

Compare a claim with its support

Target: use new evidence to retain, narrow or change a particular claim—or remain uncertain. Prerequisites: read starts/°C/time/change, compare matched trials and identify conditions. Newest does not automatically mean most informative.

Two fresh 100 g samples;22°C surroundings;10 min;same covered setup/procedure. Covered liquid water; no active heating/cooling, ice, phase change, direct sunlight or meaningful evaporative cooling. Room, cup, lid and supporting surfaces are at the stated surrounding temperature; it stays constant. Readings represent the sample temperature with a consistent procedure. This is a paper scenario, not apparatus instructions.

Two independent trials

Constructed teaching data: these values were invented for this activity, not collected in an experiment.

Trial ID	Start (°C)	After 10 min (°C)
P-1	12	16
P-2	12	17

1. Find both changes. Which claim is supported: (a) these samples warmed in this 10-minute record, or (b) every sample always warms? Explain.

2. What conditions belong in a bounded claim? What would you compare before using a new result to revise it?

Retain = evidence remains consistent; narrow = limit scope; change = alter a conclusion; uncertain = withhold a confident conclusion. Decisions may combine, such as narrow and uncertain.

Initial evidence

Work on this page first. Record a bounded claim before turning to the new-evidence page. Question: What does this record support about R’s 20-minute performance? A nominal classroom criterion is final water at or below 15°C in each supplied trial; it is not storage advice or a guarantee.

Fresh 100 g samples start 10°C in 22°C surroundings. Same sleeve versions, cups/lids, 20 min, exposure and procedure within/across trials. Covered liquid water; no active heating/cooling, ice, phase change, direct sunlight or meaningful evaporative cooling. Room, cup, lid and supporting surfaces are at the stated surrounding temperature; it stays constant. Readings represent the sample temperature with a consistent procedure. This is a paper scenario, not apparatus instructions.

Initial matched trials

Constructed teaching data: these values were invented for this activity, not collected in an experiment.

Trial ID	Sleeve R final (°C)	Sleeve S final (°C)
M-1	14.0	16.0
M-2	14.5	16.5
M-3	14.0	16.0

1. Write a bounded claim about R and support it with readings. What limit matters?

Do not look ahead until you have recorded the claim. Keep this page for the revision.