Maths
At the end of Year One

At the end of Year One students will be achieving at early level 1 in the mathematics and statistics learning area of The New Zealand Curriculum. The main focus will be number knowledge.

The student:
- can identify all numbers from 0 to 20
- can say the number before and after for numbers 0 to 20
- order numbers from 0 to 20
- is able to count objects in a group
- is able to continue a number, shape, or colour pattern based on ones
- knows groupings within 5, like 3 and 2, 1 and 4
- knows groups with 5, like 5 and 2, 5 and 4
- knows groupings with 10, like 2 and 8, 4 and 6
- knows doubles patterns to 10
- knows addition and subtraction facts to 10
- can skip count forwards and backwards, and know groupings in, 2s to 20, and 5s to 50
- is able to compare the length, size, volume and weight of objects
- is able to sort objects into common groups
- is able to divide a shape or set into two or four equal parts
- is able to sort objects into groups and describe how they are sorted
- is able to create geometrical patterns (flip, slide)
- is able to talk about the position of an object and give directions using everyday language (e.g. under, on, beside, backwards, forwards)
- is able to gather, sort, and display information and answer questions, with support
- can solve problems and talk about their maths thinking using maths vocabulary

Maths
At the end of Year Two

At the end of Year Two students will be achieving at level 1 in the mathematics and statistics learning area of The New Zealand Curriculum. The main focus will be number knowledge.

The student:
- can identify all numbers from 0 to 100
- can say the forwards and backwards word sequence for numbers 0 to 100
- can order numbers from 0 to 100
- can say the number before and after for numbers 0 to 100
- know groupings with 20 like, 12 and 8, 15 and 5
- know the number of tens in decades, like 6 tens in 60
- know multiples of 10 that add to 100, like 60 and 40
- know addition and subtraction facts to 20
- know doubles and halves to 20
- know 'ten and' facts, like, 10 + 7
- can skip count forwards and backwards, and know groupings in, 2s, 5s, and 10s to 100
- is able to count on, count back and skip count to solve simple addition and subtraction problems
- has instant recall of the 2, 5 and 10 times tables and corresponding division facts
- is able to share objects equally to find fractions of a group
- knows symbols for halves, quarters, thirds and fifths
- is able to create and continue a number, shape, or colour pattern and describe how the pattern repeats
- is able to continue number patterns based on ones, twos, fives, and tens
- is able to compare the length, size, and weight of objects
- is able to compare the time of events
- is able to sort and describe objects and shapes by different features (using mathematical language e.g. sides, corners)
- is able to create and describe geometrical patterns (flip, slide)
- is able to talk about the position of an object and give directions using steps and half or quarter turns
- is able to gather, sort, and display information and answer questions.
- is able to talk about similarities or differences in information gathered
- is able to describe the chance of something happening (outcome)
- is able to divide a shape or set into given equal parts; e.g. 1/2 of 8

Maths

At the end of Year Three

At the end of Year Three students will be achieving at early level 2 in the mathematics and statistics learning area of The New Zealand Curriculum. The main focus will be number knowledge.

The student:
- can identify all of the numbers from 0 to 1000
- can order numbers from 0 to 1000
- can say the forwards and backwards word sequences in 1's, 10's and 100's for numbers 0 to 1000
- knows addition and subtraction facts to 20
- is able to use addition and subtraction facts, and place value to solve problems
- can skip count forwards and backwards, and know groupings in, 2s, 5s and 10s, and skip count forwards in 3s to 100
- has instant recall of the 2, 5, 10, and 3 times tables and division facts
- can find doubles and halves to 100
- is able to find fractions of a group, shape, or quantity
- can identify symbols for halves, quarters, thirds and fifths and tenths
- can order fractions with the same denominators (e.g. 1/4 , 2/4, 3/4)
- is able to create and continue a number, shape, or colour pattern with one or more variables (e.g. 5, 2, 5, 2) and describe how the pattern is repeating
- is able to measure the length, area, size, volume and weight of objects using rulers (and other measuring equipment) and scales
- is able to measure the time of events
- is able to sort and describe objects and shapes by different features and identify categories within categories (using mathematical language e.g. sides, corners, faces, vertices)
- is able to create and describe geometrical patterns (flip, slide, turn)
- is able to talk about the position of an object and give directions using steps, half or quarter turns, and degrees
- is able to gather, sort, and display information and answer questions
- is able to make statements about information gathered
- is able to compare and describe the chance of something happening (outcome)
- is able to find a fraction of a number and solve division problems mentally using halving, or deriving from known addition facts; e.g. 1/3 of 12 is 4 because 4 + 4 + 4 = 12

