

Short and Sharp

You need ★ 2 dice ★ classmates

Activity One

Ms Smith was having trouble reading some of her students' writing.

So Ms Smith's class measured the lengths of their pencils to the nearest centimetre.



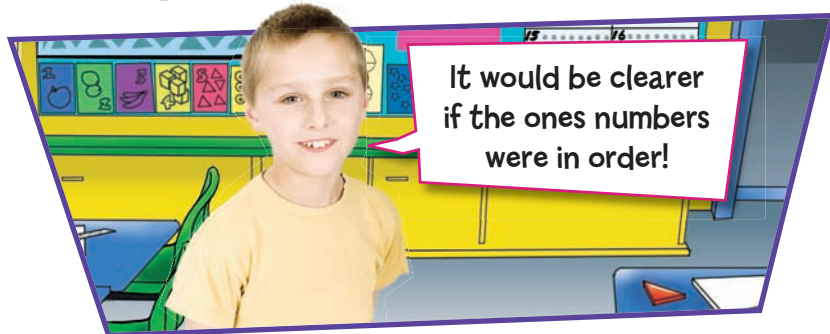
Here are the lengths:

8 16 26 13 6 8 12 9 8 15 3 10 11 8 4 7 5 15 14

The students made a stem-and-leaf graph to organise this information. Here is a graph with the first six numbers in place:

Lengths of Pencils in Centimetres

| | | | |
|------|------|---|---|
| 0 | 8 | 6 | 8 |
| 1 | 6 | 3 | |
| 2 | 6 | | |
| Tens | Ones | | |



1. Draw up a stem-and-leaf graph that shows the lengths of all the students' pencils *in order*.
2.
 - a. When do you think a pencil is too short to use?
 - b. So how many pencils in Ms Smith's class do you think are too short?
3.
 - a. As a class task, measure (to the nearest centimetre) the lengths of the pencils your class are using. Organise the data using a stem-and-leaf graph.
 - b. Is the length of pencils as much a problem in your class as it was in Ms Smith's class? Explain your answer.

Activity Two

Stem-and-leaf graphs are great for organising numbers.

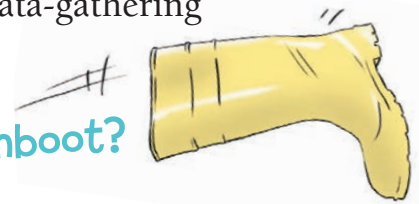
Let's think of some other data-gathering questions that will give us numbers.



The students in Ms Smith's class came up with a number of data-gathering questions, including:

What's the number of the house you live at?

How far can you toss a gumboot?



What date in the month is your birthday?

1. As a whole class, collect and share data for these three questions. With a classmate, use stem-and-leaf graphs to organise the data for each question.
2. What does the data you have collected tell you?

Activity Three

1. a. In pairs, throw two dice together 20 times to answer the following question:

What results do you get when you toss 2 dice and multiply the 2 numbers?

- b. Organise your data as a stem-and-leaf graph.

2. a. With another pair of classmates, compare and discuss your graphs.
b. Discuss why there are differences between these graphs but none among the graphs you and your classmates created for each question in Activity Two.

Wow, our dice graph looks very different from yours!



Focus

Exploring and comparing data and telling stories with the help of stem-and-leaf graphs