

Reteach · Meet every requirement

100 g, start 10°C, room 22°C, 20 min. Final ≤15°C in EVERY trial; ≤5 tokens; ≤18 mm added thickness. Covered liquid water; cups/lids, mass, starting temperature, duration, exposure and reading procedure match within and across trials. Surroundings stay at the stated room temperature. No ice, phase change, active heating/cooling, direct sunlight or meaningful evaporative cooling. Each trial uses fresh samples. Accuracy is not supplied.

K6-D-A · Supplied design record

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

Design	Tokens	Added mm	Trial 1 final °C	Trial 2 final °C	Trial 3 final °C
P	7	14	13	13.5	13
Q	5	21	14	14	14.5
R	4	18	14	16	14
S	5	18	14.5	15	14.5

Fictional response: “P wins because all its temperatures are lowest. R also works because its average is below 15°C.”

K6-A1. Evaluate both statements. Check temperatures, budget and thickness separately for every row. Which supplied design meets the whole brief?

K6-A2. Write or say a bounded recommendation that includes its weakest displayed temperature margin and a useful next test. Explain why numerical margin is not a reliability guarantee.

Fresh recheck · What if none qualifies?

100 g, start 10°C, room 22°C, 20 min. Final ≤15°C in EVERY trial; ≤4 tokens; ≤18 mm added thickness. Covered liquid water; cups/lids, mass, starting temperature, duration, exposure and reading procedure match within and across trials. Surroundings stay at the stated room temperature. No ice, phase change, active heating/cooling, direct sunlight or meaningful evaporative cooling. Each trial uses fresh samples. Accuracy is not supplied.

K6-D-Ac · Supplied design record

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

Design	Tokens	Added mm	Trial 1 final °C	Trial 2 final °C	Trial 3 final °C
U	5	14	15	15	15
V	4	19	14	14.5	14
W	4	16	14	16	14

K6-A3. Is there a feasible design? Check each failed requirement. Recommend an honest next step without inventing a successful design or changing the rules silently.

Do not choose a winner merely because the question contains design data. “None meets the brief” can be the supported conclusion.