6 Technology Survey

Attitudes and Motivation

The national monitoring assessment programme recognises the impact of attitudinal and motivational factors on student achievement in individual assessment tasks. Students' attitudes, interests and liking for a subject have a strong bearing on progress and learning outcomes. Students are influenced and shaped by the quality and style of curriculum delivery, the choice of content and the suitability of resources. Other important factors influencing students' achievements are the expectations and support of significant people in their lives, the opportunities and experiences they have in and out of school, and the extent to which they have feelings of personal success and capability.

Technology Survey

The national monitoring technology survey sought information from students about their perceptions of their achievement and potential in technology. Students were also asked about their involvement in technology-related activities within school and beyond. The survey was administered to both year 4 and year 8 students in independent format, with teacher help readily available. Three survey questions invited a written or spoken response. Results for these questions are reported later in this chapter. The remaining six questions (one in nine parts) asked students to select a response on a three or four-point rating scale. The responses to these six questions are summarised in the two tables below. The first of the rating questions was unchanged from 1996 and 2000, so comparative figures for the earlier surveys are also presented for that question.

YEAR 4 TECHNOLOGY SURVEY RESPONSES 2004 (2000) [1996]

1. How much do you like doing technology at school?

47 (56) (57)	34 (29) (38)	14 (9) (4)	5 (6) (1)

2. How much do you think you learn about technology at school?

heaps	*quite a lot*	*some*	*very little*
18	29	45	8

3. Would you like to do more or less technology at school?

more	*about the same*	*less*
45	41	14

4. How often does your class do really good things in technology?

heaps	*quite a lot*	*sometimes*	*never*
13	26	37	24

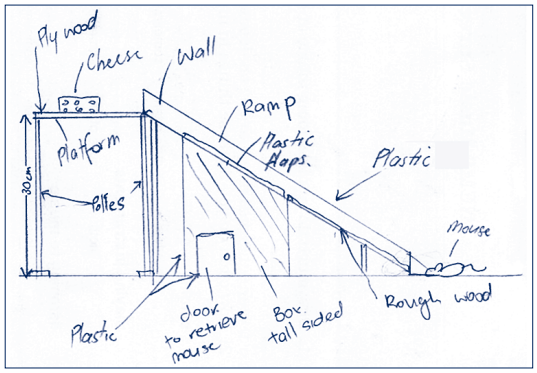
5. How good do you think you are at technology?

23	49	19	9

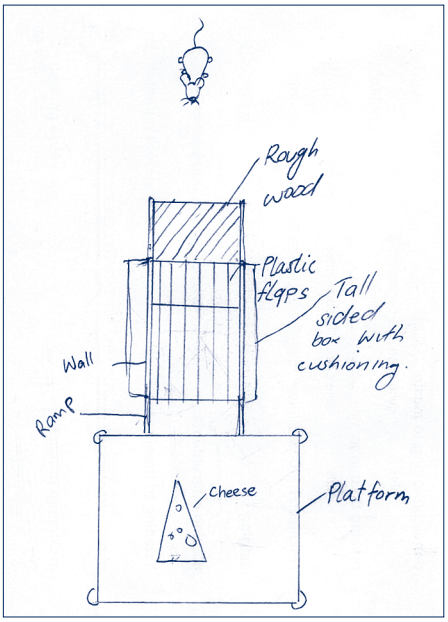
6. How often do you do these things in technology at school?

	heaps	*quite a lot*	*sometimes*	*never*
a. think about how technology affects people	18	26	39	17
b. find and use information to help make decisions	17	29	40	14
c. make visits or have visitors to help learn about technology	16	18	35	31
d. design things	35	26	27	12
e. try to find out what people want, need or like	18	23	40	19
f. change things to improve them	24	26	33	17
g. make things	43	26	26	5
h. learn how to use tools and equipment	25	20	35	20
i. check how good our ideas or designs are	29	28	31	12

The results show that 81 percent of year 4 students were positive about doing technology at school in 2004, choosing one of the two positive ratings, but this was four percent fewer than in 2000 and 14 percent fewer than in 1996. Less than half of the students thought they learned “heaps” or “quite a lot” about technology at school, 45 percent reported that they would like to learn more, and less than 40 percent believed that their class did really good things in technology “heaps” or “quite a lot”. Asked about how good they thought they were at technology, 23 percent were very positive and 49 percent more mildly positive.



When asked to indicate their perceptions of the frequency of nine different aspects of technological activity at school, year 4 students identified making things and designing things as the most common activities, followed by evaluating their ideas or designs, learning how to use tools and equipment, and changing things to improve them.



