LEARNING and TEACHING POINTS

for

Chapter 28
Comparing Sets of Data

Only a small portion of the mathematics in this chapter would be taught in primary schools. But teachers themselves need to be confident with all the material here in order to make sense of the official statistics generated in the field of education and schooling.

Some textbooks and some mathematics tests ask children to find the mode of a small set of items. This is bad mathematics. Explain to the children that the mode is an average to be used with fairly large samples.

Useful sources of comparative data for using with children are: the children themselves (their ages, their heights, shoe sizes, distance of home from school, time they leave home, boys and girls in their family), the weather, sport, science experiments and most geography-focused topics (particularly for making comparisons between different areas).

The mathematics involved in finding the range is so easy, yet many 11-year-olds get questions about the range wrong, giving an answer like 45–62 (that is, 45 to 62), rather than 17. All you have to do is to make sure the children you teach know how the word is used in mathematics tests!

Children – and teachers – must learn that conclusions drawn from statistics, such as averages, can be uncertain or even misleading.

To inform their own teaching and their assessment of children's standards and progress, teachers will need to understand government statistics presented in terms of medians, quartiles, percentiles and deciles, and the use of box-and-whisker diagrams.

Explain to children the idea of an average being a representative figure for a set of numbers, enabling us to make comparisons between different sets.

Supplement children's experience of average speed from driving around in cars with practical experience of measuring average speed in simple science experiments, such as timing toy cars running down ramps.

Haylock, *Mathematics Explained for Primary Teachers, 4th edition*. SAGE Publications Ltd, London.