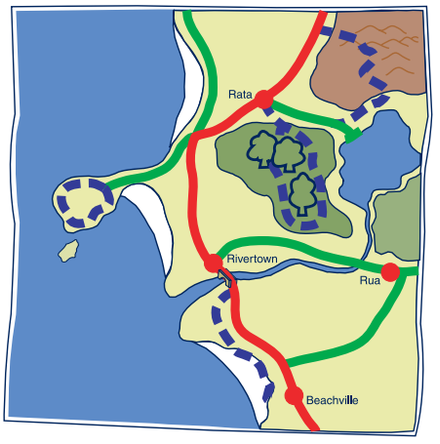
Interpretation of Graphs, Tables and Maps 3

Thirty-five of the assessment tasks presented students with completed graphs, tables or maps and asked them to extract and interpret particular information.

Twenty-three tasks were completely or largely the same for year 4 and year 8 students. Five of these are trend tasks (fully described with data for both 1999 and 2003) six are released tasks (fully described with data for 2003 only), and 12 are link tasks (to be used again in 2007 so only partially described here). Three trend tasks were attempted only by year 4 students. The remaining nine tasks, including five trend tasks, one released task and three link tasks, were attempted only by year 8 students.

The tasks were presented to students in three formats. Five tasks involved more complex instructions or required more extended responses. These were administered in one-to-one interview format. Twenty-four tasks were presented in station format. The remaining six tasks were presented in independent format.

The task details and results for trend tasks are presented in the first section, followed by the task details and results for released tasks. The



third section contains a little task information and the results for the link tasks. Within each of the three sections, tasks used with both year 4 and year 8 students are presented first, followed by tasks used only with year 4 students and then by tasks used only with year 8 students.

Comparing results for year 4 and year 8 students

Averaged across 116 task components used with both year 4 and year 8 students, 76 percent of year 8 students produced correct responses compared to 52 percent of year 4 students. This indicates that, on average, students have made substantial progress between year 4 and year 8 in the skills assessed by the tasks. Nearly one third of the task components were answered successfully by at least 90 percent of year 8 students. The largest difference between year 4 and year 8 students occurred with reading timetables.

Trend results: comparing 1999 and 2003 results

Seven trend tasks involving 37 task components were administered to year 4 students in both the 1999 and 2003 assessments. More 2003 than 1999 students succeeded on 13 components, while more 1999 than 2003 students succeeded on 22 components. Averaged across all 37 components, two percent fewer students succeeded in 2003 than in 1999. This suggests a small decline in performance for year 4 students over the four-year period.

Ten trend tasks involving 60 task components were administered to year 8 students in both the 1999 and 2003 assessments. More 2003 than 1999 students succeeded on 23 components, while more 1999 than 2003 students succeeded on 29 components. Averaged across all 60 components, one percent fewer students succeeded in 2003 than in 1999, not a meaningful change in performance over the four-year period.

Trend Task: School Camp Activities

Approach: Station
Year: 4 & 8
Focus: Interpreting a table
Resources: Activities chart

SCHOOL CAMP ACTIVITIES CHART					
Names of Groups	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Explorers	Archery F	Confidence Course A	Water Safety B	Seashore Study C	Tent Pitching
Crazy Campers	Yachting E	Archery F	Confidence Course A	Water Safety B	Seashore Study C
Adventurers	Tent Pitching	Yachting E	Archery F	Confidence Course A	Water Safety B
Cool Kids	Seashore Study C	Tent Pitching	Yachting E	Archery F	Confidence Course A

Questions / instructions:

The children at Tahi School are at school camp. They do lots of different activities every day.

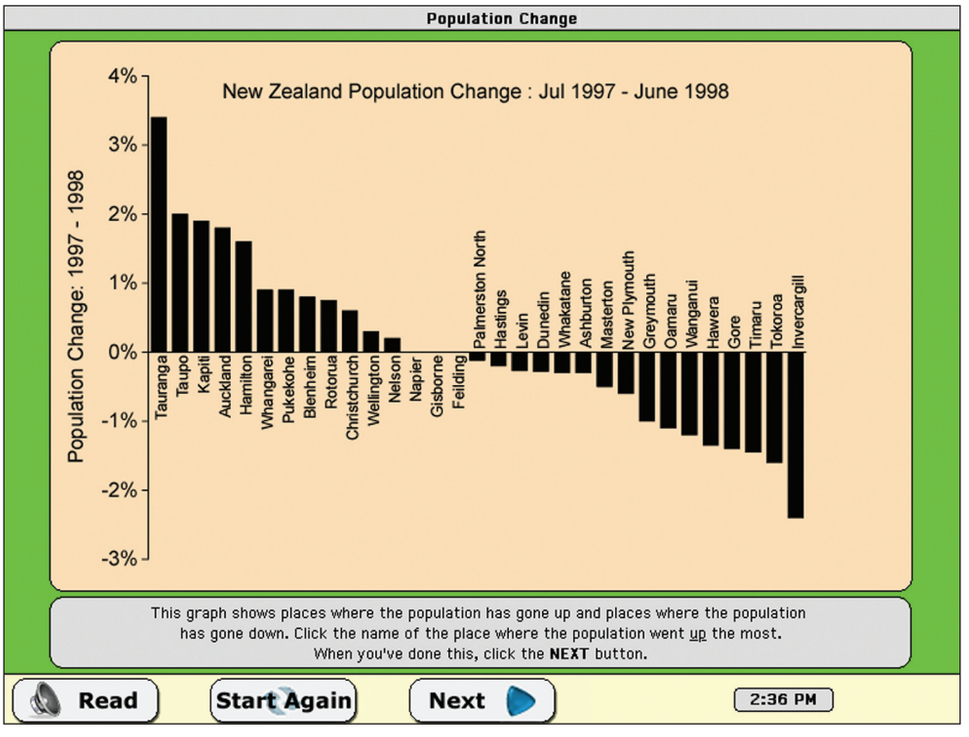
Look closely at the Activities Chart, then answer the questions.

		% responses 2003 ('99) year 4	year 8
1. How many different activities are there?	6	20 (23)	64 (62)
	5	15 (14)	12 (13)
2. Look at the *Activities Chart*. The teacher has forgotten to put a letter after the words "Tent Pitching". What letter should she have written?	D	48 (52)	76 (75)
3. Which group does the *Seashore Study* first?	Cool Kids	56 (53)	84 (81)
4. Which activity is *not* done by the *Explorers*?	yachting	60 (60)	87 (89)
5. If a group started at the *Tent Pitching*, what activity would they do next?	yachting	75 (77)	90 (90)
Total Score:	6	10 (10)	50 (43)
	4–5	28 (30)	28 (36)
	2–3	37 (39)	17 (17)
	0–1	25 (21)	5 (4)

Commentary:

For both year 4 and year 8 students, there was no change over four years in their ability to read a chart of activities. Forty percent more year 8 than year 4 students got all questions correct in 2003.

Approach:	Station
Year:	4 & 8
Focus:	Interpreting a bar graph
Resources:	Laptop computer with task software



Questions / instructions:

This activity is done on the computer. Click on the button that says **Population Change**. The computer will tell you what to do.

[Soundtrack to program gave instructions. The same instructions appeared, at the same time, in a text box at the bottom of the computer screen.]

This graph shows places where the population has gone up and places where the population has gone down.

