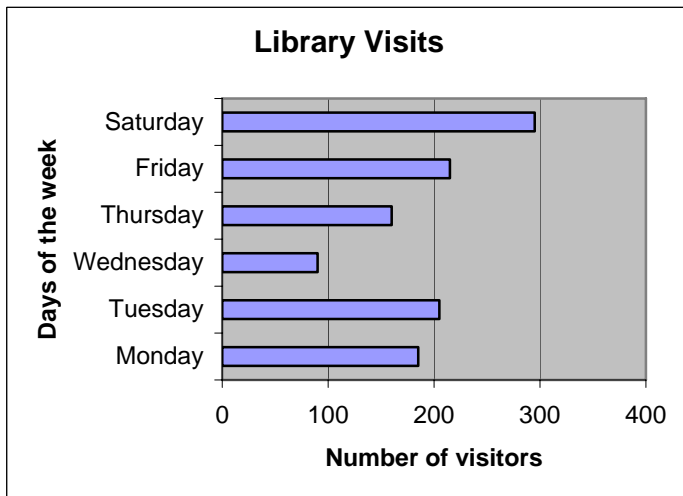


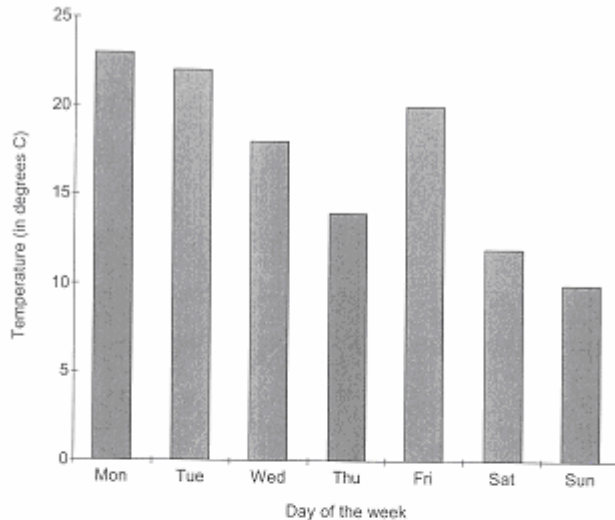
Bar Graph Worksheet #1



1. On which day did the library receive the most visitors?
2. Approximately how many visitors came to the library that day?
3. Why do you think that day had the most visitors?
4. Approximately how many visitors came to the library on Monday?
5. Describe the pattern you see in the number of visitors from Wednesday to Saturday.
6. Create one question that could be answered from the graph.

Bar Graph Worksheet #2

This is a graph which shows the highest temperature that was recorded each day for a week.



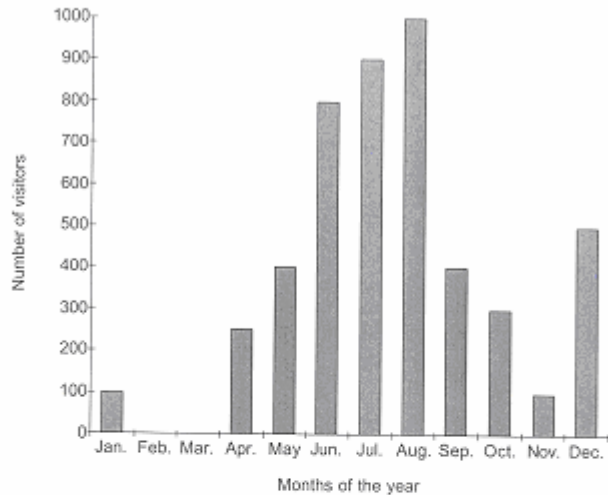
1. Which day had the highest temperature?
2. What was the temperature on Saturday?
3. How much higher was the highest temperature recorded on Saturday than the temperature recorded on Monday?
4. Discuss any patterns that you can see shown in the graph for the temperature over the week.
5. The people who made this graph took the temperature several times a day. Can you tell, from the graph, on which day they recorded the lowest temperature? Give reasons for your answer.
6. How could the people taking the survey have improved their graph to give a better idea of the temperature over the whole week?

