NATIONAL EDUCATION MONITORING PROJECT

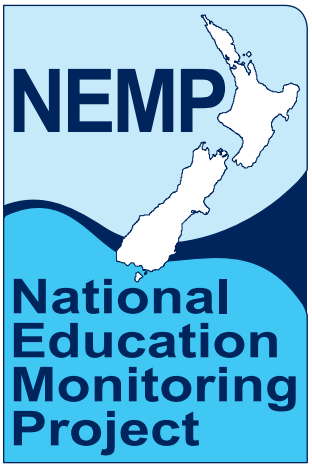
Information Skills for Inquiry Learning

Assessment Results 2009

Jeffrey Smith, Terry Crooks, Ros Allan
Educational Assessment Research Unit

INFORMATION SKILLS FOR INQUIRY LEARNING
ASSESSMENT RESULTS 2009

NEMP Report 50



NEW ZEALAND

Information Skills for Inquiry Learning

Assessment Results

2009

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MINISTRY OF EDUCATION
Te Tāhuhu o te Mātauranga

NEMP REPORTS

CYCLE 1

1995	1	Science
	2	Art
	3	Graphs, Tables and Maps
1996	4	Music
	5	Aspects of Technology
	6	Reading and Speaking
1997	7	Information Skills
	8	Social Studies
	9	Mathematics
1998	10	Listening and Viewing
	11	Health and Physical Education
	12	Writing

CYCLE 2

1999	13	Science
	14	Art
	15	Graphs, Tables and Maps
	16	Māori Students' Results
2000	17	Music
	18	Aspects of Technology
	19	Reading and Speaking
	20	Māori Students' Results
2001	21	Information Skills
	22	Social Studies
	23	Mathematics
	24	Māori Students' Results
2002	25	Listening and Viewing
	26	Health and Physical Education
	27	Writing
	28	Māori Students' Results

CYCLE 3

2003	29	Science
	30	Visual Arts
	31	Graphs, Tables and Maps
	42	Māori Medium Students' Results
2004	32	Music
	33	Aspects of Technology
	34	Reading and Speaking
	43	Māori Medium Students' Results
2005	35	Information Skills
	36	Social Studies
	37	Mathematics
	38	Māori Medium Students' Results
2006	39	Listening and Viewing
	40	Health and Physical Education
	41	Writing

CYCLE 4

2007	44	Science
	45	Visual Arts
	46	Graphs, Tables and Maps
2008	47	Music
	48	Aspects of Technology
	49	Reading and Speaking
2009	50	Information Skills for Inquiry Learning
	51	Social Studies
	52	Mathematics

Note that reports are published the year after the research is undertaken.

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NEW ZEALAND

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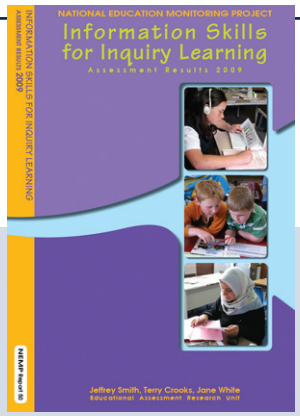

NATIONAL EDUCATION MONITORING REPORT 50

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- Heleen Visser, Hadyn Green and other staff members of the Ministry of Education
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- the 160 teachers who assisted with the marking of tasks early in 2010
- the people and organisations who granted permission for the publication of their work in this report, to illustrate our assessment resources (acknowledged in full on page 54).

Summary

Overview: In the age of information, understanding the information skills of New Zealand's schoolchildren has never been more important. The salience of technology, both its positive and negative aspects could not be better exemplified than by noting that in the 2009 administration of the Information Skills Survey, 96% of year 8 children report that when they need to find information, they go to the internet. This figure is twice as high as the next most popular response, going to a parent.

Although children are eager users of information, they are not always adept users, or savvy users. Students are fairly good, particularly at year 8, at finding and using basic information, but not as good at judging the merits of that information, comparing multiple sources of information, or organising and employing information to buttress arguments. At year 4, students have difficulty in determining what their information needs are, although there is substantial growth in this ability from year 4 to year 8. Overall we see a general pattern of skill development in all areas from year 4 to year 8 in terms of information skills.

There are some gains seen in performance overall from the 2005 administration of information skills. Girls slightly outperform boys, and Pakeha children outperform Māori and Pasifika children. The socio-economic status of the school (as indicated by its decile level) continues to be the strongest determinant of performance in information skills. Other school level variables have little impact on overall performance.

New Zealand's National Education Monitoring Project commenced in 1993, with the task of assessing and reporting on the achievement of New Zealand primary school children in all areas of the school curriculum. Children are assessed at two class levels: year 4 (halfway through primary education) and year 8 (at the end of primary education). Different curriculum areas and skills are assessed each year, over a four-year cycle. The main goal of national monitoring is to provide detailed information about what children can do so that patterns of performance can be recognised, successes celebrated, and desirable changes to educational practices and resources identified and implemented.

Each year, small random samples of children are selected nationally, then assessed in their own schools by teachers specially seconded and trained for this work. Task instructions are given orally by teachers, through video presentations, on laptop computers, or in writing. Many of the assessment tasks involve the children in the use of equipment and supplies. Their responses are presented orally, by demonstration, in writing, in computer files, or through submission of other physical products. Many of the responses are recorded on videotape for subsequent analysis.

The use of many tasks with both year 4 and year 8 students allows comparisons of the performance of year 4 and 8 students in 2009. Because some tasks have been used twice, in 2005 and again in 2009, trends in performance across the four-year period can also be analysed.

In 2009, the third year of the fourth cycle of national monitoring, three areas were assessed: mathematics, social studies and information skills. This report presents details and results of the assessments of information skills.

ASSESSING INFORMATION SKILLS

Chapter 2 explains the place of information skills in the New Zealand curriculum and presents the framework for information skills. This identifies three main content areas or strands: clarifying information needs, finding and gathering information, and thinking about and using information. Within each of these areas, various strategies, skills and processes were identified. The importance of attitudes and motivation was also noted.

CLARIFYING INFORMATION NEEDS

Chapter 3 presents information about students' skills in clarifying information needs based on 8 assessment tasks. Year 8 students were more successful than year 4 students. Averaged across 63 task components attempted by both years, 13% more year 8 than year 4 students succeeded well with these components.

Averaged across 23 trend task components attempted by year 4 students in both 2005 and 2009, 2% more students succeeded in 2009 than in 2005. This is a small increase. At year 8 level, with 29 components included, on average there was an increase of 3% from 2005 to 2009. Thus we see a small, but positive trend overall.

FINDING & GATHERING INFORMATION

Chapter 4 presents results for 16 tasks that involved finding and gathering information. Year 8 students enjoyed substantially more success than year 4 students. Averaged across 67 components of tasks attempted by both years, 14% more year 8 than year 4 students succeeded on these components.

Averaged across 38 components attempted by year 4 students in both 2005 and 2009, 1% more students succeeded in 2009 than in 2005. This is a small increase. At year 8 level, with 50 components included, on average 1% more students succeeded in 2009, again a small increase.

THINKING ABOUT & USING INFORMATION

Chapter 5 presents results for 18 tasks that asked students to think about and use information. Year 8 students enjoyed substantially more success than year 4 students. Averaged across 78 components attempted by both years, 11% more year 8 than year 4 students succeeded well with these components.

Averaged across 37 components attempted by year 4 students in both 2005 and 2009, there was no change from 2005 to 2009. At year 8 level, with 59 task components in common, there was a 2% decline in 2009. This is a small change.

INFORMATION SKILLS SURVEY

Chapter 6 focuses on the results of a survey that sought information from students about their strategies for, involvement in, and enjoyment of information gathering and interpreting activities. The message here is straightforward and clear: students use the internet a lot and they enjoy doing so. The internet continues to be by far the primary source of information for students at both years, showing a substantial increase in 2009 over 2005, which in turn had shown a substantial increase over 2001. For year 8 students, 96% reported that they turn to the internet for information (77% at year 4). In contrast, they report using the school library significantly less often. As was the case in previous NEMP assessments, more year 8 than year 4 students reported that they had to find information for a project or topic "heaps" or "quite a lot". Also similar to earlier administrations, year 8 students were much less inclined than year 4 students to be enthusiastic about hunting for information and about writing down the information they found. Most students are quite happy to share with others the information they have found.

PERFORMANCE OF SUBGROUPS

Chapter 7 details the results of analyses comparing the performance of different demographic subgroups. School type (full primary, intermediate, or year 7 to 13 high school), school size, community size and geographic zone did not seem to be important factors predicting achievement on the information skills tasks. The same was true for the three previous assessments of information skills. However, there were statistically significant differences in the performance of students from low, medium and high decile schools on 66% of the tasks at year 4 level (compared to 57% in 2005, 43% in 2001 and 81% in 1997) and 79% of the tasks at year 8 level (compared to 54% in 2005, 71% in 2001 and 56% in 1997).

For the comparisons of boys with girls, Pakeha with Māori, Pakeha with Pasifika students, and students for whom the predominant language at home was English with those for whom it was not, effect sizes were used. Effect size is the difference in mean (average) performance of the two groups, divided by the pooled standard deviation of the scores on the particular task. For this summary, these effect sizes were averaged across all tasks.

Year 4 girls averaged slightly higher than boys, with a mean effect size of 0.11 (compared to 0.14 in 2005 and 0.06 in 2001). Year 8 girls averaged slightly higher than boys, with a mean effect size of 0.16 (compared to 0.27 in 2005 and 0.15 in 2001). As was also true in 2005 and 2001, the information skills survey results at both year levels indicated some evidence that girls were more positive than boys about information skills activities.

Pakeha students averaged moderately higher than Māori students, with mean effect sizes of 0.40 for year 4 students and 0.33 for year 8 students (the corresponding figures in 2005 were 0.36 and 0.27, and in 2001 were 0.25 and 0.39). Differences on the Information Skills Survey were small.

Year 4 Pakeha students averaged substantially higher than Pasifika students, with a mean effect size of 0.49 (compared to 0.37 in 2005 and 0.40 in 2001). Year 8 Pakeha students averaged moderately to substantially higher than Pasifika students, with a mean effect size of 0.41 (compared to 0.48 in 2005 and 0.46 in 2001). Differences on the Information Skills Survey were small.

Compared to students for whom the predominant language at home was English, students from homes where other languages predominated averaged slightly or moderately lower, with mean effect sizes of 0.18 for year 4 students and 0.26 for year 8 students. Comparable mean effect sizes for 2005 were 0.16 and 0.18 respectively.

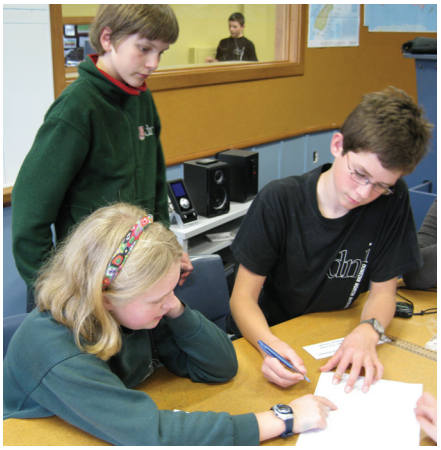
OVERALL TRENDS

Overall trends can be assessed by considering all trend tasks from Chapters 3 to 5. For year 4 students, based on 93 components, on average 1% more students succeeded with the task components in 2009 than in 2005. For year 8 students, based on 138 task components, 1% fewer students than in 2005 succeeded with the task components in 2009. Both of these trends are too small to be meaningful.

In the report on the 2005 information skills assessments, averaged across all trend task components, about 1% fewer year 4 students and 1% more year 8 students than in 2001 succeeded with those components. Four years earlier, the 2001 report compared performance in 1997 and 2001, showing an increase of 4% at year 4 level and no change at year 8 level.

Overall then, there appears to have been a small gain in the performance of year 4 students over the 12 years between 1997 and 2009. At year 8 level, the evidence suggests no change in information skills performance overall for that same 12-year period.

1 The National Education Monitoring Project



This chapter presents a concise outline of the rationale and operating procedures for national monitoring, together with some information about the reactions of participants in the 2009 assessments. Detailed information about the sample of students and schools is available in the Appendix (p51).

Purpose of National Monitoring

The New Zealand Curriculum Framework (1993, p26) states that the purpose of national monitoring is *to provide information on how well overall national standards are being maintained, and where improvements might be needed.*

The focus of the National Education Monitoring Project (NEMP) is on the educational achievements and attitudes of New Zealand primary and intermediate school children. NEMP provides a national "snapshot" of children's knowledge, skills and motivation, and a way to identify which aspects are improving, staying constant or declining. This information allows successes to be celebrated and priorities for curriculum change and teacher development to be debated more effectively, with the goal of helping to improve the education which children receive.

Assessment and reporting procedures are designed to provide a rich picture of what children can do and thus to optimise value to the educational community. The result is a detailed national picture of student achievement. It is neither feasible nor appropriate, given the purpose and the approach used, to release information about individual students or schools.

Monitoring at Two Class Levels

National monitoring assesses and reports what children know and can do at two levels in primary and intermediate schools: year 4 (ages 8-9) and year 8 (ages 12-13).

National Samples of Students

National monitoring information is gathered using carefully selected random samples of students, rather than all year 4 and year 8 students. This enables a relatively extensive exploration of students' achievement, far more detailed than would be possible if all students were to be assessed. The national samples of 1320 year 4 children and 1320 year 8 children represent about 2.2% of the children at those levels in New Zealand schools, large enough samples to give a trustworthy national picture.

Three Sets of Tasks at Each Level

So that a considerable amount of information can be gathered without placing too many demands on individual students, different students attempt different tasks. The 1320 students selected in the sample at each year level are divided into three groups of 440 students, comprising four students from each of 110 schools. Each group attempts one third of the tasks.

Timing of Assessments

The assessments take place in the second half of the school year, between August and November. The year 8 assessments occur first, over a five-week period. The year 4 assessments follow, over a similar period. Each student participates in about four hours of assessment activities spread over one week.

Specially Trained Teacher Administrators

The assessments are conducted by experienced teachers, usually working in their own region of New Zealand. They are selected from a national pool of applicants, attend a week of specialist training in Wellington led by senior Project staff and then work in pairs to conduct assessments of 60 children over five weeks. Their employing school is fully funded by the Project to employ a relief teacher during their secondment.

Four-Year Assessment Cycle

Each year, the assessments cover about one quarter of the areas within the national curriculum for primary schools. The New Zealand Curriculum Framework is the blueprint for the school curriculum. It places emphasis on seven essential learning areas, eight essential skills and a variety of attitudes and values. National monitoring aims to address all of these areas, rather than restrict itself to pre-selected priority areas.

The first four-year cycle of assessments began in 1995 and was completed in 1998. The second cycle ran from 1999 to 2002. The third cycle began in 2003 and finished

in 2006. The fourth cycle began in 2007. The areas covered each year and the reports produced are listed opposite the contents page of this report.

Approximately 45% of the tasks are kept constant from one cycle to the next. This re-use of tasks allows trends in achievement across a four-year interval to be observed and reported.

Important Learning Outcomes Assessed

The assessment tasks emphasise aspects of the curriculum which are particularly important to life in our community, and which are likely to be of enduring importance to students. Care is taken to achieve balanced coverage of important skills, knowledge and understandings within the various curriculum strands, but without attempting to follow the finer details of current curriculum statements. Such details change from time to time, whereas national monitoring needs to take a long-term perspective if it is to achieve its goals.

Wide Range of Task Difficulty

National monitoring aims to show what students know and can do. Because children at any particular class level vary greatly in educational development, tasks spanning multiple levels of the curriculum need to be included if all children are to enjoy some success and all children are to experience some challenge. Many tasks include several aspects, progressing from aspects most children can handle well to aspects that are less straightforward.

Engaging Task Approaches

Special care is taken to use tasks and approaches that interest students and stimulate them to do their best. Students' individual efforts are not reported and have no obvious consequences for them. This means that worthwhile and engaging tasks are needed to ensure that students' results represent their capabilities rather than their level of motivation. One helpful factor is that extensive use is made of equipment and supplies which allow students to be involved in hands-on activities. Presenting some of the tasks on computer also allows the use of richer stimulus material and standardises the presentation of those tasks.

	YEAR	NEW ZEALAND CURRICULUM		
1	2007 (2003) (1999) (1995)	Science Visual Arts Information Skills: *graphs, tables, maps, charts & diagrams*	Communication skills Problem-solving skills Self-management and competitive skills Social and cooperative skills Work and study skills	Attitudes
2	2008 (2004) (2000) (1996)	Language: *reading and speaking* Aspects of Technology Music		
3	2009 (2005) (2001) (1997)	Mathematics and Statistics: *numeracy skills* Social Studies Information Skills for Inquiry Learning: *library, research*		
4	(2006) (2002) (1998)	Language: *writing, listening, viewing* Health and Physical Education		

Positive Student Reactions to Tasks

At the conclusion of each assessment session, students completed evaluation forms in which they identified tasks that they particularly enjoyed, tasks they felt relatively neutral about and tasks that did not appeal. Averaged across all tasks in the 2009 assessments, 73% of year 4 students indicated that they particularly enjoyed the tasks. The range across the 124 tasks was from 95% down to 47%. As usual, year 8 students were more demanding. On average, 55% of them indicated that they particularly enjoyed the tasks, with a range across 171 tasks from 89% down to 31%. One task was more disliked than liked, by year 8 students only: a task involving finding information from a poster about New Zealand's parliament.

Appropriate Support for Students

A key goal in Project planning is to minimise the extent to which student strengths or weaknesses in one area of the curriculum might unduly influence their assessed performance in other areas. For instance, skills in reading and writing often play a key role in success or failure in paper-and-pencil tests in areas such as science, social studies, or even mathematics. In national monitoring, a majority of tasks are presented orally by teachers or on computer, and most answers are given orally or by demonstration rather than in writing. Where reading or writing skills are required to perform tasks in areas other than reading and writing, teachers are happy to help students to understand these tasks or to communicate their responses. Teachers are working with no more than four students at a time, so are readily available to help individuals.

To free teachers further to concentrate on providing appropriate guidance and help to students, so that the students achieve as well as they can, teachers are not asked to record judgements on the work the students are doing. All marking and analysis is done later, when the students' work has reached the Project office in Dunedin. Some of the work comes on paper, but much of it arrives recorded on videotape. In 2009, about half of the students' work came in that form, on a total of about 3250 videotapes. The video recordings give a detailed picture of what students and teachers did and said, allowing rich analysis of both process and task achievement.

Four Task Approaches Used

In 2009, four task approaches were used. Each student was expected to spend about an hour working in each format. The four approaches were:

- *One-to-one interview*
  Each student worked individually with a teacher, with the whole session recorded on videotape.
- *Stations*
  Four students, working independently, moved around a series of stations where tasks had been set up. This session was not videotaped.
- *Team*
  Four students worked collaboratively, supervised by a teacher, on some tasks. This was recorded on videotape.
- *Group and Independent*
  Four students worked collaboratively, supervised by a teacher, on one or two tasks. The students then worked individually on some paper-and-pencil tasks.

Professional Development Benefits for Teacher Administrators

The teacher administrators reported that they found their training and assessment work very stimulating and professionally enriching. Working so closely with interesting tasks administered to 60 children in at least five schools offered valuable insights. Some teachers have reported major changes in their teaching and assessment practices as a result of their experiences working with the Project. Given that 88 teachers served as teacher administrators in 2009, or about 0.3% of all primary teachers, the Project is making a major contribution to the professional development of teachers in assessment knowledge and skills. This contribution will steadily grow, since preference for appointment each year is given to teachers who have not previously served as teacher administrators. The total after 15 years is 1365 different teachers, 108 of whom have served more than once.

Marking Arrangements

The marking and analysis of the students' work occurs in Dunedin. The marking process includes extensive discussion of initial examples and careful checks of the consistency of marking by different markers.

Tasks which can be marked objectively or with modest amounts of professional experience usually are marked by senior tertiary students, most of whom have completed two or three years of pre-service preparation for primary school teaching. Forty-four student markers worked on the 2009 tasks, employed five hours per day for about four weeks.

The tasks that require higher levels of professional judgement are marked by teachers, selected from throughout New Zealand. In 2009, 160 teachers were appointed as markers. Most teachers worked either mornings or afternoons for one week. Teacher professional development through participation in the marking process is another substantial benefit from national monitoring. In evaluations of their experiences on a four-point scale ("dissatisfied" to "highly satisfied"), 70% to 96% of the teachers who marked student work in January 2010 chose "highly satisfied" in response to questions about:

- the instructions and guidance given during marking sessions
- the degree to which marking was professionally satisfying and interesting
- its contribution to their professional development in the area of assessment
- the overall experience.

Analysis of Results

The results are analysed and reported task by task. Most task reports include a total score, created by adding scores for appropriate task components. Details of how the total score has been constructed for particular assessment tasks can be obtained from the NEMP office (earu@otago.ac.nz).

Although the emphasis is on the overall national picture, some attention is also given to possible differences in performance patterns for different demographic groups and categories of school. The variables considered are:

- *Student gender:*
  - male
  - female
- *Student ethnicity:*
  - Māori
  - Pasifika
  - Pakeha (includes all other students)
- *Home language:*
  (predominant language spoken at home)
  - English
  - any other language
- *Geographical zone:*
  - Greater Auckland
  - other North Island
  - South Island
- *Size of community:*
  - main centre over 100,000
  - provincial city of 10,000 to 100,000
  - rural area or town of less than 10,000
- *Socio-economic index for the school:*
  - lowest three deciles
  - middle four deciles
  - highest three deciles
- *Size of school:*
  YEAR 4 SCHOOLS
  - fewer than 25 year-4 students
  - 25 to 60 year-4 students
  - more than 60 year-4 students

  YEAR 8 SCHOOLS
  - fewer than 35 year-8 students
  - 35 to 150 year-8 students
  - more than 150 year-8 students
- *Type of school* (for year 8 sample only):
  - full primary school
  - intermediate school
  - year 7–13 high school

  (some students were in other types of schools, but too few to allow separate analysis).

Categories containing fewer children, such as Asian students or female Māori students, were not used because the resulting statistics would be based on the performance of fewer than 70 children, and would therefore be unreliable.

An exception to this guideline was made for Pasifika children and children whose home language was not English because of the agreed importance of gaining some information about their performance.

