Name(s)	**Project Number**
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Project Title

Sticky Situation?

Abstract

Objectives/Goals

The purpose of my project is to test whether the cost of tape affects its adhesiveness. My hypothesis is that the more expensive tape will be more adhesive because the manufacturers claim to have stickier compounds in their tapes.

Methods/Materials

In this experiment, I used six different rolls of tape, a metric tape measure, a ramp with a magnetic release, a sheet of polished aluminum, a digital thermometer and humidity measuring device, and a metal pinball machine ball. For a single trial, I set the metal pinball on the top of the ramp. I then put a piece of the tape (sticky side up) on the aluminum surface. Using another magnet, I released the ball down the ramp, measured the distance in millimeters, and recorded the results.

Results

After conducting five trials for each of the six tapes, I averaged the results. The cheap office tape (Dollar Tree Crystal Clear Tape) averaged 134.6mm, while the expensive office tape (Scotch Magic tape) averaged 377.6mm. So, the cheaper of the two office tapes was the best of the two. In the packaging tape trials, the cheap one (Dollar Tree Packaging Tape) averaged a stunning 1236.2mm while the expensive packaging (Office Depot Heavy Packaging Tape) averaged 290.4mm. In the duct tape trials, the cheap one (Dollar Tree Duct Tape)averaged 139.8mm, and the expensive one (Gorilla Tape) averaged 160mm.

Conclusions/Discussion

My hypothesis was incorrect. In only one case, the expensive one beat the cheap one and that was because the cheaper one had an unusual makeup with many bubbles in the surface. Suprisingly, the Dollar Tree Office Tape was the best adherer. If I had to do this experiment over again, I would most likely try testing something other than adhesiveness, like sheer strength or a weight holding test.

Summary Statement

Whether the cost of tape affects its adhesiveness?

Help Received

My Father helped me assemble the ramp