

An additional feature in national monitoring since 1999 has been the commitment to look directly at the achievement of Pacific students in New Zealand primary and intermediate schools. These students were among the samples in NEMP assessments between 1995 and 1998, but not in sufficient numbers to allow their results to be reported separately. At the request of the Ministry of Education, in each year since 1999 NEMP has selected special additional samples of 120 year 4 students and 120 year 8 students, so that the achievement of Pacific students could be assessed and reported. The augmented samples are too small, however, to allow separate reporting on students from different Pacific nations (such as Samoa, Tonga and Fiji).

All schools in the main NEMP year 8 sample that had 15 percent or more Pacific students (as classified in school records) were selected. All other schools nationally with at least 12 year 8 students and at least 15 percent Pacific students in their total roll were identified, and an additional random sample of 10 schools drawn from this list. A similar procedure was followed at year 4 level, except that schools already chosen at year 8 level were excluded from the sampling list. From each specially sampled school, 12 students (in 3 groups of 4) were sampled, confirmed and assessed using exactly the same procedures as in the main sample. The students' performances were also scored in the same manner as the performances of students in the main sample.



The results for Pacific, Māori, and "other" students in the schools with more than 15 percent Pacific students were then compared. Because all of the schools chosen for these analyses have at least 15 percent Pacific students, the results only apply to students at schools like these.

Differences among the three ethnic groups of students were checked for statistical significance using one-way analysis of variance on the overall scores for each task. Each analysis compared the performance of about 45 Pacific students, 25 Māori students and 35 other students. The critical level for statistical significance was set at  $p = .05$  (so that differences this large or larger among the subgroups would not be expected by chance in more than five percent of cases). Where statistical significance occurred, Tukey tests were used to identify which groups differed significantly.

The mean scores for each group on each task are presented in the four tables below, together with the standard deviations for all students in this sample. Statistically significant differences are clearly indicated.

**YEAR 4 - HEALTH**

Average (mean) marks on health tasks for year 4 students, attending schools enrolling at least fifteen percent Pacific students, who are classified as Pacific students, Māori students or "other" students.

Statistically significant ( $p < .05$ ) differences among the means are shown thus: significantly **lower** or **higher**.

	Pacific Mean	Māori Mean	Other Mean	Overall Std.Dev.
Camp Out	2.7	2.8	3.3	2.3
Self-Worth	0.5	0.2	0.5	0.9
Fit for Fun	2.0	2.1	2.6	1.5
Sun Sense	3.3	3.5	3.6	1.3
The Body	9.5	10.2	11.0	3.0
Swimming	1.5	1.8	2.1	1.4
A Hot Drink	1.6	2.0	2.0	1.2
Smoke Alarm	<b>1.1</b>	1.7	<b>2.3</b>	1.5
Link Task 1	1.4	1.4	1.7	0.6
Link Task 2	<b>0.6</b>	0.7	<b>1.3</b>	0.9
Link Task 3	3.0	4.1	4.0	2.0
Link Task 4	0.4	0.6	0.4	0.7
Link Task 5	0.6	0.4	0.4	0.8
Link Task 6	1.4	1.6	1.7	0.9
Options	2.6	2.4	3.3	1.6
Andrew's School	0.7	0.4	0.8	0.6
Old Bones	0.5	0.6	0.9	0.8
Whose Friend?	1.0	0.9	1.3	1.0
Winning: A Problem	<b>0.9</b>	1.2	<b>1.4</b>	0.8
Jump, Jump!	1.8	2.4	2.1	1.2
Marching Boy	<b>0.5</b>	0.8	<b>1.1</b>	0.9
Link Task 22	0.9	0.9	1.0	0.6
Link Task 23	1.1	1.7	1.4	1.1
Link Task 24	4.4	4.8	4.7	0.9
Link Task 25	2.4	2.0	2.6	1.4
Happy School	1.6	1.6	2.0	1.3
Link Task 28	5.2	5.4	6.1	2.3
Link Task 29	8.8	7.9	8.8	4.1

For year 4 students, there were statistically significant differences in performance among the three groups on four of the 28 health tasks. The Pacific students scored lower than the "other" students on all four tasks. There were also statistically significant differences on two questions of the *Health Survey* (p63). Pacific and Māori student were more positive than "other" students about doing health education in school (question 1), and compared to "other" students Pacific students believed that their class more often did things to help them learn about health (question 4).