		% responses 2003 ('99) year 4	year 8
Click the name of the place where the population went up the most.	Tauranga	88 (89)	95 (97)
Click the name of the place where the population went down the most.	Invercargill	43 (46)	82 (75)
Click the names of the places where the population has not changed.	Napier, Gisborne, Feilding	16 (17)	54 (49)
By how much did Taupo's population go up? Type your answer into the yellow box.	2%	63 (47)	87 (80)
Total score:	4	9 (12)	48 (42)
	3	25 (17)	29 (28)
	2	37 (35)	17 (20)
	1	24 (31)	5 (10)
	0	5 (5)	1 (0)

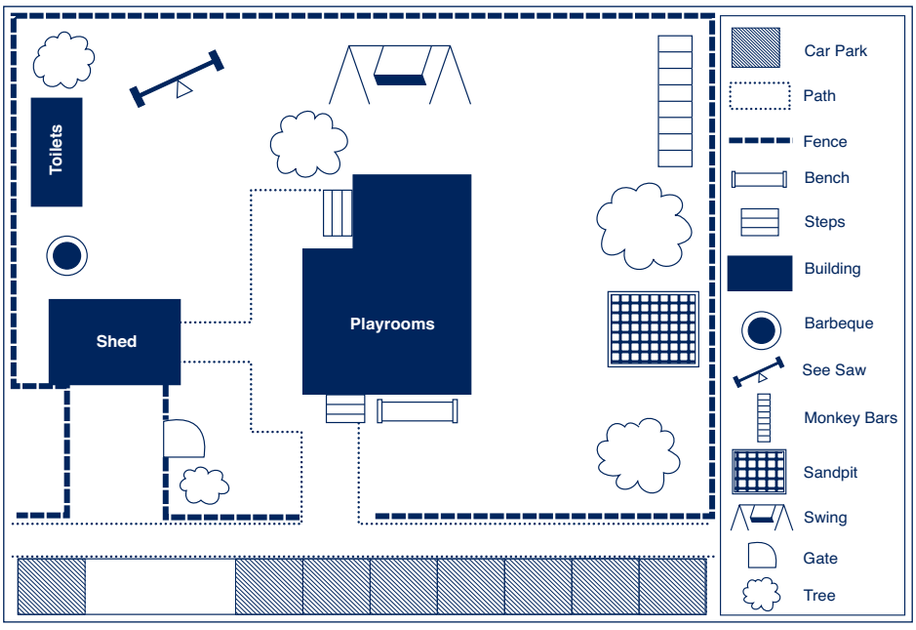
Commentary:

For year 4 and year 8 students there was no change between 1999 and 2003.

Trend Task: Playground Map

NEMP Access Task

Approach: Station
Focus: Interpreting a map
Resources: Red pen, map in recording book
Year: 4 & 8



Questions / instructions:

Here is a map of the Newtime Kindergarten.

Look at it then answer the questions below.

1. How many buildings are there?

	% responses 2003 ('99) year 4	year 8
3	88 (87)	9

2. When the two teachers have parked their cars, how many parks are left?

	year 4	year 8
6	32 (62)	58 (77)
5	7 (5)	9 (3)

3. If someone was in the sandpit, what could they see?

Circle the right answers.

toilets **swings** **fence**
barbeque **tree** shed

	year 4	year 8
swings	49 (61)	62 (71)
fence	55 (66)	69 (76)
tree	81 (91)	95 (96)

4. **Use the red pen** to mark in, on the map, the quickest way from the toilets to the bench without going inside.

	year 4	year 8
correct route	51 (65)	86 (87)

5. More gates need to be put in to keep the children from going onto the road. **Use the red** pen to mark in where the gates should be put.

	year 4	year 8
front gate	28 (31)	39 (36)
front gate and elsewhere	42 (44)	49 (52)

	year 4	year 8
Total score: 8	6 (20)	30 (41)
6–7	28 (39)	40 (43)
4–5	39 (26)	26 (12)
2–3	24 (14)	4 (3)
0–1	3 (1)	0 (1)

Commentary:

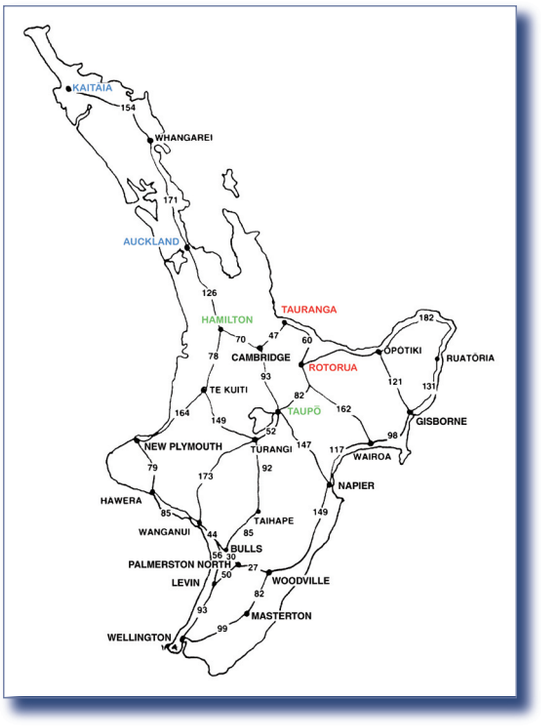
There were declines in performance for both year 4 and 8 students between 1999 and 2003, larger for year 4 than year 8. Both year 4 and year 8 students in 2003 had more difficulty when required to use subtraction to answer a question (Q2) or, for year 4 students, to identify features visible from a given position (Q3). Overall, year 8 students interpreted the map more correctly than year 4 students (70% cf 34% achieved a total score of six or more in 2003).

Trend Task: **Tripping Around**

NEMP Access Task

Approach:	One to one
Focus:	Interpreting a map
Resources:	Map

Year: 4 & 8



Questions / instructions:

In this activity you will need this map of the North Island.
[Year 4 map was as above, with some town names in colour. Year 8 map was in black only.]

The map was designed to show driving distances between towns and cities.

Give student map of North Island. Help student locate cities if necessary.

		% responses 2003 ('99) year 4	year 8
1. How far is it from Rotorua to Tauranga?	60km	77 (83)	94 (94)
2. How would I work out how far it is from Auckland to Kaitaia?	325km	35 (40)	75 (60)
3. If I wanted to go the shortest way from Taupo to Hamilton which town would I go through?	Cambridge	91 (90)	92 (98)
Total score:	4	32 (34)	67 (58)
	3	8 (11)	20 (23)
	2	35 (37)	10 (16)
	1	22 (16)	3 (3)
	0	3 (2)	0 (0)

Commentary:

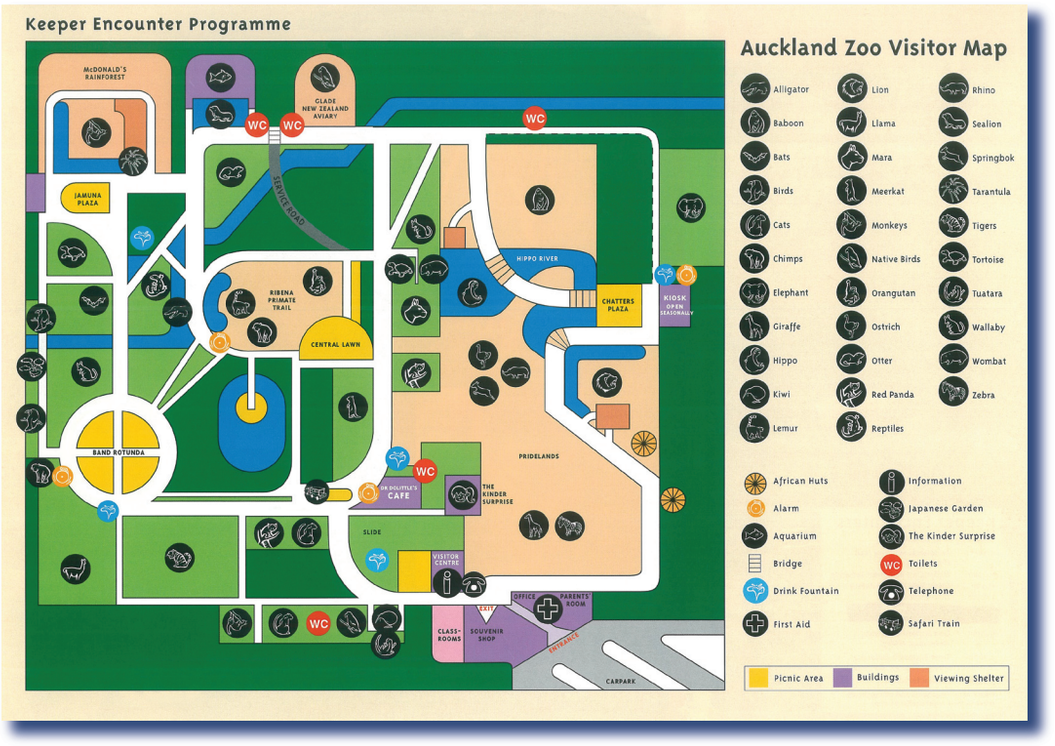
There was relatively little change between 1999 and 2003 in the ability of year 4 and year 8 students to determine distances and routes on a map. About twice as many year 8 students as year 4 students got all questions correct in 2003 (67 percent versus 32 percent).

