

Our Beliefs About Mathematics and Statistics

At Rangikura School Numeracy will be structured around the Mathematics and Statistic strands:

- Number and Algebra
- Geometry and Measurement
- Statistics

Students will build their knowledge and skills as they progress through each level of the curriculum. There will be a major focus on Number in the Junior School with the other strands being covered in topic work. By Year 8 number will be the focus of at least 50% of the mathematics programme.

Teachers will use the current Mathematics Implementation document to support the teaching of Numeracy.

At Rangikura School we will provide opportunities for students to engage in mathematical and statistical activities in order to become competent numerators.

Why Study Mathematics and Statistics?

At Rangikura School we want our students to:

- Develop the ability to think creatively, critically, strategically, and logically and to enjoy intellectual challenges.
- Develop thinking skills, learn to create models and predict outcomes, to justify, verify and seek patterns and generalisations, through learning mathematics and statistics.
- Learn to estimate, calculate and understand in order to apply mathematical concepts in a broad range of practical applications in everyday life.

Mathematics Programmes

Mathematics is one of the core foundation curriculum areas which must be covered fully at each level. We will ensure the following are covered;

- Number and Algebra – using the Number Framework and Numeracy Project strategies.
- Geometry and Measurement – including shape, symmetry, describing movement and position, length, time, weight, capacity and calculating rates of change.
- Statistics – covering both the gathering and interpreting of statistical data and dealing with uncertainty and variation.

Number and Algebra will form the basis of the Year 0-3 mathematics programmes with Geometry and Measurement/Statistics being incorporated into topic studies. All Achievement Objectives will be covered by Year 4-8 each year.

Mathematics and Statistics and the Key Competencies

All the key competencies can be incorporated into mathematics and statistics teaching programmes:

- Thinking:
 - To develop understanding
 - To create possible solutions
 - To question and challenge

- To draw on personal knowledge
- To make connections to prior learning
- To develop problem solving strategies including those that apply to real life situations using meaningful contexts
- Using Language, Symbols and Texts:
 - To communicate ideas and information
 - To display and describe understandings
 - To interpret information using words, numbers and symbols
 - To learn to use mathematical language
- Managing Self
 - To complete tasks and activities
 - To assess performance
 - To manage progress including setting goals
 - To devise and apply strategies to tasks
- Relating to Others
 - When communicating information
 - When working in group activities
 - When comparing and contrasting their ideas with those of others
 - When giving and receiving feedback
- Participating and Contributing
 - When working on projects that relate to real life situations, community or home
 - When discussing strategies and understanding
 - When involved in mathematical and statistical investigations

These key competencies will be evident in teachers' mathematics planning and classroom programmes.

Mathematics and Statistics and the Core Values

All of the values will be incorporated into mathematics and statistics programmes school wide. However, in mathematics and statistics the following will be given greater emphasis.

- Excellence
 - Students supported to produce high quality work
 - Students recognised for attaining excellence and persevering to complete tasks and activities
 - Students will set goals
- Innovation, Inquiry and Curiosity
 - Students given opportunities to study topics in depth
 - Students frame their own investigative questions in statistical investigations and problem solving
 - Students have opportunities to approach ideas from different angles and perspectives
 - Students will have opportunities to participate in Problem Solving tasks.
 - Students will have opportunities to reflect on their learning

- Community and Participation
 - Students have the opportunity to share their ideas and to participate as part of various groups
 - Students will participate in programmes relevant to the real world
- Diversity and Equity
 - Students will be provided with a variety of learning experiences to fairly reflect the diversity of our school
- Respect
 - Students will show respect for the ideas and strategies used by others
 - Students will show respect for mathematical equipment
 - Students will demonstrate respect for the various ideas, strategies and resources used by others.
 - Students will understand the importance of maths and how it applies to everyday life

Achievement in Mathematics

Our school expects our students to achieve to high standards in mathematics and statistics. Students will be guided, supported and challenged to achieve high standards and levels of achievement in all mathematics work.