## YEAR 8 - HEALTH

Average (mean) marks on health tasks for year 8 students, attending schools enrolling at least fifteen percent Pacific students, who are classified as Pacific students, Māori students or “other” students.

Statistically significant ( $p < .05$ ) differences among the means are shown thus: significantly **lower** or **higher**.

	Pacific Mean	Māori Mean	Other Mean	Overall Std.Dev.
Camp Out	5.1	5.6	5.6	2.7
Self-Worth	1.9	1.4	1.6	1.5
Fit for Fun	2.7	3.5	3.2	1.8
Safe Swimming	5.6	6.5	5.8	2.1
Body Parts	<b>7.1</b>	8.3	<b>8.8</b>	2.0
Stressed Out	4.4	4.3	5.0	1.5
A Hot Drink	2.5	2.6	2.6	1.1
Smoke Alarm	<b>2.0</b>	2.8	<b>3.1</b>	1.8
Choice Food	<b>2.9</b>	<b>3.7</b>	<b>4.2</b>	1.4
Teens	<b>2.2</b>	2.6	<b>3.1</b>	1.5
Bush Safety	<b>4.8</b>	5.0	<b>6.4</b>	2.6
Link Task 1	1.6	1.6	2.0	1.0
Link Task 2	2.1	1.9	2.0	1.0
Link Task 3	4.8	5.4	5.5	2.4
Link Task 4	0.9	0.8	1.0	0.8
Link Task 5	0.8	0.8	1.0	1.0
Link Task 6	1.8	1.9	2.0	0.8
Link Task 9	2.3	2.5	2.9	1.2
Link Task 10	4.2	3.8	3.9	1.5
Options	4.9	5.7	5.7	1.6
Andrew's School	0.9	1.2	1.1	0.7
Old Bones	0.8	0.9	0.9	0.9
Whose Friend?	2.5	2.4	2.3	1.1
Winning: A Problem	1.9	1.5	1.9	1.0
Jump, Jump!	2.6	2.5	3.0	1.3
Marching Boy	1.4	1.5	1.6	1.1
To Smoke or Not to Smoke	2.4	2.6	2.7	1.1
Link Task 22	1.3	1.4	1.3	0.7
Link Task 23	1.9	2.5	2.4	1.3
Link Task 24	4.5	4.5	4.6	0.8
Link Task 25	3.2	3.1	3.4	1.7
Link Task 27	1.1	1.4	1.1	0.9
Happy School	2.4	2.0	2.4	1.6
Caring for Papatūānuku	2.3	2.7	2.9	1.3
Link Task 28	6.2	6.1	6.6	2.0
Link Task 29	9.5	8.8	8.4	3.7

For year 8 students, there were statistically significant differences in performance among the three groups on five of the 36 health tasks. The Pacific students scored lower than the “other” students on all five tasks, and than the Māori students on one of the five tasks. There were no statistically significant differences on questions of the *Health Survey* (p63).

## YEAR 4 - PHYSICAL EDUCATION

Average (mean) marks on physical education tasks for year 4 students, attending schools enrolling at least fifteen percent Pacific students, who are classified as Pacific students, Māori students or “other” students.

Statistically significant ( $p < .05$ ) differences among the means are shown thus: significantly **lower** or **higher**.

