

### Main samples

In 2002, 2868 children from 249 schools were in the main samples to participate in national monitoring. Half were in year 4, the other half in year 8. At each level, 120 schools were selected randomly from national lists of state, integrated and private schools teaching at that level, with their probability of selection proportional to the number of students enrolled in the level. The process used ensured that each region was fairly represented. Schools with fewer than four students enrolled at the given level were excluded from these main samples, as were special schools and Māori immersion schools (such as *Kura Kaupapa Māori*).

Early in May 2002, the Ministry of Education provided computer files containing lists of eligible schools with year 4 and year 8 students, organized by region and district, including year 4 and year 8 roll numbers drawn from school statistical returns based on enrolments at 1 March 2002.

From these lists, we randomly selected 120 schools with year 4 students and 120 schools with year 8 students. Schools with four students in year 4 or 8 had about a one percent chance of being selected, while some of the largest intermediate (year 7 and 8) schools had a more than 90 percent chance of inclusion. In the four cases where the same school was chosen at both year 4 and year 8 level, a replacement year 4 school of similar size was chosen from the same region and district, type and size of school.

### Additional samples

From 1999 onwards, national monitoring has included additional samples of students to allow the performance of special categories of students to be reported.

To allow results for Pacific students to be compared with those of Māori students and “other” students, 10 additional schools were selected at year 4 level and 10 at year 8 level. These were selected randomly from schools that had not been selected in the main sample, had at least 15 percent Pacific students attending the school, and had at least 12 students at the relevant year level.

To allow results for Māori students learning in Māori immersion programmes to be compared with results for Māori children learning in English, 10 additional schools were selected at year 8 level only. They were selected from Māori immersion schools (such as *Kura Kaupapa Māori*) that had at least four year 8 students, and from other schools that had at least four year 8 students in classes classified as Level 1 immersion (80 to 100 percent of instruction taking place in Māori). Only students that the schools reported to be in at least their fifth year of immersion education were included in the sampling process.

### Pairing small schools

At the year 8 level, 5 of the 120 chosen schools in the main sample had less than 12 year 8 students. For each of these schools, we identified the nearest small school meeting our criteria to be paired with the first school. Wherever possible, schools with 8 to 11 students were paired with schools with 4 to 7 students, and vice versa. However, the travelling distances between the schools were also taken into account. Four of the 10 schools in the year 8 Māori immersion sample also needed to be paired with other schools of the same type.

Similar pairing procedures were followed at the year 4 level. Four pairs were required in the main sample of 120 schools.

### Contacting schools

Late in May, we attempted to telephone the principals or acting principals of all schools in the year 8 samples (excluding the 14 schools in the Māori immersion sample). We made contact with all schools within a week.

In our telephone calls with the principals, we briefly explained the purpose of national monitoring, the safeguards for schools and students, and the practical demands that participation would make on schools and students. We informed the principals about the materials which would be arriving at the school (a copy of a 20 minute NEMP videotape plus copies for all staff and trustees of the general NEMP brochure and the information booklet for sample schools). We asked the principals to consult with their staff and Board of Trustees and confirm their participation by the end of June.

A similar procedure was followed at the end of July with the principals of the schools selected in the year 4 samples, and they were asked to respond to the invitation by the end of August. The principals of the 14 schools in the Māori immersion sample were contacted in early August and asked to respond by early September. They were sent brochures in both Māori and English.

### Response from schools

Of the 283 schools originally invited to participate, 277 agreed. Three schools in the main year 8 sample declined to participate: an intermediate school because of severe space problems, a brand new independent school because of the challenges associated with getting established, and a full primary school because it was its first year as a recapitated school and there had been a major upheaval in their year 8 class. One school in the year 8 Pacific sample was replaced because of major building work and a bereavement that had disrupted the work of the school. In the Māori immersion sample, two schools chose not to participate and were replaced by nearby schools.

### Sampling of students

With their confirmation of participation, each school sent a list of the names of all year 4 or year 8 students on their roll. Using computer-generated random numbers, we randomly selected the required number of students (12, or 4 plus 8 in a pair of small schools), at the same time clustering them into random groups of four students. The schools were then sent a list of their selected students and invited to inform us if special care would be needed in assessing any of those children (e.g. children with disabilities or limited skills in English).

At the year 8 level, we received 144 comments from schools about particular students. In 41 cases, we randomly selected replacement students because the children initially selected had left the school between the time the roll was provided and the start of the assessment programme in the school, or were expected to be away throughout the assessment week, or had been included in the roll by mistake. The remaining 103 comments concerned children with special needs. Each such child was discussed with the school and a decision agreed. Fifteen students were replaced because they were very recent immigrants or overseas students who had extremely limited English language skills. Nine students were replaced because they had disabilities or other problems of such seriousness that it was agreed that the students would be placed at risk if they participated. Participation was agreed upon for the remaining 79 students, but a special note was prepared to give additional guidance to the teachers who would assess them.