Maths

At the end of Year Four

At the end of Year Four students will be achieving at level 2 in the mathematics and statistics learning area of The New Zealand Curriculum. Number is the focus of 60–80 percent of mathematics teaching time. Geometry, Measurement and Statistics is the focus of 20–40 percent of mathematics teaching time.

The student:
- can identify all of the numbers from 0 to 1000
- can identify decimals to two decimal places
- know groupings with 100, particularly multiples of 5
- know groups of 2 that are in numbers to 20
- know groupings of 5 that are in numbers to 50
- know groupings of 10 that can be made from a 3 digit numbers
- know the number of hundreds in centuries and thousands
- know multiples of 100 that add to 1000
- apply addition and subtraction facts to combine or partition whole numbers
- can identify symbols for any fraction including tenths, hundredths, thousandths
- can identify symbols for improper fractions
- can find fractions of sets, shapes, and quantities
- can solve problems using doubles and halves
- has instant recall of 2, 3, 4, 5, and 10 times tables and division facts
- apply multiplication facts to combine or partition whole number
- apply knowledge of place value to combine or partition whole numbers
- can create and continue a pattern
- can describe the rule for a sequential pattern with two variables
- is able to measure and compare: time, length (mm, cm, m), area (cm2), volume (ml, l), weight (mg, g, kg), and temperature (degrees C)
- Is able to sort two and three dimensional shapes using their features (faces, edges, corners, planes)
- Is able to describe the properties of a shape
- can make cubes from nets
- can describe my position in relation to something
- can give directions and use simple maps
- can conduct a statistical investigation: gathering and displaying information using charts and graphs
- can compare and explain the chance of something happening - Probability
- is able to find a fraction of a number and solve division problems mentally using halving, or deriving from known facts; e.g. 8 pies shared among 4 people (8 ÷ 4) by giving each person 2 pies, or half of 8 is 4 and half of 4 is 2, or 4 X 2 = 8, or 8 ÷ 4 = 2

Maths

At the end of Year Six

At the end of Year Six students will be achieving at level 3 in the mathematics and statistics learning area of The New Zealand Curriculum. Number is the focus of 60-80 percent of mathematics teaching time. Geometry, Measurement and Statistics is the focus of 20-40 percent of mathematics teaching time.