Funding Arrangements

National monitoring is funded by the Ministry of Education, and organised by the Educational Assessment Research Unit at the University of Otago, under the direction of Professors Terry Crooks and Jeffrey Smith. The current contract runs until June 2011. The cost is about $2.7 million per year, less than one tenth of a percent of the budget allocation for primary education. Almost half of the funding is used to pay for the time and expenses of the teachers who assist with the assessments as task developers, teacher administrators or markers.

Further Information

A more extended description of national monitoring, including detailed information about task development procedures, is available in:

Flockton, L. (1999). *School-wide Assessment: National Education Monitoring Project.* Wellington: New Zealand Council for Educational Research.

2 Assessing Information Skills for Inquiry Learning

The tasks in this report were developed and administered under the New Zealand curriculum documents that applied until the end of 2009. Many schools had started using the curriculum for 2010 and onwards, but it was appropriate here to use the curriculum that was in use at the time of assessment. That New Zealand Curriculum Framework included information skills as one of the eight groupings of essential skills. It stated (p18) that students will:

- identify, locate, gather, store, retrieve and process information from a range of sources
- organise, analyse, synthesise, evaluate and use information
- present information clearly, logically, concisely and accurately
- identify, describe and interpret different points of view, and distinguish fact from opinion
- use a range of information-retrieval and information-processing technologies confidently and competently.

These skills are clearly important to everyday life in our communities. The range and quantity of information available to us is rapidly increasing, and skill in accessing, collating, interpreting and using information is very helpful to most educational, work and leisure activities.

Other National Monitoring Reports

Some of the skills listed above are assessed in other national monitoring reports. For instance, reports on

Graphs, Tables and Maps results (1995, 1999, 2003, 2007 assessments) have examined in some depth students' capabilities in making use of graphs, tables and maps to find, interpret or present information. Similarly, reports on Reading and Speaking results (1996, 2000, 2004, 2008 assessments) have dealt quite extensively with students' skills in finding and understanding written information, and their skills in presenting information clearly in oral form. Most other NEMP reports have also, to a greater or lesser degree, required students to identify, interpret, organise, evaluate and present information.

The Role of This Report

Despite the substantial coverage of information skills in other reports, it was always intended that national monitoring should include one set of assessments specifically focused on information skills, with special emphasis on skills which would be only lightly or unsystematically covered in other reports. These skills include clarifying information needs, finding suitable sources of information, searching those sources for specific information needed, gathering that information, and interpreting, collating and reporting information.

Framework for Assessment of Information Skills

National monitoring task frameworks are developed with the Project's curriculum advisory panels. These frameworks have two key purposes. They provide a valuable guideline structure for the development and selection of tasks, and they bring into focus those important dimensions of the learning domain which are arguably the basis for valid analyses of students' skills, knowledge and understandings.

The assessment frameworks are intended to be flexible and broad enough to encourage and enable the development

INFORMATION SKILLS FOR INQUIRY LEARNING FRAMEWORK 2009

Finding, evaluating and using information for inquiry learning

• clarifying information needs • finding and gathering information • thinking about and using information

INQUIRY STRATEGIES, SKILLS AND PROCESSES

CLARIFYING INFORMATION NEEDS

Working out:

– What does this task require me to know?

– What do I already know?

– What do I need to do?

FINDING AND GATHERING INFORMATION

- Knowing about sources of information
- Identifying sources of information for a purpose
- Accessing those sources of information
- Finding and understanding information
- Selecting and recording the most useful information (relevance, quality)
- Recording the source of the information

THINKING ABOUT AND USING INFORMATION

- Sorting, organising and discarding information
- Analysing, interpreting and evaluating information
- Synthesising information (weaving, connecting)
- Using information for problem-solving, making decisions and creating new meanings
- Communicating the information
- Evaluating how well the purpose has been achieved (knowledge, skills and attitudes)

SOURCES OF INFORMATION

- People
- Television/Radio
- Newspapers
- Internet
- Video/Film/DVDs
- Books
- Magazines
- Pictures/Photos
- Dictionaries
- Encyclopaedias
- Atlases
- Catalogues
- Indexes
- CDs
- Posters
- Diagrams

ATTITUDES AND MOTIVATION

Curiosity:
I want to know

Open-mindedness:
I'll welcome new information which enriches my thinking

Reflection:
I'll critically evaluate information

Confidence:
I know how to go about it

Self-management:
I can plan what to do and get it done

Perseverance:
I don't give up easily

Satisfaction:
I enjoy using information to learn

of tasks that lead to meaningful descriptions of what students know and can do. They are also designed to help ensure a balanced representation of important learning outcomes.

The information skills framework has a central organising theme, three interrelated content areas, and lists of strategies, skills or processes associated with each content area.

A wide range of possible sources of information is highlighted, and attention is drawn in the final section to the importance of students' attitudes and motivation.

The most important message emerging from the framework is that students possessing well-developed inform-ation skills can perform three main tasks effectively: clarify information needs, find and gather relevant information, and then analyse and use that information to meet the required purposes. A substantial proportion of the intellectual demands occurs during the first and third of these tasks: finding and gathering information is clearly important, but its value is greatly dependent on the extent to which it can be validly interpreted and used to answer important questions.

The Choice of Tasks for National Monitoring

The choice of tasks for national monitoring is guided by a number of educational and practical considerations. Uppermost in any decisions relating to the choice or administration of a task is the central consideration of validity and the effect that a whole range of decisions can have on this key attribute. Tasks are chosen because they provide a good representation of important knowledge and skills, but also because they meet a number of requirements to do with their administration and presentation. For example:

- Each task, with its associated materials, needs to be structured to ensure a high level of consistency in the way it is presented by specially trained teacher administrators to students of wide-ranging back-grounds and abilities, and in diverse settings throughout New Zealand.
- Tasks need to span the expected range of capabilities of year 4 and 8 students and to allow the most able students to show the extent of their abilities while also giving the least able the opportunity to show what they can do.
- Materials for tasks need to be sufficiently portable, economical, safe and within the handling capabilities of students. Task materials also need to have meaning for students.

- The time needed for completing an individual task has to be balanced against the total time available for all of the assessment tasks, without denying students sufficient opportunity to demonstrate their capabilities.
- Each task needs to be capable of sustaining the attention and effort of students if they are to produce responses that truly indicate what they know and can do. Since neither the student nor the school receives immediate or specific feedback on performance, the motivational potential of the assessment is critical.
- Tasks need to avoid unnecessary bias on the grounds of gender, culture or social background while accepting that it is appropriate to have tasks that reflect the interests of particular groups within the community.

National Monitoring Information Skills Assessment Tasks and Survey

Forty-three information skills tasks were administered. Each student also completed a survey questionnaire that investigated their interests, attitudes and involvement in information skills activities.

Eight tasks were administered in one-to-one interview settings, where students used materials and visual information. Eight tasks were presented in team or group situations involving small groups of students working together. Nineteen tasks were attempted in a stations arrangement, where students worked independently on a series of tasks; some were presented on laptop computers. The final eight tasks were administered in an independent approach, where students sat at desks or tables and worked through a series of paper-and-pencil tasks.

Twenty-nine of the 43 tasks were the same or overlapped substantially for year 4 and year 8 students. One task was similar for both year 4 and year 8, but used different materials. The remaining 13 tasks were designed for year 8 students.

Trend Tasks

Twenty-one of the tasks in this report were previously used in identical form in the 2005 information skills assessments. These were called link tasks in the 2005 report, but were not described in detail to avoid any distortions in 2009 results that might have occurred if the tasks had been widely available for use in schools since 2005. In the current report, these tasks are called trend tasks and are used to examine trends in student performance: whether they have improved, stayed constant or declined over the four-year period since the 2005 assessments.

Link Tasks

To allow comparisons between the 2009 and later assessments, 19 of the tasks used for the first time in 2009 have been designated link tasks. Results of student performance on these tasks are presented in this report, but the tasks are described only in general terms because they may be used again in a future study.

Marking Methods

The students' responses were assessed using specially designed marking procedures. The criteria used had been developed in advance by Project staff, but were sometimes modified as a result of issues raised during the marking. Tasks that required marker judgement and were common to year 4 and year 8, or to 2005 and 2009, were intermingled during marking sessions, with the goal of ensuring that the same scoring standards and procedures were used for both.

Task-by-Task Reporting

National monitoring assessment is reported task by task so that results can be understood in relation to what the students were asked to do.

Access Tasks

Teachers and principals have expressed considerable interest in access to NEMP task materials and marking instructions, so that they can use them within their own schools. Some are interested in comparing the performance of their own students to national results on some aspects of the curriculum, while others want to use tasks as models of good practice. Some would like to modify tasks to suit their own purposes, while others want to follow the original procedures as closely as possible. There is obvious merit in making available carefully developed tasks that are seen to be highly valid and useful for assessing student learning.

Some of the tasks in this report cannot be made available in this way. Link tasks must be saved for use in four years' time, and other tasks use copyright or expensive resources that cannot be duplicated by NEMP and provided economically to schools. There are also limitations on how precisely a school's administration and marking of tasks can mirror the ways that they are administered and marked by the Project. Nevertheless, a substantial number of tasks are suitable to duplicate for teachers and schools. In this report, these access tasks are identified with the symbol above. These tasks are bundled into access kits and can be purchased online, from the NEMP website *(http://nemp.otago.ac.nz)*. Teachers are also encouraged to use the website to view tasks and results.

Reading the Tasks and Results

The content, instructions and key resources are shown for each task, as they were presented to the students. Sentences in bold blue are an instruction to the teacher administrator. The students' results are shown in red.

ABOUT THE TASK

WHAT THE STUDENTS READ OR HEARD (BLUE)
MARKING CRITERIA (RED)

PERFORMANCE PATTERNS

Trend Task: Book Sort

Approach: One to one
Year: 4 & 8
Focus: Sorting books by classification
Resources: 8 book covers (labelled A-H), recording book

Questions / instructions:

Put the book covers in order using the letters (A-H) on the backs.
Hand the student the book covers.

Imagine that these are real books and that you are helping to put them back in their right place in a school library.
[Fiction: A, C, D, F
Non-Fiction: G, H, E, B]

	% response 2009 ('05) year 4	year 8
1. Look carefully at the information on the covers, then sort them and put them into order for putting on the library shelves. **Allow time for student to sort books.**		
responses showed that student correctly divided the books into fiction and non-fiction, and then placed the books into correct order within these categories *(alphabetical for fiction, by Dewey number for non-fiction)*	20 (29)	49 (44)
as above, except non-fiction was in alphabetical order by author rather than in Dewey number order/ B, G, H, E	1 (0)	0 (0)
separated fiction and non-fiction but not in order	31 (36)	33 (34)

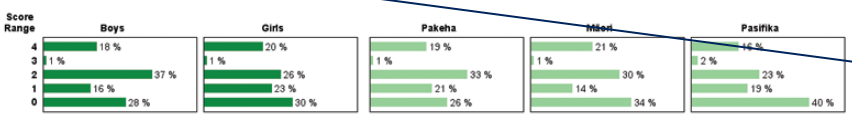
	% response 2009 ('05) year 4	year 8
2. Can you tell me why you have arranged them that way?		
non-fiction and fiction not separated correctly in response to question 1, but separated correctly after explicitly requested to do so	19 (11)	9 (14)
fiction and non-fiction not correctly separated, even after prompting to do so	29 (25)	9 (8)

If the student hasn't divided the books into fiction/non-fiction, ask: ***Can you sort the books into fiction (story books) and non-fiction?*** **Allow time for student to sort the books.**

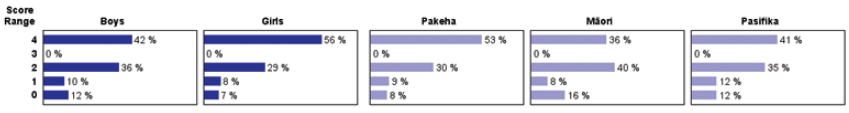
Total Score:	year 4	year 8
4	20 (29)	49 (44)
3	1 (0)	0 (0)
2	31 (36)	33 (34)
1	19 (11)	9 (14)
0	29 (25)	9 (8)

Subgroup Analyses:

Year 4



Year 8



Commentary:

This was a difficult task for the year 4 children, but about half of the year 8 children were able to successfully complete the task. Differences by ethnicity were small in both years, but year 8 girls performed substantially better on this task than year 8 boys.

Students did this task in a one-to-one situation. See page 6 for descriptions of all four approaches used.

What this task was aiming to evaluate.

The resources used in this task.

- In 2009, 31% of year 4 students were able to separate fiction from non-fiction but could not put them in the correct order.
- In 2005, 36% of year 4 students were able to separate fiction from non-fiction but could not put them in the correct order.
- In 2009, 33% of year 8 students were able to separate fiction from non-fiction but could not put them in the correct order.
- In 2005, 34% of year 8 students were able to separate fiction from non-fiction but could not put them in the correct order.

The total score is created by adding those marking criteria that seem to capture best the overall task performance. For some tasks this is all of the criteria but for others, it is just one or two of the criteria.

Performance patterns for boys and girls; Pakeha, Māori and Pasifika students, based on their total scores on the task. Note that Pakeha is defined as everyone not included in Māori or Pasifika.

Comments that assist with interpreting the results.

3 Clarifying Information Needs

Overview: Determining what information was necessary in a given setting was challenging for year 4 students, but there was substantial growth from year 4 to year 8. Students at year 4 were not successful when the task called for them to generate information needs with little external support. The trend in performance from 2005 to 2009 was small, but in a positive direction.

The assessments related to *Clarifying Information Needs* consisted of eight tasks that allowed students to show their skills in clarifying information needs through analysing what information was required, planning how to obtain the information, and selecting or developing appropriate questions.

Year 4 students were only modestly successful on most of these tasks, especially those that asked for students to generate information needs with little or no supporting information given (see, for example, *School Fair*, p13). Year 8 students were much more successful at these tasks. Overall, year 8 students outperformed year 4 students on the tasks that both groups attempted; averaged across 63 task components, 13% more year 8 than year 4 students were successful on these components.

Differences in performance from 2005 to 2009 were positive, but small. At year 4, there were 23 task components that had been attempted by students in 2005 as well as 2009. Overall, year 4 students in 2009 scored 2% higher than in 2005, a slight increase in performance. At year 8 there were 29 task components in common across the two administrations, with the 2009 sample scoring 3% higher on average: again, a slight improvement.

Seven of the tasks were identical for both year 4 and year 8 students in the 2009 administration. One task was attempted only by year 8 students. Four tasks are trend tasks, containing full information for the 2005 and 2009 administration and four tasks are link tasks to be used at a later administration and only partially described here.

The tasks are presented here in the following order:

- trend tasks attempted by year 4 and year 8 students;
- the trend task attempted by only year 8 students;
- link tasks attempted by year 4 and year 8 students.

Trend Task: School Fair

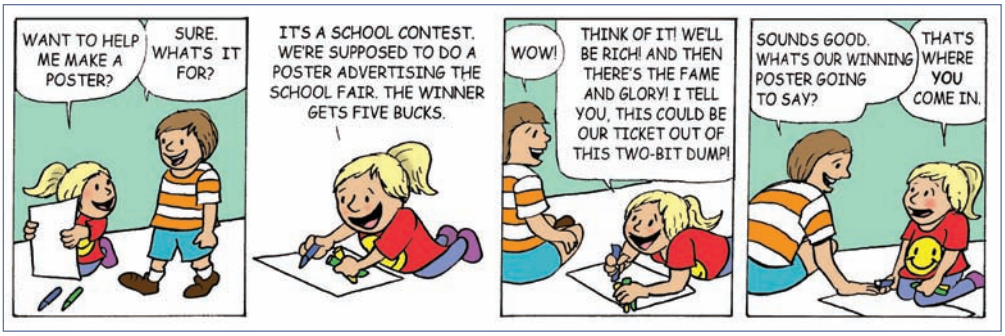
NEMP Access Task

Approach:	Station
Year:	4 & 8
Focus:	Identifying information needs for a poster
Resources:	Video recording on laptop computer, answer booklet, cartoon card *[simulated resource shown below.]*

Questions / instructions:

This activity uses the computer.

Click on the button that says **School Fair**.



VOICE-OVER INSTRUCTIONS:
(Series of stills as above; voice-over same as text above, followed by instructions below.)

Grace has to make a poster to advertise the school fair. She asks Ben to help her. Ben asks YOU!
Ben wants you to think of up to five pieces of important information to write on the poster. It should be information that will tell people the things they need to know about the school fair.
Write your ideas in the booklet.

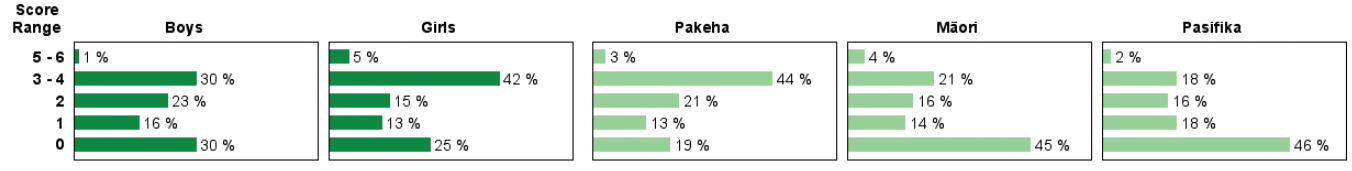
Write up to five pieces of important information that the poster will need to say. Tell people the things they need to know about the school fair.

		% response 2009 ('05) year 4	year 8
Mentioned:	day fair held	34 (20)	47 (57)
	time fair held	28 (22)	45 (42)
	where fair held	31 (20)	50 (59)
	some of the stalls	19 (25)	26 (22)
	some of the activities	25 (34)	40 (32)
	reasons why people might want to go *(fun and enjoyable)*	11 (23)	23 (9)
Any other appropriate information:			
	yes, two or more items	7 (4)	10 (12)
	yes, one item	28 (18)	39 (47)

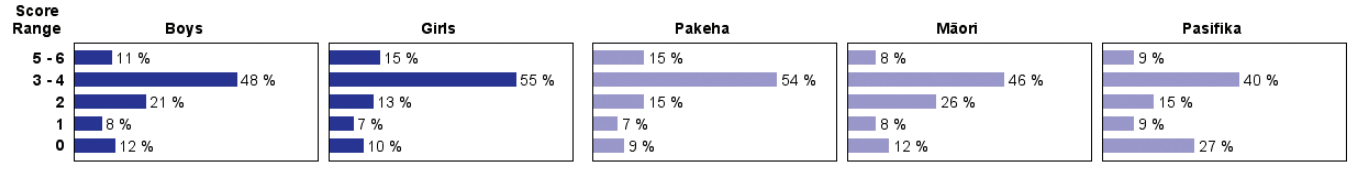
		% response 2009 ('05) year 4	year 8
Total Score:	5–6	3 (1)	13 (10)
	3–4	36 (28)	51 (57)
	2	19 (26)	17 (18)
	1	14 (20)	7 (9)
	0	28 (25)	11 (6)

Subgroup Analyses:

Year 4



Year 8



Commentary:

This was a difficult task, particularly at year 4. Children had difficulty coming up with more than two or three ideas for messages that should be on a poster for a school fair. Year 4 Māori and Pasifika children had great difficulty with the task, with almost half not being able to come up with any ideas. Girls outperformed boys at both years. Modest growth was seen in performance at year 4 from the previous administration.

Trend Task: Earthquake Survival Plan

NEMP Access Task

Approach:	Team
Focus:	Justifying appropriate information sources
Resources:	Set of 12 pictures *[simulated resource shown below]*, chart

Year: 4 & 8

Questions / instructions:

Imagine your principal has asked your group to come up with an earthquake survival plan for your school. Here is a set of pictures showing people you can ask for help. Look at these pictures and decide on the **four** people who could give you the best help making your survival plan. You will need to think of reasons why they would be good people to help you.

Teacher
I help others to learn

Builder
I build schools

Civil Engineer
I make sure that buildings like schools are planned and built to be strong

Doctor
I look after people who are hurt or sick

Householder
I have an earthquake survival plan

OSH Worker
I check schools and other workplaces to make sure that they are safe

Seismologist
I know all about earthquakes and why they happen

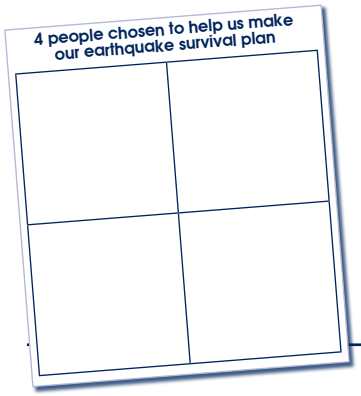
Great-grandparent
I lived through the 1931 Napier earthquake

Civil Defence Worker
I help people when disasters happen

First Aid Teacher
I teach people first aid

Rescue Worker
I rescue people

Librarian
I show people how to find information



Discuss who would be the most suitable people to help you develop your survival plan. When you are ready I will ask you to tell me which people you would choose and why. You will have a chart to put the **four** pictures onto. Here are the pictures and the chart. I'll read the picture cards to you.

Read picture captions and put pictures and chart on table. Allow time.

Now tell me the **four** people you would choose to help you to come up with an earthquake survival plan for your school. First, read what it tells you about each person on their card, then tell me how that person could help you with your plan. All of you can help to tell me how each person could help you.

After students read what is on the card say:
Tell me how that person could help you with your plan.

	% response 2009 ('05) year 4	year 8
First response given: *[These are the responses for the first person the teams selected. The responses for the other three selections show a similar pattern.]*		
librarian	5 (0)	3 (2)
civil engineer	6 (7)	16 (9)
householder	17 (23)	14 (19)
Civil Defence worker	17 (16)	13 (7)
great-grandparent	13 (12)	9 (7)
doctor	5 (7)	1 (3)
first-aid teacher	10 (7)	14 (12)
builder	1 (0)	1 (0)
rescue worker	4 (7)	4 (5)
seismologist	17 (19)	20 (24)
OSH worker	3 (2)	6 (12)
teacher	2 (0)	0 (0)
anything else *(or none)*	1 (0)	0 (0)
Justification for choosing person 1: very strong	7 (11)	14 (17)
reasonable *(specific to school needs)*	21 (18)	40 (26)
weak	28 (32)	28 (29)
only read card or no response	44 (40)	18 (28)

	% response 2009 ('05) year 4	year 8
Justification for choosing person 2: very strong	8 (5)	12 (12)
reasonable *(specific to school needs)*	13 (20)	27 (28)
weak	23 (21)	31 (35)
only read card or no response	56 (54)	30 (26)
Justification for choosing Person 3: very strong	4 (9)	12 (9)
reasonable *(specific to school needs)*	26 (5)	28 (29)
weak	21 (30)	28 (35)
only read card or no response	50 (56)	32 (28)
Justification for choosing person 4: very strong	3 (4)	18 (7)
reasonable *(specific to school needs)*	18 (7)	35 (32)
weak	23 (35)	23 (35)
only read card or no response	57 (54)	24 (26)
Total Score: 8–12	7 (5)	22 (19)
6–7	11 (7)	26 (25)
4–5	19 (21)	25 (21)
2–3	32 (32)	18 (21)
0–1	31 (34)	8 (14)

Commentary:

This was a difficult task for the year 4 children, with most teams not being able to come up with any justification for their choices, or only a weak response. There was marked improvement in the year 8 teams. The selections that students made were fairly similar at year 4 and year 8. Slight growth in the quality of the justifications was seen at both levels over the previous administration. Subgroup comparisons are not possible because this was a team task.

