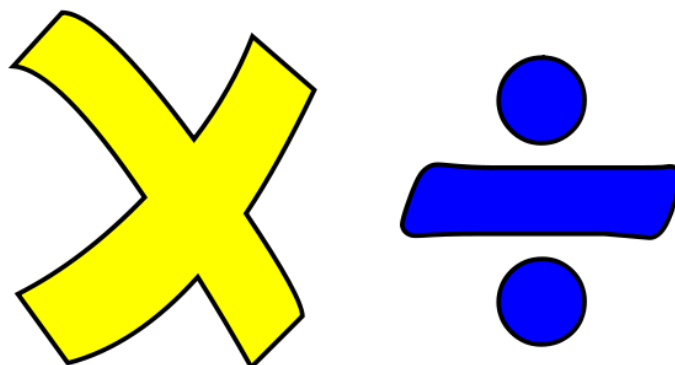
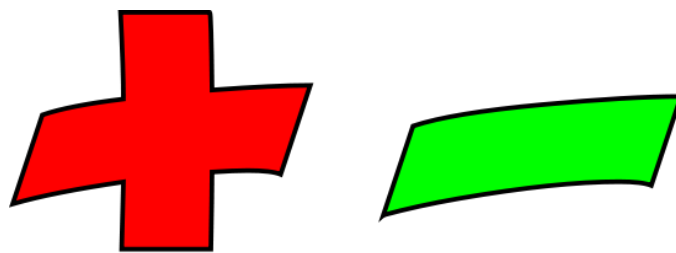




Dundonald Primary School's Parent Guide to:

Number Talks



What is a Number Talk?

A number talk is a strategy to build flexibility, accuracy and efficiency in mathematical thinking through the discussion and sharing of mental math strategies. It is a short daily routine that allows pupils to contribute to meaningful dialogue concentrating on how to answer Numeracy problems. A Number Talk is a powerful tool for helping students develop fluency to help them when adding, subtracting, multiplying and dividing.

Key Features of a Number Talk

- It is a conversation that takes place around a Numeracy problem that the children should solve mentally
- The problems allow children to build on previous knowledge and use specific strategies
- Pupils are given a problem that they are expected to mentally solve them accurately and efficiently
- Pupils share how they have solved the problems and what strategies they have used
- 5-15 minutes at the beginning of Numeracy lesson

Question
Solve
Talk
Report Back

Benefits of a Number Talk

Through participating in Number Talks, the pupils have the opportunity to:

- Explain their own thinking;
- Consider other strategies suggested by their peers
- Learn about a range of efficient strategies;
- Make decisions about choosing the best strategy for specific problems.

Number Talks in Primary 1, Primary 2 and Primary 3

In the infant stages children will be developing:

- Number sense - awareness of numbers and what they are, one-to one correspondence, estimation of numbers
- Fluency with small numbers - knowing how numbers can be composed and decomposed e.g. $8=4+4$, or $7+1$ or $10-2$
- Subitizing - the ability to quickly identify the number of items in a small set without counting
- Ability to make tens

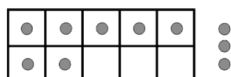
Resources used in P1 -3 to support Number Talks:

You may hear your child talking about some of these resources that we use in school to support the teaching and learning of Number Talks:

- **Dot images:** How many did you see? How did you see them?