Trend Task: Auckland Zoo

NEMP Access Task

Approach:	Station
Focus:	Interpreting a map
Resources:	Map, red pen, blue pen

Year: 4 & 8



Questions / instructions:

This is a map of Auckland Zoo. Use this map to help you answer the questions.

		% responses 2003 ('99) year 4	year 8
1. Find the entrance to the zoo. Mark it with a red **X**.		88 (87)	97 (95)
2. Start from the entrance. Draw in red the quickest way to get to the tigers. Mark **T** for tigers.	quickest way from the entrance to the tigers	56 (53)	80 (82)
	tigers marked with T	81 (84)	92 (91)
3. Start from the tigers. Draw in blue the quickest way to get to the bats. Mark **B** for the bats.	quickest way from the tigers to the bats	32 (26)	67 (62)
	bats marked with B	85 (86)	93 (91)
4. Some parts of the map are coloured purple. What does this mean?	buildings	55 (58)	86 (87)
5. Find the toilet nearest to the elephants. Circle it in red.		65 (75)	93 (93)
Total score:	7	12 (9)	50 (47)
	5–6	46 (52)	39 (42)
	3–4	30 (29)	10 (8)
	1–2	9 (9)	1 (3)
	0	3 (1)	0 (0)

Commentary:

Year 4 and year 8 students achieved very similarly in 1999 and 2003. Students were particularly strong in most aspects of locating places on a map (Q1 and Q5).

Trend Task: **Cheese Slices**

NEMP Access Task

Approach:	Station
Focus:	Interpreting tables
Resources:	2 pictures with table on reverse of each

Year: 4

Questions / instructions:

Different cheeses have different amounts of fat.

Look at the information that is on both of the cheese slice packets.

		% responses 2003 ('99) year 4	year 8
1. How much fat is in one slice of *Light and Trim* cheese?	3.2g	81 (77)	
2. How much fat is in one slice of *Cheddar* cheese?	5.3g	80 (72)	
3. Which cheese has more fat?	Cheddar	85 (81)	
Total score:	5	69 (63)	
	4	6 (7)	
	3	6 (7)	
	2	3 (3)	
	0–1	16 (19)	

Commentary:

Year 4 students in 2003 were able to read a chart about food nutrients slightly better than students in 1999. Seventy percent or more students correctly answered each question in both years.

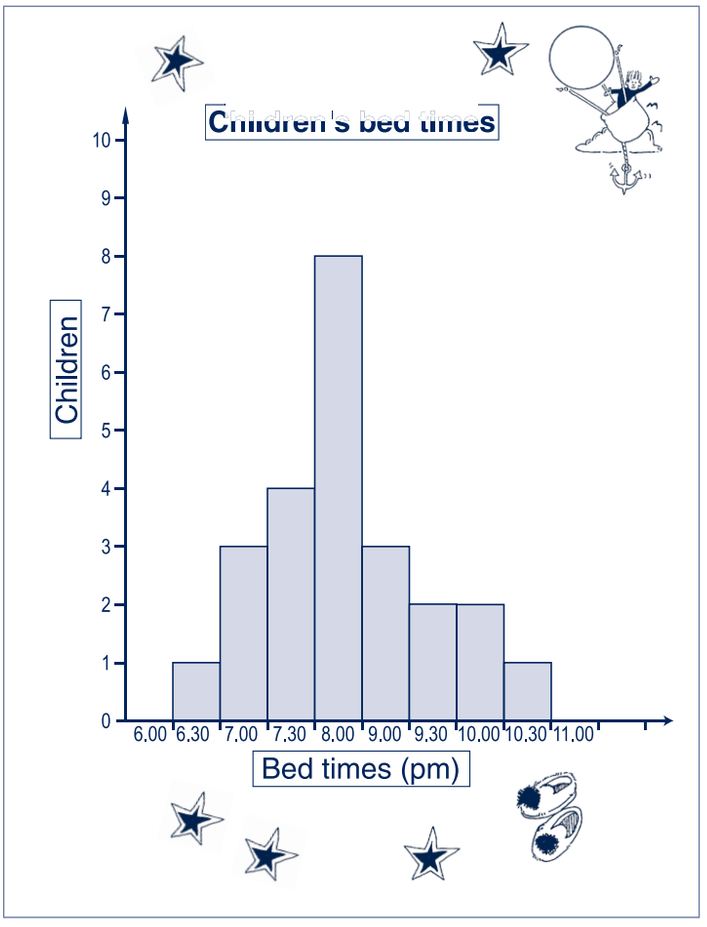
Trend Task: Bed Times

NEMP Access Task

Approach:	Independent	Year:	4
Focus:	Interpreting a bar graph		
Resources:	Bar graph in resource book, red pen		

Questions / instructions:

The children in the class made a **graph** showing their bed times.



		% responses 2003 ('99) year 4
1. What is the earliest bed time?	6:30 (pm)	51 (49)
2. How many children go to bed at 7:30?	4	78 (76)
3. What time do most children go to bed?	8 (pm)	85 (85)
4. How many more children go to bed at 8.00 than 7.30?	4	65 (61)
Total score:	4	36 (34)
	3	33 (29)
	2	14 (19)
	1	9 (10)
	0	8 (8)

Commentary:

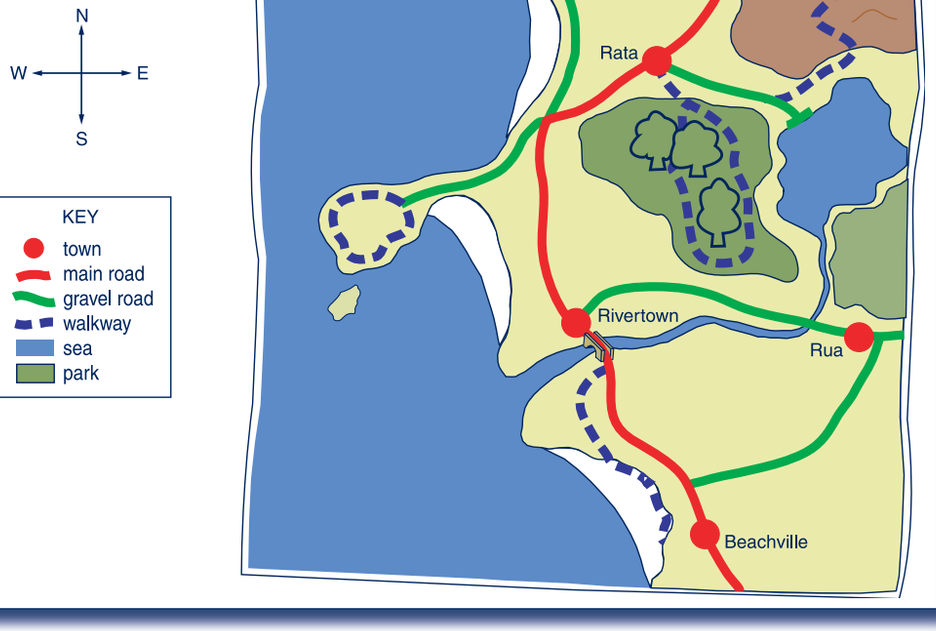
There is no change between 1999 and 2003 in year 4 students' ability to read a simple bar graph. About a third of year 4 students answered all questions accurately.