NEMP Access Task

Approach:	Independent
Focus:	Identifying information needs for a talk
Resources:	Answer booklet

Year: 4 & 8

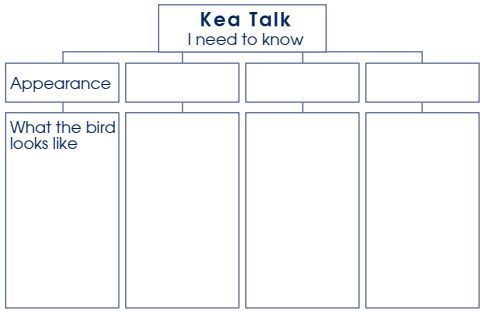
Questions / instructions:

You are getting ready to give a talk to your class about the kea - a New Zealand bird.

Your teacher tells you the things you need to talk about.

1. Write down the **things you need to know** so that you can talk about it.

   The first one is done for you.



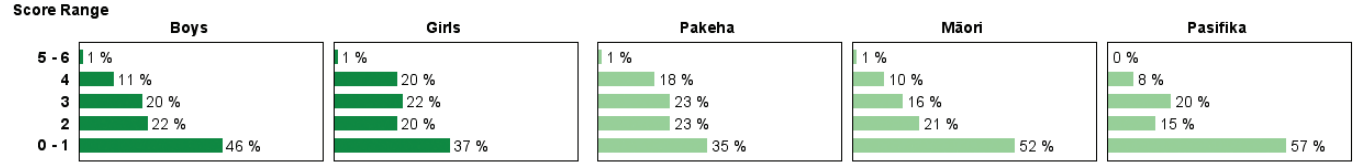
		% response 2009 ('05) year 4	year 8
Mentioned:	food – what the bird eats	45 (48)	70 (60)
	habitat – where the bird lives	43 (38)	82 (70)
	conservation – how to care for the bird and its environment	2 (2)	5 (2)
	breeding – how do kea reproduce	2 (4)	9 (12)
	habits – what behaviours do they engage in	21 (14)	23 (19)
	caring for young – how do they look after chicks	1 (4)	3 (4)
	anything else reasonable	40 (51)	54 (56)
Made:	appropriate use of headings and examples	38 (35)	75 (67)

2. At the end of your study, which things do you think you should know about keas? *[List was given as below.]* Tick the boxes.

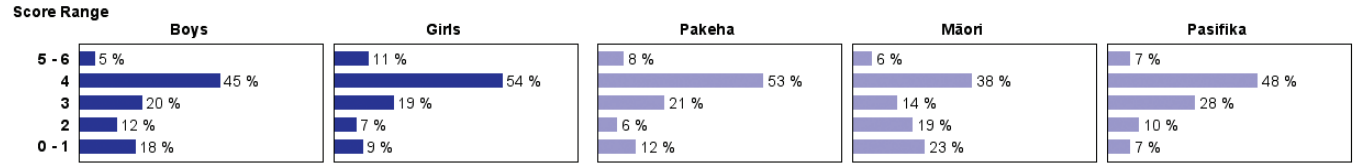
		% response 2009 ('05) year 4	year 8
Ticked:	how big a kea is	82 (83)	87 (83)
	how many different kinds of birds in New Zealand	47 (45)	30 (18)
	where the kea can be found	84 (86)	93 (94)
	if kea are shy birds	65 (66)	75 (61)
	come out only at night	49 (98)	34 (27)
	eat eggs of other birds	56 (57)	58 (65)
	where to buy kea toys	34 (34)	11 (9)
	how kea look after their chicks	80 (80)	86 (82)
Total Score:	5–6	1 (2)	8 (5)
	4	15 (17)	49 (41)
	3	21 (12)	20 (20)
	2	21 (29)	10 (12)
	0–1	42 (40)	14 (22)

Subgroup Analyses:

Year 4



Year 8



Commentary:

Year 4 students had difficulty with this task, with many only being able to provide a minimal response. Year 8 students were much more successful, particularly in their ability to use the headings and provide examples appropriate for the headings. Girls outperformed boys, more so at year 8 than year 4. Differences by ethnicity were small to moderate.

Trend Task: Fire Safety

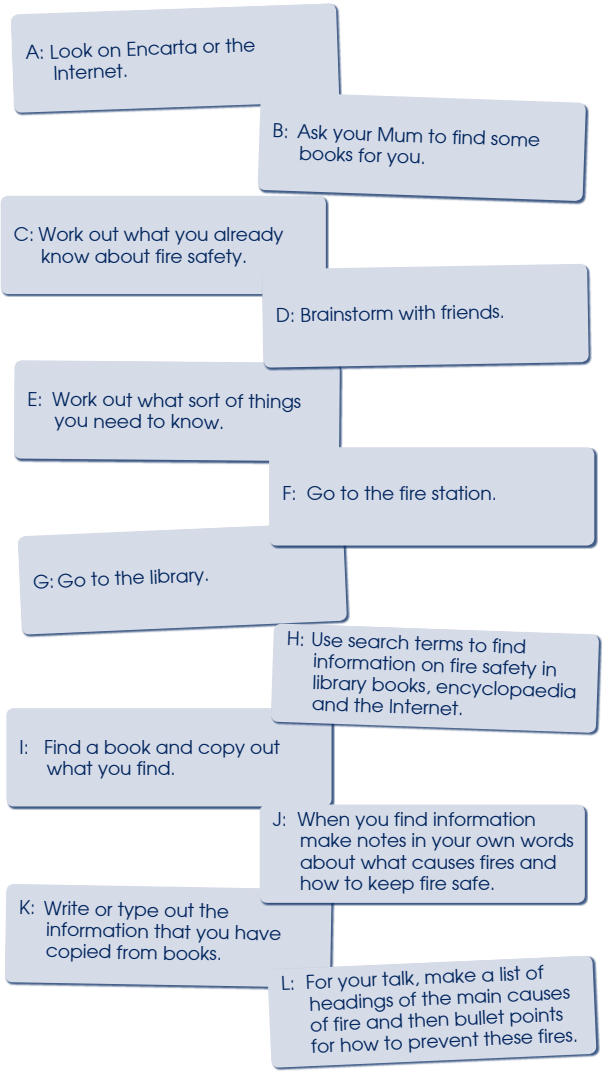
NEMP Access Task

Approach:	Station	Year:	8
Focus:	Planning an information study		
Resources:	12 stickers, answer booklet		

Questions / instructions:

Imagine you have been asked to give a talk on fire safety. You need help so that you will have your talk ready by next week.

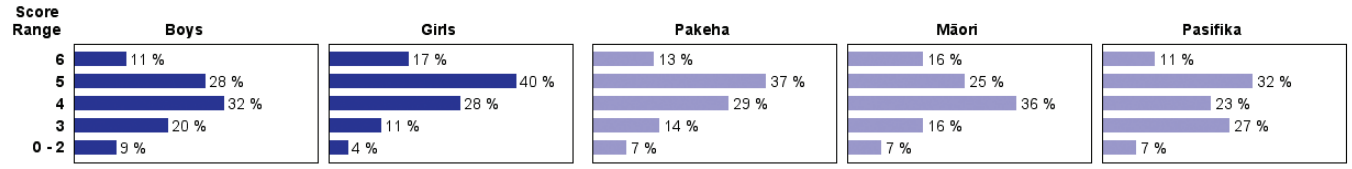
1. Look at the stickers. They show some steps you could take.
2. Choose six steps that would be most helpful to get your talk ready by next week.
3. Stick the six steps in the order you would follow.



		% response 2009 ('05) year 8
Step 1:	C	80 (76)
Step 2:	E	69 (70)
Step 3:	F	62 (61)
Step 4:	H	69 (61)
Step 5:	J	73 (73)
Step 6:	L	79 (68)
Total Score:	6	14 (9)
	5	34 (32)
	4	30 (31)
	3	16 (18)
	0–2	7 (11)

Subgroup Analyses:

Year 8



Commentary:

Performance was quite mixed on this task, with some students doing quite well and others having difficulty. Modest growth was seen in performance from the 2005 administration. Girls outperformed boys; differences by ethnicity were small.

		% responses y4	% responses y8
LINK TASK:	**1**		
Approach:	Station		
Year:	4 & 8		
Focus:	Identifying sources of information and clarifying needs		
Total Score:	6–8	13	34
	5	43	44
	4	15	9
	3	10	3
	0–2	19	10
LINK TASK:	**2**		
Approach:	Team		
Year:	4 & 8		
Focus:	Sorting and discarding questions		
Total Score:	8–12	4	33
	6–7	19	34
	4–5	25	24
	2–3	31	7
	0–1	20	3
LINK TASK:	**3**		
Approach:	Independent		
Year:	4 & 8		
Focus:	Knowing about information sources and analysing information on a pamphlet		
Total Score:	8–11	4	9
	6–7	7	28
	4–5	20	28
	2–3	38	24
	0–1	32	12
LINK TASK:	**4**		
Approach:	Independent		
Year:	4 & 8		
Focus:	Identifying information needs using a website		
Total Score:	10–12	1	8
	8–9	8	20
	6–7	18	24
	4–5	22	25
	0–3	51	22

4 Finding and Gathering Information

Overview: Students were fairly successful on tasks requiring finding and gathering information, particularly where the tasks called for locating information that was clearly indicated as desired. Where it was necessary to go in depth to find information, or where some level of inference was needed to find information, year 4 students struggled somewhat, and performance at year 8 was much better. Very small gains were observed from the 2005 to the 2009 administrations.

The assessments related to *Finding and Gathering Information* included 16 tasks that explored how well the students could find and gather information. Specifically, the tasks explored students' knowledge and skills relating to:

- the organisation of libraries, reference books and other books;
- the types of information available from different sources;
- finding particular information in books, pamphlets, diagrams, video recordings and simulations of the internet;
- extracting and recording relevant information.

Year 8 students were generally more successful at finding and gathering information than year 4 students, particularly on tasks that required going in depth to find information, inferring what was needed, or coming up with more than one way to acquire information. This can be seen in particular on *Everyday Detective* (p20) and *Zoo Trip* (p22). On tasks that required a more straightforward identification of information, differences between year 4 and year 8 students were smaller.

Five tasks were identical for both year 4 and 8 students; four were very similar for year 4 and year 8 students but truncated for year 4 students; one was attempted only by year 4 students; and seven were attempted only by year 8 students. Ten are trend tasks (fully described with data for both 2005 and 2009); one is a released task (fully described with data for 2009 only); and six are link tasks (to be used again in a later administration and so only partially described here). On 67 task components that year 4 and year 8 students had in common, year 8 students were successful 14% more of the time on average. Gains from the 2005 administration to the 2009 administration were very small, with 1% more students being successful in 2009 for both years.

The tasks are presented here in the following order:

- trend tasks attempted by year 4 and year 8 students;
- trend tasks attempted by only year 4 or year 8 students;
- a released task attempted by only year 8 students;
- link tasks attempted by year 4 and year 8 students;
- a link task attempted by only year 8 students.

Trend Task: Book Sort

NEMP Access Task

Approach:	One to one
Focus:	Sorting books by classification
Resources:	8 book covers (labelled A-H), recording book
Year:	4 & 8

Questions / instructions:

Put the book covers in order using the letters (A-H) on the backs. Hand the student the book covers.

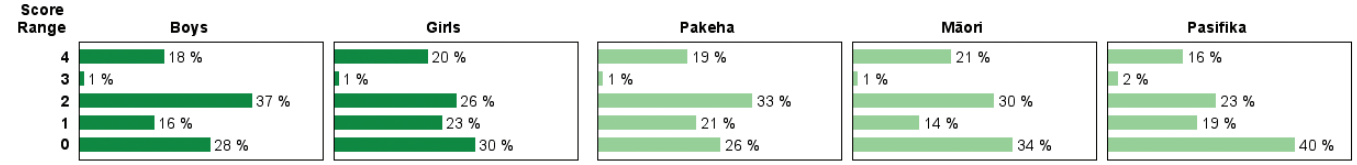
Imagine that these are real books and that you are helping to put them back in their right place in a school library.
[Fiction: A, C, D, F
Non-Fiction: G, H, E, B]

	% response 2009 ('05) year 4	% response 2009 ('05) year 8
1. Look carefully at the information on the covers, then sort them and put them into order for putting on the library shelves. **Allow time for student to sort books.**		
responses showed that student correctly divided the books into fiction and non-fiction, and then placed the books into correct order within these categories *(alphabetical for fiction, by Dewey number for non-fiction)*	20 (29)	49 (44)
as above, except non-fiction was in alphabetical order by author rather than in Dewey number order/ B, G, H, E	1 (0)	0 (0)
separated fiction and non-fiction but not in order	31 (36)	33 (34)
2. Can you tell me why you have arranged them that way?		
non-fiction and fiction not separated correctly in response to question 1, but separated correctly after explicitly requested to do so	19 (11)	9 (14)
fiction and non-fiction not correctly separated, even after prompting to do so	29 (25)	9 (8)
If the student hasn't divided the books into fiction/non-fiction, ask: *Can you sort the books into fiction (story books) and non-fiction?* **Allow time for student to sort the books.**		

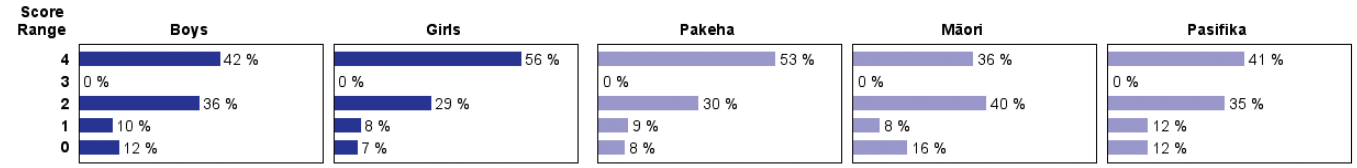
Total Score:		% response 2009 ('05) year 4	% response 2009 ('05) year 8
	4	20 (29)	49 (44)
	3	1 (0)	0 (0)
	2	31 (36)	33 (34)
	1	19 (11)	9 (14)
	0	29 (25)	9 (8)

Subgroup Analyses:

Year 4



Year 8



Commentary:

This was a difficult task for the year 4 children, but about half of the year 8 children were able to successfully complete the task. Differences by ethnicity were small in both years, but year 8 girls performed substantially better on this task than year 8 boys.

Trend Task: Everyday Detective

NEMP Access Task

Approach:	One to one
Focus:	Identifying appropriate information sources
Resources:	6 cards

Year: 4 & 8

Questions / instructions:

Some children want to find out about different things. Tell me your ideas about how they could find the information. There may be more than one way to find out the information, so tell me all the ways you can think of.

Hand card 1 to the student.

Mereana is at home. She wants to know whether the library has a book about turtles.

1. How could she find out?

	% response 2009 ('05) year 4	year 8
more than two ways that would work	2 (0)	11 (6)
more than two ways that would work, plus one or more that would not	1 (1)	2 (1)
two ways that would work	12 (11)	21 (23)
two ways that would work, plus one or more that would not	6 (4)	9 (6)
one way that would work	22 (20)	22 (16)
one way that would work, plus one or more that would not	18 (18)	17 (18)

Hand card 2 to the student.

Chris is not sure whether or not he should take his raincoat to school.

2. How could he find out?

	% response 2009 ('05) year 4	year 8
more than two ways that would work	9 (6)	28 (30)
more than two ways that would work, plus one or more that would not	1 (0)	3 (5)
two ways that would work	29 (26)	34 (27)
two ways that would work, plus one or more that would not	5 (7)	5 (9)
one way that would work	27 (35)	19 (15)
one way that would work, plus one or more that would not	12 (12)	8 (10)

Hand card 3 to the student.

Rata finds a spider with a white mark on its back.

3. How could he find out if it is poisonous?

	% response 2009 ('05) year 4	year 8
more than two ways that would work	12 (4)	29 (30)
more than two ways that would work, plus one or more that would not	3 (0)	4 (6)
two ways that would work	26 (27)	31 (30)
two ways that would work, plus one or more that would not	6 (8)	7 (3)
one way that would work	26 (28)	18 (12)
one way that would work, plus one or more that would not	11 (11)	7 (14)

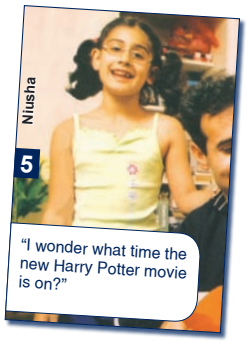
Hand card 4 to the student.

Hazel's family has moved to a new town. She wants to find out where the swimming pool is.

4. How could she find out?

	% response 2009 ('05) year 4	year 8
more than two ways that would work	13 (9)	29 (22)
more than two ways that would work, plus one or more that would not	2 (0)	3 (4)
two ways that would work	26 (25)	38 (40)
two ways that would work, plus one or more that would not	6 (5)	6 (6)
one way that would work	21 (29)	17 (16)
one way that would work, plus one or more that would not	15 (20)	4 (6)

Hand card 5 to the student.



Niusha wants to go and see the new Harry Potter movie. She wants to find out what time it is on.

5. How could she find out?

	% response 2009 ('05) year 4	year 8
more than two ways that would work	8 (7)	25 (31)
more than two ways that would work, plus one or more that would not	3 (0)	2 (1)
two ways that would work	25 (37)	41 (37)
two ways that would work, plus one or more that would not	6 (4)	6 (4)
one way that would work	32 (32)	19 (17)
one way that would work, plus one or more that would not	10 (11)	4 (4)

Hand card 6 to the student.

Hadyn wants to find out what the Māori place name Waimaunga means.

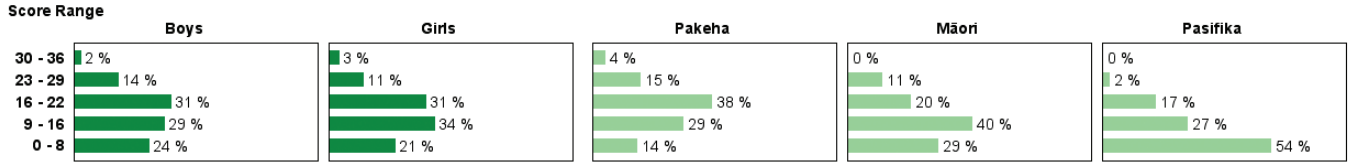
6. How could he find out?

	% response 2009 ('05) year 4	year 8
more than two ways that would work	13 (10)	30 (22)
more than two ways that would work, plus one or more that would not	2 (2)	4 (4)
two ways that would work	27 (31)	35 (32)
two ways that would work, plus one or more that would not	6 (3)	4 (7)
one way that would work	32 (28)	18 (16)
one way that would work, plus one or more that would not	10 (11)	7 (12)

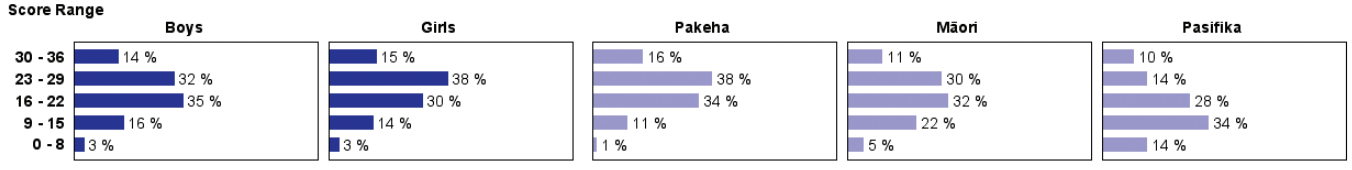
Total Score:		
30–36	3 (1)	14 (13)
23–29	13 (8)	35 (30)
16–22	31 (30)	33 (34)
9–15	31 (37)	15 (15)
0–8	22 (24)	3 (8)

Subgroup Analyses:

Year 4



Year 8



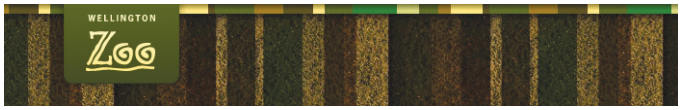
Commentary:

This task asked students to come up with ways to find answers to basic informational tasks that people encounter in their everyday lives. The total scores reflect the ability to come up with multiple ways of solving the problem. Looking at the responses for individual sub-tasks, it is clear that most children, at both years, could come up with at least one successful approach to finding the needed information. Performance improved slightly from 2005, and clear growth is seen from year 4 to year 8. Differences by gender and ethnicity were small.

Trend Task: Zoo Trip

Approach:	Station
Focus:	Finding information on a website
Resources:	Computer program on laptop computer, answer booklet
Year:	4 & 8

Questions / instructions:



Opening Hours ...

Wellington Zoo is open from 9.30am - 5.00pm every day, except Christmas Day.

Please Note : Children under the age of 12 must have adult supervision for Zoo entry.

How to get here...

Wellington Zoo is located at 200 Daniell Street, Newtown, Wellington.

By car
- Just 10 minutes drive from the centre of the city, with free parking. View Street Map

By bus, Stagecoach services
- No.10 departs from the railway station via Cuba St.
- No.23 from Mairangi via Kelburn and Lambton Quay.
- For timetables contact Ridewell on 04 801 7000 or www.ridewell.co.nz

By tour
- Wellington Rover day pass, departing Wellington Visitor Information Centre at various times during the day, has a pick up and drop off service from the Zoo. See www.wellingtonrover.co.nz for more details.

Keeper Talks ...

Check out the daily Keeper/Guide talks starting at 10:00am each day. Make sure you look at the Zoo entrance board to see what time you can hear about your favourite animal!

Or call 04 381 6755 and follow the prompts for a recorded message of daily talks.

Contact Us ...

