Percentages - Introduction

An important part of numeracy

Percentages are one of the most common means that people use to describe what's happening in our world. In the media they are used to describe unemployment rates, a plethora of health and welfare statistics and the allocation of government resources, such as how much is spent on education or the military in comparison to other countries.

In more personal and immediate matters, percentages are used to inform us about interest rates on credit cards and loans, to explain salary deductions, to announce increases in pensions and allowances, and of course, to entice us to save (or spend) money with discount offers.

Since numeracy is about understanding mathematically related aspects of our world, part of numeracy teaching is to make percentages meaningful. We want students to be able to get a sense of their size or value when they arise, whether in personal situations or in relation to the wider society.

The meaning of 'percent'

Percentages are used in reporting information because they are easier to understand and compare than other types of fractions. For example, comparing 20% and 15% of the population is a lot simpler than if the same figures were presented as 1/5 and 3/20.

Percentages are simple and powerful because they always use the same base number, 100. Unfortunately, this basic understanding of the meaning of percentages has been obscured for many adults because of a common preoccupation with teaching formulae rather than meaning.

This section attempts to redress that focus and to demystify percentages for adults operating in a modern world.

Building on prior knowledge for shortcut methods

The activities draw on students' everyday understanding of common percentages, such as 50% and 100%, to boost confidence in their existing knowledge. They go on to explore the meaning of percentage as part of 100, to make links to other common fractions, and to use these as the basis of 'shortcut' or 'in the head' strategies for calculating everyday percentages.

Calculators and estimations

The section also contains activities to introduce the percentage function on the calculator, and familiarise students with its use.

Estimation techniques are also introduced in this section. They are used as a strategy for checking calculator results as well as a means of approximating complex percentage calculations which do not lend themselves to simple 'in the head' strategies.