YEAR 8 TECHNOLOGY SURVEY RESPONSES 2004 (2000) [1996]

1. How much do you like doing technology at school?

55 (57) (45)	37 (36) (48)	6 (6) (6)	2 (1) (1)

2. How much do you think you learn about technology at school?

heaps	*quite a lot*	*some*	*very little*
18	52	29	1

3. Would you like to do more or less technology at school?

more	*about the same*	*less*
46	49	5

4. How often does your class do really good things in technology?

heaps	*quite a lot*	*sometimes*	*never*
11	36	42	11

5. How good do you think you are at technology?

20	63	15	2

6. How often do you do these things in technology at school?

	heaps	*quite a lot*	*sometimes*	*never*
a. think about how technology affects people	22	26	43	9
b. find and use information to help make decisions	19	41	33	7
c. make visits or have visitors to help learn about technology	12	18	41	29
d. design things	42	31	23	4
e. try to find out what people want, need or like	15	31	43	11
f. change things to improve them	26	36	32	6
g. make things	55	29	14	2
h. learn how to use tools and equipment	48	28	20	4
i. check how good our ideas or designs are	26	39	30	5

Since 1996, year 8 students have remained very positive about doing technology at school, with 92 or 93 percent choosing a positive rating in 1996, 2000 and 2004, and more than half choosing the most positive rating in both 2000 and 2004. A question in the 2004 *Reading and Speaking* survey showed that technology was the second favourite subject among the 14 listed subjects for year 8 students (cf. tenth for year 4 students). Seventy percent of the year 8 students thought they learned "heaps" or "quite a lot" about technology at school, but 46 percent reported that they would like to learn more, and less than 50 percent believed that their class did really good things in technology "heaps" or "quite a lot". Asked about how good they thought they were at technology, 20 percent were very positive and 63 percent more mildly positive.

When asked to indicate their perceptions of the frequency of nine different aspects of technological activity at school, year 8 students identified making things, learning how to use tools and equipment, and designing things as the most common activities, followed distantly by evaluating their ideas or designs and changing things to improve them.

The remaining three survey questions were open-ended, inviting students to give written or spoken responses. For each question, the students' responses were categorised into several categories, as indicated on the adjacent page.

What is technology?

At the beginning of the survey, students were asked what they thought technology was. Up to four different responses could be recorded for each student. The table below categorises both year 4 and year 8 responses into eight categories. Comparisons with responses to a similar question in 2000 and 1996 appeared inappropriate because of changes in the structure of the questionnaire.

WHAT IS TECHNOLOGY?	% responses year 4	% responses year 8
hi-tech equipment/computers	33	38
making and designing	18	36
learning about equipment	2	6
science	13	6
inventing	4	6
meeting needs, solving problems	4	11
workshop subjects	9	32
other appropriate	6	15

Many year 4 students appeared unsure what technology was, with 46 percent of students not responding at all. About 60 percent of those responding (33 percent of those filling in the year 4 *Technology Survey*) associated technology with the use of hi-tech equipment and computers, with about half as many associating technology with designing and/or making things.

A very different picture emerged with year 8 students. Over 80 percent of students responded to the question, with 38 percent identifying technology with hi-tech equipment and/or computers, 36 percent identifying it with designing and making things, and 32 percent identifying it with workshop subjects in school.

What do you require to be good at technology?

Students were asked "what are three things a person needs to be able to do to be really good at technology?" Their responses were categorised into eight categories and are summarised in the table below.

WHAT IS REQUIRED TO BE GOOD AT TECHNOLOGY?	% responses year 4	% responses year 8
good at making, building, using equipment, measuring, working with hands	29	38
good personal, interpersonal and communication skills, such as listening and teamwork	23	39
have lots of knowledge or practise a lot	23	28
good imagination or ideas	7	21
good at using computers	6	6
good at science, maths, or other related subjects	9	5
good at solving problems	2	3
good at other appropriate skills	9	15

For both year 4 and year 8 students, the most common responses fell in three categories:

- good at making, building, using equipment, measuring, working with hands;
- good personal, interpersonal and communication skills, such as listening and teamwork;
- have lots of knowledge or practise a lot.

For year 8 students only, having good imagination or ideas was also a quite prominent category.

What sort of technology things do you do in your own time – when not at school?

Students were asked what sort of technology things they did in their own time. Their responses were categorised into six categories.

For year 4 students *Construction* was clearly the most popular category with 41 percent of students responding with a related comment. The next two most popular activities were:

- electronics – TV, video, games (19 percent of students)
- computer (18 percent of students).

In 2000, the corresponding figures were 40 percent, 12 percent and 17 percent.

For year 8 students *Construction* was also the most popular category with 49 percent of students responding. The following two most popular activities were:

- cooking or sewing (38 percent of students)
- electronics – TV, video, games (33 percent of students)
- computers (24 percent of students).

In 2000, the corresponding figures were 54 percent, 38 percent, 15 percent and 40 percent.

The apparent shift from "computer" activities in 2000 to "electronics" activities in 2004 may have resulted from different interpretations in 2000 and 2004 of how to categorise responses involving electronic games. It is increasingly hard to distinguish electronic games that are played on game consoles from those played on computers, so electronic gaming may predominantly have been placed under the "electronics" category in 2004.