Wellington Zoo
200 Daniell Street
Newtown
Wellington
New Zealand
Ph 04 381 6755
Fax 04 389 4577
wellingtonzoo@wellingtonzoo.com

Facilities for the Disabled...

Parking
There is one designated disability car park located in the Newtown Park car park.

Toilets
Toilets with wheelchair accessibility are located in the front entrance foyer and near the Historic Elephant house in the middle of the Zoo.

Visitors with impaired mobility
Wheelchairs are available for hire, free of charge. Be aware the Zoo has a steep gradient in some places.

Visitors with impaired hearing
You can book a tour with our signing Zoo Keeper.
For enquiries email: wellingtonzoo@wellingtonzoo.com
or phone: 04 381 6755

If you have any questions or suggestions,
please contact us email: wellingtonzoo@wellingtonzoo.com
phone: 04 381 6755

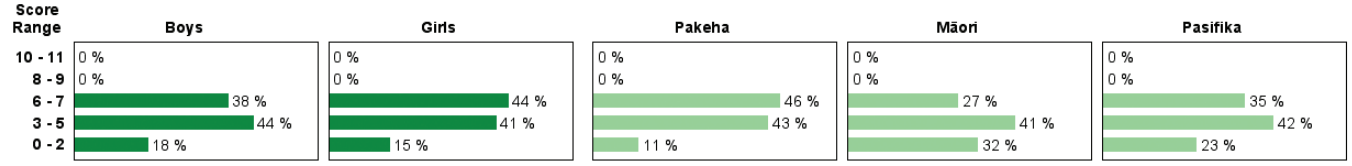
This activity uses the computer.

Click on the button that says **Zoo Trip**.
[Note: The program was a simplified version of the Wellington Zoo website – www.wellingtonzoo.com. Information was correct at time of task development in 2005.]

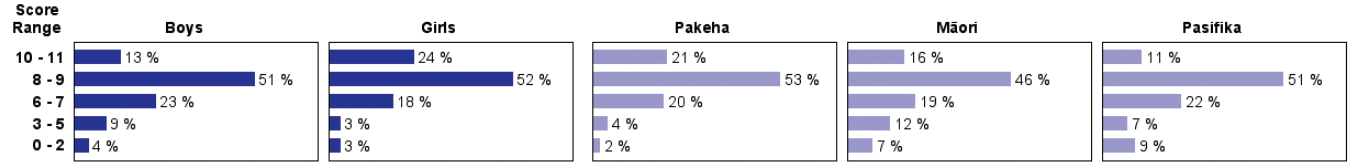
		% response 2009 ('05) year 4	year 8
1.	What time does the zoo open? 9.30 (am)	91 (90)	97 (97)
2.	Where in Wellington is the zoo?		
	full address/instructions/ directions *(200 Daniell St, Newtown)*	47 (40)	75 (72)
	200 Daniell Street	17 (20)	7 (8)
	some information *(10-minute drive from the centre of the city)*	14 (15)	8 (11)
3.	When you are at the zoo, where do you go to find out the times for keeper talks?		
	zoo entrance board	21 (19)	63 (62)
4.	What is the zoo's phone number and email address? [04] 381 6755	83 (79)	93 (92)
	wellingtonzoo@wellingtonzoo.com	68 (60)	90 (88)
	YEAR 8 ONLY:		
5.	Does the zoo provide any help for people who are in a wheelchair? yes		91 (93)
6.	Explain your answer:		
	Mentioned: wheelchairs free of charge		47 (39)
	special guided tours		3 (9)
	other special facilities for disabled		57 (52)
	Total Score: 10–11		19 (16)
	8–9		52 (47)
	6–7	41 (30)	20 (24)
	3–5	42 (52)	6 (11)
	[Note: Maximum score of 7 for year 4] 0–2	17 (18)	4 (3)

Subgroup Analyses:

Year 4



Year 8



Commentary:

Most children at year 4 and year 8 were quite successful on this task involving finding information on the internet. Substantial growth is seen from 2005 to 2009. Girls performed a little better than boys at both years.

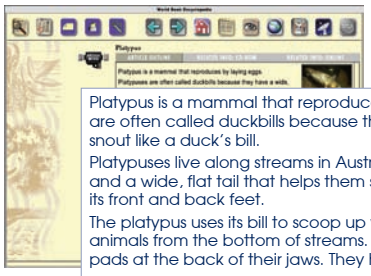
Trend Task: **Platypus**

Approach:	Station
Focus:	Finding information in a reference text
Resources:	Information card, answer booklet

Year: 4 & 8

Questions / instructions:

1. Look at the information about the platypus. It comes from the World Book Encyclopaedia.



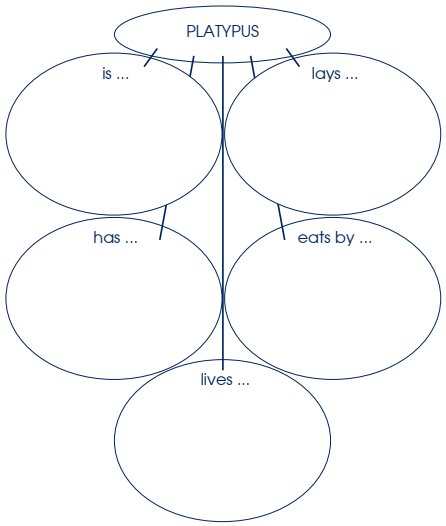
Platypus is a mammal that reproduces by laying eggs. Platypuses are often called duckbills because they have a wide, flat, hairless snout like a duck's bill.

Platypuses live along streams in Australia. They have webbed feet and a wide, flat tail that helps them swim. The platypus has claws on its front and back feet.

The platypus uses its bill to scoop up worms, small shellfish, and other animals from the bottom of streams. They crush their food with horny pads at the back of their jaws. They have a thick coat of brown fur.

Platypuses live in burrows that they dig in the banks of streams. Except for female platypuses with their young, each animal lives in its own burrow. During the breeding season, the female platypus builds a nest of leaves and grass at the end of her burrow. Before laying her eggs, she blocks the entrances to the burrow with dirt. Female platypuses lay from one to three eggs at a time. Platypus eggs hatch after about 10 days. Young platypuses stay in their mother's burrow for about four months and feed on their mother's milk.

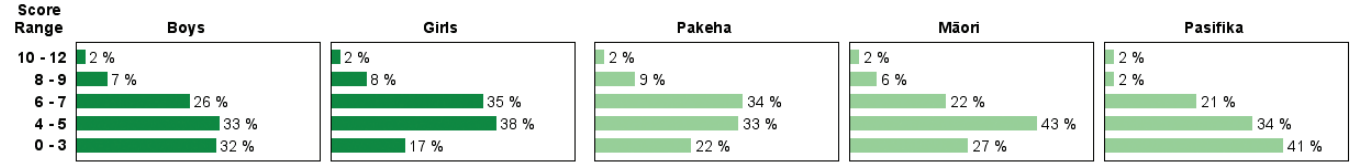
2. Use the information to fill out a story map with **facts** about the platypus.



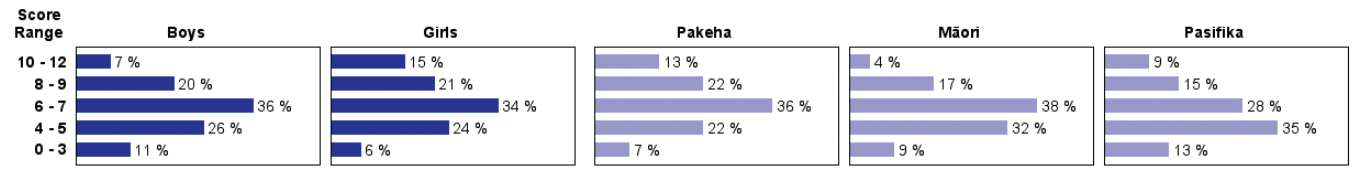
Information given:		% response 2009 ('05) year 4	year 8
A platypus...			
is ...	a mammal	82 (77)	92 (87)
has ...	a wide, flat, hairless snout: yes	7 (9)	18 (13)
	yes, mentions "snout" plus one or two of "wide", "flat", "hairless"	14 (8)	26 (25)
has ...	webbed feet	39 (43)	52 (50)
	a wide, flat tail	29 (32)	42 (35)
	claws	23 (20)	45 (34)
	thick brown hair [fur]	16 (21)	21 (23)
lives ...	in Australia	51 (56)	50 (60)
	along streams	62 (56)	74 (75)
	in burrows	48 (48)	68 (60)
lays ...	eggs	93 (94)	93 (94)
eats...	by crushing food with horny pads at the back of their jaws	13 (15)	41 (32)
Total Score:	10–12	2 (1)	11 (11)
	8–9	8 (8)	20 (15)
	6–7	30 (27)	35 (40)
	4–5	36 (40)	25 (25)
	0–3	25 (25)	8 (9)

Subgroup Analyses:

Year 4



Year 8



Commentary:

Most children got the basics of this task involving a story map, but many were not particularly effective at elaboration on the basic approach. Girls slightly outperformed boys. There was modest improvement from year 4 to year 8; performance levels were similar in 2005 and 2009.

Trend Task: Book Look (Y4)

Approach:	One to one	Year:	4
Focus:	Knowing about features in a non-fiction book		
Resources:	Book: *Recycling Rubbish,* recording book		

Questions / instructions:

Hand the book to the student.

Here's a book called *Recycling Rubbish.*
[Quinn, P. (2000). Recycling Rubbish. *Skyrider. Wellington, N.Z.: Learning Media.]*

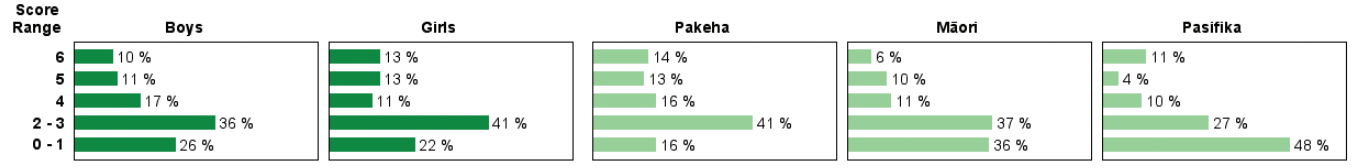
Take a little time to have a look at the different **parts** of this book.

Allow time.

	% response 2009 ('05) year 4
1. Show me where you would look if you wanted to find a list of the topics covered in the book. contents page *(page 2)*	58 (66)
2. Show me where you would look if you wanted to find an explanation of some of the special words used in the book. glossary *(page 30-31)*	40 (37)
3. Show me where you would look if you wanted to find the page number for information about oil. index	26 (29)
"The Oily Hair Solution" chapter *(pages 27–28)*	10 (7)
4. The author of this book is Pat Quinn. Show me where you would look if you wanted to find out about her. inside back cover	75 (83)
5. Show me where you would look if you wanted to find out whether the book is up to date, or quite old. inside front cover	63 (69)
Total Score: 6	12 (15)
5	12 (12)
4	14 (11)
2–3	39 (42)
0–1	24 (20)

Subgroup Analyses:

Year 4



Commentary:

Most year 4 children did not have a strong grasp of where to find information in a non-fiction book. Only about one quarter were able to locate all or almost all basic information. There was little change from 2005 on this task. Gender differences were small.

Approach:	One to one	Year:	8
Focus:	Knowing about features in a non-fiction book		
Resources:	Book: *The War in the Trenches,* recording book		

Questions / instructions:

Hand the book to the student.

Here's a book called *The War in the Trenches.*
[Hansen, O. S. (2003). The War In The Trenches. *The World Wars. London: Hodder Wayland.]*

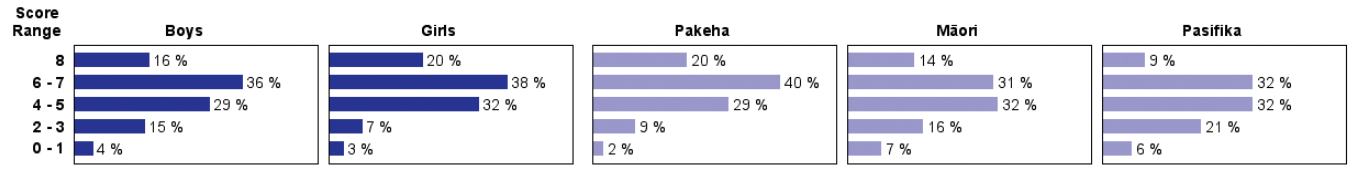
Take a little time to have a look at the different parts of this book.

Allow time.

	% response 2009 ('05) year 8
1. Show me where you would look if you wanted to find out whether the book is up to date, or quite old. inside first page/page 2/ publications page	58 (62)
2. Show me where you would look if you wanted to find a list of the topics covered in the book. contents page/page 3	82 (75)
index page / page 64	10 (14)
3. Show me where you would look if you wanted to find an explanation of some of the terms or special words used in the book. glossary *(pages 61–62)*	77 (75)
4. Show me where you would look if you wanted to find the books the author used to get information for this book. page 63 – sources/resources	61 (57)
5. Show me where you would look if you wanted to find the page number for a specific topic, like tanks. index, page 64	58 (56)
6. Show me where you would look if you wanted to find the name of the country or the place where the book was published. inside first page/page 2/ publications page	72 (70)
7. Show me where you would look if you wanted to find out about the author. back cover	57 (62)
Total Score: 8	18 (16)
6–7	37 (34)
4–5	30 (34)
2–3	11 (12)
0–1	4 (3)

Subgroup Analyses:

Year 8



Commentary:

Most year 8 children were able to locate basic information in a non-fiction book, but few were able to locate all of the information. Performance in 2009 was slightly improved over 2005. Girls were somewhat more successful on this task as were Pakeha children.

Trend Task: Get Firewise

Approach:	Station	Year:	8
Focus:	Finding information on a website		
Resources:	Computer program on laptop computer		

Questions / instructions:

This activity uses the computer.

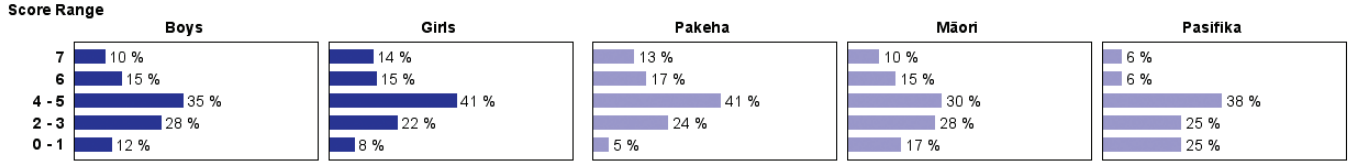
Click on the button that says **Get Firewise**.
[Search term menu shown below is based on the New Zealand Fire Service Firewise website, as at time of task development in 2005, and is now out of date. The website shown below is the site as at April 2010, showing the current programme – http://firewise.fire.org.nz/index.html]

VOICE-OVER INSTRUCTIONS:
Look at the web page about the New Zealand Fire Service. You will be asked to find some different things about this service. Click on the search term in the menu bar you would use to find the answers. Here's the first one.
(Voice-over and on-screen text presented same list as in answer column adjacent.)

	% response 2009 ('05) year 8
Pictures of fire fighting: selected search term "Photo Library"	61 (60)
How many house fires were there this year? selected search term "Facts and Statistics"	33 (35)
Stories about fires that have been on TV and in the newspapers: selected search term "News & Media"	78 (72)
How to make sure you don't have a fire in your home: selected search term "Safety in You House"	75 (77)
Studies that show the things that cause fires: selected search term "Fire Research"	49 (49)
How to get out of a building that is on fire: selected search term "Evacuation Advice"	55 (51)
How much fire fighters get paid: selected search term "Jobs & Recruitment"	66 (64)
Total Score: 7	12 (10)
6	15 (16)
4–5	38 (40)
2–3	25 (24)
0–1	10 (11)

Subgroup Analyses:

Year 8

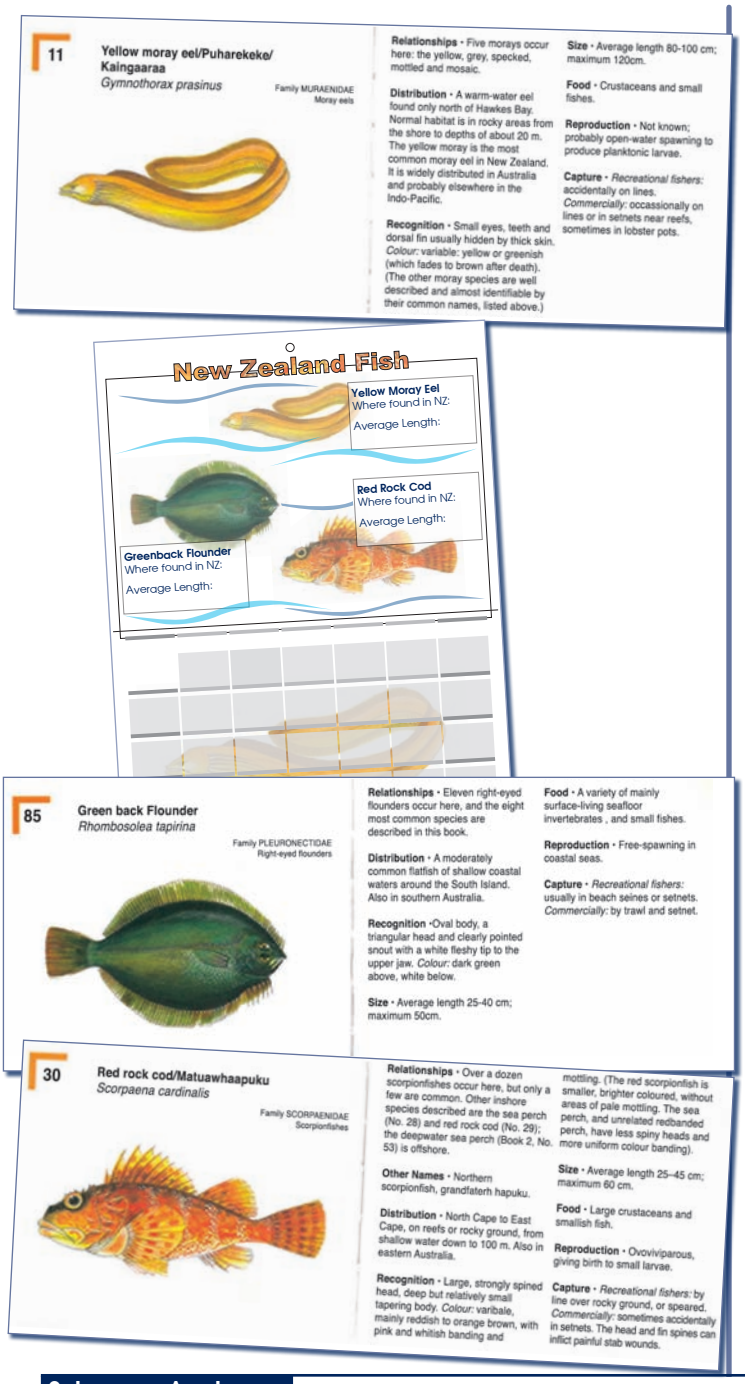


Commentary:

Most children were able to find quite a lot of the requested information on a website concerning fire safety. Performance was very similar in 2005 and 2009. Girls slightly outperformed boys and Pakeha and Māori children outperformed Pasifika children.

Approach:	Station
Year:	8
Focus:	Finding information in a non-fiction text
Resources:	Book: *Marine Fishes of New Zealand,* calendar page

Questions / instructions:



Imagine that your class is making a calendar for next year. The calendar will show pictures and information about fish found around New Zealand. You are going to find information for the February page. It is information about the Greenback Flounder, the Yellow Moray Eel and the Red Rock Cod.

Your calendar page needs to say:

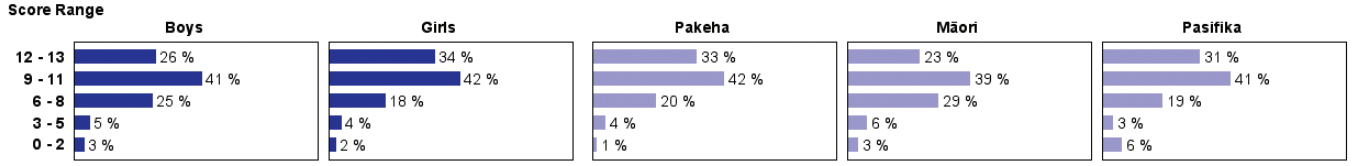
- in what part of New Zealand they are found and
- the average length of the fish.

Use the book *Marine Fishes of New Zealand* to find this information. Write the information on the calendar page.

		% response 2009 ('05) year 8
Yellow Moray Eel: *(found north of Hawkes Bay)*		
Mentioned:	north of/and Hawkes Bay	48 (42)
	Hawkes Bay only	38 (39)
Average length:	80–100 cm	93 (90)
	120 cm	2 (2)
Greenback Flounder: *(found around South Island and southern Australia)*		
Mentioned:	South Island only	71 (73)
	both places	6 (6)
Average length:	25–40 cm	89 (92)
	50 cm	2 (1)
Red Rock Cod: *(found North Cape to East Cape; eastern Australia)*		
Mentioned:	North Cape to/and East Cape	68 (62)
	one area	7 (4)
Mentioned:	eastern Australia	5 (2)
Average length:	25–45 cm	84 (74)
	60 cm	2 (3)
Total Score:	12–13	30 (23)
	9–11	41 (38)
	6–8	22 (30)
	3–5	4 (7)
	0–2	2 (2)

Subgroup Analyses:

Year 8



Commentary:

Year 8 students were quite successful in locating and recording information about various fish found in New Zealand. Modest growth was seen from 2005. Girls slightly outperformed boys, and Pakeha and Pasifika students slightly outperformed Māori students.

