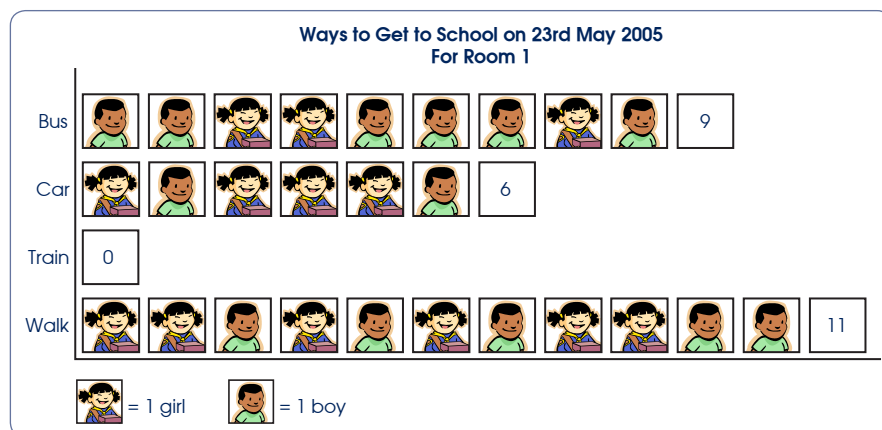


Approach: One to one
Focus: Interpret graphs; prediction
Resources: Graph

Questions / instructions:**Hand student graph.**

Look carefully at this graph.

1. How many children walk to school? **11**2. How many more children come by bus than by car? **3**3. This graph is for the 23rd of May. Would the graph look the same every day? **no**

4. Why do you think that?

Explanation:

understanding of variation
(e.g. some children might stay home because sick; some children might want to be driven if it is raining)

some understanding of variation but unclear

5. What does the row with 'Train' tell you about how these children go to school?

nobody took the train that day

nobody catches/uses the train

no trains in area/train doesn't

stop there/train too expensive, etc.

% response
2009 ('05)
year 4 year 8

93 (88) 99 (99)

62 (62) 89 (91)

90 (89) 95 (92)

51 (49) 79 (72)

26 (31) 15 (20)

5 (3) 6 (5)

46 (62) 59 (64)

17 (16) 23 (19)

6. Tom was not at school on that day. How do you think he normally gets to school?

no way to tell/can't know

walk

bus

car

train

any other response (incl. "don't know")

7. Why do you think that?

Explanation:

sound explanation for "not able to tell"

reasonable argument for specific choice based on graph

Total Score:

6-7 14 (10) 41 (34)

5 30 (28) 39 (40)

4 24 (26) 13 (20)

3 14 (18) 4 (3)

0-2 18 (18) 3 (3)

% response
2009 ('05)
year 4 year 8

2 (1) 11 (12)

26 (25) 32 (31)

21 (19) 17 (16)

27 (40) 17 (19)

16 (8) 15 (11)

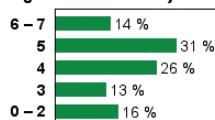
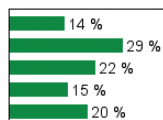
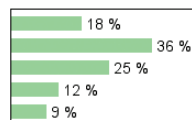
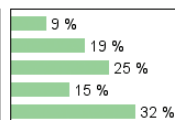
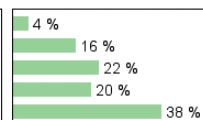
8 (7) 8 (11)

1 (1) 7 (9)

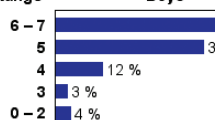
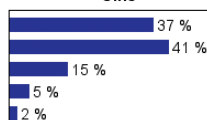
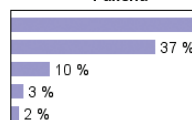
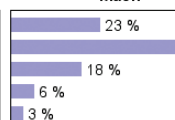
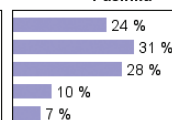
27 (17) 46 (41)

Subgroup Analyses:**Year 4**

Score Range

Boys**Girls****Pakeha****Māori****Pasifika****Year 8**

Score Range

Boys**Girls****Pakeha****Māori****Pasifika****Commentary:**

Most students were good at direct interpretation of the graph for the day, but far fewer understood day-to-day variability in travel methods. There was no meaningful change in performance from 2005 to 2009. Year 4 Māori and Pasifika students and year 8 Pasifika students scored substantially lower than their Pakeha counterparts.