- **Ten Frame activities**



- **Rekenreks:** Exploring numbers using 1-20 Counting Frames

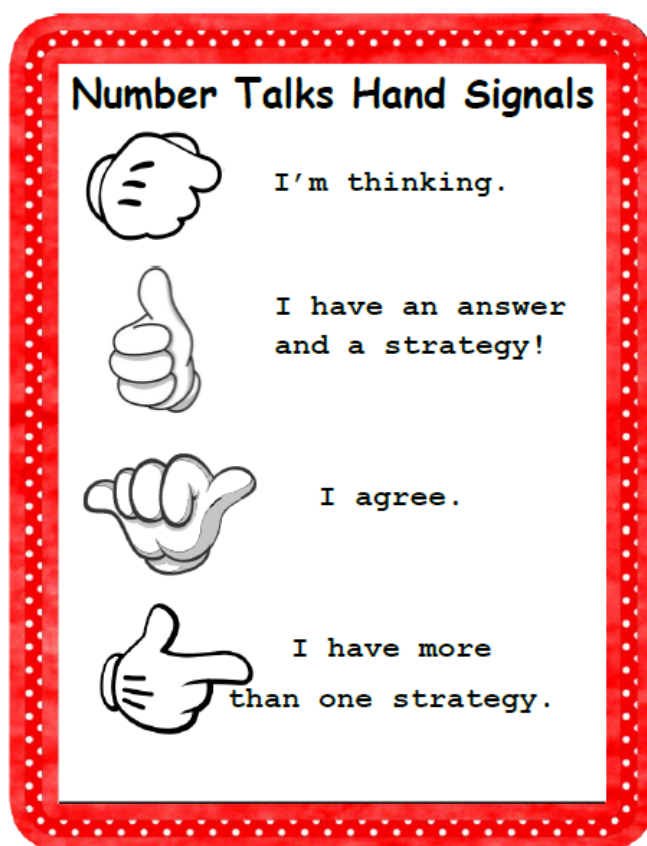


- **Number lines activities**
- **'Making Tens' weekly activities**
- **Numicon**



Number Talks in Primary 4- 7

Students are given a Numeracy word problem that they are encouraged to solve using efficient strategies that they have been taught. They are encouraged to use as many different ways as they can to solve the Numeracy problem and then explain these to the rest of the class. Children will be given time to think of the best way to solve the problem and will use hand signals to show how many strategies they have used.



Children will then share their ideas as a class and discuss all the different strategies that they could use. These will be displayed to the class and discussed.

How would you solve 9×16 mentally?

Lia used friendly numbers:

$$\begin{array}{r} 9 \times 16 \\ + 1 \text{ (group of 16)} \\ \hline 10 \times 16 = 160 \\ 160 - 16 = \underline{144} \end{array}$$

Ben used partial products:

$$\begin{array}{r} 9 \times 10 = 90 \\ 9 \times 6 = 54 \\ 90 + 54 = \underline{144} \end{array}$$

Michael broke a factor into smaller factors:

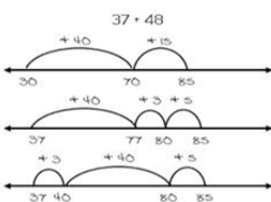



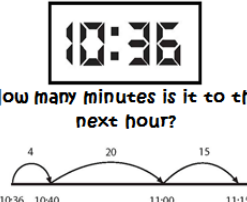
$$\begin{array}{r} 9 \times 16 \\ 9 \times (8 \times 2) \\ 72 \times 2 = \underline{144} \end{array}$$

Lisbeth used doubling and halving:

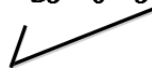
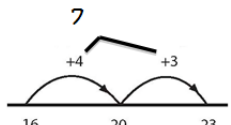
$$\begin{array}{r} 9 \times 16 \\ 18 \times 8 \\ 36 \times 4 \\ 72 \times 2 \\ 144 \times 1 = \underline{144} \end{array}$$

Below are a selection of strategies that your child will learn to help them to solve problems related to the 4 operations.

Addition Strategies

<p>Adding Up in Chunks/Counting On</p> <p>$37 + 48$</p> 	<p>Reordering</p> <p>$25 + 26 + 75$</p>  <p>$100 + 26 = 126$</p>	<p>Place Value - Partitioning</p> <p>$116 + 127$</p> <p>$100 + 100 = 200$ $10 + 20 = 30$ $6 + 7 = 13$ $200 + 30 + 13 = 243$</p>	<p>Making Tens/Bridging through 10</p> <p>$49 + 38$</p>  <p>$50 + 37 = 87$</p>
<p>Compensation</p> <p>$67 + 28$</p> <p>+2</p> <p>/</p> <p>$67 + 30 = 97$ $97 - 2 = 95$</p>	<p>Doubles/Near Doubles</p> <p>$16 + 17$</p>  <p>$16 + 16 = 32$ $32 + 1 = 33$</p>	<p>Friendly Numbers</p> <p>$28 + 47$</p> <p>+2 -2</p> <p>$30 + 45 = 75$</p>	<p>Bridging through 60</p>  <p>How many minutes is it to the next hour?</p>

