

SPARK Science Lab Worksheet

SPARK Hybrid Education Center | Upper Dec Lab Wk2: Newton's Laws in Depth

Student Name: _____

Date: _____

Purpose

Investigate: Newton's Laws in Depth

Materials

- * Materials for advanced newton's laws in depth lab
- * Protective equipment
- * Data sheets
- * Calculator

Procedure

1. Review background: Net force; free body diagrams; $F=ma$ problems; friction; Newt
2. Form a detailed hypothesis with expected data ranges.
3. Conduct lab: Atwood machine lab: verify Newton's 2nd law experimentally
4. Record quantitative data with units.
5. Calculate results and determine percent error where applicable.

Data / Observations Table

Trial/Sample	Independent Variable	Dependent Variable M	Calculated Value	% Error

Analysis Questions

1. What was the quantitative result of this Newton's Laws in Depth lab?

2. Was your hypothesis supported? Cite specific data values.

3. Calculate the percent error if an accepted value is known.

4. What systematic error might affect these results? How would you eliminate it?

Conclusion

In my own words, what did I learn from this lab?