

# Analysing the Data - Level Ladder

Levels suitable for APP AF5 - Thread 3

Level	When analysing the data, Dr Rob says you should ...	For example ...
4	Spot a pattern in a graph and draw a conclusion from it	<i>".. schools with higher public transport use have higher levels of school absence due to illness.."</i>
5	Use evidence from more than one graph to back up your conclusion	<i>"the 'flu outbreak seemed to start in the North. Illnesses at our school and the average illnesses in the North came before the national illnesses peaked"</i>
6	Explain your conclusion using scientific knowledge. Show how choosing a different selection of data could lead to a different conclusion.	<i>"we repeated the experiment looking at other regions. The pattern was much less obvious in areas outside Central England".</i>
7	Assess the strength / quality of your evidence, deciding whether it is sufficient to support your conclusion.	<i>"it's possible our data was biased because ..." "there are issues with confounding such as .." At the moment, the number of schools uploading data is... which suggests ... about our data"</i>
	Identify quantitative relationships between variables.	<i>"for every increase in 100 pupils a school has, the illness rate increases by 5 half-days of illness per hundred pupils in the outbreak week we analysed"</i>
	Describe the distribution of the data. Is it evenly spread ("normal") or skewed to one side?	<i>"there is currently a large group of schools built between 1970 and the present with a slow tail off to the oldest school which is over 200 years old. This could effect my conclusion because .."</i>
8	Explain what effect skewed data could have on your conclusion and explain steps you have taken to see how badly a poor distribution of data effects your conclusion,	<i>"there were a number of schools with low usage of public transport - it looked like there was a linear correlation but when we removed these schools from the sample, the correlation was a lot weaker"</i>