Trend Task: **Green Park**

Approach:	Station
Focus:	Interpreting a map
Resources:	Map

Year: 4

Map of Green Park



Questions / instructions:

Look at the map of Green Park.

		% responses 2003 ('99) year 4	year 8
1. How many towns are shown on the map?	4	91 (92)	
2. How many walkways are shown on the map?	4	65 (72)	
3. Does the map show more sea or land?	land	65 (69)	
4. What does the line from Rata to Beachville mean?	main road	51 (59)	
5. Is Rata north or south of Rivertown?	north	64 (70)	
6. Which town will you have to go through when going from Rua to Rata?	Rivertown	87 (86)	
Total score:	6	17 (23)	
	5	29 (33)	
	4	27 (25)	
	2–3	23 (17)	
	0–1	3 (2)	

Commentary:

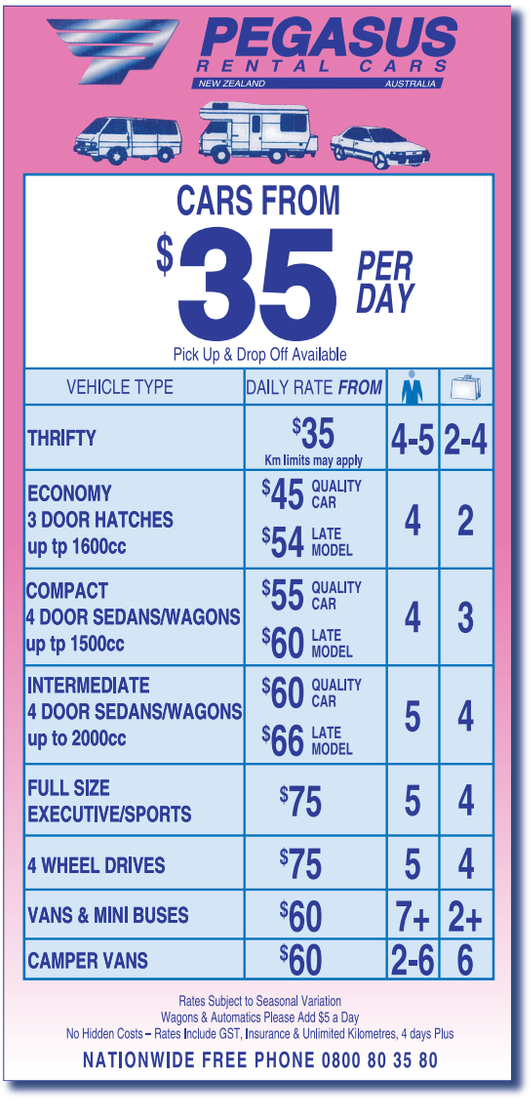
The ability of year 4 students in 2003 to interpret a map is similar to that of students in 1999. About 50 percent of students got five or six of the questions correct.

Trend Task: Renting a Car

Approach: Station
Focus: Interpreting a table
Resources: Rate card
Year: 8

Questions / instructions:

Look at the Pegasus Rental Car chart to help you answer the questions.



PEGASUS RENTAL CARS
NEW ZEALAND AUSTRALIA

CARS FROM $35 PER DAY
Pick Up & Drop Off Available

VEHICLE TYPE	DAILY RATE *FROM*		
THRIFTY	$35 Km limits may apply	4-5	2-4
ECONOMY 3 DOOR HATCHES up tp 1600cc	$45 QUALITY CAR $54 LATE MODEL	4	2
COMPACT 4 DOOR SEDANS/WAGONS up tp 1500cc	$55 QUALITY CAR $60 LATE MODEL	4	3
INTERMEDIATE 4 DOOR SEDANS/WAGONS up to 2000cc	$60 QUALITY CAR $66 LATE MODEL	5	4
FULL SIZE EXECUTIVE/SPORTS	$75	5	4
4 WHEEL DRIVES	$75	5	4
VANS & MINI BUSES	$60	7+	2+
CAMPER VANS	$60	2-6	6

Rates Subject to Seasonal Variation
Wagons & Automatics Please Add $5 a Day
No Hidden Costs – Rates Include GST, Insurance & Unlimited Kilometres, 4 days Plus
NATIONWIDE FREE PHONE 0800 80 35 80

		% responses 2003 ('99) year 8
1. Look at the 4 wheel drives. How much would you pay each day for a 4 wheel drive?	$75	93 (88)
2. How many people can comfortably fit into the 4 wheel drive?	5	96 (93)
3. How many suitcases can the 4 wheel drive take?	4	95 (95)
4. Imagine that 11 people in a hockey team are travelling to another town. Which vehicle would be best?	van and/or minibus	64 (80)
	other combination of vehicles	31 (5)
5. Why did you choose that vehicle? Try to give two reasons.	2 good reasons	54 (48)
	1 good reason	41 (46)
Total score:	7	32 (36)
	5–6	60 (50)
	3–4	7 (11)
	1–2	1 (2)
	0	0 (1)

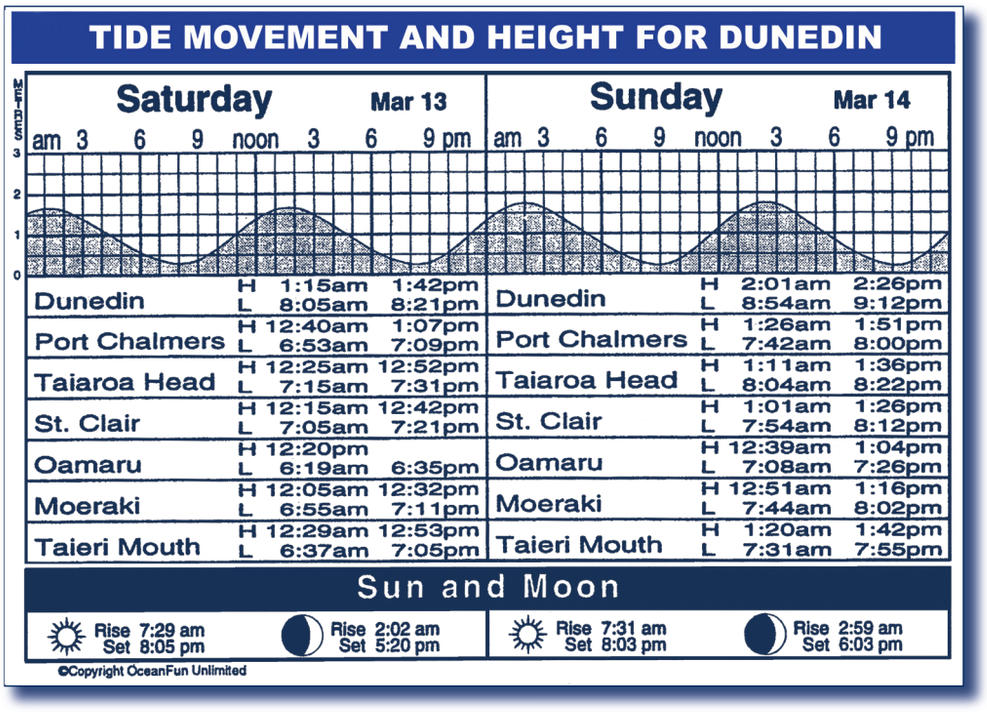
Commentary:

More than 90 percent of year 8 students could answer a range of questions requiring them to interpret a table in a brochure. Only about 50 percent of students could provide complete justifications for an answer. There is very little change between 1999 and 2003 in students' performace overall, although in 2003, students used a wider range of alternatives for selecting vehicles to transport a large number of people.(Q4).

