

Evaluate an Experimental Claim

Grades 9-12 Name: _____ Date: _____

Context and evidence

A headline says: 'New study drink doubles concentration.' Twelve volunteers completed a 10-minute task after the drink; eight improved, two stayed the same and two scored lower. There was no comparison group.

Your investigation

1. Calculate the percentage who improved.

2. List three features of the method that limit the claim.

3. Explain why 'eight improved' does not establish that the drink caused improvement.

4. Design a stronger study including comparison, allocation, measurement and sample size.

5. Rewrite the headline as an accurate scientific conclusion using cautious language.

Evaluate an Experimental Claim

Learning goals

Reason accurately, use evidence, show a method and communicate a defensible conclusion.

Response guidance

Expected limitations include small sample, no control or blinding, practice effects and short outcome measure. Do not accept 'doubles concentration' without baseline and effect-size evidence.

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Extension and assessment

Ask learners to compare methods, revise one response after feedback and identify the evidence that most changed their thinking.