Populations and Samples

Populations vs. Samples

A population is: the <u>whole</u> set of items that are of interest

A sample is the name given to some subset of the population intended to represent the population. Once you have this group, it is known as a '*sampling frame*'.

> This can cause confusion, as the difference between a sample and a sampling frame may not be obvious. They are the same thing, the difference is just a quirk of language. You would take a *sample* of the population resulting in having a *sampling frame*. The *sampling frame* is the group of people who are to be surveyed.

Each individual thing in the population that can be samples is known as a sampling unit.

Often sampling units of a population are individually named or numbered to **form a list** called the **sampling frame**. It can be said that a sampling frame is a *sub-population* of the overall population that we are interested in.

We can collect data either from a sample, or from the entire population. Data collected from the entire population is known as a **census**

	Advantages	Disadvantages
Census	Should give a completely accurate answer	- Time consuming and expensive. - Can not be used when testing involves destruction - Large volume of data to process
Sample	- Cheaper - Quicker - Less data to process	- Data may not be accurate - Data may not be large enough to represent small sub-groups