Trend Task: **Tides**

NEMP Access Task

Approach:	One to one	**Year:**	8
Focus:	Interpreting a table and a graph		
Resources:	Chart with table		



TIDE MOVEMENT AND HEIGHT FOR DUNEDIN

	Saturday Mar 13		Sunday Mar 14	
Dunedin	H 1:15am	1:42pm	H 2:01am	2:26pm
	L 8:05am	8:21pm	L 8:54am	9:12pm
Port Chalmers	H 12:40am	1:07pm	H 1:26am	1:51pm
	L 6:53am	7:09pm	L 7:42am	8:00pm
Taiaroa Head	H 12:25am	12:52pm	H 1:11am	1:36pm
	L 7:15am	7:31pm	L 8:04am	8:22pm
St. Clair	H 12:15am	12:42pm	H 1:01am	1:26pm
	L 7:05am	7:21pm	L 7:54am	8:12pm
Oamaru	H 12:20pm		H 12:39am	1:04pm
	L 6:19am	6:35pm	L 7:08am	7:26pm
Moeraki	H 12:05am	12:32pm	H 12:51am	1:16pm
	L 6:55am	7:11pm	L 7:44am	8:02pm
Taieri Mouth	H 12:29am	12:53pm	H 1:20am	1:42pm
	L 6:37am	7:05pm	L 7:31am	7:55pm

Sun and Moon

Rise 7:29 am Set 8:05 pm | Rise 2:02 am Set 5:20 pm | Rise 7:31 am Set 8:03 pm | Rise 2:59 am Set 6:03 pm

Questions / instructions:

Give student tide chart.

This chart gives information about tides, the sun and moon.

H means high tide and **L** means low tide.

1. Look for Sunday, March 14th.

   At what time in the afternoon will it be high tide at Port Chalmers? 1.51pm

2. Look at Saturday, March 13th. Imagine that you want to catch low tide at St.Clair. What times would you catch a low tide?

   Correct choices: 7.05am & 7.21pm

3. The tide chart also has information about the sun and the moon. Look at the moon for Saturday, March 13th.

   Try to tell me three things about the moon on this date.

   rises at 2.02am

   sets at 5.20pm

   is a crescent / $\frac{1}{3}$ moon

Point to Saturday 13 March tide section of the graph.

4. Now look at the graph for Saturday March 13th.

   What is happening between 2 am and 6 am? tide is going out

5. Who might find this chart helpful?

   people who need to know about the level of the sea *(or examples of such people)*

	% responses 2003 ('99) year 8
1. 1.51pm	57 (70)
2. 7.05am	88 (88)
2. 7.21pm	74 (81)
3. rises at 2.02am	79 (83)
3. sets at 5.20pm	78 (84)
3. is a crescent / $\frac{1}{3}$ moon	12 (49)
4. tide is going out	59 (55)
5. people who need to know about the level of the sea *(or examples of such people)*	85 (70)

Total score:

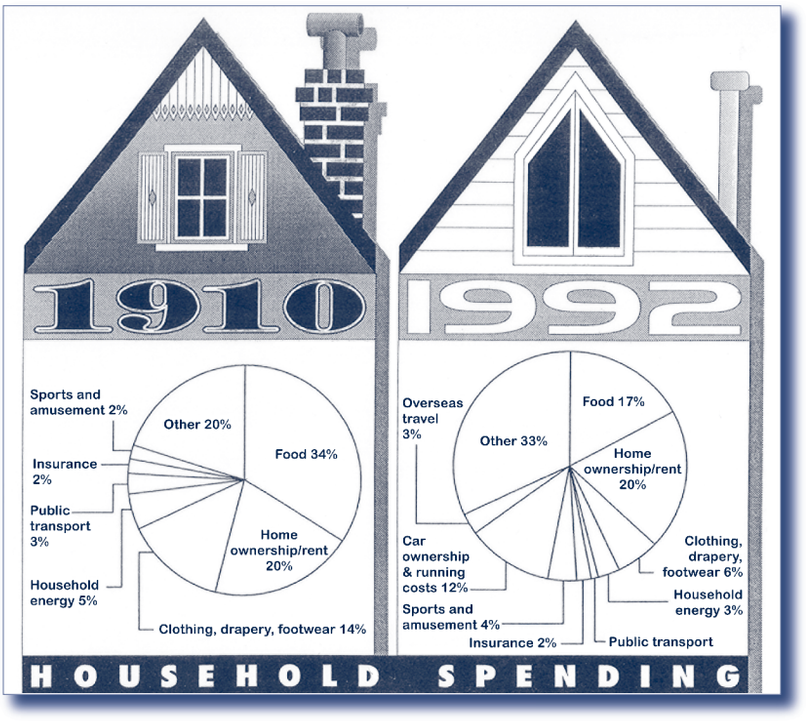
	% responses 2003 ('99) year 8
8–9	27 (42)
6–7	46 (37)
4–5	19 (14)
2–3	6 (5)
0–1	2 (2)

Commentary:

There was a slight decline in year 8 students' ability to interpret aspects of related material presented in a table and a graph from 1999 to 2003. Overall, 27 percent of students in 2003 compared with 42 percent in 1999 scored more than seven overall.

Trend Task: Household Spending

Approach:	Independent	Year:	8
Focus:	Interpreting two graphs		
Resources:	Chart		



Questions / instructions:

The graphs show household spending in 1910 and 1992.

	% responses 2003 ('99) year 8
1. What things had the same percent of spending in 1910 and 1992?	
insurance and home ownership	54 (58)
insurance only	4 (4)
home ownership only	34 (32)
2. What did 1910 households spend a higher percentage of their money on than 1992 households?	
food	81 (82)
clothing/drapery/footwear	44 (47)
household energy	43 (42)
public transport	37 (38)
3. What one area did 1910 households spend most on? food	90 (89)
Total score: 7	24 (26)
5–6	21 (21)
3–4	39 (39)
1–2	14 (12)
0	2 (2)

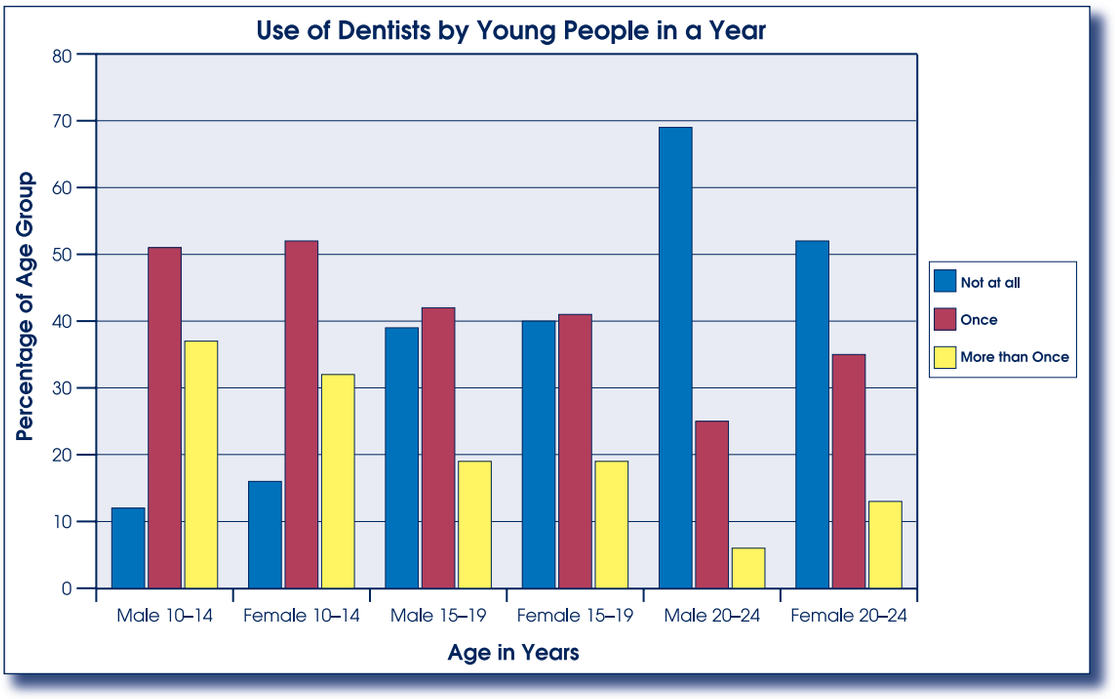
Commentary:

In 2003, year 8 students showed a range of responses when interpreting a pair of graphs (from 37 to 90 percent). There is no change in the level of achievement between 1999 and 2003.