In the corresponding operation at year 4 level, we received 142 comments from schools about particular students. Eighteen students were changed because the lists originally supplied were incorrect (students from other than year 4 included). Thirty-three students originally selected were replaced because they had left the school or were expected to be away throughout the assessment week. Twelve students were replaced because of their NESB status and very limited English. Nineteen students were replaced because they had disabilities or other problems of such seriousness the students appeared to be at risk if they participated. Special notes for the assessing teachers were made about 60 children retained in the sample.

### Communication with parents

Following these discussions with the school, Project staff prepared letters to all of the parents, including a copy of the NEMP brochure, and asked the schools to address the letters and mail them. Parents were told they could obtain further information from Project staff (using an 0800 number) or their school principal, and advised that they had the right to ask that their child be excluded from the assessment.

At the year 8 level, we received a number of phone calls including several from students wanting more information about what would be involved. Five children were replaced as a result of these contacts, one at the child's request and four at the parents' request.

At the year 4 level we also received several phone calls from parents. Some wanted details confirmed or explained (notably about reasons for selection). One child was replaced at his parents' request, because they were worried about his missing classes.

### Practical arrangement with schools

On the basis of preferences expressed by the schools, we then allocated each school to one of the five assessment weeks available and gave them contact information for the two teachers who would come to the school for a week to conduct the assessments. We also provided information about the assessment schedule and the space and furniture requirements, offering to pay for hire of a nearby facility if the school was too crowded to accommodate the assessment programme. This proved necessary in several cases.

### Results of the sampling process

As a result of the considerable care taken, and the attractiveness of the assessment arrangements to schools and children, the attrition from the initial sample was quite low. Only about two percent of selected schools did not participate, and less than two percent of the originally sampled children had to be replaced for reasons other than their transfer to another school or planned absence for the assessment week. The sample can be regarded as very representative of the population from which it was chosen (all children in New Zealand schools at the two class levels except the one to two percent in special schools or schools with less than four year 4 or year 8 children).

Of course, not all the children in the samples actually could be assessed. Eleven year 8 students, 26 year 4 students, and 5 Māori immersion students left school at short notice and could not be replaced. Parents withdrew 2 year 8 students and 1 year 4 student too late to be replaced. One year 4 student was found to be in a Māori immersion programme, and should not be assessed in English. A further 12 year 8 students, 16 year 4 students, and 7 Māori immersion students were absent from school throughout the assessment week. Some others were absent from school for some of their assessment sessions, and a small percentage of performances were lost because of malfunctions in the video recording process. Some of the students ran out of time to complete the schedules of tasks. Nevertheless, for many tasks, over 95 percent of the sampled students were assessed. No task had less than 90 percent of the sample students assessed. Given the complexity of the Project, this is a very acceptable level of participation.

### Composition of the sample

Because of the sampling approach used, regions were fairly represented in the sample, in approximate proportion to the number of school children in the regions.

### Region

PERCENTAGES OF STUDENTS FROM EACH REGION		
REGION	% YEAR 4 SAMPLE	% YEAR 8 SAMPLE
Northland	4.2	4.2
Auckland	32.5	31.6
Waikato	10.0	10.0
Bay of Plenty/Poverty Bay	8.3	7.5
Hawkes Bay	4.2	4.2
Taranaki	2.5	3.3
Wanganui/Manawatu	5.8	5.8
Wellington/Wairarapa	10.8	10.8
Nelson/Marlborough/West Coast	4.2	4.2
Canterbury	10.8	11.7
Otago	4.2	4.2
Southland	2.5	2.5

### Demography

DEMOGRAPHIC VARIABLES: PERCENTAGES OF STUDENTS IN EACH CATEGORY			
VARIABLE	CATEGORY	% YEAR 4 SAMPLE	% YEAR 8 SAMPLE
Gender	Male	52	51
	Female	48	49
Ethnicity	Non-Māori	79	81
	Māori	21	19
Geographic Zone	Greater Auckland	32	32
	Other North Island	46	46
	South Island	22	22
Community Size	< 10,000	18	13
	10,000 – 100,000	24	28
	> 100,000	58	59
School SES Index	Bottom 30 percent	31	27
	Middle 40 percent	40	39
	Top 30 percent	29	34
Size of School	< 20 y4 students	16	
	20 – 35 y4 students	21	
	> 35 y4 students	63	
	<35 y8 students		23
	35 – 150 y8 students		29
	> 150 y8 students		48
Type of School	Full Primary		33
	Intermediate		53
	Other (not analysed)		14