Source: <http://www.primaryresources.co.uk>

Bar Graph Worksheet #3

The Amusement Park

This chart shows the number of visitors that an amusement park had over the course of a year.



1. In which month did the amusement park receive the most visitors?
2. How many visitors came to the park that month?
3. Why do you think so many visitors came during that month?
4. How many visitors, in total, came to the park during September, October and November?
5. Describe the pattern you see in the number of visitors from April to November.
6. Why does December not follow the pattern you've observed? Can you think of a reason?
7. What might explain the number of visitors to the park during February and March?

Source: <http://www.primaryresources.co.uk>

Line Graph

1) This data shows how quickly a beaker of water was heated, using a Bunsen burner:

Time (mins)	Temperature (°C)
0	18
1	25
2	36
3	45
4	54
5	61
6	69
7	76
8	82
9	89
10	93

- Plot the data in the form of a line graph.
- What was the starting temperature?
- Use your graph to estimate the temperature after $5\frac{1}{2}$ minutes.
- What was the approximate temperature after 90 seconds?

2) The following data shows how far a Mountain Biker travels during an off-road race:

Time (hours)	Distance (miles)
0.0	0
0.5	6
1.0	10
1.5	15
2.0	19
2.5	22
3.0	24

- Plot the data as a line graph.
- What distance did the rider cover?
- Approximately how long did it take to ride 12 miles?
- What can you say about his speed (in m.p.h.) as the race went on?
- How do you explain this?

Misleading Graphs:

A complete graph will have the following:

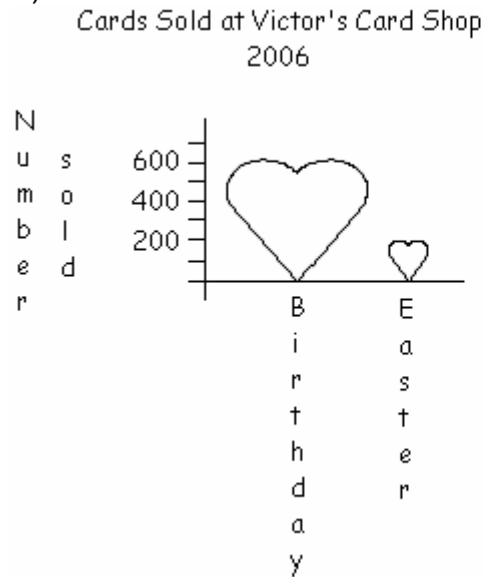
- Title
- Labels on both axes
- Scale - labelled
 - distance between number/bars equivalent
 - increments equal
- Source

Why would a company produce a misleading graph?

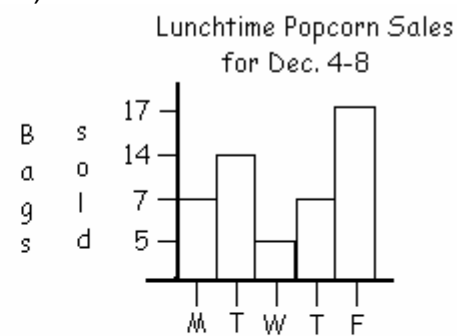
What type of graphs might mislead the public?