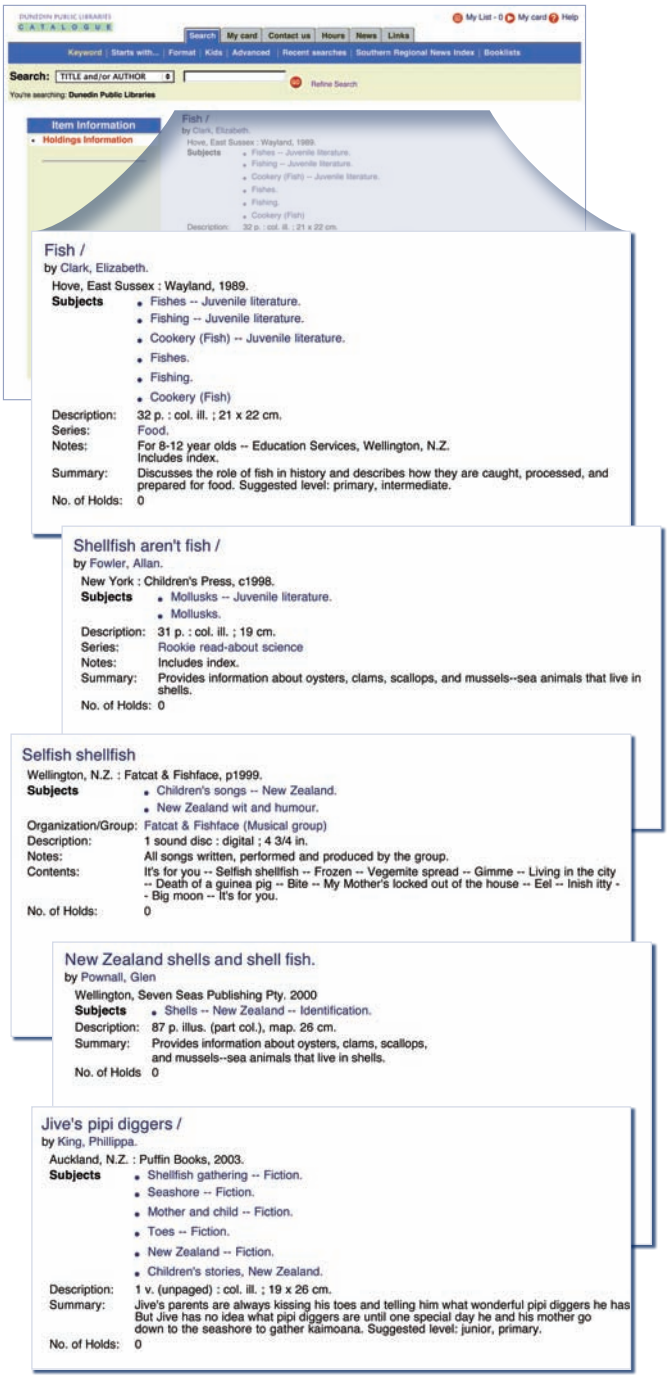
Trend Task: Best Book

NEMP Access Task

Approach:	Station
Focus:	Selecting information from a library catalogue
Resources:	5 catalogue records, answer booklet

Year: 8

Questions / instructions:



Tui wants a book that will give her good information on New Zealand shellfish for a school project. She looked up the library catalogue and found five books she could use.

1. Look at the catalogue records about each book.

2. Choose the book that you think is the **best** for Tui's project. Write down the book title.

	% response 2009 ('05) year 8
Jive's Pippi Diggers	3 (4)
✓ New Zealand Shells and Shellfish	69 (61)
Selfish Shellfish	3 (4)
Shellfish aren't Fish	12 (21)
Fish	4 (2)

3. Why is this the best book for Tui's project?

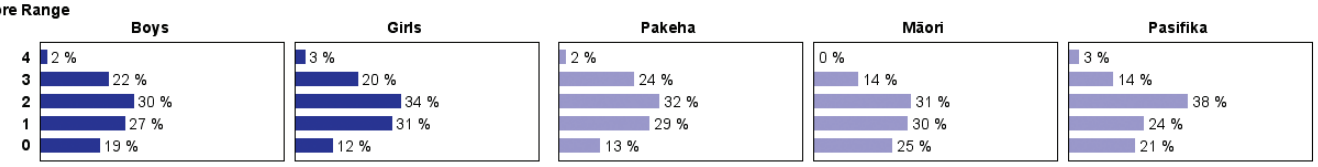
		% response 2009 ('05) year 8
Mentioned:	non-fiction *(not fiction)*	8 (10)
	about New Zealand	21 (23)
	shellfish specifically as opposed to fish	66 (73)

		% response 2009 ('05) year 8
Total Score:	4	2 (4)
	3	21 (16)
	2	32 (38)
	1	29 (28)
	0	16 (14)

Subgroup Analyses:

Year 8

Score Range

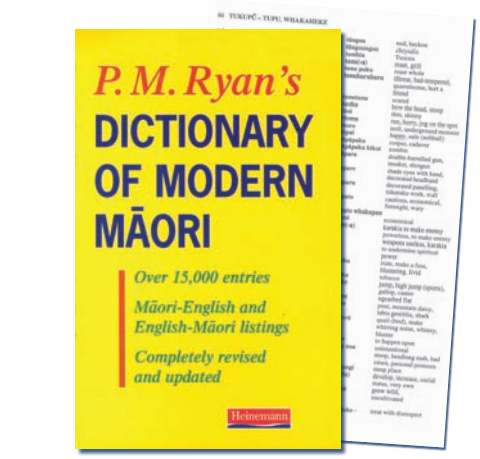


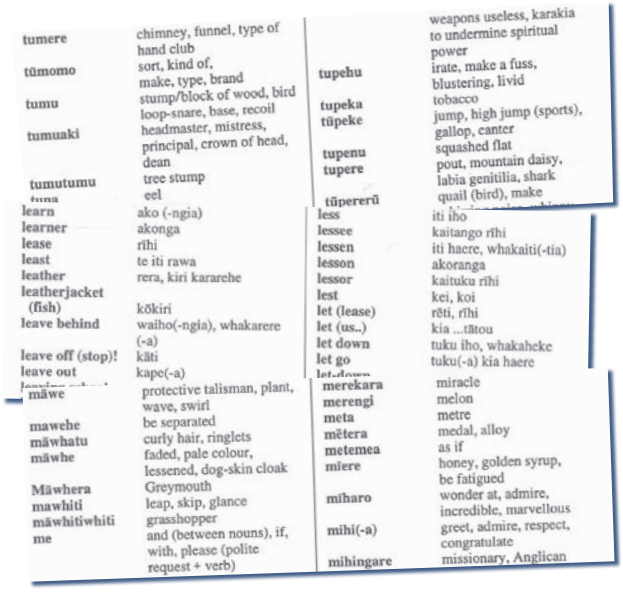
Commentary:

Most children at year 8 were able to select the best book from among five possibilities and give a rationale for their selection. Performance was similar in 2005 and 2009. Pakeha and Pasifika students slightly outperformed Māori students.

Approach:	Station
Year:	8
Focus:	Finding information in a dictionary
Resources:	Book: *P.M. Ryan's Dictionary of Modern Māori*, answer booklet

Questions / instructions:





Use the Māori dictionary to answer all of the questions. Write down the number of the page on which you found each answer.

1. Matt was told that the **tumuaki** wanted to see him. What is a tumuaki?

   principal/headmaster/headmistress — 89 (94)

   Find on: page 86 — 85 (89)

2. Give the Māori word for **learner**.

   akonga — 73 (80)

   ako (-ngia) — 12 (10)

   Find on: page 160 — 84 (89)

3. Give two meanings of the word **mihi**.

   Greeting, admire, respect, congratulate: any two meanings — 84 (75)

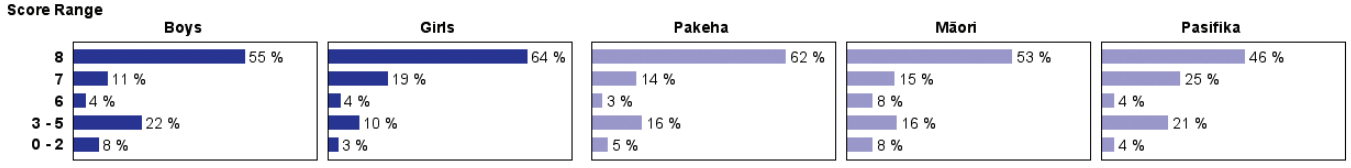
   one meaning — 3 (15)

   Find on: page 40 — 84 (86)

		% response 2009 ('05) year 8
Total Score:	8	59 (57)
	7	15 (23)
	6	4 (4)
	3–5	17 (11)
	0–2	6 (6)

Subgroup Analyses:

Year 8



Commentary:

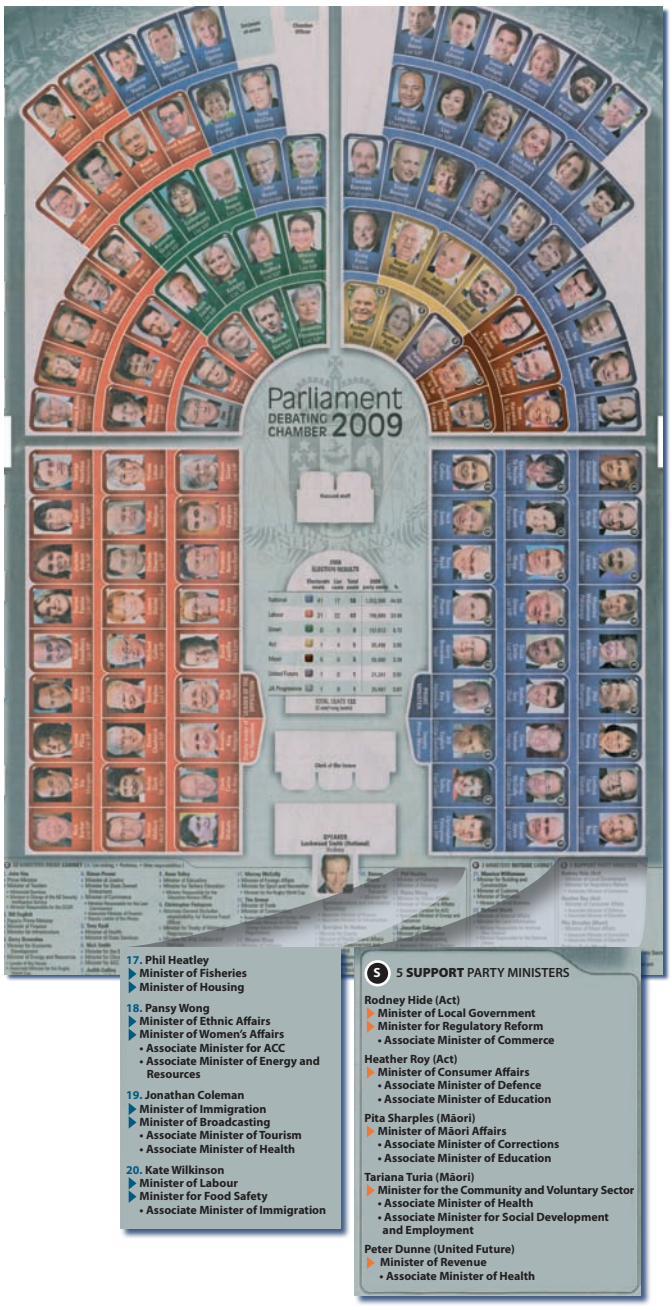
Most students at year 8 performed well on using a Māori dictionary. There was little change in performance from 2005 to 2009. Girls outperformed boys on this task.

Task: Parliament Poster

NEMP Access Task

Approach:	One to one	Year:	8
Focus:	Finding and analysing information on a poster		
Resources:	Poster, picture card, information card		

Questions / instructions:



Hand student poster.

Have a good look at this poster. You are going to use this poster to answer some questions.

Hand student picture card.

		% responses y8
1. Can you find this person on the chart?	yes	94

If student can't find the person, show them.

Use the poster to find out about this person.

2. Who is this person?	Pita Sharples	98
3. Which party does he belong to?	Māori Party	83
4. What is he responsible for in parliament?		
Number of things mentioned: *(Minister of Māori Affairs, Associate Minister of Corrections, Associate Minister of Education)*	3 or more	31
	2	5
	1	11
	0	53

Point to letters on parliament members' pictures.

5. Why do some people have a letter on their picture while others don't?	they are Ministers of Parliament/ Cabinet Ministers	38

Hand and read information card to student.

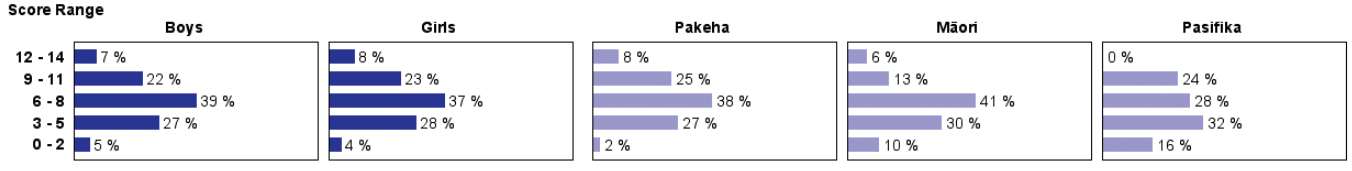
Use the poster to work out who this person is.

Information Card
- I am a cabinet minister.
- I am responsible for two portfolios.
- My list ranking is 18.
- I represent the Botany electorate of New Zealand.
- Who am I?

6. Who am I?	Pansy Wong	59
7. What is this poster telling us about parliament?		
Number of valid points relating to the make up and structure of parliament: *(e.g. parties, responsibilities, number of seats, **not** specific information relating to individuals)*	5 or more	7
	4	13
	3	16
	2	32
	1	17
	0	16
Total Score:	12–14	7
	9–11	22
	6–8	38
	3–5	28
	0–2	5

Subgroup Analyses:

Year 8



Commentary:

Year 8 students were moderately successful at locating information on posters representing Members of Parliament. Pasifika students did not perform as well as Pakeha or Māori students.

LINK TASK: 5

Approach: One to one
Year: 4 & 8
Focus: Accessing book information and recording sources

		% responses y4	% responses y8
Total Score:	8–12		22
	6–7	1	15
	4–5	8	23
	2–3	35	28
[Note: Maximum score of 6 for year 4]	0–1	57	13

LINK TASK: 6

Approach: One to one
Year: 4 & 8
Focus: Knowing about, accessing and using information

Total Score:	8–9	0	3
	6–7	8	21
	4–5	36	45
	2–3	44	29
	0–1	13	3

LINK TASK: 7

Approach: Station
Year: 4 & 8
Focus: Using a website to access information; synthesising information, recording sources

Y4 Total Score:	4	2	
	3	21	
	2	41	
	1	30	
	0	6	
Y8 Total Score:	9–11		8
	7–8		39
	5–6		32
	3–4		14
	0–2		7

LINK TASK: 8

Approach: Team
Year: 4 & 8
Focus: Selecting, synthesising and recording sources of book and internet information

Y4 Total Score:	11–13	16	
	9–10	21	
	7–8	34	
	5–6	19	
	0–4	10	
Y8 Total Score:	15–17		12
	13–14		27
	11–12		23
	9–10		24
	0–8		15

LINK TASK: 9

Approach: Independent
Year: 4 & 8
Focus: Accessing information in a library

		% responses y4	% responses y8
Total Score:	4–5	4	14
	3	18	40
	2	27	21
	1	31	16
	0	20	9

LINK TASK: 10

Approach: One to one
Year: 8
Focus: Accessing and selecting useful information from websites

Total Score:	7–8		13
	5–6		22
	3–4		38
	1–2		15
	0		12

5 Thinking About and Using Information

Overview: In the area of thinking about and using information, students showed good ability at taking information and making basic uses out of it, but did less well in using it in more sophisticated ways. In particular, using information to help support an argument they were making was challenging for students. There was strong growth from year 4 to year 8 and little change from the 2005 assessments.

The assessments included 18 tasks that explored how well students could think about and use information. These included interpreting individual pieces of information, analysing and collating information from more than one source, understanding and describing the structure of a collection of information and reporting findings.

Students, particularly at year 8, are able to take information that is presented to them and make basic, fundamental uses of that information (see, for example, *Sushi*, (p34)). Children are less able to use that information to form general opinions or support arguments that they wish to make (see for example, *Shoes* (p35)). Generally speaking, there is moderate growth in thinking about and using information from year 4 to year 8. Averaged across 78 task components, year 8 students performed 11% better than year 4 students. There was little change in performance from the previous administration in 2005: a 2% decline for year 8 students (based on 59 task components) and no change for year 4 students (based on 37 task components).

Twelve of the tasks were identical for both year 4 and year 8 students in the 2009 administration. Six tasks were attempted only by year 8 students. Seven tasks are trend tasks, containing full information for the 2005 and 2009 administration; two are released tasks with information only for 2009, and nine are linked tasks to be used at a later administration and only partially described here.

The tasks are presented here in the following order:

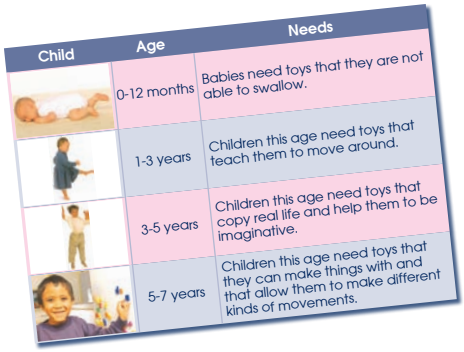
- trend tasks attempted by year 4 and year 8 students;
- trend tasks attempted by only year 8 students;
- released tasks attempted by only year 8 students;
- link tasks attempted by year 4 and year 8 students;
- link tasks attempted by only year 8 students.

Trend Task: Consumer Kids

NEMP Access Task

Approach:	Station	Year:	4 & 8
Focus:	Using information to make choices		
Resources:	Chart, placement board, 8 cards, answer booklet		

Questions / instructions:



Children of different ages need different kinds of toys.

- Use the chart and placement board to help you choose the two best toys for each child.
- Use the letters on the toy cards to finish these sentences.

1. For a child who was 0–12 months old I would choose toy ____ and toy ____ .

2. For a child who was 1–3 years old I would choose toy ____ and toy ____ .

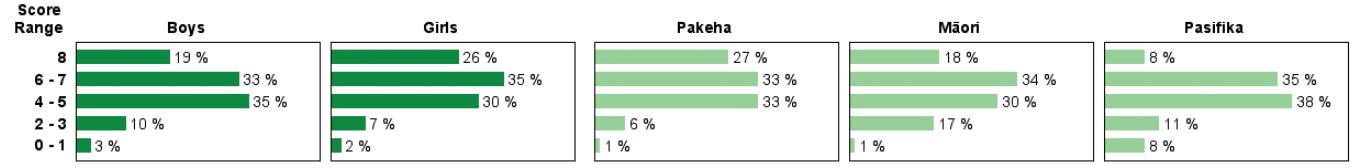
3. For a child who was 3-5 years old I would choose toy ____ and toy ____ .

4. For a child who was 5-7 years old I would choose toy ____ and toy ____ .

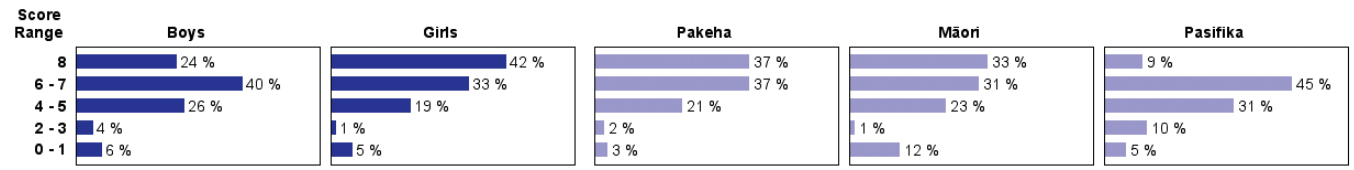
		% response 2009 ('05) year 4	year 8
Chose:	A	87 (90)	90 (95)
and:	H	77 (84)	88 (89)
Chose:	B	77 (78)	82 (88)
and:	G	57 (62)	71 (72)
Chose:	D	61 (59)	70 (74)
and:	E	60 (61)	60 (70)
Chose:	C	71 (70)	73 (78)
and:	F	67 (69)	62 (72)
Total Score:	8	23 (26)	33 (43)
	6–7	34 (37)	36 (31)
	4–5	33 (28)	22 (22)
	2–3	9 (7)	3 (2)
	0–1	2 (2)	5 (1)

Subgroup Analyses:

Year 4



Year 8



Commentary:

Many children were successful on this task, at both year 4 and year 8. Modest growth was seen between year 4 and year 8, but students did not perform as well in 2009 as in 2005. Pasifika students had more difficulties with this task, and girls outperformed boys, especially at year 8 level.

Trend Task: Sushi

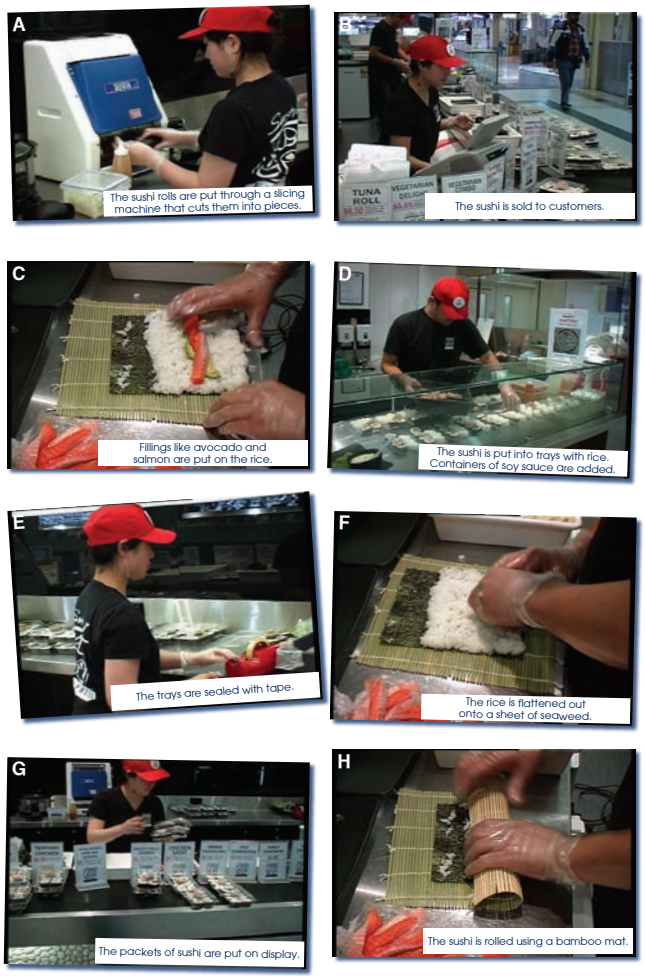
NEMP Access Task

Approach:	Station
Focus:	Sorting and sequencing a process
Resources:	Video recording on laptop computer, set of 8 cards, answer booklet
Year:	4 & 8

Questions / instructions:

This activity uses the computer.

