Collecting Data

AP Statistics · Vocabulary in context

Word	Example
population /ˌpɒpjʊˈleɪʃn/	Define the **population** before deciding whom to include.
observational study /ɒbzəˈveɪʃənl ˈstʌdi/	In an **observational study**, we watch without changing anything.
experiment /ekˈsperɪmənt/	In an **experiment**, we give treatments and measure the results.
treatment /ˈtriːtmənt/	Each **treatment** is a condition given to the subjects.
confounding variable /kənˈfaʊndɪŋ ˈveərɪəbl/	A **confounding variable** affects both variables and confuses the results.
sample /ˈsæmpl/	The **sample** contains the people selected for this study.
Random sampling /ˈrændəm ˈsæmplɪŋ/	**Random sampling** gives everyone a chance to be chosen.
bias /ˈbaɪəs/	**Bias** comes from a bad design; a bigger sample cannot fix it.
Simple random sample (SRS) /ˈsɪmpl ˈrændəm ˈsæmpl/	In a **simple random sample (SRS)**, every group of the same size is equally likely.
Stratified /ˈstrætɪfaɪd/	**Stratified** sampling picks people from each group.
Cluster /ˈklʌstə/	**Cluster** sampling picks whole groups at random.
Systematic /ˌsɪstəˈmætɪk/	**Systematic** sampling picks every tenth person.

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census /ˈsensəs/	A **census** asks every member of the population, not just a sample.
convenience sample /kənˈviːnɪəns ˈsæmpl/	Asking only your friends gives a **convenience sample**.
Undercoverage /ˌʌndəˈkʌvərɪdʒ/	**Undercoverage** leaves some groups out of the sample.
Nonresponse /ˌnɒnrɪˈspɒns/	**Nonresponse** happens when chosen people do not answer.
Response bias /rɪˈspɒns ˈbaɪəs/	**Response bias** happens when people do not tell the truth.
question wording bias /ˈkwestʃn ˈwɜːdɪŋ ˈbaɪəs/	**Question wording bias** happens when a question pushes people to one answer.
control group /kənˈtrəʊl gruːp/	The **control group** gets no treatment or a fake one.
placebo /pləˈsiːbəʊ/	A **placebo** resembles a treatment but lacks its active ingredient.
Random assignment /ˈrændəm əˈsaɪnmənt/	**Random assignment** puts subjects into groups by chance.
Replication /ˌreplɪˈkeɪʃn/	**Replication** means using enough subjects in each group.
experimental units /ekˌsperɪˈmentl ˈjuːnɪts/	The **experimental units** are the things that get the treatments.
factor /ˈfæktə/	A **factor** is a variable the experimenter changes.

Word	Example
Confounding /kən'faʊndɪŋ/	**Confounding** makes it impossible to know which variable caused the effect.
Blinding /'blaɪndɪŋ/	**Blinding** means subjects do not know which treatment they get.
single-blind /'sɪŋgl blaɪnd/	In a **single-blind** study, only the subjects do not know their treatment.
double-blind /'dʌbl blaɪnd/	In a **double-blind** study, neither the athletes nor the testers know who got the real drink.
Blocking /'blɒkɪŋ/	**Blocking** groups similar subjects together before assigning treatments.
randomized block design /'rændəmaɪzd blɒk dɪ'zaɪn/	In a **randomized block design**, treatments are assigned at random inside each block.
matched-pairs design /mætʃt peəz dɪ'zaɪn/	In a **matched-pairs design**, each subject is compared with a similar partner.
statistically significant /stə'tɪstɪkli sɪg'nɪfɪkənt/	A **statistically significant** result is unlikely to happen by chance alone.

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