Look at the following graphs and discuss why they may or may not be misleading:

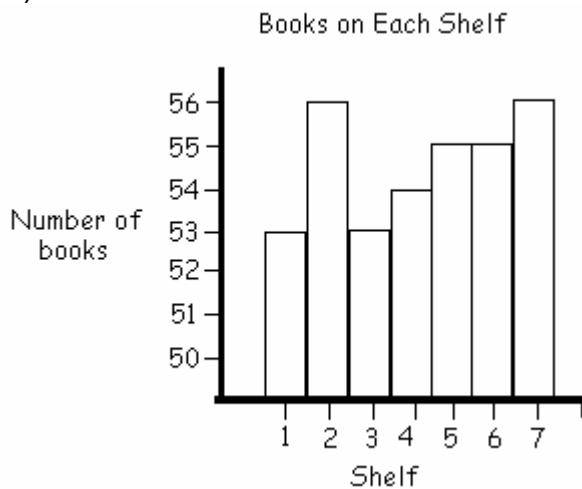
A)



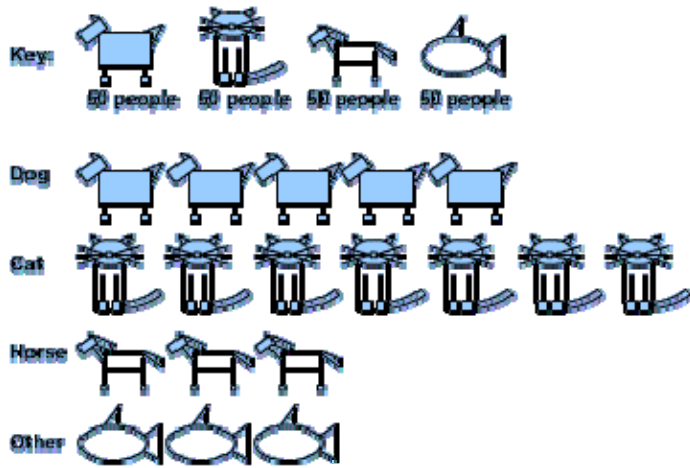
B)



C)

