

Sampling

It is not usually possible to carry out a survey or a poll on an entire **population** (e.g. people eligible to vote in an election, students in a school, people who attend a sporting event). Instead a smaller number of people called a **sample** are surveyed.

The sample should be large enough to represent the population (e.g. a sample of 50 out of a population of 10 000 would be too small). The larger the sample size, the more accurate the results. The sample must also be **representative** of the population (e.g. same proportion of males/females and age groups).

Random sampling

The sample should be taken randomly, with each member of the population having an equal chance of being chosen. To ensure a **random** sample, you could:

- number each person and then use the random select on a calculator or computer
- write names on paper, fold them, jumble them up in a container and then pick them out.

Bias

A **biased** sample will not reflect the population accurately. The following should be considered when sampling:

- **The time the survey is done:** doing a survey at 8.30 am outside a train station on a weekday is less likely to include people who do not work.
- **Where the survey is done:** trying to find out the number of holidays people take by interviewing people as they leave a travel agent shop would bias the results towards people who take holidays.
- **The gender of people in the survey:** the sample should have the same percentage of males/females as the population.
- **The age of the people in the survey:** the sample should have the same age composition as the population.

Stratified samples

Stratified samples ensure that the sample mirrors the make-up of the population.