individuals – the objects described by a set of data

variable – any characteristic of an individual

observational study – observes individuals and measures variables of interest but does not attempt to influence the responses
→ the purpose of this type of study is to describe some group or situation

sample survey – a type of observational survey in which a sample is selected and asked to respond to questions

population – the entire group of individuals about which we want information

sample – a part of the population from which we actually collect information, used to draw conclusions about the whole
census – a sample survey that attempts to include the entire population in the sample

experiments – deliberately imposes some treatment on individuals in order to observe their responses
→ the purpose of an experiment is to study whether the treatment causes a change in the response