The student:
- can identify all of the numbers from 0 to 1 000 000
- can identify decimals to three decimal places
- can identify symbols for any fraction including tenths, hundredths, thousandths, and improper fractions
- can say the forwards and backwards sequences for halves, thirds, quarters, fifths and tenths (beyond one)
- can say the decimal word sequence forwards and backwards in tenths and hundredths
- can order unit fraction for halves, thirds quarters, fifths and tenths
- know groupings with 1000, like 498 and 502
- know the multiples of 100 that add to 1000
- know groupings of 2, 3, 5 and 10 that are in numbers to 100 and find remainders
- know tenths and hundredths in decimals to two places
- can round whole numbers to the nearest ten, hundred or thousand
- know multiplication basic facts with tens, hundreds and thousands
- has instant recall of 2, 3, 4, 5, 6, 7, 10, and 11 times tables and division facts (End of Year 5)
- has instant recall of multiplication times tables and division facts, up to 12 (End of Year 6)
- can apply additive and multiplicative strategies to combine or partition whole numbers
- is able to solve problems including mixed operations and using addition and subtraction as inverse operations
- can find fractions of sets, shapes, and quantities
- can find fractions of numbers where the numerator is greater than one
- can rename common fractions as decimals and percentages
- can create and continue a sequential pattern
- can describe spatial and number patterns with rules that involve addition or subtraction,and multiplication
- is able to measure and compare: time, length (mm, cm, m), area (cm2), volume (ml, l), weight (mg, g, kg), and temperature (degrees celsius)
- is able to describe the properties of a shape
- is able to sort two and three dimensional shapes (including prisms), using their features (faces, edges, corners, planes)
- can draw and make objects given their plan, front, and side views
- can represent and describe the results of reflection, rotation, and translation on shapes or patterns
- can identify nets for three dimensional shapes
- can describe locations and give directions, using grid references, turns, and points of the compass
- can conduct a statistical investigation: gathering or sorting data, and displaying information in different ways, and interpret results
- can compare and explain the chance of something happening - Probability
- uses repeated halving, or known multiplication and division facts to solve problems that involve finding fractions of a set or region, renaming improper fractions, and division with remainders

Maths
At the end of Year Eight

At the end of Year Four students will be achieving at level 4 in the mathematics and statistics learning area of The New Zealand Curriculum. Number is the focus of 60-80 percent of mathematics teaching time. Geometry, Measurement and Statistics is the focus of 20-40 percent of mathematics teaching time.

The student:
- can order decimals to three decimal places, eg 6.25 and 6.3
- know the groupings of numbers to 10 that are in numbers to 100 and can find the resulting remainders
- know the groupings of 10, 100 and 1000 that can be made from a number of up to seven digits
- know equivalent fractions for halves, thirds, quarters, fifths and tenths with denominators up to 100 and up to 1000
- can round whole numbers and decimals with up to two places to the nearest whole number or one tenth
- **can instantly recall division basic facts up to the 12 times tables**
- can recall fraction, decimal, percentage conversions for halves, thirds, quarters, fifths and tenths
- know divisibility rules for multi-digit numbers
- know the square numbers to 100 and corresponding roots
- can identify factors of numbers to 100, including prime numbers
- can identify the common multiples of numbers to 10
- can use multiplication strategies when working with numbers, fractions, and ratios (including decimals and percentages)
- can accurately perform the basic operations (addition, subtraction, multiplication, and division)
- is able to solve problems including mixed operations and using inverse operations
- can convert between decimals, percentages, and fractions.
- can understand place value in whole numbers and decimal numbers
- can solve problems and calculate the value of pronumerals (letters) in an equation
- can create, read and interpret graphs and tables
- is able to calculate perimeter, area, and volume of different shapes, including 3 and 4 sided shapes
- can identify and create reflections, tessellations and transformations
- is able to identify and create two or three dimensional shapes, and name the features of shapes (e.g. the internal angles of a triangle add up to 180 degrees)
- is able to calculate and measure angles
- can understand different units of measurement and convert between them (e.g. 1.2m = 120cm and 1200mm)
- can create, read and interpret graphs and tables
- calculate averages (mean, median, mode)
- can understand and use vocabulary associated with probability (e.g certain, likely etc..)
- is able to solve more complex problems independently
- uses a range of multiplication and division strategies to estimate answers and solve problems with fractions, proportions, and ratios. These strategies involve linking division to fractional answers,
  e.g. $11 \div 3 = \frac{11}{3} = 3\frac{2}{3}$
  e.g. $13 \div 5 = (10 \div 5) + (3 \div 5) = 2\frac{3}{5}$
  - can find simple equivalent fractions and rename common fractions as decimals and percentages
  e.g. 5/6 of 24 as 1/6 of 24 = 4, 5 X 4 = 20 or 24 − 4 = 20
  e.g. 3 : 5 as □ : 40, 8 X 5 = 40, 8 X 3 = 24 so □ = 24
  e.g. $\frac{3}{4} = \frac{75}{100} = 75\% = 0.75$