

Title: Alternative Experiment Report for Inquiry & Patterns – Complete all Missing Elements

Wild Guess: For a teeter-totter, when a 15 kg mass is 0.5 m from the pivot, a girl of mass 45 kg will need to be placed at _____ m to have a balanced teeter-totter.

Research Question: How does the mass of an object affect the distance it needs to be from the pivot, to balance a 15 kg mass, 0.5 m from the pivot?

Hypothesis: Graph form:

In words: _____



Independent Variable _____

Dependent Variable: _____

Controls: _____

Procedure: Google: “PhET Balancing Act”. Click on “[Balancing Act - Force, Torque, Rotation - PhET](#)”. Then click “Download” and run the application. A new window will open. Next, click on “Balance Lab” near the top of the screen. Then click on “Rulers” in the upper right.

LEFT SIDE: Drag the 15 kg mass to the location 0.5 m left of the pivot. Then click to “Remove Supports”.



RIGHT SIDE: Now place the 5 kg mass on the right of the pivot, so that the teeter-totter balances, and record the distance. Repeat on the right side, using 10 kg, 15 kg, and 20 kg, and finally the 60 kg woman (found two screens to the right in the mass window).

Data:

Value of Controls: _____

Qualitative Data: _____

IV: Mass (kg) +/-1	DV: Distance from Pivot (m) +/- 0.2

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[illegible]

Conclusion: _____

Research Extension Question: _____