Click the button that says **Sushi**.
[Video demonstrates sushi-making process; no voice-over; music only. Images on cards are stills taken from the video.]



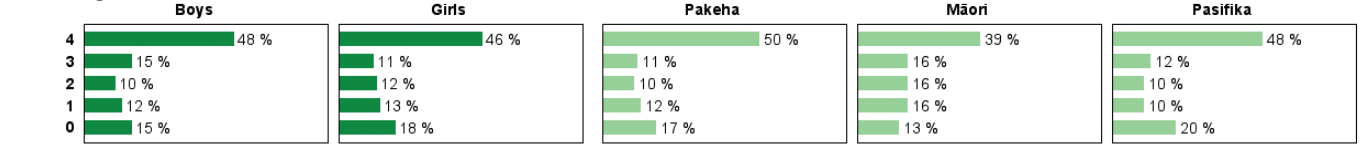
1. Read the cards on making sushi.
2. Choose the **four** that you think show the **main** steps for **making** sushi.
3. Put the **four** cards in order so that they show how sushi is **made**.
4. Write the letter for each card in these boxes.

1st step	2nd step	3rd step	4th step

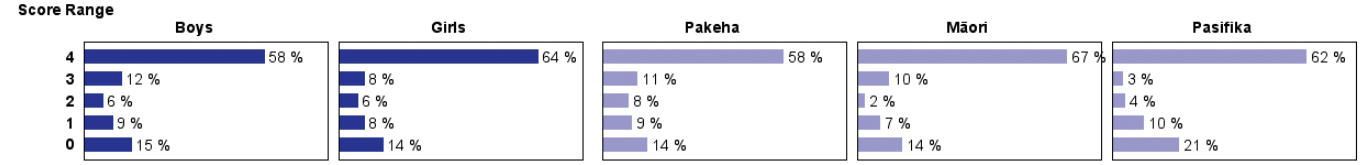
		% response 2009 ('05) year 4	year 8
Step 1:	F	76 (78)	82 (84)
Step 2:	C	68 (76)	77 (76)
Step 3:	H	62 (66)	73 (72)
Step 4:	A	55 (57)	63 (68)
Total Score:	4	47 (51)	61 (62)
	3	13 (14)	10 (9)
	2	11 (11)	6 (9)
	1	13 (11)	9 (8)
	0	17 (13)	15 (13)

Subgroup Analyses:

Year 4



Year 8



Commentary:

Students performed well on this task, with 60 to 70% of students getting three or four of the main points correct and properly sequenced. There was moderate growth from year 4 to year 8, and little change from the previous administration. Boys and girls performed similarly.

Task: Shoes

NEMP Access Task

Approach:	Team
Year:	4 & 8
Focus:	Comparing and summarising information to inform decision-making
Resources:	Video recording on laptop computer, picture

Questions / instructions:

This activity uses the computer.

The principal of East Bay School has made a new rule. The rule is that students must wear shoes when they are outside. You are going to watch a video that shows how different people at the school feel about this new rule. After you have watched the video you will have time to decide whether or not you think the rule is a good one, and why. Later you will have the chance to talk to the other people in your team about your ideas.

Click the *Shoes* button.
[Stills in picture taken from video.]

VIDEO VOICE-OVER:
(Stills on cards taken from video.)

1. Parent
My child is always losing her shoes out in the playground. I am tired of searching for them after school. If she had to leave her shoes on when she was outside, this would not happen. I like the principal's new rule.

2. Tui
I asked all the kids in my class and only one person has hurt his feet in the playground this year. I don't think it's fair that all of us have to wear shoes just because one or two people get hurt. We should be able to choose whether or not we wear shoes. I do not like the principal's new rule.

3. Secretary
I spend a lot of my time looking after children who have stubbed toes and bee stings on their feet. These accidents would not happen if students had to wear shoes outside. I think that the principal's new rule is a good one.

4. Teacher
The new rule is going to be difficult. Many of the children in my class wear jandals or shoes with thick soles to school. It is not safe for them to do fitness and sports in this footwear so I ask them to take off their shoes. The principal's new rule means that I cannot ask them to do this anymore. Now these children will not be able to do fitness or play some sports.

5. Richard
My favourite lunchtime game is having running races on the field with my friends. I can't run as fast with shoes on. I do not like the principal's new rule.

6. Principal
It is my job to make sure that the children at this school are kept safe. Too many kids are getting hurt because they do not wear shoes outside. This is why I made up the rule that says that children at East Bay School must wear shoes outside.

Each of you is going to think about whether the principal's new rule is a good one. After that, you will tell the team what you think.Think about it on your own for a minute.

Hand students the picture. Allow time.

Now each of you is going to explain to your team whether or not you think the principal's rule is a good one and why.

Allow students time to share their opinions.

You have listened to each other's views. Now try to agree together so that you have a team opinion about the principal's rule – an opinion you all support.

Allow time for the team to reach a shared opinion.

1. To finish off, I want one person in the team to tell me what you have decided about the principal's rule.
2. What are your reasons for reaching this decision? Take turns to tell me why your team made this decision.

		% response 2009 ('05) year 4	year 8
Team response:			
Agreed with principal:	yes	18 (18)	16 (18)
	no	37 (39)	59 (55)
	bit of both	45 (44)	25 (26)
Justification of response:	strong	15 (19)	19 (20)
	somewhat justified	73 (75)	64 (72)
	weak or no response	12 (5)	17 (7)
Incorporated ideas from video:			
	several ideas incorporated well	4 (4)	6 (6)
	several ideas but not linked	16 (9)	10 (16)
	one or two ideas	60 (67)	58 (69)
Total Score:	5	4 (2)	4 (6)
	4	5 (2)	8 (7)
	3	17 (25)	14 (17)
	2	50 (53)	44 (56)
	1–0	25 (19)	31 (13)

Commentary:

Children at both year 4 and year 8 held strong opinions on the issue of a new rule requiring students to wear shoes outside, and only about one team in six agreed with the principal's decision. Students at both years presented somewhat well-justified opinions, with very little improvement from year 4 to year 8. Year 8 student performance declined slightly between 2005 and 2009.

Trend Task: Fiji and Niue

Approach: Team
Year: 4 & 8
Focus: Finding and comparing information in similar texts
Resources: 2 books: *Fiji* and *Niue*, 2 pair answer sheets, 1 team answer sheet

What does Fiji look like?
Fiji is made up of between 326 and 332 islands – no one is too sure!
Many of these islands have no people living on them.
The largest islands are Viti Levu and Vanua Levu.

The islands of Fiji were made by volcanoes.
Large areas are covered by very thick forests.
Many islands are atolls.

The capital city of Fiji is Suva.

An atoll is an island made of coral.

What is the weather like in Fiji?
The weather in Fiji is mostly warm and moist.
It rains a lot in Fiji.
However, because of a range of mountains, the eastern side of the country gets more rain than the western side.
The mountain range blocks the winds that are carrying the rain.

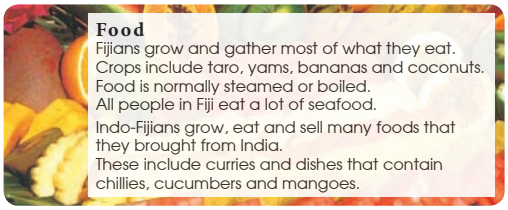
Cyclones and hurricanes cause a lot of damage in Fiji.

Animals and plants
There are a lot of tropical rainforest areas in Fiji.
There are many types of plants, birds and animals in these forests.

The coconut beetle is as large as a coffee cup – and it flies!

This Giant Orb spider is actual size!

The reefs around Fiji contain amazing sea life.
This includes fish, corals, lobsters, turtles and starfish.



Food
Fijians grow and gather most of what they eat.
Crops include taro, yams, bananas and coconuts.
Food is normally steamed or boiled.
All people in Fiji eat a lot of seafood.

Indo-Fijians grow, eat and sell many foods that they brought from India.
These include curries and dishes that contain chillies, cucumbers and mangoes.

Ceremonies
Kava
The ceremony of greatest importance to Fijians is yaqona – the kava-drinking ceremony.
Traditionally, only male chiefs and priests could take part in this ceremony. But today, men and women drink kava made from yaqona, the roots of a shrub.
The kava ceremony is used to gather people to celebrate an event or just to visit with each other and talk.

Yaqona is dried before being used to make kava.

Firewalking
Firewalking is linked with the people from the island of Beqa.
No one is sure why the people from Beqa began firewalking.
Today, men from Beqa perform firewalking on many islands throughout Fiji.
Firewalking was once done by both men and women.
Dancers would meditate and prepare for days before walking.

They would slowly and calmly walk over a long pit, full of red-hot rock.
Today, firewalking is done only by men.
The walkers are trained by a ratu, their firewalking chief.

Questions / instructions:

In this activity you will be finding and sharing information about a Pacific Island.

To start off, you will work in pairs. [Students 1 and 2] will be finding information on Fiji. [Students 3 and 4] will be finding information on Niue.

Hand Students 1 and 2 book on Fiji, and Students 3 and 4 book on Niue. Hand students pair answer sheets.

Your book tells you about a Pacific Island. Use the book to make notes that will help you to answer the questions written on this sheet. Write your notes in the boxes.

Allow time.

Fiji:

Make notes in the boxes to help you answer the questions.

		% response 2009 ('05) year 4	year 8
1. What does Fiji look like?			
Number mentioned: *[volcanoes, lots of islands, thick forests, some islands are coral atolls]*	4	4 (0)	8 (3)
	3	5 (5)	16 (17)
	2	16 (13)	28 (27)
	1	36 (42)	39 (42)
	0	39 (40)	8 (10)
2. What is the weather like?			
Number mentioned: *[warm and moist; rains a lot; east side gets more rain than west side; cyclones/hurricanes cause damage]*	4	2 (5)	7 (10)
	3	13 (5)	35 (31)
	2	42 (40)	46 (48)
	1	37 (40)	12 (10)
	0	6 (10)	0 (2)
3. What types of sea creatures can be found?			
Number mentioned: *[fish, corals, lobsters, turtles, starfish]*	5	54 (42)	78 (75)
	4	12 (17)	17 (15)
	3	3 (8)	1 (3)
	2	4 (5)	1 (2)
	1	22 (18)	2 (3)
	0	6 (10)	2 (2)
4. What types of food do they grow?			
Number mentioned: *[taro, yams, bananas, coconuts]*	4	46 (47)	84 (85)
	3	9 (17)	4 (7)
	2	16 (8)	1 (3)
	1	18 (12)	4 (2)
	0	12 (17)	8 (3)
Number mentioned: *[chillies, cucumbers, mangoes]*	3	27 (20)	30 (15)
	2	4 (2)	2 (3)
	1	9 (8)	5 (3)
	0	60 (70)	63 (78)
5. What special ceremonies do they have?			
Mentioned: kava drinking ceremony		72 (73)	90 (98)
firewalking		52 (42)	65 (78)

Niue:

Make notes in the boxes to help you answer the questions.

		% response 2009 ('05) year 4	year 8
1. What does Niue look like?			
Number mentioned: *[world's biggest atoll; coastline rises straight up/no beaches; lots of coconut palms]*	3	2 (0)	6 (0)
	2	12 (18)	52 (46)
	1	36 (37)	19 (32)
	0	52 (45)	22 (22)
2. What is the weather like?			
Number mentioned: *[sunny and warm; cyclones/ hurricanes cause damage]*	2	55 (48)	90 (76)
	1	42 (48)	9 (24)
	0	4 (3)	1 (0)
3. What types of sea creatures can be found?			
Number mentioned: *[poisonous snakes, poisonous coral fish, shellfish, fish]*	4	5 (3)	6 (3)
	3	4 (8)	12 (7)
	2	49 (48)	64 (76)
	1	34 (30)	9 (9)
	0	9 (10)	9 (5)

What does Niue look like?
Niue is the world's largest atoll.
Most of the coastline around Niue rises straight up out of the sea.
Because of this, Niue does not have the beaches that are usually seen on Pacific islands.

An atoll is an island made of coral.

'Niue' can be broken into two words.
Niu means coconut and *e* means here.
However, Niue's proper name is Niue Fekai.
Some people believe it means *Niue as a Whole*.
Others believe it means

The capital of Niue is Alofi. About 700 people live in Alofi.

Animals
There are no poisonous animals, spiders or insects on Niue.
However, in the sea there is a poisonous snake and a poisonous coral fish.
The forests have many birds and flying foxes.
Sadly, the numbers of birds and flying foxes are getting smaller.
This is because the forest areas are being cleared away to make room for the growing of crops.

A flying fox is a type of bat.

What is the weather like on Niue?
Niue's weather is mostly sunny and warm.
However, the island does get hurricanes that often cause a lot of damage.
Today, many people live in houses made of concrete.
They call their houses 'hurricane houses'!

Water
Because Niue is made of coral, a lot of the rain that falls runs straight through the ground.
The drained water falls down into the sea and forms a 'lake' that floats on top of the sea water.
This 'lake' makes diving and snorkelling in Niue an amazing adventure because the water is so clear.

Food
Niueans get their food from the land and the sea.
Some of the main foods they eat are talo (taro), pitako (a bread), shellfish, fish and, everyone's favourite, uga, which is a coconut-eating land crab.

Uga is said 'u-nga'

The flying fox is also a highly valued source of food for the islanders.

The umu
An umu is an earth oven,much like the hangi that Maori use to cook food.
A hole is filled with wood and large rocks. When the wood has burnt off, the rocks are very hot.

Food is put in woven baskets, placed on the rocks and completely covered with layers of coconut palm fronds.

After a few hours of steaming, the food is cooked.

Coconuts
Niueans use coconuts and the coconut tree in many different ways.
The flesh of the coconut can be eaten.
The flesh can also be pulped and squeezed to make coconut cream.
When coconut cream is left to curdle it makes oil.

The oil is used for cooking and as an ointment for healing.
The shell of the coconut can be used to carry water.
It can be cut in half to make jewellery and bras for costumes.

Inside a coconut, there are about three cups of sweet liquid that is nice to drink.

Celebrations and ceremonies
Both Niuean boys and girls have a special ceremony to celebrate their 'coming of age'.
Girls have ear-piercing ceremonies any time between the ages of 5 and 19.
The girl's ceremony is known as hukiteliga (hookey-ti-linga).
People give money to her family for the girl's future.

Boys have a haircutting ceremony. The boy's hair is not cut much from the time he is born.
At the boy's ceremony people pay money to cut off one of his braids and keep it.

		% response 2009 ('05) year 4	year 8
4. What types of food do they grow?			
Number mentioned: *[talo (taro), bananas, coconuts]*	3	20 (15)	24 (29)
	2	43 (40)	42 (41)
	1	36 (33)	30 (31)
	0	1 (12)	4 (0)
5. What special ceremonies do they have?			
Ear piercing ceremony for girls:			
mentioned and says it's for girls		43 (53)	71 (71)
mentioned ear piercing *(not girls)*		14 (10)	9 (9)
mentioned coming-of-age ceremony for girls *(not ear piercing)*		16 (15)	11 (10)
Haircutting ceremony for boys:			
mentioned and says it's for boys		29 (33)	50 (56)
mentioned hair cutting *(not boys)*		7 (12)	8 (7)
mentioned coming-of-age ceremony for boys *(not haircutting)*		16 (13)	21 (12)

Now it's time for you to work as a team. Start off by sharing your notes on each question. As you share your notes think about the things that are the same and the things that are different about Fiji and Niue.

Allow time.

Hand students team answer sheet.

Use your pair answer sheets and talk together to fill out this team answer sheet. Decide which things are the same and different about Fiji and Niue. Write how they are the same and different in the boxes. When you have finished filling out the answer sheet, I'll ask you to share your ideas with me.

Allow about 10 minutes.

		% response 2009 ('05) year 4	year 8
Now tell me your ideas about what is the same and different about Fiji and Niue.			
Things that are the same:			
both have coral atolls		10 (13)	22 (22)
temperature similar *(warm)*		74 (58)	72 (81)
cyclones *(cause a lot of damage)*		12 (23)	24 (32)
fish common to both countries		55 (55)	55 (53)
Number of same crops mentioned: *[both islands grow taro (talo), bananas, coconuts]*	3	9 (13)	19 (17)
	2	31 (23)	27 (25)
	1	35 (23)	22 (32)
	0	26 (40)	32 (25)
Things that are different			
Mentioned:			
geographical features: *(physical features e.g. beaches)*			
two or more differences		6 (8)	22 (22)
one difference		41 (45)	43 (53)
weather *(more rain in Fiji)*		30 (17)	38 (34)
difference in food grown *(yams in Fiji, not mentioned for Niue)*		36 (22)	34 (20)
ceremonies		75 (63)	78 (90)
difference in sea creatures *(e.g. turtles and starfish in Fiji; poisonous snakes and poisonous coral fish in Niue)*		46 (40)	57 (48)
Total Score:	41–50	4 (3)	14 (5)
	31–40	25 (15)	57 (59)
	21–30	50 (48)	20 (32)
	11–20	17 (27)	7 (2)
	0–10	5 (7)	1 (2)

Commentary:

Working in pairs and then in teams, students were somewhat successful in gathering, comparing and contrasting information about Fiji and Niue. They were typically more successful in responding to questions for which answers could be readily located but were challenged by a variety of text features. Moderate growth was seen in year 8 students compared to the year 4 students.

Trend Task: Risk Plan

NEMP Access Task

Approach:	Group
Focus:	Using information to develop a plan
Resources:	Completed risk management plan, A3 team answer sheet, 2 camp brochures

Year: 4 & 8

Questions / instructions:

A class is going on a school camp. You have been asked to help do the risk management plan for the camp. Risk management plans need to be done before all school trips to make sure that the trip is safe. Here is a risk management plan that was done for a swimming pool trip. I will read it to you.

RISK MANAGEMENT PLAN

Event: Trip to the swimming pool

Place: Town Pool

Activity (What we will be doing)	Risk (Things that could be dangerous)	How to Reduce Risk (How to make it safer)
Moving to the pool	Children might slip on the wet concrete	• Walk to the swimming pool
Getting into the pool	Children might get bumped or pushed under the water while getting in and out	• Use the ladder to get in and out • One child at a time on the ladder
Swimming	Children could drown	• Adults should watch children swimming at all times • Teachers should check whether children can swim
Diving	Children could hit their heads on the bottom of the pool and get badly hurt	• No diving at the pool

Give students the completed Risk Management Plan. Read plan to students.

Here is a brochure about the camp.

Hand students brochures.

Read the brochure and think about the activities that can be done on the camp. For each activity, think about the risks it may cause. Then think about how you could make the activity as safe as possible. You will need to listen to everybody's ideas. Write your ideas on the school camp risk management plan. You can use the swimming pool plan to help you.

Give students the team answer sheet. Allow time.

Now it is time for you to share your risk management plan with me.

		% response 2009 ('05) year 4	year 8
Activity 1:	plan is likely to be undertaken	99 (98)	99 (100)
Significant risk identified:	clear	90 (90)	91 (90)
	possible	8 (9)	9 (9)
	not at all	2 (2)	1 (2)
Risk reduction:	substantial	68 (66)	71 (64)
	slight	18 (25)	23 (32)
	prohibit activity to students	4 (0)	3 (3)
Activity 2:	plan is likely to be undertaken	97 (100)	98 (100)
Significant risk identified:	clear	83 (85)	89 (92)
	possible	14 (12)	9 (7)
	not at all	4 (3)	3 (2)
Risk reduction:	substantial	57 (73)	74 (78)
	slight	29 (19)	21 (17)
	prohibit activity to students	2 (3)	6 (3)
Activity 3:	plan is likely to be undertaken	98 (100)	99 (98)
Significant risk identified:	clear	85 (88)	87 (91)
	possible	12 (10)	11 (5)
	not at all	4 (2)	2 (3)
Risk reduction:	substantial	58 (66)	72 (72)
	slight	28 (20)	17 (16)
	prohibit activity to students	3 (14)	9 (2)
YEAR 8 ONLY: *(answer sheet provided for two more activities)*			
Activity 4:	plan is likely to be undertaken		98 (98)
Significant risk identified:	clear		89 (88)
	possible		9 (9)
	not at all		2 (3)
Risk reduction:	substantial		70 (58)
	slight		23 (31)
	prohibit activity to students		1 (2)
Activity 5:	plan is likely to be undertaken		98 (98)
Significant risk identified:	clear		84 (93)
	possible		12 (4)
	not at all		5 (4)
Risk reduction:	substantial		64 (82)
	slight		28 (14)
	prohibit activity to students		8 (4)
Y4 Total Score:	17–18	51 (58)	
	15–16	17 (19)	
	13–14	19 (17)	
	11–12	6 (3)	
	0–10	6 (3)	
Y8 Total Score:	29–30		45 (53)
	27–28		30 (24)
	25–26		10 (7)
	23–24		3 (6)
	0–22		13 (11)

Commentary:

Children were quite successful at this task, developing plans that would be likely to be undertaken and that would significantly reduce the risk of the situation. Students at year 4 performed almost as well as the year 8 students on the three activities they reported on. There was a slight decline in performance between 2005 and 2009 at both year 4 and year 8.

NEMP Access Task

Approach:	Station
Focus:	Summarising and comparing information to make a decision
Resources:	2 pamphlets, cell phones, answer booklet

Year: 8

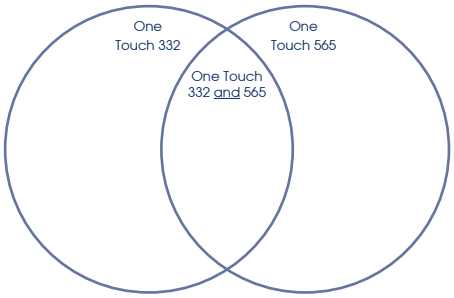
Questions / instructions:

Emily wants to buy a new cell phone. She wants it for text messaging, playing games and phoning her Mum.

1. Look at the two pamphlets on cell phones.
   [information correct at time of task development in 2005]

2. Fill in the diagram to help Emily choose a phone.

   Make notes about each phone in the circles. Where the circles join, write the things that are the same about the two phones.



