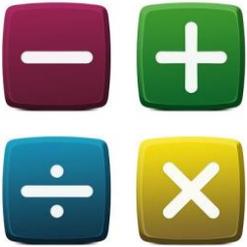


Mathematical Language and OPS

Purpose of this information: To build students' understandings of mathematical words and concepts. To use the same language for mathematics across the school and at home.

At Overport Primary School, the teachers have compiled a list of mathematical terminology that is used throughout the school to enhance student learning. This list was created by the maths team to assist teachers, students as well as parents to speak a 'common language'. As our students progress from Foundation level to Year 6, the terms we use change and become more sophisticated, i.e. sharp angle becomes an acute angle. To bridge the gap and cement a solid foundation, teachers have spent some time in their daily maths sessions to develop mathematical language and to explicitly teach concepts in a variety of contexts. We believe it is important for our students to develop into mathematically capable students that can effectively use mathematics concepts and skills in a dynamic and evolving world.

<p>4 processes</p> 	<p>Addition - Finding the total, or sum, by combining two or more numbers. Subtraction - Taking one number away from another, for example if you have 5 apples and you subtract 2, you are left with 3. Multiplication - The basic idea for multiplication is repeated addition e.g. $5 \times 3 = 5 + 5 + 5 = 15$ But as well as multiplying by whole numbers, we can also multiply by fractions, decimals and more. Division - Splitting into equal parts of groups. It is the result of "fair sharing".</p>
<p>Algorithm</p>	<p>A well-defined set of instructions designed to perform a particular task or solve a type of problem, such as determining which of two fractions is larger, bisecting an angle, or calculating the mean of a set of numbers.</p>
<p>Automatic Recall</p>	<p>Knowing facts off by heart for fast response.</p>
<p>Digits</p>	<p>There are 10 of them. 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9.</p>
<p>Doubles/Near Doubles</p>	<p>Twice as many or nearly twice as many.</p>
<p>Extended (expanded) notation</p>	<p>Writing a number to show the value of each digit. It is shown as a sum of each digit multiplied by its matching place value (ones, tens, hundreds). For example: $293 = 2 \times 100 + 9 \times 10 + 3$</p>
<p>Equals</p> 	<p>Exactly the same amount or value. For example, $1 + 1 = 2$ and 1 dollar is equal to 100 cents.</p>
<p>Fractions</p>	<p>Represents the division of one whole number by another. They are also used to indicate a part of a whole number.</p>
<p>Integers</p>	<p>They are whole numbers such as (0, 1, 2, 3), but also include negative numbers (-1, -2, -3). They can be positive, negative or zero.</p>
<p>Natural numbers</p>	<p>Natural numbers are simply the numbers 1, 2, 3, 4 etc.</p>
<p>Number Lines</p>	<p>A line on which numbers (integers, whole numbers, natural numbers, fractions) are marked. These lines can be used to model mathematical thinking. For example: counting on, counting back, addition, subtraction, etc.</p>

Numeral Identification	Reading and writing numbers. Hindu-Arabic number system: 0123456789
Number word sequences and patterns	A list of numbers that follow a certain sequence or pattern. For example: 2, 4, 6, 8, 10, starts at 2 and jumps by 2 every time.
Numerals	The symbol for numbers, i.e. 4, 78, 632. They are all numerals!
Ordering Numbers	Numbers can be ordered in increasing (up/ascending) or decreasing (down/descending) in order of size (value). Can include whole numbers, fractions, decimals, etc.
Partitioning	Partitioning is a way of working out maths problems that involve large numbers by splitting them into smaller units so they're easier to work with. For example $79+34=113$ when partitioned is $70+30+9+4=100+13=113$
Place Value	The value of a digit in a number and its corresponding column, e.g. ones, tens, hundredths, etc.
Renaming	In everyday use, numbers often need to be renamed in a variety of ways. A number such as 68 can be viewed as 6 tens and 8 ones.
Structuring numbers	The crucial development of mentally adding and subtracting that is, not counting to get answers, like when you know 5 and 5 is 10.
Whole numbers	Whole numbers are the natural numbers along with zero: for example 0, 1, 2, 3, 4 etc.
Worded problems	When a mathematical problem is asked through a question using a real life experience.