Subtraction Strategies

<p>Removal or Counting Back</p> <p>$123 - 69$</p> <p>$123 - (20 + 40 + 3 + 6)$</p> <p>$123 - 20 = 103$ $103 - 40 = 63$ $63 - 3 = 60$ $60 - 6 = 54$</p>	<p>Reordering</p> <p>$25 - 6 - 5$</p>  <p>$20 - 6 = 14$</p>	<p>Place Value - Partitioning</p> <p>$367 - 154$</p> <p>$367 - 100 = 267$ $267 - 50 = 217$ $217 - 4 = 213$</p> <p>$367 - 100 - 50 - 4 = 213$</p>	<p>Adding Up/Bridging through 10</p> <p>$23 - 16$</p> <p>$16 + 4 = 20$ $20 + 3 = 23$</p> 
<p>Place Value + Negative Numbers</p> <p>$399 - 254$</p> <p>$(300 + 90 + 9) - (200 + 50 + 9)$</p> <p>$300 + 90 + 9$ $- 200 + 50 + 9$ $100 + 40 + 5$ $= 145$</p>	<p>Adjusting for Easier Numbers</p> <p>$123 - 59$</p> <p>+1</p> <p>$123 - 60 = 63$ $63 + 1 = 64$</p>	<p>Keep a Constant Difference</p> <p>$151 - 98$</p> <p>$(151 + 2) - (98 + 2)$</p> <p>$153 - 100 = 53$ $151 - 98 = 53$</p>	

Multiplication and Division Strategies

<p>Friendly Numbers</p> <p>9×15 $10 \times 15 = 150$ $150 - 15 = 135$</p> <p>Don't forget to 'undo' your change!</p>	<p>Repeated Addition</p> <p>6×15 $15+15+15+15+15+15$ $15 + 15 = 30$ $30 + 15 = 45$ $45 + 15 = 60$ $60 + 15 = 75$ $75 + 15 = 90$</p>	<p>Partial Products</p> <p>6×125 $6 \times (100 + 20 + 5)$ $(6 \times 100) + (6 \times 20) + (6 \times 5)$ $600 + 120 + 30 = 750$</p>	<p>Doubling and Halving</p> <p>24×8 $\times 2 \quad +2$ 48×4 $\times 2 \quad +2$ 96×2 $\times 2 \quad +2$ 192</p>						
<p>Breaking Factors into Smaller Factors</p> <p>12×25 $\begin{array}{c} \wedge \\ 2 \times 6 \end{array}$ $2 \times 25 = 50$ $50 \times 6 = 300$</p>	<p>Grid Method</p> <p>35×7</p> <table border="1" data-bbox="515 680 726 741"> <tbody> <tr> <td>x</td> <td>30</td> <td>5</td> </tr> <tr> <td>7</td> <td>210</td> <td>35</td> </tr> </tbody> </table> <p>$210 + 35 = 245$</p>	x	30	5	7	210	35	<p>Partial Quotients</p> $\begin{array}{r} 36 \text{ R } 10 \\ 15 \overline{) 550} \\ \underline{-150} \quad (10 \times 15) \\ 400 \\ \underline{-300} \quad (20 \times 15) \\ 100 \\ \underline{-30} \quad (2 \times 15) \\ 70 \\ \underline{-60} \quad (4 \times 15) \\ 10 \end{array}$	<p>Multiplying Up</p> <p>$72 \div 8$ $8 \times$</p> <p>$\underline{5} = 40$ $8 \times \underline{4} = 32$ $(\underline{5} + \underline{4}) = (40 + 32)$ $8 \times \underline{9} = 72$</p>
x	30	5							
7	210	35							
<p>Repeated Subtraction</p> <p>$24 \div 6$ $24 - 6 - 6 - 6 - 6$ $6 \times 4 = 24$ SO $24 \div 6 = 4$</p>									



We hope you find this parent leaflet helpful.
 We have created other Numeracy and Literacy leaflets to help you when supporting your child at home.