Trend Task: **Going to the Dentist**

Approach:	One to one
Focus:	Interpreting a graph
Resources:	Graph

Year: 8



Questions / instructions:

Give student graph.

Here is a graph about people's visits to the dentist.

I'm going to ask you some questions, and you will need to look at the graph to find the answers.

		% responses 2003 ('99) year 8
1. What does the graph show about the number of visits to the dentist as people get older?	people go less often as they get older	64 (64)
2. Which group of people have the smallest number of visits to the dentist?	males 20-24 years old	66 (69)
3. What percentage of males aged 10–14 go to the dentist once a year?	51–52%	58 (62)
4. What are three things this graph tells about dentist visits by females aged 10–14?	3 points made	41 (43)
	2 points made	13 (12)
	1 point made	15 (13)
Total score:	6	19 (21)
	4–5	34 (33)
	2–3	29 (29)
	0–1	18 (17)

Commentary:

Year 8 students in 2003 interpreted a graph with the same level of success as year 8 students in 1999. About 20 percent of students answered all questions accurately.

Trend Task: Delivery Girl

Approach: Independent
Year: 8
Focus: Interpreting a map
Resources: Map in recording book, red pen

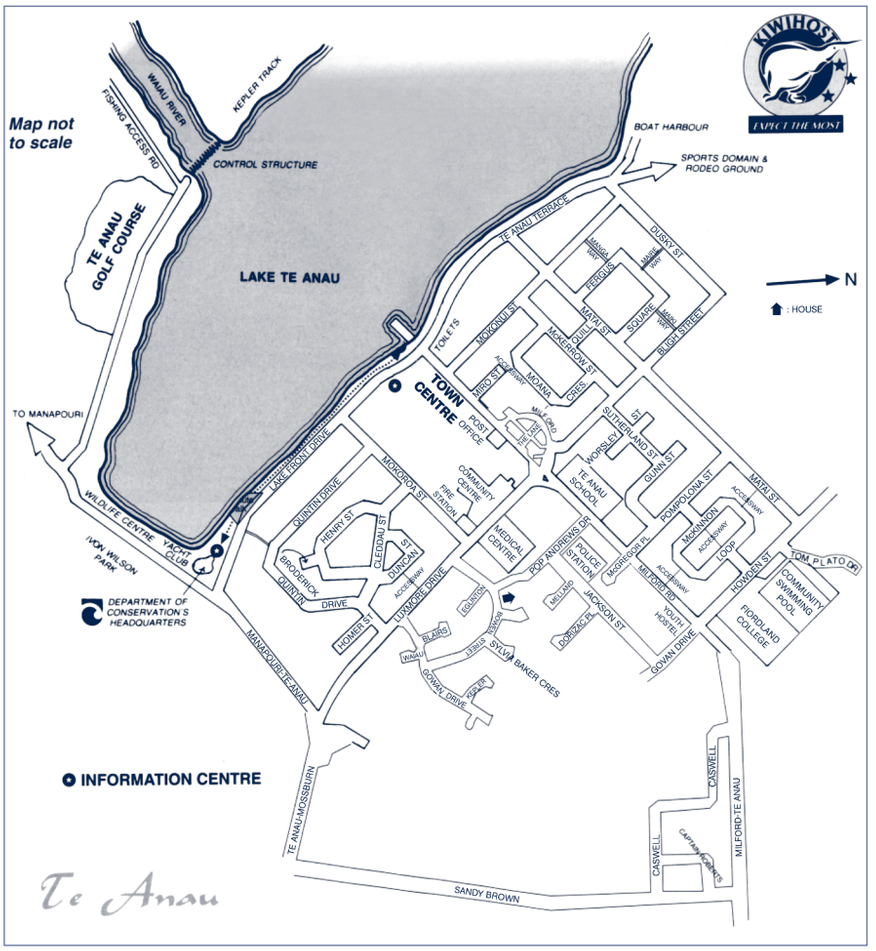
Questions / instructions:

Nicole has an after-school job. She delivers parcels from the post office to places in the town. She likes to finish at the swimming pool for a swim.

Nicole has parcels to take to these places, starting from the **post office:**

- medical centre
- house in Bowen Street (shown as ⌂)
- Te Anau school
- police station

With a red pen draw the **shortest way** to deliver the parcels from the post office, and then end up at the swimming pool.

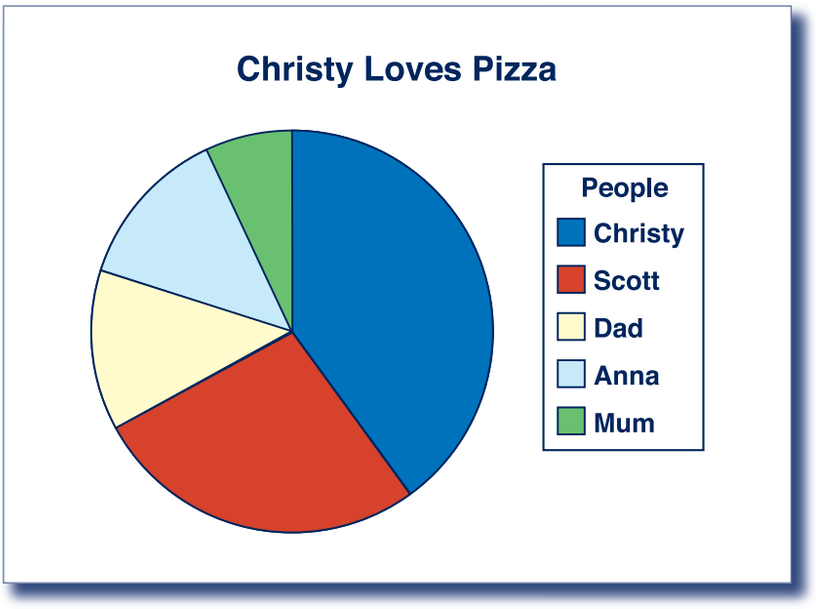


	% responses 2003 ('99) year 8			% responses 2003 ('99) year 8
starts at post office	96 (98)			
passes medical centre	93 (95)			
passes house in Bowen St	84 (90)	**Total score:**	8	37 (42)
passes police station	91 (94)		6–7	38 (36)
passes Te Anau school	95 (95)		4–5	17 (17)
finishes at swimming pool	89 (88)		2–3	7 (4)
shortest route	41 (43)		0–1	1 (1)

Commentary:

There is no difference between 1999 and 2003 in year 8 students' ability to interpret a map by following directions. While about 90 percent or more students correctly identified each of five locations on the map, only about 40 percent were able to plot the shortest route to complete instructions.

Task:	Christy Loves Pizza		
Approach:	Station	Year:	4 & 8
Focus:	Interpreting a pie graph		
Resources:	Graph		



Questions / instructions:

The pie graph shows how much everyone in Christy's family ate from one pizza.

