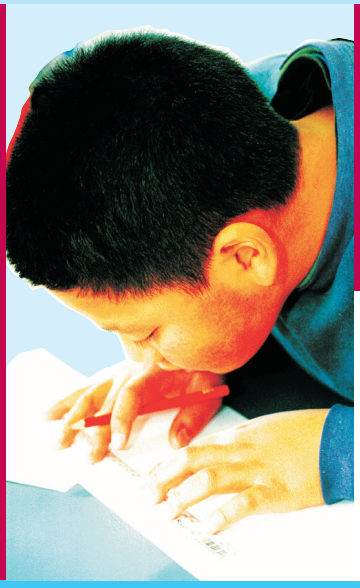
TALK ABOUT IT

MATHEMATICS



RESEARCH DIVISION
Wāhanga Mahi Rangahau

MINISTRY OF EDUCATION
Te Tāhuhu o te Mātauranga

THINGS TO CONSIDER

Findings from asTTle data: On average...

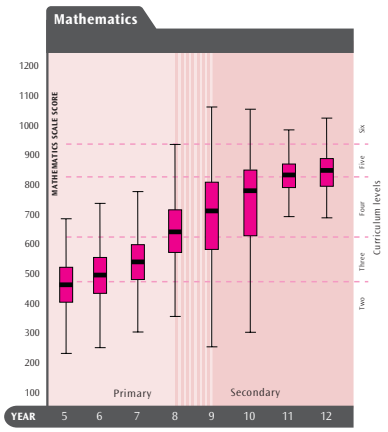
Students show progress over their school years, but the average increase is not at a steady rate.

Related information from the Student Outcome Overview (see page 18)

The Numeracy Project confirms that some levels are harder to achieve and therefore take longer than others.

This finding could also indicate that students need to have the underlying knowledge before they can make significant progress in a curriculum area.

FIGURE 2. Mathematics score and curriculum level by year.



Findings from asTTle data: On average...

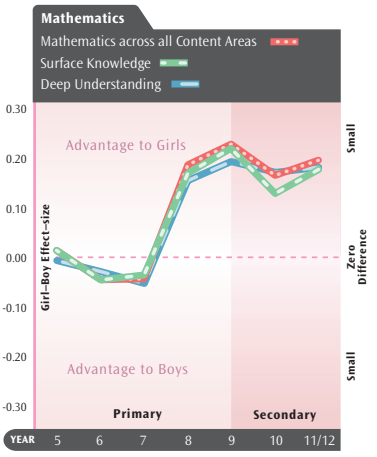
There is little difference in the pattern of achievement between girls and boys.

Related information from the Student Outcome Overview (see page 18 & 19)

Overall, the different studies show only slight differences in performance in maths between girls and boys. However, PISA shows that boys at 15 have a small, but statistically significant, advantage compared to girls.

The 2004 Numeracy Development Project findings suggest that boys make faster gains than girls at higher levels of the Numeracy Framework.

FIGURE 6. Average mathematics score and curriculum level by gender by year.



SOME QUESTIONS TO START DISCUSSION

- Should we expect more students to perform at higher levels of the curriculum throughout their schooling?

- What achievement differences do you notice between boys and girls?
- What can be done to address those differences?

THINGS TO CONSIDER

SOME QUESTIONS TO START DISCUSSION

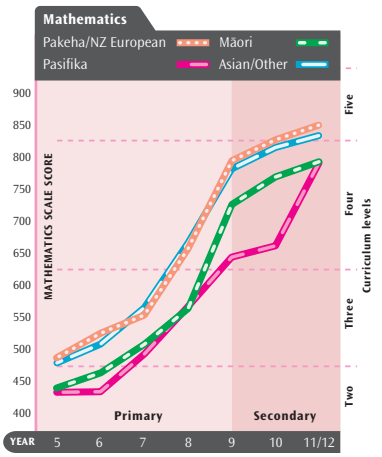
Findings from asTTle data: On average...

Māori and Pasifika students achieve at the same rate as other ethnic groups; however, they start with lower average scores and the gap remains.

Related information from the Student Outcome Overview (see page 19 & 20)

Findings from the Numeracy Project confirm that this gap is already evident at Year 1 and at each year level in primary schools. The NEMP study shows that this gap continues at Year 4.

FIGURE 7. Average mathematics score and curriculum level by ethnic group and year.



- Why, on average, are Māori and Pasifika students starting with lower average scores?
- Why do they experience accelerated periods of achievement after other ethnic groups? (Refer to Figure 7.)
- Why doesn't the achievement gap close?

Findings from asTTle data: On average...

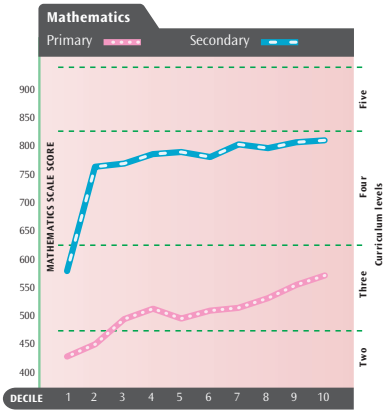
More students do not achieve as well in decile 1 schools than in other schools.

Related information from the Student Outcome Overview (see page 20 & 21)

Although, on average, decile 1 schools perform more poorly than all other schools, there is little relationship between decile and achievement for decile 3 to 9 schools. Decile 10 students, on average, outperform all other students.

Evidence suggests that one of the causes of decile 1 schools performing less well is that both the students and the teachers tend to be more transient and therefore there may be less continuity in teaching and learning.

FIGURE 9. Average mathematics score and curriculum level across deciles for primary and secondary students.



- While student transience and teacher retention in decile 1 schools may contribute to lower student achievement in these schools, are there other reasons that also contribute to this?
- What do you know about the range of achievement within your school?