Our specific school expectations are:

The shaded stages in the diagrams below are an indication of the expected levels of achievement. The expectation is that by the end of the year the majority of students will be working at this stage, with most of the accompanying knowledge known, and students close to being ready to work at the next stage. A range of achievement is normal and expected at each year level. These expectations and the indications of when to consider students to be “**At Risk**”, “**Cause for Concern**” or “**High Achievers**”, are a guide only. They are intended to assist principals and teachers in setting high yet attainable expectations, and develop teaching and learning programmes for all students at each year level in their school.

Students rated as “**At Risk**” are those who are sufficiently below expectations that their future learning in mathematics is in jeopardy. Students rated “at risk” require special teaching, modified classroom programmes and extra support to continue their development and maintain positive attitudes. The support required is likely to be beyond what can be reasonably expected from their classroom teacher alone.

Students rated as “**Cause for Concern**” are those who are below expectations, although at a stage where it is reasonable to expect classroom teachers to be able to move them to the expected stage.

“**High Achievers**” are those students who are sufficiently above expectations that they may require special teaching, modified classroom programmes and extra support to continue their development and maintain positive attitudes. The support required could be beyond what can be reasonably expected from the classroom teacher alone.

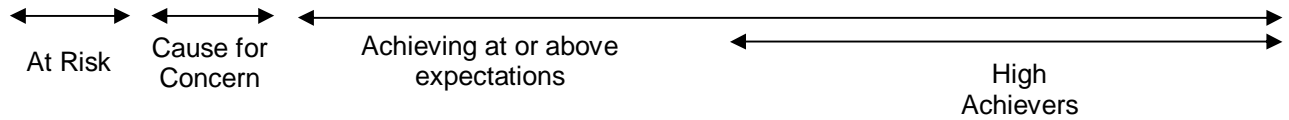
We expect at least 75% of our students to be achieving at or above expectations.

At all levels, students with special talents in mathematics and statistics will be identified. Programmes to enable these students to exceed our school achievement expectations will be planned for, delivered and assessed. The special talents of these students will be recorded in the school’s special needs register.

RANGIKURA SCHOOL CURRICULUM - MATHEMATICS

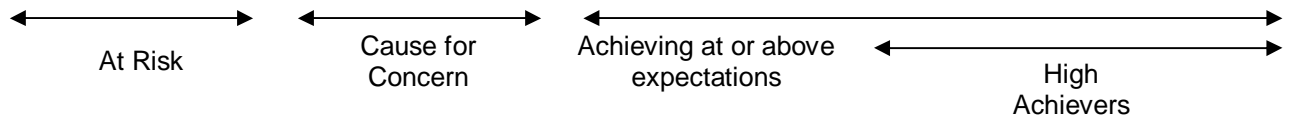
End of Year One Curriculum Expectations

Curriculum - Level 1					Level 2	Level 3	Level 4	Level 5
Stage 0 Em	Stage 1 1-1	Stage 2 CA	Stage 3 CAI	Stage 4 AC	Stage 5 EA	Stage 6 AA	Stage 7 AM	Stage 8 AP



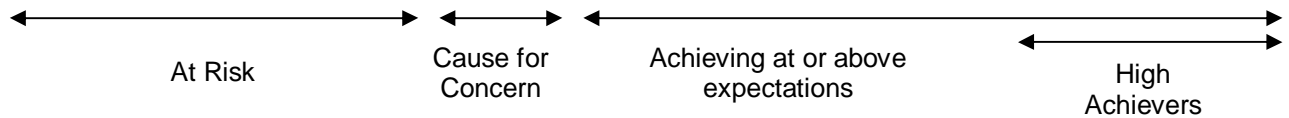
End of Year Two Curriculum Expectations

Curriculum - Level 1					Level 2	Level 3	Level 4	Level 5
Stage 0 Em	Stage 1 1-1	Stage 2 CA	Stage 3 CAI	Stage 4 AC	Stage 5 EA	Stage 6 AA	Stage 7 AM	Stage 8 AP