		% responses y4	% responses y8
1. Who ate the most?	Christy	98	98
2. Who ate the least?	Mum	96	99
3. Who ate equal amounts?	Anna and Dad	82	95
4. Did Scott eat more, less, or the same as Dad and Anna together?			
a. more			
b. less			
c. about the the same	c	35	53
Total score:	4	29	50
	3	58	46
	2	10	4
	1	3	0

Commentary:

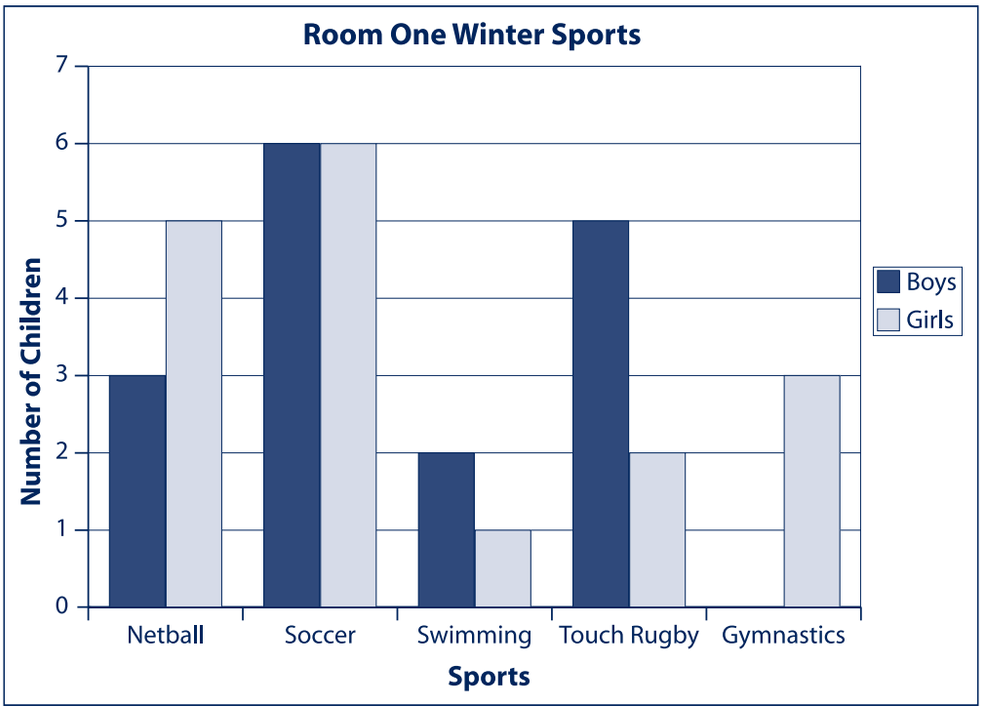
Both year 4 and year 8 students were very successful at interpreting a simple pie graph when asked to identify straightforward information. Where a complex interpretation was required (Q4), about 50 percent of year 8 and 35 percent of year 4 students were successful.

Task: Room One Winter Sports

NEMP Access Task

Approach:	Station
Focus:	Interpreting a graph
Resources:	Graph in recording book

Year: 4 & 8



Questions / instructions:

Look at the graph. It shows the sports that children in Room One play in the winter.

		% responses y4	% responses y8
1. What are two things this graph tells you about soccer?			
	the same number of boys and girls play soccer	20	39
	six boys play soccer	18	17
	six girls play soccer	17	17
	soccer is most popular *(for boys, girls, both)*	28	46
2. Which sports do girls play more than boys?	netball	82	89
	gymnastics	30	55
3. More boys play touch rugby than girls. How many more?	3	58	83
4. How many children go swimming?	3	68	93
Total score:	6–8	7	21
	4–5	36	56
	2–3	37	19
	0–1	20	4

Commentary:

Year 8 students were more successful than year 4 students in interpreting the graph. About 75 percent of year 8 students scored six or more of the items correctly, compared with 43 percent of year 4 students.

Task: **Train Tickets**

Approach: Station **Year:** 4 & 8
Focus: Interpreting a timetable
Resources: Table in recording book

CHILD SINGLE FARES IN $ DOLLARS

Paraparaumu	4.00	4.00	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.00	2.00	2.00	2.00	1.00	
Paekakariki	3.50	3.50	2.50	2.50	2.50	2.50	2.00	2.00	2.00	1.50	1.50	1.50	1.50		30
Muri	3.00	3.00	2.00	2.00	2.00	2.00	1.50	1.50	1.50	1.00	1.00	1.00		36	48
Pukerua Bay	3.00	3.00	2.00	2.00	2.00	2.00	1.50	1.50	1.50	1.00	1.00		24	36	48
Plimmerton	2.50	2.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00		24	24	36	48
Mana	2.50	2.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00		24	24	24	36	48
Paremata	2.50	2.50	1.50	1.50	1.50	1.50	1.00	1.00		24	24	36	36	48	60
Porirua	2.00	2.00	1.00	1.00	1.00	1.00	1.00		24	24	24	36	36	48	60
Kenepuru	2.00	2.00	1.00	1.00	1.00	1.00		24	24	24	24	36	36	48	60
Linden	1.50	1.50	1.00	1.00	1.00		24	24	36	36	36	48	48	60	72
Tawa	1.50	1.50	1.00	1.00		24	24	24	36	36	36	48	48	60	72
Redwood	1.50	1.50	1.00		24	24	24	24	36	36	36	48	48	60	72
Takapu Road	1.50	1.50		24	24	24	24	24	36	36	36	48	48	60	72
Kaiwharawhara	1.00		42	42	42	42	48	48	60	60	60	72	72	84	96
Wellington		24	42	42	42	42	48	48	60	60	60	72	72	84	96
	Wellington	Kaiwharawhara	Takapu Road	Redwood	Tawa	Linden	Kenepuru	Porirua	Paremata	Mana	Plimmerton	Pukerua Bay	Muri	Paekakariki	Paraparaumu

CHILD MONTHLY FARES IN $ DOLLARS

Questions / instructions:

This table shows how much it costs for a child to catch a train between different places.

		% responses y4	% responses y8
1. How much does it cost for a single fare from Wellington to Plimmerton?	$2.50	21	63
	2.50	18	9
2. How much is a monthly fare between Pukerua Bay and Takapu Road?	$48	5	40
	48	5	9
Total score:	2	6	43
	1	36	35
	0	58	22

Commentary:

There was a marked difference between year 4 and year 8 students in interpreting a timetable. In addition, year 8 students answered the questions fully more frequently by providing the unit of money (e.g. $2.50), rather than just the amount of money (e.g. 2.50).

Task: Movie Prices

NEMP Access Task

Approach: Station
Year: 4 & 8
Focus: Interpreting a price and time table
Resources: Price and time table

Questions / instructions:

Look at the table showing movie prices.

Movie Prices

PRICES IN AUCKLAND, HAMILTON AND DUNEDIN

	TUESDAY	MON & WED		THURS & FRI		SAT & SUN
	All day	Before 5pm	After 5pm	Before 5pm	After 5pm	All day
Child	$7.00	$7.00	$7.50	$7.00	$7.50	$7.50
High School Student	$9.50	$9.50	$10.50	$10.00	$11.00	$11.00
Adult	$9.50	$9.50	$12.50	$12.00	$13.00	$13.00
Senior Citizen	$7.00	$7.00	$7.50	$7.00	$7.50	$7.50

PRICES IN WELLINGTON AND CHRISTCHURCH

	TUESDAY	MON & WED		THURS & FRI		SAT & SUN
	All day	Before 5pm	After 5pm	Before 5pm	After 5pm	All day
Child	$6.50	$6.50	$6.50	$6.50	$7.00	$7.00
High School Student	$8.00	$8.00	$9.00	$9.00	$10.00	$10.00
Adult	$8.00	$8.00	$11.00	$11.00	$12.00	$12.00
Senior Citizen	$6.50	$6.50	$6.50	$6.50	$7.00	$7.00

		% responses y4	% responses y8
1. In Auckland how much does it cost for a child to go to the movies on Saturday?	$7.50	86	98
2. In Christchurch what days and times does it cost $7 for a child to go to the movies?			
	Thursday after 5pm	19	66
	Thursday	12	6
	Friday after 5pm	27	77
	Friday	26	10
	Saturday, all day	20	61
	Saturday	23	16
	Sunday, all day	20	59
	Sunday	20	15
3. In Dunedin how much does it cost for a child to go to a 4 pm movie on Thursday?	$7.00	66	87
Total score:	9–10	9	47
	7–8	8	16
	5–6	21	22
	3–4	23	8
	0–2	39	7

Commentary:

Year 8 students read the movie price and time table with more accuracy than year 4 students (47 percent compared with 9 percent obtaining a score of 9 or 10 correct). Year 8 students were particularly more successful at providing the full details of times (e.g. “Thursday, after 5pm”) rather than partial details (e.g. “Thursday”).