	Pacific Mean	Māori Mean	Other Mean	Overall Std.Dev.
Circuit Ball	9.4	10.1	8.6	3.7
Ladder Activities	17.9	17.9	17.5	3.6
Tī Rākau	1.2	0.8	1.0	0.9
Standing Long Jump	6.7	7.1	7.5	2.1
Tap 'n' Hit	7.4	6.8	6.3	2.1
Ball Bounce	7.3	6.6	6.6	2.0
Target Throw	19.7	21.2	19.1	3.2
Forward Roll	3.7	3.6	3.5	1.3
Hit the Wickets	1.4	2.1	2.0	1.3
Large Ball Kick	8.6	8.7	8.5	2.2
Many Moves	7.6	7.4	8.1	2.5
Vertical Jump	4.3	4.2	4.1	0.9
Link Task 11	4.5	4.5	4.2	1.0
Link Task 12	3.0	2.8	2.6	1.7
Link Task 13	<b>5.1</b>	<b>4.6</b>	<b>3.4</b>	1.5
Link Task 14	6.2	6.1	5.1	2.1
Link Task 15	4.8	4.1	4.0	1.8
Link Task 16	2.9	2.7	2.6	1.2
Link Task 17	7.8	8.0	7.5	1.4
Link Task 18	13.8	12.4	11.7	4.1
Link Task 19	7.0	7.1	6.4	2.4
Link Task 20	4.7	3.8	4.3	1.5

For year 4 students, there was a statistically significant difference in performance among the three groups on just one of the 22 physical education tasks. The Pacific and Māori students scored higher than the “other” students on *Link Task 13* (p44). There was also a difference on one question of the *Physical Education Survey* (p65), with Māori and Pacific students believing that their teachers rated their physical education capabilities more positively (question 3).



### YEAR 8 - PHYSICAL EDUCATION

Average (mean) marks on physical education tasks for year 8 students, attending schools enrolling at least fifteen percent Pacific students, who are classified as Pacific students, Māori students or “other” students.

Statistically significant ( $p < .05$ ) differences among the means are shown thus: significantly **lower** or **higher**.

	Pacific Mean	Māori Mean	Other Mean	Overall Std.Dev.
Circuit Ball	13.2	12.7	13.6	4.3
Ladder Activities	21.3	22.0	22.3	5.1
Tī Rākau	1.5	<b>1.9</b>	<b>1.2</b>	0.9
Standing Long Jump	7.4	6.1	7.0	2.1
Tap ‘n’ Hit	8.2	7.3	7.7	2.5
Ball Bounce	7.8	8.1	8.0	1.4
Target Throw	23.1	22.8	23.0	2.9
Forward Roll	5.7	6.2	6.9	3.2
Hit the Wickets	2.2	2.5	2.0	1.3
Large Ball Kick	9.0	9.0	9.9	1.9
Many Moves	8.5	8.5	7.9	2.3
Vertical Jump	4.5	4.5	4.2	1.1
Link Task 11	4.7	4.3	4.5	1.0
Link Task 12	4.3	4.2	3.9	1.1
Link Task 13	5.7	5.6	5.5	0.7
Link Task 14	7.7	7.3	7.3	1.3
Link Task 15	4.7	4.3	4.5	1.7
Link Task 16	2.8	2.7	2.5	1.3
Link Task 17	8.2	8.1	8.2	1.3
Link Task 18	15.3	15.2	14.1	3.4
Link Task 19	8.3	7.6	7.6	2.2
Link Task 20	<b>5.6</b>	<b>5.7</b>	<b>4.3</b>	1.8
Link Task 21	12.9	13.3	13.1	2.7

For year 8 students, there were statistically significant differences in performance among the three groups on just 2 of the 23 physical education tasks. The Māori students scored higher than the “other” students on *Tī Rākau* (p38), and both the Māori and Pacific students scored higher than the “other” students on *Link Task 20* (p44). There were also statistically significant differences on six questions of the Physical Education Survey (p65), with the Pacific students more positive than the “other” students on all six questions: how much they liked physical education in school (question 1), how good they thought they were at physical education (question 2), how highly they thought their teachers rated their physical education capabilities (question 3), how much they liked doing physical education in their own time (question 6), their wish to do more physical education in school (question 7), and their desire to keep learning physical education when they were older (question 8).



### Summary

Compared to Māori and “other” students in schools with more than 15 percent Pacific students, both year 4 and year 8 Pacific students in these schools performed less well than the “other” students on 14 percent of the health tasks, but better than the “other” students on 5 percent of the physical education tasks. In both areas and at both year levels, Pacific students performed very similarly to Māori students in their schools. On the two surveys, the most notable feature was the high level of enthusiasm for and perceived competence in physical education displayed by year 8 Pacific students.

