

How to use the Data on this CD

There are several sets of data on this CD, of varying levels of difficulty.

With younger or less experienced children, you may confine your analysis to simply drawing block graphs of the results, finding averages and ranges.

With most data, it is possible to compare that on the CD with the results of your own surveys. Children love to collect data, but try to make sure they are doing this with a particular purpose in mind. A good way to focus their attention is to make them ask a specific question such as 'Are our children taller and heavier than those whose results are given on the CD?'

With more confidence, children can begin to group the data to find, for example, how many children are between 120 and 129 cm, how many between 130 and 139 cm etc. The graphs drawn as a result of this are more meaningful as they give an idea of how the data is distributed.

They may also wish to find the three averages: mean, median and mode and compare these with their own data. (These terms and the different types of graphs are shown in the dictionary, also on the CD.)

They may be asked to display the data in different ways: graphs, tally chart and diagrams, for example. Do not forget the pie chart; this is also good practice with measuring angles.

More advanced analysis should include looking for 'rogue' values (ie values that are obviously incorrect and it is good fun discussing what should be done about these), and there are some in the data included of the measurements of children. Some of the measuring was done in inches instead of centimetres, for example.

In the data collected about aliens (which has been nicely massaged to fit curves well) a spy from Wobbat has infiltrated the population of Stega. Is it possible to find him/her?

Scatter graphs of the alien data comparing two measurements such as age and height show how the aliens grow over their early lives. Do they have growth spurts as humans do? Do they mature at the same time? Which group lives on a planet with high gravity and which on a planet with low gravity? Do they have the same relationship between height and body span as human do (in humans these two measurements are quite similar)?

To achieve some of these results, children will have to collect data of their own and this is often good measuring practice with a purpose.

This may lead to quite unrelated data analysis such as 'What is the range of speeds of cars travelling near your home/school?' 'How many drivers stick to the speed limits?' This is easy to measure if you mark two points on the road side and measure the time taken between these posts (a car travelling at 30mph will take 10 seconds to travel 134 metres, 5 seconds at 60mph etc).