Task: Space Creations

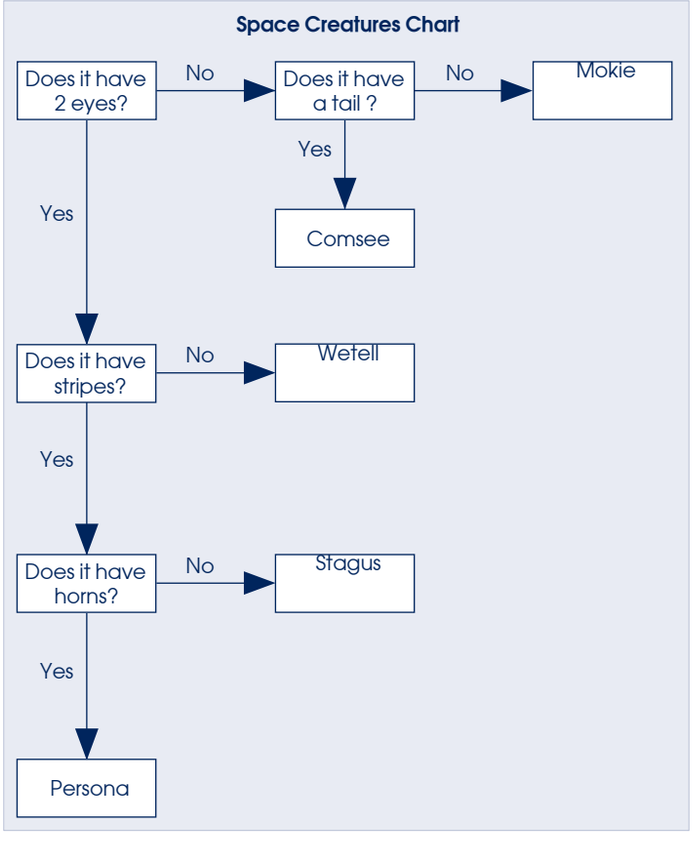
Approach: Station
Focus: Interpreting a flow chart
Resources: 5 pictures, chart in recording book
Year: 4 & 8

Questions / instructions:

The pictures show creatures from the planet Wackyglump.

Use this chart to find out what they are called.

Write the names of the space creatures.



	% responses y4	% responses y8
Mokie	85	92
Stagus	75	88
Comsee	89	95
Persona	84	94
Wetell	80	91
Total score: 5	71	84
4	2	1
3	11	9
2	6	4
1	6	1
0	4	1

Commentary:

On average, about 80 percent of year 4 students and 90 percent of year 8 students correctly identified each creature using the flowchart.

Task: Blackbeard's Map

NEMP Access Task

Approach:	Station
Focus:	Interpreting a map
Resources:	Map in resource book
Year:	4 & 8

Questions / instructions:		% responses y4	% responses y8
Here is a treasure map left by the pirate Blackbeard.			
If you stood on Lookout Peak, what hill would you see to the South?	Hopscotch Hill	77	95
Name the bay that is closest to Captain's Cave.	Barnacle Bay	79	95
Here are Blackbeard's instructions for finding treasure.			

Instructions to find the buried treasure

Stand so that you are facing Wiggly Woods with Dark Woods behind you.

Shipwreck Bay should be on your right. Captain's Cave should be on your left.

Find the house on your right. The treasure is halfway between it and the nearest tree.

		% responses y4	% responses y8
1. Put a cross where you would dig for treasure on the map.			
	cross where treasure is	31	65
2. Draw a line to show the shortest way to walk from your boat in Shipwreck Bay to the treasure.			
	shortest route	63	80
3. You don't want someone to follow you to the treasure. Mark a route from your boat to the treasure. It must go through Honeycomb Hill but does NOT go through Wiggly Woods.			
	route from boat to treasure	43	69
Total score:	5	15	46
	4	25	27
	3	22	15
	2	21	9
	0–1	17	3

Commentary:

Year 8 students were more successful than year 4 students on all aspects of interpreting the map. All students found it more difficult to follow detailed instructions to find a location than to identify straightforward details of the map.

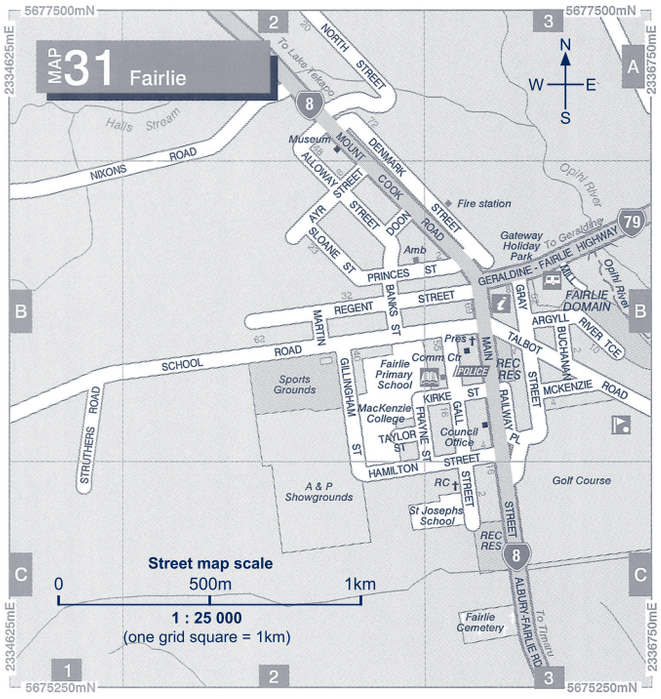
Task: Finding Your Way

Approach: Station **Year:** 8

Focus: Interpreting a map

Resources: Map in work book, ruler

Questions / instructions:



FAIRLIE	Map	Grid ref.
ALBURY-FAIRLIE ROAD	31	C-3
ALLOWAY STREET	31	B-2
ARGYLL STREET	31	B-3
AYR STREET	31	B-2
BANKS STREET	31	B-2
BUCHANAN STREET	31	B-3
DENMARK STREET	31	A-2
DOON STREET	31	B-2
FRAYNE STREET	31	B-3
GALL STREET	31	B-3
GERALDINE-FAIRLIE HIGHWAY	31	B-3
GILLINGHAM STREET	31	B-2
GRAY STREET	31	B-3
HAMILTON STREET	31	C-2
KIRKE STREET	31	B-3
MAIN STREET	31	B-3
MARTIN STREET	31	B-2
MCKENZIE STREET	31	B-3
MILL ROAD	31	B-3
MOUNT COOK ROAD	31	B-2
NIXONS ROAD	31	B-1
NORTH STREET	31	A-2
PRINCES STREET	31	B-2
RAILWAY PLACE	31	B-3
REGENT STREET	31	B-2
RIVER TERRACE	31	B-3
SCHOOL ROAD	31	B-2
SLOANE STREET	31	B-2
STRUTHERS ROAD	31	B-1
TALBOT ROAD	31	B-3
TAYLOR STREET	31	B-2

Street Map Key

Police Station	POLICE
Church	†
Information Centre	i
Motor Camp	
Golf Course	
Park, Reserve	
'Other' open area	
Library	

Here is a map of Fairlie.

If you drive into Fairlie from Timaru, you come in on Main Street.

		% responses y4	% responses y8
1. If you turned from Main Street into School Road what direction would you be going?			
a. North			
b. South			
c. East			
d. West	d		87
2. Look at the key.			
On the map put a circle around the motor camp.			
	circled motor camp correctly		79
3. What street is the information centre in?			
a. Denmark Street			
b. Main Street	b		91
c. Regent Street			
d. North Street			
4. What is the grid reference for the sports ground?			
	B–2		62
	2–B		7
5. Where is the police station?			
a. B – 1			
b. B – 3	b		91
c. C – 1			
d. C - 2			
6. Look at the scale on the map.			
How long is Hamilton Street?	400–500m		58
Total score:	7		33
	6		23
	4–5		30
	2–3		11
	0–1		3

Commentary:

Just over 50 percent of year 8 students obtained a total score of six or seven. Interpreting straightforward information from a map was achieved by about 80 to 90 percent of students. Using the scale of the map to interpret distance was done successfully by 58 percent of students.