

# A Appendix : The Sample of Schools and Students in 2003

## Main Samples, Assessed in English

In 2003, 2878 children from 252 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*).

Late in May 2003, the Ministry of Education provided computer files containing lists of eligible schools with year 4 and year 8 students, organised by region and district, including year 4 and year 8 roll numbers drawn from school statistical returns based on enrolments at 1 March 2003.

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 two 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.



## Māori Immersion Sample, Assessed Predominantly in Te Reo

Details of the sample for the Māori immersion assessments are given in the separate report *Assessment Results for Māori Students 2003: Science; Visual Arts; Graphs, Tables and Maps*.

## Pairing Small Schools

At the year 8 level, six 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 eight to eleven students were paired with schools with four to seven students, and vice versa. However, the travelling distances between the schools were also taken into account.

Similar pairing procedures were followed at the year 4 level. Four pairs and one trio of very small schools were included in the sample of 120 schools.

## Contacting Schools

In the first week of June, we attempted to telephone the principals or acting principals of all schools in the year 8 sample. In these calls, 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 in 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.

## Response from Schools

Of the 252 schools originally invited to participate, 246 agreed. Four schools in the year 8 sample declined to participate: two intermediate schools and one independent school because of severe space problems associated with active building projects, and an intermediate school because of an extreme overload of special projects. Two schools were replaced in the year 4 sample: an integrated primary school because of major building work and resultant space problems, and another integrated school that failed to respond to repeated communications

after initially expressing interest in participating.

The six schools not participating were replaced with schools, from the same district, matched as closely as possible on size and socio-economic decile rating.

### Sampling of Students

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 four plus eight 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).

For the year 8 sample, we received 112 comments from 67 schools about particular students. In 54 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 or involved in special activities throughout the assessment week, or had been included in the roll by mistake. The remaining 58 comments concerned children with special needs. Each such child was discussed with the school and a decision agreed. Fourteen students were replaced because they were very recent immigrants or overseas students who had extremely limited English language skills. Thirteen 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 31 students, but a special note was prepared to give additional guidance to the teachers who would assess them.

For the year 4 sample, we received 92 comments from 55 schools about particular students. Thirty-four

students originally selected were replaced because the lists originally supplied were incorrect or the student had left the school or was expected to be away throughout the assessment week. Nine students were replaced because of their non-English speaking background (NESB) "status" and very limited English. Twenty-two 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 27 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 or parents wanting more information about what would be involved. Seven children were replaced as a result of these contacts, two at the child's request and five 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). Three children were replaced at their parents' request and one at the child's request.

### 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 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 in the main samples 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 main samples can be regarded as very representative of the populations from which they were chosen (all children in New Zealand schools at the two class levels except the one to two percent in special schools, in Māori immersion programmes, or in schools with less than four year 4 or year 8 children).

Of course, not all the children in the samples actually could be assessed. One place in each sample was not filled because insufficient students were available in a school. Nine year 8 students and 23 year 4 students left school at short notice and could not be replaced. Parents withdrew a year 8 student too late to be replaced, and four year 8 students declined to participate when first approached by the teacher administrators. Two year 8 students were suspended at the time of the assessments and a year 4 student was found to be misclassified (actually year 5). Seven year 8 students and five year 4 students were absent from school throughout the assessment week. Some other students 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 sampled 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	33.3	33.3
Waikato	10.0	9.2
Bay of Plenty/Poverty Bay	8.3	8.3
Hawkes Bay	3.3	4.2
Taranaki	3.3	2.5
Wanganui/Manawatu	5.8	5.8
Wellington/Wairarapa	10.0	10.8
Nelson/Marlborough/West Coast	3.3	4.2
Canterbury	11.7	11.7
Otago	4.2	4.2
Southland	2.5	1.7

#### DEMOGRAPHY

DEMOGRAPHIC VARIABLES: PERCENTAGES OF STUDENTS IN EACH CATEGORY			
VARIABLE	CATEGORY	% YEAR 4 SAMPLE	% YEAR 8 SAMPLE
Gender	Male	51	50
	Female	49	50
Ethnicity	Pakeha	74	75
	Māori	17	18
	Pasifika	9	7
Geographic Zone	Greater Auckland	32	32
	Other North Island	46	46
	South Island	22	22
Community Size	< 10,000	18	22
	10,000 – 100,000	23	22
	> 100,000	59	56
School SES Index	Bottom 30 percent	28	21
	Middle 40 percent	36	44
	Top 30 percent	36	35
Main Language at Home	English	87	90
	Other	13	10
Size of School	< 25 y4 students	18	
	25 – 60 y4 students	45	
	> 60 y4 students	37	
	<35 y8 students		18
	35 – 150 y8 students		33
	> 150 y8 students		49
Type of School	Full Primary		30
	Intermediate		54
	Other (not analysed)		16