

Experimental Design (Part 2)

Supplementary Material for CFB3333/PHY3333
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Based on the following information on the web:

<http://www.physics.smu.edu/pseudo/experiment.html>

Two Primary Goals

- (1) If the person really does possess the claimed power, that person will be able to perform the feat as advertised.
- (2) If the person does NOT actually have the claimed power, that person will NOT be able to perform the feat.

Facets of an Experiment

- The experiment must be feasible, reasonable in cost, and performable in a reasonable period of time.
- The trials *MUST* be randomized.
- The test must be double-blind if possible.
- You need to have a competent magician present to detect trickery.
- Keep a permanent and complete record.
- BEFORE the trials begin, the claimant must sign a contract specifying exactly what constitutes success and failure.
http://www.physics.smu.edu/devel/pseudo/Challenge_Application.pdf

Facets of an Experiment (continued)

- Trials must be defined so that success or failure is easily and clearly defined – no interpretation.
- Within reason, cater to the claimants.
- Where appropriate, use instrumentation to measure test parameters.
- A successful test run must be repeatable. Good results are possible by chance. Really proving the ability requires doing it again.
- All scheduled trials will be run; the subject is not allowed to "quit while ahead."
- Remember - the person making the claim must prove the claim. *The burden of proof is on the claimant.* The rest of us DO NOT have to prove that the claim is false.

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