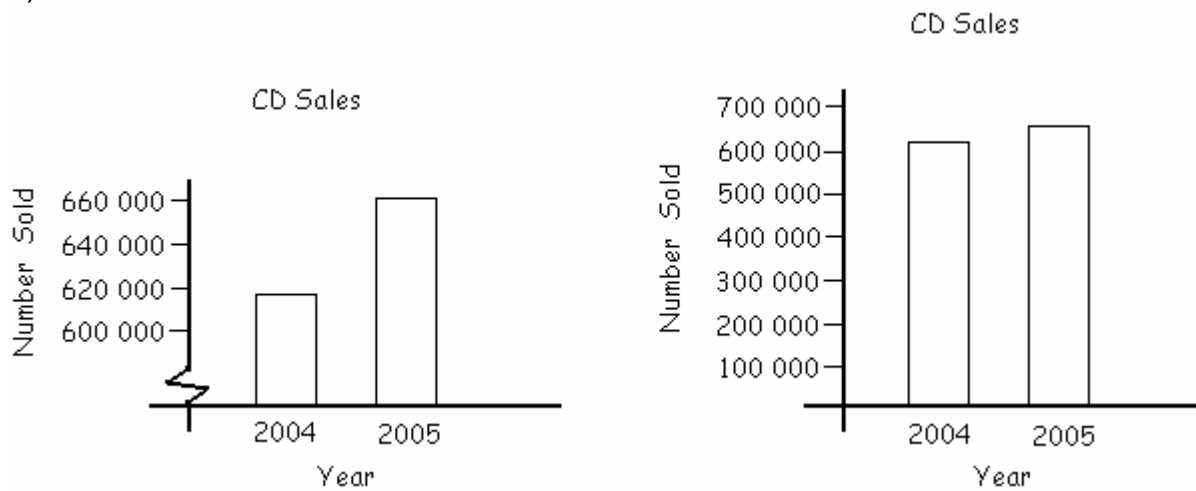


D) Number of People Owning a Pet



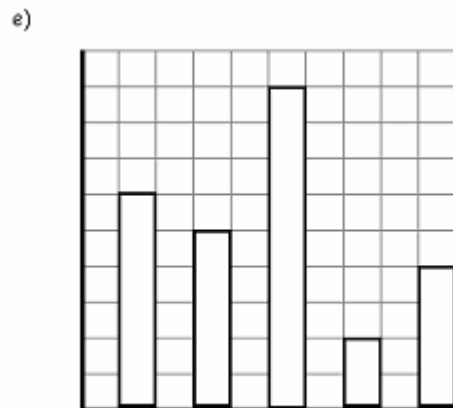
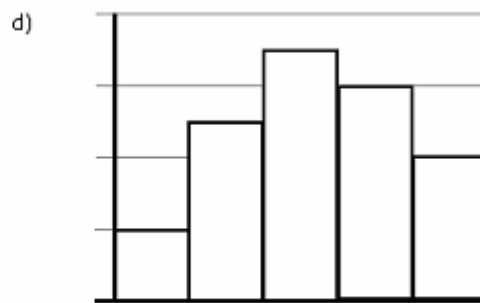
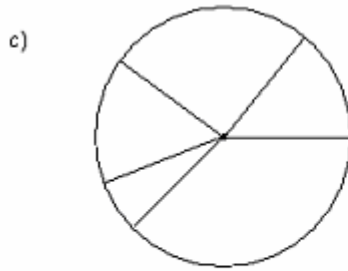
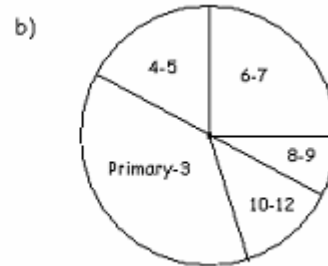
Source: <http://www.coolschool.ca>
 (Misleading Graphs)

E)



Completing the Graphs

For each of the graphs: create titles, labels, and scales. For the circle graphs create a legend and estimate the percentages in each sector.



Project

Gathering, Displaying, and Interpreting Data

1. Identify an issue or topic of interest to you, about which you would like to collect some data.
2. Design and conduct survey questions.
2. Use a Tally Frequency Chart to record and to display your data.
3. Display your data 3 ways; use technology for at least one of the displays.
4. Draw Conclusions:
 - a) How did you carry out your survey questions?
 - b) Explain the disadvantages of conducting surveys.
 - c) Was your survey biased? Why or why not?
 - d) Based on your groups' results, predict what the trend would be for your survey?

Possible Topics for Chapter Project

The following are lists of possible topics and survey questions from:

<http://primaryresources.uk/maths/mathsFI.htm>



Computers at Home

1. Do you own a computer?
2. What kind of computer do you own? (From a list of popular brands.)

From the Data:

Which computer is the most popular?

What is the total number of computers owned by all people surveyed?

What is the percentage difference between the least popular and most popular type of computer?

From the data, can you predict what type of computer would be most popular in Nova Scotia? Would your predication be valid based on the number you surveyed?



Favourite Colors

1. Which color is most popular?
2. Which color is least popular?



Favourite Colours

1. Which is the most popular colour?
2. Which is the least popular colour?
3. Which two colours when added together equal ____?
4. How many colours have ____ or more votes?
5. How many people voted?
6. How many more did _____ get than _____?
7. What is the total of _____, _____ and _____?
8. Divide the number for _____ by the number for _____, what colour is nearest to the result?
9. Re-draw the graph from lowest to highest.

Project: Gathering, Displaying and Interpreting Data

Project Rubric

	0	1	2	3
Questions	No survey questions evident on topic	Survey questions on topic but unclear	Survey questions appropriate for topic	At least 4 survey questions clearly stated for topic
Chart	No Tally Frequency Chart evident	Chart attempted but no data collected	Tally Frequency Chart data collected with errors	Tally Frequency Chart data complete
Display	No attempt to display data	Data displayed correctly one way	Data displayed correctly 2 ways	Data displayed correctly 3 ways, one of which is technology
Results/Conclusions	No conclusion drawn or survey questions done	Survey explained but no conclusion drawn from data	Survey explained but error in judgment	Survey explained and conclusion clearly comes from data collected