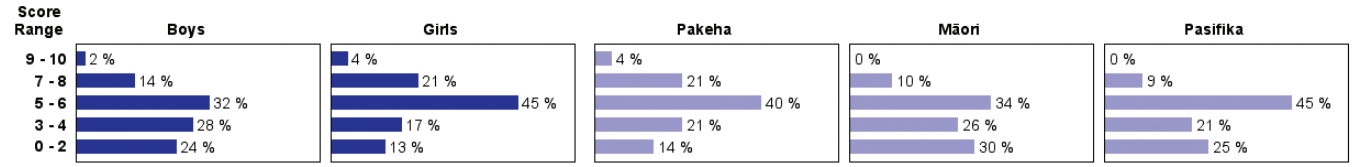
3. Circle the phone that Emily should buy.
   One Touch 332 One Touch 565

4. Why is this the best phone for Emily?

	% response 2009 (‘05) year 8
One Touch 332 only:	
Relevant features: *(menu easy to find; text menus easy to read; screen can be changed; sturdy metallic body; lightweight (77g); small size (98x42x21 mm); zoom effect; silent vibrating system; $199)*	
5 or more relevant features	2 (3)
3-4 relevant features	16 (14)
1-2 relevant features	54 (56)
One Touch 565 only:	
Relevant features: *(video player; camera; $299; changeable colour screens; take photo and send while talking; downloadable games; can be used for news & information)*	
5 or more relevant features	7 (9)
3-4 relevant features	31 (32)
1-2 relevant features	45 (46)
Use of Venn Diagram:	
diagram filled in correctly	73 (77)
information for each phone correct BUT intersection of circles not used	8 (6)
good justification	21 (25)
some justification	48 (43)
Total Score: 9–10	3 (4)
7–8	18 (20)
5–6	39 (39)
3–4	22 (20)
0–2	18 (18)

Subgroup Analyses:

Year 8



Commentary:

Year 8 students were moderately successful at comparing different cell phones using a Venn diagram. They were able to find some features to enter into the diagram, but typically did not list many features, nor were they able to provide strong justifications for their choices. Performance was very similar in 2005 and 2009. Girls outperformed boys and Pakeha students outperformed Māori and Pasifika children.

Trend Task: Lizard

NEMP Access Task

Approach:	Station	Year:	8
Focus:	Interpreting and analysing similar information		
Resources:	Photo *[simulated resource shown below]*, 2 information cards, answer booklet		

Questions / instructions:

Look at the photo of a lizard. A family saw it when they were on holiday in the South Island.

They looked through lots of books to see if they could find out what kind of lizard it was. They worked out that it had to be one of two lizards.

Read the information on the two cards to work out which lizard is shown in the photograph.

Common Green Gecko

The common green gecko has no pattern on its body. It is a very bright green, with lighter green or yellow sides.

Common green geckos have a vivid blue mouth and tongue. Their tails help them to climb because they can wrap them around twigs. They sometimes lose their tails, but not often.

The common green gecko is found throughout the North Island except for Northland.

Jewelled Gecko

As its name suggests, the jewelled gecko is a very striking gecko. It has very bright background colour that has yellow or white stripes on it.

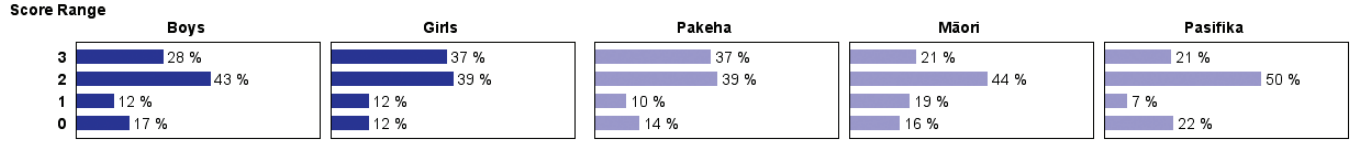
Jewelled geckos have a blue/purple mouth and tongue. They have a long slender tail that can grip well and is hardly ever lost.

Jewelled geckos live in forests, shrublands and the tussock grasslands of the South Island.

		% response 2009 ('05) year 8
1. What kind of lizard do you think they saw?	✓Jewelled Gecko	84 (89)
	Common Green Gecko	9 (6)
2. Write down two reasons why you think it was that lizard.		
	mentions white *(and yellow)* stripes	61 (69)
	mentions lives in South Island	45 (59)
Total Score:	3	32 (41)
	2	41 (44)
	1	12 (7)
	0	15 (8)

Subgroup Analyses:

Year 8



Commentary:

Students did well on this task that asked them to use information to determine which of two possible geckos a family had encountered. However, performance was markedly lower in 2009 than in 2005.

Task: Climate Change

NEMP Access Task

Approach:	One to one	Year:	8
Focus:	Interpreting a key and creating new meanings		
Resources:	Poster, card		

Questions / instructions:


Toni is a market gardener in Auckland

Hand student poster.

This poster shows how climate change might affect New Zealand. Climate change is the change in weather patterns over time.

Hand student card. Point to Auckland on poster.

Toni is a market gardener in Auckland. He grows vegetables.

1. How might climate change affect Toni?

		% responses y8
more irrigation required because of less rainfall, increased evaporation		28
increased chance of heat stress so will need to protect himself		1
increased winds may require added precautions *(e.g. protection cloth)*		1
other valid information from key not specfic to growing vegetables *(e.g. electricity use, financial issues)*		5

Point to Christchurch on poster.

Imagine you live in Christchurch.

2. How might climate change affect you?

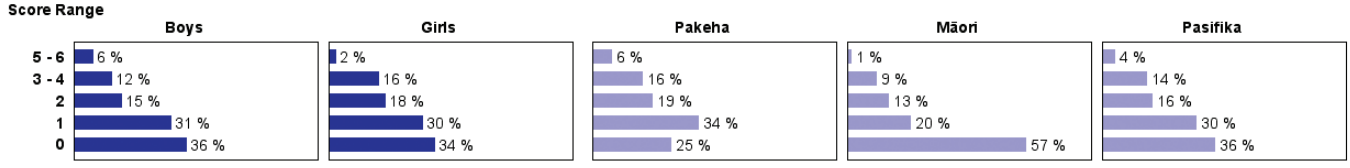
		% responses y8
Number of valid points from key likely to affect children and their lifestyle:	2	2
	1	10
	0	89
Number of valid points taken from key but not specifically relevant to lives of children:	3	3
	2	8
	1	17
	0	73

3. Give me one reason why it is important for someone of your age to know about climate change?

		% responses y8
one valid reason given		44
Total Score:	5–6	4
	3–4	14
	2	16
	1	30
	0	36

Subgroup Analyses:

Year 8



Commentary:

Most students had great difficulty with this task, with very few students showing any real grasp of the consequences of climate change. Māori students performed considerably less well than Pakeha and Pasifika students.

Task: Goldfish Memory

Approach:	Station
Focus:	Evaluating and comparing websites
Resources:	List of sites, 3 articles

Year: 8

Questions / instructions:

"Goldfish have a memory span of three seconds"

1. Which websites say this is **not** true?
   Circle the numbers.
   [See page adjacent for list of websites]

website 1 | website 2 | website 3 | website 4 | website 5 | website 6

2. The **three articles** are from different websites. They have information about goldfish memory. Which website do you think could have the **most reliable** information? Circle the letter.
   [See page adjacent for articles from websites]

website A | website B | website C

3. What are your reasons for choosing this site?

Trustworthiness of site in general:

[ABC News (C): tend to give accurate information, check their sources.
Blog (A): handles a whole range of issues and relies on ideas submitted by people somewhat haphazardly.
Ezine (B): appears likely to be somewhat selective in what goes in, refers to expert, has list below.]

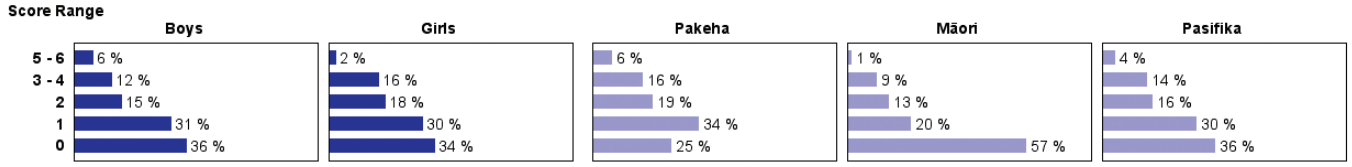
Arguments about specific evidence on the three sites:

		% responses y8
Circled:	website 1	29
✓	website 2	31
	website 3	17
	website 4	28
	website 5	23
✓	website 6	36
Circled:	website A	8
	website B	44
✓	website C	45
	comparative	9
	single site	15
	comparative	3
	single site	27

Total Score:	% responses y8
4–7	13
3	15
2	23
1	31
0	19

Subgroup Analyses:

Year 8



Commentary:

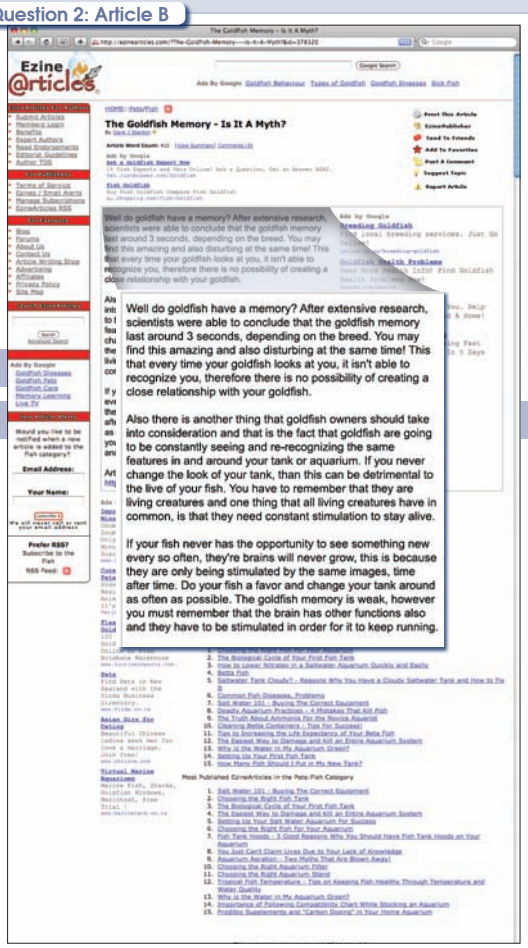
This task required students to look at the reliability of various websites and to compare their reliability. This was very difficult for most students to do, with half of the students receiving a mark of 1 or 0.

Question 1: List of sites

Question 2: Article A

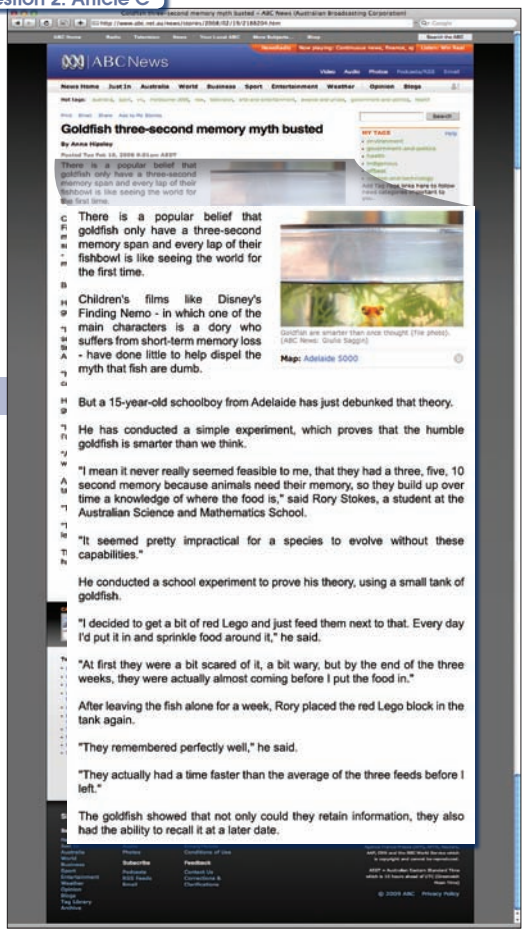
A

Question 2: Article B



B

Question 2: Article C



C

LINK TASK: 11

Approach: One to one (Y4) / Station (Y8)
Year: 4 & 8
Focus: Sorting and sequencing a process

Total Score:	% responses y4	% responses y8
9	5	15
7–8	24	33
5–6	29	33
3–4	29	13
0–2	13	6

LINK TASK: 12

Approach: Station
Year: 4 & 8
Focus: Selecting and recording; comparing and evaluating points of view

Total Score:	% responses y4	% responses y8
3	2	3
2	13	21
1	53	42
0	33	34

LINK TASK: 13

Approach: Independent
Year: 4 & 8
Focus: Interpreting answers and synthesising information to form questions

Total Score:	% responses y4	% responses y8
5	4	29
4	14	33
3	20	18
2	19	9
0–1	44	12

LINK TASK: 14

Approach: Group
Year: 4 & 8
Focus: Note-taking, sorting, interpreting and using information for making decisions

Total Score:	% responses y4	% responses y8
12–13	1	11
10–11	32	38
8–9	36	25
6–7	16	12
0–5	16	15

LINK TASK: 15

Approach: Independent
Year: 4 & 8
Focus: Sorting, synthesising and communicating information for a text message

Total Score:	% responses y4	% responses y8
10–12	14	24
8–9	20	22
6–7	24	24
4–5	21	13
0–3	21	17

LINK TASK: 16

Approach: Independent
Year: 4 & 8
Focus: Sorting, analysing and interpreting information on a chart

Total Score:	% responses y4	% responses y8
12–14	3	13
9–11	36	49
6–8	41	28
3–5	15	7
0–2	5	3

LINK TASK: 17

Approach: Session 1: Station Session 2: Team
Year: 8
Focus: Selecting and note-taking;using information for making decisions

Total Score:	% responses y4	% responses y8
7		21
6		21
5		19
4		10
1–3		29

LINK TASK: 18

Approach: Station
Year: 8
Focus: Using information for problem solving, making decisions, new meanings

Total Score:	% responses y4	% responses y8
5–6		13
4		13
3		21
2		19
0–1		34

LINK TASK: 19

Approach: Team
Year: 8
Focus: Sorting, synthesising, communicating and evaluating information

Total Score:	% responses y4	% responses y8
31–36		5
26–30		25
21–25		47
16–20		22
0–15		2

6 Information Skills Survey

Overview: Perhaps the most striking single finding in the information skills survey is that 96% of year 8 students report that they usually find information by going to the internet, twice the number reporting going to the second most popular source, their parents. This number is only slightly lower at year 4 (77%) and has risen substantially in both groups from 2001. Students enjoy seeking out information, with 80% saying they like it "heaps" or "quite a lot" at year 4, and 71% giving those responses at year 8. Four out of five students at each year level feel that they are good at finding information.

The information skills survey asked students about their strategies for, involvement in, and enjoyment of information-gathering activities. The questions were the same for year 4 and year 8 students. The survey was administered to the students in an independent-task session (four students working individually on tasks, supported by a teacher). The questions were read to year 4 students and also to individual year 8 students who requested this help.

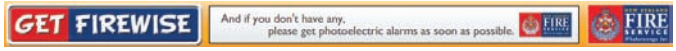
The survey included eight questions which invited students to record a rating response by circling their choice and two questions which invited students to tick up to three options from a list (including an "other" option where students could describe an additional response).

One item asked students to indicate where they usually go when trying to find information. They could tick up to three options. Their responses are shown here, in order of popularity for year 4 students, with 2001 and 2005 percentages for comparison.

For both year 4 and year 8 students, the internet was the most popular source by a substantial margin. This represented a very significant increase in popularity over the past eight years. Next most popular were "parents" followed by "books at home" or the "school library". Both the "school library" and "books at home" have slipped in popularity since 2001, especially for year 8 students.

WHERE STUDENTS USUALLY FIND INFORMATION	year 4 2009 ('05) ['01']	year 8 2009 ('05) ['01]
internet	77 (61) [47]	96 (88) [72]
parent	43 (45) [45]	48 (43) [45]
books at home	33 (37) [41]	21 (30) [38]
school library	32 (46) [51]	35 (53) [57]
town library	29 (22) [22]	29 (22) [27]
teacher	21 (25) [19]	22 (14) [10]
friend	20 (17) [17]	13 (12) [12]
DVD/CD-ROM	13 (7) [15]	3 (6) [24]
other (written in)	4 (6) [3]	2 (4) [2]

WHEN STUDENTS CAN'T FIND INFORMATION		year 4 2009 ('05) ['01] {'97}	year 8 2009 ('05) ['01] {'97}
Strategy:	keep looking	64 (71) [67] {67}	59 (58) [64] {54}
	ask a parent	50 (54) [55] {45}	51 (58) [64] {54}
	ask the teacher	38 (40) [43] {47}	52 (52) [51] {49}
	ask an expert	37 (-) [-] {-}	29 (-) [-] {-}
	ask a librarian	34 (40) [33] {35}	27 (41) [38] {50}
	ask a friend	29 (36) [34] {35}	28 (31) [38] {31}
	give up	10 (8) [7] {9}	10 (11) [10] {8}
	other (written in)	4 (6) [2] {5}	6 (7) [7] {2}



Another item asked students to indicate what they do when they can't find information they need. They could tick up to three options. Their responses are shown here, in order of popularity for year 4 students, with 2005, 2001 and 1997 percentages for comparison. The option "ask an expert" was added in 2009.

Compared to year 4 students, year 8 students placed more emphasis on asking their teacher. There has been little change in the responses over the eight years since the first survey in 1997, except for the large decline with year 8 students for "ask a librarian" (which may relate to the new option).

The remaining eight items used a rating format. The percentages of students choosing each response to these eight questions are shown in the two tables opposite. Where available, 2005, 2001 and 1997 percentages are shown for comparative purposes.

YEAR 4 INFORMATION SKILLS SURVEY 2009 (2005) (2001) {1997}

	heaps	*quite a lot*	*sometimes*	*never*
1. How often do you have to find information for a study (inquiry/research topic/project)?	15 (14) [13] {13}	29 (31) [32] {33}	52 (50) [52] {53}	4 (5) [3] {1}
2. How often do you have a really interesting study for which you have to find information?	16 (15) [12] {14}	29 (29) [31] {27}	47 (47) [51] {51}	8 (9) [6] {8}
3. How often do you look for information because you want to, not because you've been told to?	17 (17) [17] {15}	22 (20) [22] {23}	42 (43) [45] {45}	19 (20) [16] {17}
4. How often have you used a library catalogue?	21 (17)	21 (24)	37 (37)	21 (22)
				
5. How much do you like hunting for information?	41 (39) [42] {38}	39 (37) [34] {38}	15 (15) [15] {14}	5 (9) [9] {10}
6. How good do you think you are at hunting for information?	36 (32) [33] {•}	45 (42) [43] {•}	14 (19) [17] {•}	5 (7) [7] {•}
7. How much do you like sharing with others the information you find?	52 (50) [51] {•}	26 (27) [25] {•}	15 (13) [15] {•}	7 (10) [9] {•}
8. How much do you like writing down what you find out?	41 (42) [43] {41}	29 (28) [25] {32}	18 (15) [19] {14}	12 (15) [13] {13}

YEAR 8 INFORMATION SKILLS SURVEY 2009 (2005) (2001) {1997}

	heaps	*quite a lot*	*sometimes*	*never*
1. How often do you have to find information for a study (inquiry/research topic/project)?	20 (15) [18] {18}	45 (48) [47] {52}	33 (37) [34] {29}	2 (0) [1] {1}
2. How often do you have a really interesting study for which you have to find information?	9 (6) [7] {8}	30 (25) [28] {27}	56 (64) [61] {61}	5 (5) [4] {4}
3. How often do you look for information because you want to, not because you've been told to?	7 (5) [8] {9}	25 (18) [19] {19}	53 (60) [58] {60}	15 (17) [15] {12}
4. How often have you used a library catalogue?	11 (11)	24 (31)	51 (44)	14 (14)
				
5. How much do you like hunting for information?	17 (12) [17] {18}	54 (48) [51] {51}	24 (33) [25] {24}	5 (7) [7] {7}
6. How good do you think you are at hunting for information?	24 (18) [23] {•}	57 (52) [52] {•}	16 (22) [20] {•}	3 (8) [5] {•}
7. How much do you like sharing with others the information you find?	27 (31) [37] {•}	46 (42) [41] {•}	21 (20) [17] {•}	6 (7) [5] {•}
8. How much do you like writing down what you find out?	19 (16) [23] {16}	32 (34) [37] {35}	36 (32) [24] {34}	13 (18) [16] {15}

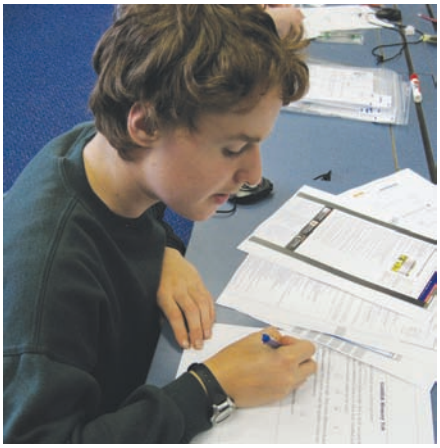
A substantially greater proportion of year 8 than year 4 students reported that they had to find information for a project or inquiry topic "heaps" or "quite a lot" (question 1). Perhaps as a consequence of being given such tasks more frequently, year 8 students were much less inclined than year 4 students to be highly enthusiastic about hunting for information (question 5) and about writing down the information they found (question 8). While year 4 students responded similarly to questions 1 and 2, the pattern was quite different for year 8 students, suggesting that many of the information-finding projects which year 8 students were asked to attempt were not viewed as "really interesting". About 75% of students are quite happy to share with others the information they have found (question 7). Where comparisons with 2005, 2001 and 1997 responses are possible, the results in 2009 are very similar to the results of the earlier surveys.

7 Performance of Subgroups

Overview: Information skills concern seeking, analysing, and understanding information. Looking at various subgroups in terms of performance on the tasks, we see that girls tend to outperform boys to a modest degree, and that the socio-economic status of the school is a strong predictor of performance. Differences by ethnicity are seen as well, with Pakeha students outperforming Māori and Pasifika students on many tasks. The home language of the student, and other variables concerning the school (size, community type, zone, and school type at year 8) have only modest if any influence on performance. Patterns of performance by subgroup are similar to previous assessments.

Although national monitoring has been designed primarily to present an overall national picture of student achievement, there is some provision for reporting on performance differences among subgroups of the sample. Eight demographic variables are available for creating subgroups, with students divided into subgroups on each variable, as detailed on page 7 of Chapter 1.

Analyses of the relative performance of subgroups used the total score for each task, created as described in Chapter 1.



