Billboards

You need: a computer spreadsheet/graphing program (optional), classmates

ACTIVITY ONE

The Supa Signs company puts advertisements on billboards. It tries to place them where the greatest number of potential customers will see them.

Supa Signs needs to place these billboards:

i.
Xtremo
A game to push you and your computer to the limit

ii.
Hungry?
Stop for fresh, tasty food at
Easy Eat
500 m

iii.
Fuel low?
Only 1 km to
Fuel Up

> **Target market:** the group of people (for example, defined by age, gender, location, or income) at whom you are aiming your product or service

Discuss with a classmate:

a. who the target market for each product or service might be
b. where you might place each of these billboards to reach its target market.

ACTIVITY TWO

Supa Signs has four possible sites for these billboards:

A. on main road near the city
B. near office buildings
C. near a school
D. at a sports complex.

To help it decide which billboard to place where, the company employs people to count the number of vehicles, buses, cycles, and pedestrians passing each location at 4 different times during a typical day.
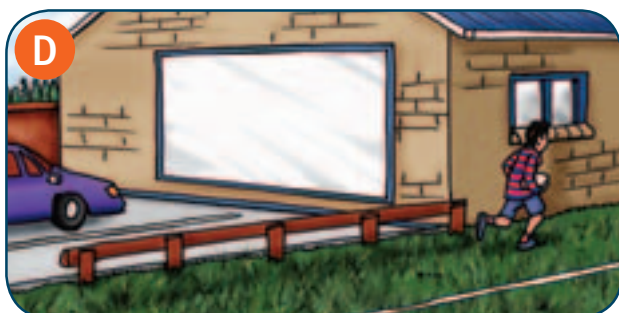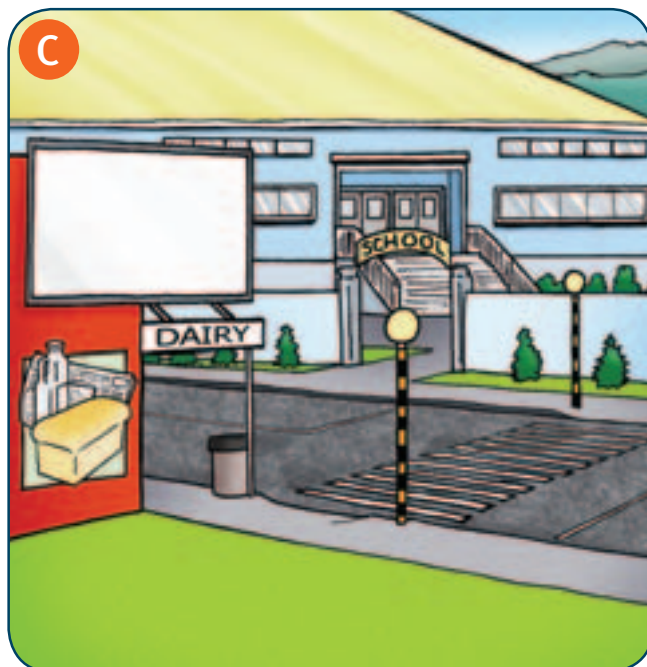
This spreadsheet shows their data:

		8–9 a.m.	3–4 p.m.	5.30–6.30 p.m.	9 p.m.–midnight
Vehicles	Location A	306	930	1 245	385
	Location B	303	224	256	92
	Location C	255	208	103	84
	Location D	77	56	89	78
Pedestrians	Location A	0	0	0	0
	Location B	60	35	39	4
	Location C	169	198	14	5
	Location D	0	16	9	2
Buses	Location A	12	20	15	4
	Location B	8	4	8	4
	Location C	6	6	2	2
	Location D	1	1	1	1
Cyclists	Location A	0	0	0	0
	Location B	23	14	28	0
	Location C	63	47	5	0
	Location D	4	18	3	5

Note: "Vehicles" includes vans, motorbikes, trucks, and so on.

1. Working with a classmate, investigate Supa Signs' data:
   a. For each transport mode, create a clustered (grouped) bar graph.
   b. i. Write at least two statements about what each graph tells you about the traffic flows past the different sites.
   ii. Swap statements with another pair of classmates. Check that each statement is based firmly on the data.

2. Supa Signs needs to report to its clients on its choice of billboard location.
   Decide which location would be best for each of the ads. Use the data and your graphs to justify your recommendations.

I think data from only 1 day is too limited to use for making decisions.

In a small group, discuss why the Supa Signs boss might think this.
What do we need to know that this data doesn't tell us?

Focus   Analysing multivariate data sets