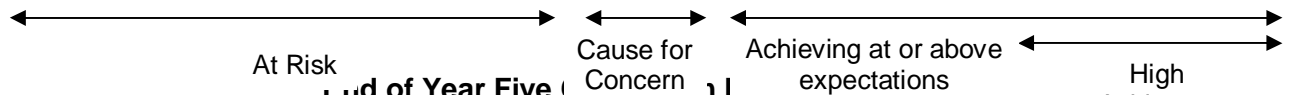
End of Year Three Curriculum Expectations

Curriculum - Level 1					Level 2	Level 3	Level 4	Level 5
Stage 0 Em	Stage 1 1-1	Stage 2 CA	Stage 3 CAI	Stage 4 AC	Stage 5 EA	Stage 6 AA	Stage 7 AM	Stage 8 AP



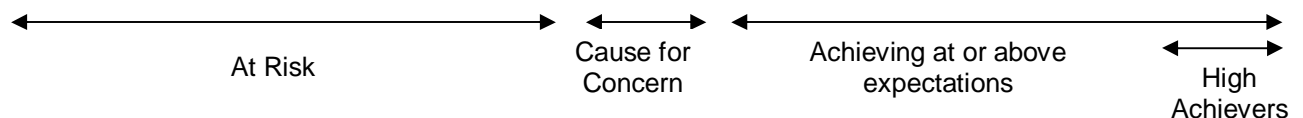
End of Year Four Curriculum Expectations

Curriculum - Level 1					Level 2	Level 3	Level 4	Level 5
Stage 0 Em	Stage 1 1-1	Stage 2 CA	Stage 3 CAI	Stage 4 AC	Stage 5 EA	Stage 6 AA	Stage 7 AM	Stage 8 AP



End of Year Five Curriculum Expectations

Curriculum - Level 1					Level 2	Level 3	Level 4	Level 5
Stage 0 Em	Stage 1 1-1	Stage 2 CA	Stage 3 CAI	Stage 4 AC	Stage 5 EA	Stage 6 AA	Stage 7 AM	Stage 8 AP



RANGIKURA SCHOOL CURRICULUM - MATHEMATICS

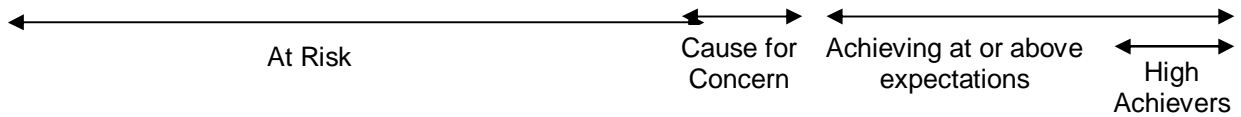
End of Year Six Curriculum Expectations

Curriculum - Level 1					Level 2	Level 3	Level 4	Level 5
Stage 0 Em	Stage 1 1-1	Stage 2 CA	Stage 3 CAI	Stage 4 AC	Stage 5 EA	Stage 6 AA	Stage 7 AM	Stage 8 AP



End of Year Seven Curriculum Expectations

Curriculum - Level 1					Level 2	Level 3	Level 4	Level 5
Stage 0 Em	Stage 1 1-1	Stage 2 CA	Stage 3 CAI	Stage 4 AC	Stage 5 EA	Stage 6 AA	Stage 7 AM	Stage 8 AP



End of Year Eight Curriculum Expectations

Curriculum - Level 1					Level 2	Level 3	Level 4	Level 5
Stage 0 Em	Stage 1 1-1	Stage 2 CA	Stage 3 CAI	Stage 4 AC	Stage 5 EA	Stage 6 AA	Stage 7 AM	Stage 8 AP