SCHOOL VARIABLES

Five of the demographic variables related to the schools the students attended. For these five variables, statistical significance testing was used to explore differences in task performance among the subgroups. Where only two subgroups were compared (for *School Type*), differences in task performance between the two subgroups were checked for statistical significance using t-tests. Where three subgroups were compared, one-way analysis of variance was used to check for statistically significant differences among the three subgroups.

Because the number of students included in each analysis was quite large (approximately 420), the statistical tests were quite sensitive to small differences. To reduce the likelihood of attention being drawn to unimportant differences, the critical level for statistical significance for tasks reporting results for individual students was set at p = .01 (so that differences this large or larger among the subgroups would not be expected by chance in more than one of cases). For tasks administered to teams or groups of students, p = .05 was used as the critical level to compensate for the smaller numbers of cases in the subgroups.

Very few statistically significant differences were found for any of the school level variables except for socio-economic status. In the detailed report below, all "differences" mentioned are statistically significant (to save space, the words "statistically significant" are omitted).

School Size

Results were compared from students in large, medium-sized and small schools (exact definitions were given on page 7 of *Chapter 1*).

For year 4 students, there was a difference among the three subgroups on three of the 29 tasks, with students from large schools scoring highest on *Book Look* (p24), *Link Task 2* (p17), and *Link Task 14* (p44). There were no differences on questions of the *Information Skills Survey*.

For year 8 students, there were differences on two of the 42 tasks, with students from large schools scoring highest on *Link Tasks 9* and *10* (p31). There were no differences on questions of the *Information Skills Survey*.

Community Size

Results were compared for students living in communities containing over 100,000 people (main centre), communities containing 10,000 to 100,000 people (provincial city) and communities containing less than 10,000 people (rural areas).

For year 4 students, there were differences among the three subgroups on one of the 29 tasks. Students from the main centres scored highest on *Link Task 2* (p17). There were no differences on questions of the *Information Skills Survey*.

For year 8 students, there were differences on two of the 42 tasks, with students from main centres scoring highest on *Link Task 2* (p17) and on *Link Task 13* (p44). There was one significantly different response on the *Information Skills Survey* (p46), with students from larger communities using the internet more for looking for information because they want to, not because they are told to do so (question 3).

School Type

Results were compared for year 8 students attending full primary and intermediate (or middle) schools. There were differences between these two subgroups on one of the 42 tasks, *Link Task 2* (p17), with students in middle schools scoring higher than students in full primaries. There were no differences on the *Information Skills Survey*.

The analysis also compared students attending year 7 to 13 high schools to students attending intermediate schools. There was a difference on *Link Task 7* (p31), with students from year 7 to 13 high schools scoring higher than students attending intermediate schools. There were no differences on questions of the *Information Skills Survey*.

Zone

Results achieved by students from Auckland, the rest of the North Island, and the South Island were compared.

For year 4 students, there were differences among the three sub-groups on two of the 29 tasks. Students from the South Island scored highest on *Link Task 3* (p17). Students from the rest of the North Island (excluding Auckland) performed less well than the other two groups on *Link Task* 13 (p44). There were no differences on questions of the *Information Skills Survey*.

For year 8 students, there were differences among the three subgroups on five of the 42 tasks: students from the South Island scored highest on *Consumer Kids* (p33), *Cell Phones* (p39), and *Link Task* 15 (p44). Students from Auckland scored highest on *Link Task 2* (p17), and students from Auckland and the South Island outperformed students from the rest of the North Island on *Link Task 5* (p31). On the *Information Skills Survey* (p46), students from Auckland were the least likely to have to find information for a study (question 1), and students from the South Island were most likely to say that they look for information because they want to rather than have to (question 3).

Socio-Economic Index

Schools are categorised by the Ministry of Education based on census data for the census mesh blocks where children attending the schools live. The resulting index takes into account household income levels and categories of employment. It uses 10 subdivisions, each containing 10% of schools (deciles 1 to 10). For our purposes, the bottom three deciles (1-3) formed the low decile group, the middle four deciles (4-7) formed the medium decile group, and the top three deciles (8-10) formed the high decile group. Results were compared for students attending schools in each of these three decile groups.

For year 4 students, there were differences among the three subgroups on 19 of the 29 tasks, spread across the three task chapters. Because of the number of tasks showing differences, they are not listed here. Students in high decile schools performed better than students in low decile schools on all 19 tasks, usually with larger gaps between low and medium decile schools than between medium and high decile schools. There was also a difference on one question of the *Information Skills Survey* (p46): students from high decile schools were most positive about writing down information (question 8), with students from low decile schools being least positive.

For year 8 students, there were differences among the three subgroups on 33 of the 42 tasks, spread across the three task chapters. Because of the number of tasks showing differences, they are not listed here. Students in high decile schools performed better than students in low decile schools on all 33 tasks, usually with larger gaps between low and medium decile schools than between medium and high decile schools. There were no differences on *Information Skills Survey*.

STUDENT VARIABLES

Three demographic variables related to the students themselves:

- *Gender:* boys and girls
- *Ethnicity:* Māori, Pasifika and Pakeha (this term was used for all other students)
- *Language used predominantly at home:* English and other.

The analyses reported compare the performances of boys and girls, Pakeha and Māori students, Pakeha and Pasifika students, and students from predominantly English-speaking and non-English-speaking homes.

For each of these three comparisons, differences in task performance between the two subgroups are described using "effect sizes" and statistical significance.

For each task and each year level, the analyses began with a t-test comparing the performance of the two selected subgroups and checking for statistical significance of the differences. Then the mean score obtained by students in one subgroup was subtracted from the mean score obtai ned by students in the other subgroup, and the difference in means was divided by the pooled standard deviation of the scores obtained by the two groups of students. This computed effect size describes the magnitude of the difference between the two subgroups in a way that indicates the strength of the difference and is not affected by the sample size. An effect size of .30, for instance, indicates that students in the first subgroup scored, on average, three tenths of a standard deviation higher than students in the second subgroup.

For each pair of subgroups at each year level, the effect sizes of all available tasks were averaged to produce a mean-effect size for the curriculum area and year level, giving an overall indication of the typical performance difference between the two subgroups.

Gender

Results achieved by male and female students were compared using the effect-size procedures.

For year 4 students, the mean-effect size across the 22 tasks was 0.11 (girls averaged 0.11 standard deviations higher than boys). This difference is small. There were statistically significant ($p < .01$) differences favouring girls on 5 of the 22 tasks: *Platypus* (p23), *School Fair* (p13), and *Link Tasks 1, 3* (p17) and *13* (p44). There were also differences on two of the questions on the *Information Skills Survey* (p46): girls were more positive than boys on Question 5 (*"How much do you like hunting for information?"*) and Question 8 (*"How much do you like writing down what you find out?"*).

For year 8 students, the mean-effect size across the 34 tasks was 0.16 (girls averaged 0.16 standard deviations higher than boys): a small difference. There were statistically significant differences on 15 of the 34 tasks, with girls performing better on all 15 tasks, spread across the three task chapters. Because of the number of tasks showing differences, they are not listed here. There were also differences on the same two questions of the survey as for the year 4 students, again with girls being more positive about hunting for and writing down information.

Ethnicity

Results achieved by Māori, Pasifika and Pakeha (all other) students were compared using the effect-size procedures. First, the results for Pakeha students were compared to those for Māori students. Second, the results for Pakeha students were compared to those for Pasifika students.

Pakeha-Māori Comparisons

For year 4 students, the mean-effect size across the 22 tasks was 0.40 (Pakeha students averaged 0.40 standard deviations higher than Māori students). This is a moderate to large difference. There were statistically significant differences ($p < .01$) on 17 of the 22 tasks, spread across the three task chapters. Pakeha students scored higher than Māori students on all 17 tasks. Because of the number of tasks showing differences, they are not listed here. There was one difference on questions of the *Information Skills Survey* (p46), Question 1, with Māori students reporting being more likely to have to find information for a study.

For year 8 students, the picture was similar. The mean-effect size across the 34 tasks was 0.33 (Pakeha students averaged 0.33 standard deviations higher than Māori students). This is a moderate difference. There were statistically significant differences on 26 of the 34 tasks, spread across the three task chapters. Pakeha students scored higher than Māori students on all 26 tasks. Because of the number of tasks showing differences, they are not listed here. There were no differences on questions of the *Information Skills Survey*.

Pakeha-Pasifika Comparisons

Readers should note that only about 30 to 50 Pasifika students were included in the analysis for each task. This is lower than normally preferred for NEMP subgroup analyses, but has been judged adequate for giving a useful indication, through the overall pattern of results, of the Pasifika students' performance. Because of the relatively small numbers of Pasifika students, $p = .05$ has been used here as the critical level for statistical significance.

For year 4 students, the mean-effect size across the 22 tasks was 0.49 (Pakeha students averaged 0.49 standard deviations higher than Pasifika students). This is a large difference. There were statistically significant differences on 19 of the 22 tasks, spread across the three task chapters. Pakeha students scored higher on all 19 tasks. Because of the number of tasks showing differences, they are not listed here. There were no differences on the *Information Skills Survey*.

For year 8 students, the mean-effect size across the 34 tasks was 0.41 (Pakeha students averaged 0.41 standard deviations higher than Pasifika students). This is a moderate to large difference. There were statistically significant differences on 20 of the 34 tasks, spread across the three task chapters. Pakeha students scored higher on all 20 tasks. Because of the number of tasks showing differences, they are not listed here. There were no differences on the *Information Skills Survey*.

Home Language

Results achieved by students who reported that English was the predominant language spoken at home were compared, using the effect-size procedures, with the results of students who reported predominant use of another language at home (most commonly an Asian or Pasifika language). Because of the relatively small numbers in the "other language" group, p = .05 has been used here as the critical level for statistical significance.

For year 4 students, the mean-effect size across the 22 tasks was 0.18 (students for whom English was the predominant language at home averaged 0.18 standard deviations higher than the other students). This is a small difference. There were statistically significant differences on 7 of the 22 tasks: students for whom English was the predominant language spoken at home scored higher on *Book Look* (p24), *Everyday Detective* (p20), School Fair (p13), and *Link Tasks 1*, *4* (p17), Link Tasks *6* and *9* (p31). There were also differences on five questions of the *Information Skills Survey* (p46). Students whose predominant language at home was not English reported that they were more likely to have to find information for a study (Question 1), more often have interesting studies for which they have to find information (Question 2), more often use a library catalogue (Question 4), enjoy hunting for information more (Question 5), and like writing down what they find more (Question 8).

For year 8 students, the mean-effect size across the 34 tasks was 0.26 (students for whom English was the predominant language at home averaged 0.26 standard deviations higher than the other students). This is a moderate difference. There were statistically significant differences on 15 of the 34 tasks: students for whom English was the predominant language spoken at home scored higher on all 15 tasks, spread across the three task chapters. Because of the number of tasks showing differences, they are not listed here. There was a difference on Question 4 of the *Information Skills Survey* (p46) with students whose predominant language at home was not English reporting that they were more likely to use a library catalogue than students whose home language was English.

Summary, with Comparisons to Previous Information Skills Assessments

School type (full primary, intermediate, or year 7 to 13 high school), school size, community size and geographic zone were not important factors in predicting achievement on the information skills tasks. The same was true for the three previous assessments (2005, 2001, and 1997). However, there were statistically significant differences in the performance of students from low, medium and high decile schools on 77% of the tasks at year 4 level (compared to 57% in 2005, 43% in 2001 and 81% in 1997) and 62% of the tasks at year 8 level (compared to 54% in 2005, 71% in 2001 and 56% in 1997).

For gender, ethnic, and home language comparisons, effect sizes were used. Effect size is the difference in mean (average) performance of the two groups, divided by the pooled standard deviation of the scores on the particular task. For this summary, these effect sizes were averaged across all tasks.

Year 4 girls averaged slightly higher than boys, with a mean effect size of 0.11 (compared to 0.14 in 2005 and 0.06 in 2001). Year 8 girls averaged slightly higher than boys, with a mean effect size of 0.16 (compared to 0.27 in 2005 and 0.15 in 2001). As was also true in 2001, the *Information Skills Survey* (p46) results at both year levels showed some evidence that girls were more positive than boys about information skills activities, similar to 2005.

Pakeha students averaged moderately higher than Māori students, with mean effect sizes of 0.40 for year 4 students and 0.33 for year 8 students (the corresponding figures in 2005 were .36 and .27, and in 2001 were 0.25 and 0.39).

Year 4 Pakeha students averaged substantially higher than Pasifika students, with a mean effect size of 0.49 (compared to 0.37 in 2005 and 0.40 in 2001). Year 8 Pakeha students averaged moderately to substantially higher than Pasifika students, with a mean effect size of 0.41 (compared to 0.48 in 2005 and 0.46 in 2001). There were almost no differences among ethnic groups on the *Information Skills Survey*.

Compared to students for whom the predominant language at home was English, students from homes where other languages predominated averaged slightly to moderately lower, with mean effect sizes of 0.18 for year 4 students (compared to 0.16 in 2005) and 0.26 for year 8 students (compared to 0.18 in 2005). At year 4, students whose home language was not English were more enthusiastic about a number of aspects of information skills.

Appendix : The Sample of Schools and Students in 2009

Year 4 and Year 8 Samples

In 2009, 2638 children from 228 schools were in the main samples to participate in national monitoring. About half were in year 4, the other half in year 8. At each level, 110 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).

In late April 2009, 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 2009.

From these lists, we randomly selected 110 schools with year 4 students and 110 schools with year 8 students. Schools with four students in year 4 or 8 had a less than 1% chance of being selected, while some of the largest intermediate (year 7 and 8) schools had a more than 90% chance of inclusion.

Pairing Small Schools

At the year 8 level, three of the 110 chosen schools in the main sample had fewer 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 11 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. Here, five pairs of very small schools were included in the sample, giving a total of 115 schools.

Contacting Schools

In the middle of May, 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 DVD, 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 middle of June.

A similar procedure was followed at the end of July with the principals of the schools selected in the year 4 samples. They were asked to respond to the invitation within about three weeks.

Response from Schools

Of the 113 schools originally invited to participate at year 8 level, 110 agreed. Of the 115 schools originally invited to participate at year 4 level, 111 agreed. The most common reason for withdrawal was severe space constraints, usually associated with current redevelopment work. The schools who withdrew were replaced by schools with similar characteristics from the same district.

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 102 comments about particular students. In 61 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. The remaining 41 comments concerned children with special needs. Each such child was discussed with the school and a decision agreed. Eight students were replaced because they were very recent immigrants or overseas students who had extremely limited English-language skills. Nineteen 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 14 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 146 comments about particular students. Forty-four students originally selected were replaced because they had left the school or were expected to be away throughout the assessment week. Two students were replaced because they were not correctly classified as year 4 students. Thirty-one students were replaced because of their NESB status and very limited English. Fifty-six 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 13 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. Eight students were replaced because they did not want to participate or their parents did not want them to (usually because of concern about missing regular classwork).

At the year 4 level we also received several phone calls from parents. Some wanted details confirmed or explained (notably about reasons for selection). Four children were replaced at their parents' request.

Practical Arrangements 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. About 3% of selected schools in the main samples did not participate, and less than 4% 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 apart from the one to two percent who were in special schools, Māori immersion programmes, or schools with fewer than four year 4 or year 8 children).

Of course, not all the children in the samples actually could be assessed. Two student places in the year 8 sample were not filled because insufficient students were available in small schools. One student at each year level was withdrawn because they had been incorrectly classified as year 4 or year 8. Three year 8 students and two year 4 students left school at short notice and could not be replaced. Four year 8 students and one year 4 student withdrew or were withdrawn by their parents or school too late to be replaced. Twenty-one year 8 students and 20 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 very 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 most of the tasks over 90% of the sampled students were 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	4.5	3.6
Auckland	33.6	33.6
Waikato	10.0	10.0
Bay of Plenty/Poverty Bay	8.2	8.2
Hawkes Bay	3.6	3.6
Taranaki/Whanganui/Manawatu	7.3	8.2
Wellington/Wairarapa	10.9	10.9
Nelson/Marlborough/West Coast	3.6	3.6
Canterbury	11.8	11.8
Otago/Southland	6.4	6.4

DEMOGRAPHY

DEMOGRAPHIC VARIABLES: PERCENTAGES OF STUDENTS IN EACH CATEGORY			
VARIABLE	CATEGORY	% YEAR 4 SAMPLE	% YEAR 8 SAMPLE
Gender	Male	51	52
	Female	49	48
Ethnicity	Pakeha	67	69
	Māori	22	22
	Pasifika	11	9
Geographic Zone	Greater Auckland	32	33
	Other North Island	46	45
	South Island	22	22
Community Size	< 10,000	16	16
	10,000 – 100,000	28	21
	> 100,000	56	63
School SES Index	Bottom 30%	26	24
	Middle 40%	40	44
	Top 30%	34	32
Main Language at Home	English	84	86
	Other	16	14
Size of School	< 25 y4 students	20	
	25 – 60 y4 students	46	
	> 60 y4 students	34	
	<35 y8 students		20
	35 – 150 y8 students		34
	> 150 y8 students		46
Type of School	Full Primary		34
	Intermediate or Middle		50
	Year 7 to 13 High School		11
	Other *(not analysed)*		5

Resource Acknowledgements

The National Education Monitoring Project (NEMP) acknowledges the vital support and contribution of the people and organisations who have granted permission for the publication of their work in this report, in the illustration of NEMP assessment resources.

pg	task	resource	reference
14	**Earthquake Disaster Plan**	Cards	[Civil Defence Worker, First Aid Teacher, Rescue Worker] St John's Ambulance Resource CD, 2009.
			[Doctor] University of Otago, Dunedin, New Zealand. Retrieved on April 29, 2010 from Image Library database.
			[Rescue Worker] *US Navy 040315-N-8921O-001 Hospital Corpsman 2nd Class Eric Lembke, of Virginia Beach, Va., prepares tto be lowered out of a UH-3H Sea King helicopter during a Search and Rescue (SAR) exercise.jpg.* Retrieved on 29 April, 2010, under the terms of the Creative Commons Attribution/Share-Alike License from *http://commons.wikimedia.org/wiki.*
19	**Book Sort**	Book Covers (8)	Jordon, S. (1995). *Tanith*, New Zealand.: Ashton Scholastic
			Dodd, L. (1989). *Hairy Maclary's Rumpus at the Vet.*: Penguin Group (UK)
			Riddell, T.A. (2003). *Toroa - The Royal Albatross.*: Huia NZ Ltd
			Kerr, B. (1998). *Strange Tales from the Mall.*: Mallinson Rendell (NZ)
			Drewery, M. (2003). *Mataiki.*: Penguin Group NZ Ltd
			Crowe, A. (1999). *Life-Size Guide to Insects.*: Penguin Group NZ Ltd
			Cooper, C. (2003). *Niue, Pacific Way.*: Reed Children's Books, Auckland, NZ
			Stenson, M. (2004). *Illustrated History of New Zealand.*: Random House NZ Ltd
20	**Everyday Detective**	Cards	Journals listed below are published by Learning Media on behalf of the Ministry of Education: Wellington, New Zealand:
			[Mereana] Heke, A. (photo). *Meet the Tribe*: *School Journal, SL (4) 1999, 1–16.*
			[Chris] Stirling, G. (photo). *Get Lost: School Journal, SL (1) 2002, 2–16.*
			[Rata] Heke, A. (photo). *Bottle Rock: School Journal, SL (1) 2003, 1–16.*
			[Hazel] Belcher, A. (photo). *Beach Watch: School Journal, SL (1) 1999, 2–16.*
			[Niusha] Heke, A. (photo). *Don't Sit on the Roof of Our House*: *School Journal, Pt 2 (1) 2004, 6–9.*
23	**Platypus**	Image	IBM, (1998). *Platypus.*: World Book, Macintosh Edition, Version 1 PN# WB504
26	**Get Firewise**	Image	[Website] Retrieved on April 15, 2010, from *http://firewise.fire.org.nz/index.html* *[Important note: The search term menu shown is based on the New Zealand Fire Service Firewise website, as at time of task development in 2005, and is now out of date. The website shown is the site as at April 2010, showing the current program which teachers are encouraged to use.]*
27	**Fishy Calendar**	Images	Paul, L. & Heath, E. (1997). *Marine Fishes of New Zealand 1.*: Reed, 1997
28	**Best Book**	Book	Dunedin Public Library. (1994). *www.dunedinlibraries.com*
29	**Maori Dictionary**	Book	Ryan, P.M. (1994). P.M. *Ryan's Dictionary of Modern Maori.*: Heinemann - Reed Publishing, NZ.
30	**Parliament Poster**	Photo	*PitaSharples.jpg.* Retrieved on April 4, 2009 from http://www.beehive.govt.nz/gallery/dr+pita+sharples, © Crown Copyright 2007.
		Poster	January 28, 2009 issue of Otago Daily Times, Dunedin, New Zealand.
33	**Consumer Kids**	Book	Davis, F.L. (1999). *I Can Write - Card 4.*: Learning Media, Wellington, NZ
			Good Housekeeping Institute. (1996). *Good Housekeeping: The Essential Book of Parenting.*: Ebury Press, Random House, London.
36	**Fiji and Niue**	Book	Cooper, C. (2003). *Niue, Pacific Way.*: Reed Children's Books, Auckland, NZ
			Cooper, C. (2003). *Fiji: Pacific Way.*: Reed Children's Books, Auckland, NZ
40	**Lizard**	Photo	Ryan, P. *http://www.ryanphotographic.com/gemmeus.htm*
41	**Climate Change**	Photo	Culbert,D. UF/IFAS, *DSCN3205.JPG.* Retrieved February15, 2009 from *http://okeechobee.ifas.ufl.edu.*
		Poster	Retrieved February 15, 2009 from *http://www.mfe.govt.nz/issues/climate/resources/impact-map/index.html* © Ministry for the Environment, New Zealand.

The range and quantity of information available to us is rapidly increasing, and skill in accessing, collating, interpreting and using information is very helpful to most educational, work and leisure activities.

While there is substantial coverage of information skills in other reports, national monitoring includes this set of assessments specifically focused on information skills which are only lightly or unsystematically covered in other reports. These skills include clarifying information needs; finding suitable sources of information; searching those sources for specific information needed; gathering that information; interpreting, collating and reporting it.

National monitoring provides a "snapshot" of what New Zealand children can do at two levels, at the middle and end of primary education (year 4 and year 8).

The main purposes for national monitoring are:

- to meet public accountability and information requirements by identifying and reporting patterns and trends in educational performance
- to provide high quality, detailed information which policy makers, curriculum planners and educators can use to debate and review educational practices and resourcing.

NEMP National Education Monitoring Project

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UNIVERSITY of OTAGO
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