

Approach: Station

Year: 4 & 8

Focus: Constructing a tally and bar graph

Resources: Animal card, ruler, table and blank grid in work book

**Questions / instructions:**

1. Fill in the table using tally marks. The lions are done for you.

Animal	Tally
Lion	HHH I
Elephant	
Giraffe	
Tiger	

	% response 2007 ('03)	
	year 4	year 8
	85 (84)	97 (95)
	89 (91)	97 (98)
	89 (87)	96 (98)

**5 elephants:**

number and convention correct 85 (84) 97 (95)  
 number correct 3 (5) 0 (3)

**3 giraffes:**

number and convention correct 89 (91) 97 (98)  
 number correct 2 (2) 0 (1)

**1 tiger:**

number correct 89 (87) 96 (98)

2. Use the tally chart to help you draw a bar graph of this information on the next page.

Make sure your graph has:

- a title
- labels on the side and bottom axis
- bar graphs drawn to the right height.

**Title:**  
 ("Animal Add Ups"/  
 "How many Animals?" or similar)

**Position of title:** above  
 below

**"Animals" axis:**  
 appropriate axis label and all animal names 3 (5) 41 (41)  
 appropriate axis label, not all animal names 1 (0) 2 (3)  
 all animal names, but no appropriate axis label 44 (43) 46 (48)

**Number axis:**  
 appropriate axis label and all animal names 1 (3) 39 (43)  
 appropriate axis label, not all animal names 1 (1) 5 (4)  
 all animal names, but no appropriate axis label 32 (30) 39 (38)

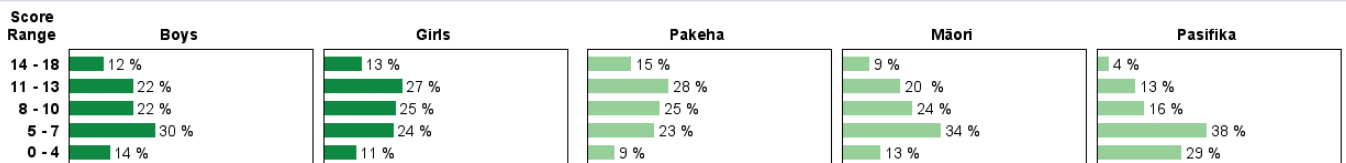
**Bars of graph:**  
 all bars drawn to correct height (or matching tally numbers) 42 (42) 82 (87)  
 two or three bars drawn to correct height (or matching tally numbers) 6 (7) 6 (6)

**Placement of bars:** bars separated 31 (29) 55 (53)  
 bars together 25 (19) 40 (41)

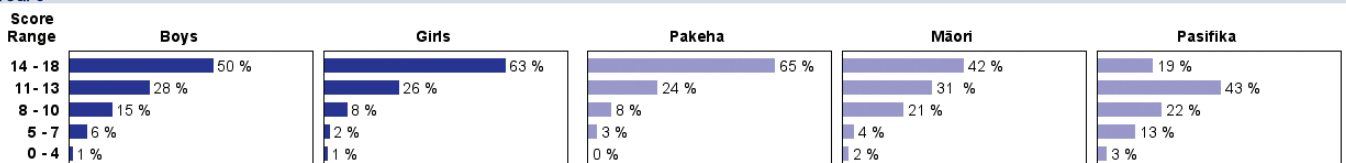
**Total score:** 14-18 13 (11) 56 (59)  
 11-13 25 (23) 27 (28)  
 8-10 24 (27) 12 (9)  
 5-7 27 (28) 4 (4)  
 0-4 13 (11) 1 (1)

**Subgroup Analyses:**

Year 4



Year 8



**Commentary:**

Most year 4 and year 8 students were successful in tallying information, but many year 4 students had difficulty translating those tallies into a bar graph. Year 8 students were much more successful at that task. Students at both years tended to ignore the need for labels and titles on their graphs. Performance in 2003 and 2007 was very similar. On average, Pasifika students scored lower than Māori students who, in turn, were lower than Pakeha students.