Date _____ Period _____ Name _____

1 Physics Lab

The Paper Tower

Problem

What is the tallest free standing tower you can construct with a single sheet of paper and ~~30~~ 50 cm of cellophane tape?

Materials

- 2 ~~1~~ sheet of white paper per student
- 2 ~~1~~ sheet of colored paper per group
- cellophane tape
- scissors

Procedure

1. Each student will receive one sheet of white paper. Use the white sheet to try out various design possibilities. Think creatively.
2. Each lab group will receive one sheet of colored paper to make a competition tower.
3. Before working with the colored paper, examine the designs of each group member.
4. Decide which aspects of each design should be incorporated into your final design. The most important aspects of a winning team are communication and cooperation.
5. Plan ahead. Set a timetable for experimentation and for actual construction. Plan on finishing at least five minutes before the end of the period.
6. Watch your time. Do not fall too far behind schedule.
7. Your tower must be free standing for at least five seconds.
8. Measure the height of your tower before it tips over.

Analyze and Conclude

1. **Forming a Hypothesis** What are some limiting factors to how high a tower can be built?

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2. **Analyzing the Results** What were the limiting factors in your tower's construction?

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3. **Evaluating the Process** Did your group work well as a team? What could you do differently to be more effective?

Apply

1. What architectural elements have been incorporated into your design?

Data and Observations

Table 1

Group	Design