



How does the design of  
parachute affect its fall  
time?

M7-6 PHYSICS

# Testable Question & Purpose

**Question**: Does the design of a coffee filter parachute affect the fall time?

**Purpose**: My purpose was to see if kids toy parachutes could fall as slow as possible.

# Abstract

I dropped three different types of parachutes from the same height, twenty-five times. Over-all, the parachute with the least amount of holes fell the slowest.

# Hypothesis

If you drop three different types of parachutes from the same height, the one with the least amount of holes will fall the slowest, because it has the most air resistance.

# Materials

My materials for my project included:

- 5 meters of nylon rope
- 3 basket coffee filters
- A hole punch
- 3 half-inch steel washers

# Procedures

1. Build three parachutes
2. Punch 3 holes in one, 5 holes in another, and leave the other one hole-less
3. Drop each one from four feet up
4. Time how long each one takes to hit the ground
5. Record data
6. Repeat 25 times.

# Variables

Control:

- Type of filter
- Type and length of string
- Type of washer
- Drop height

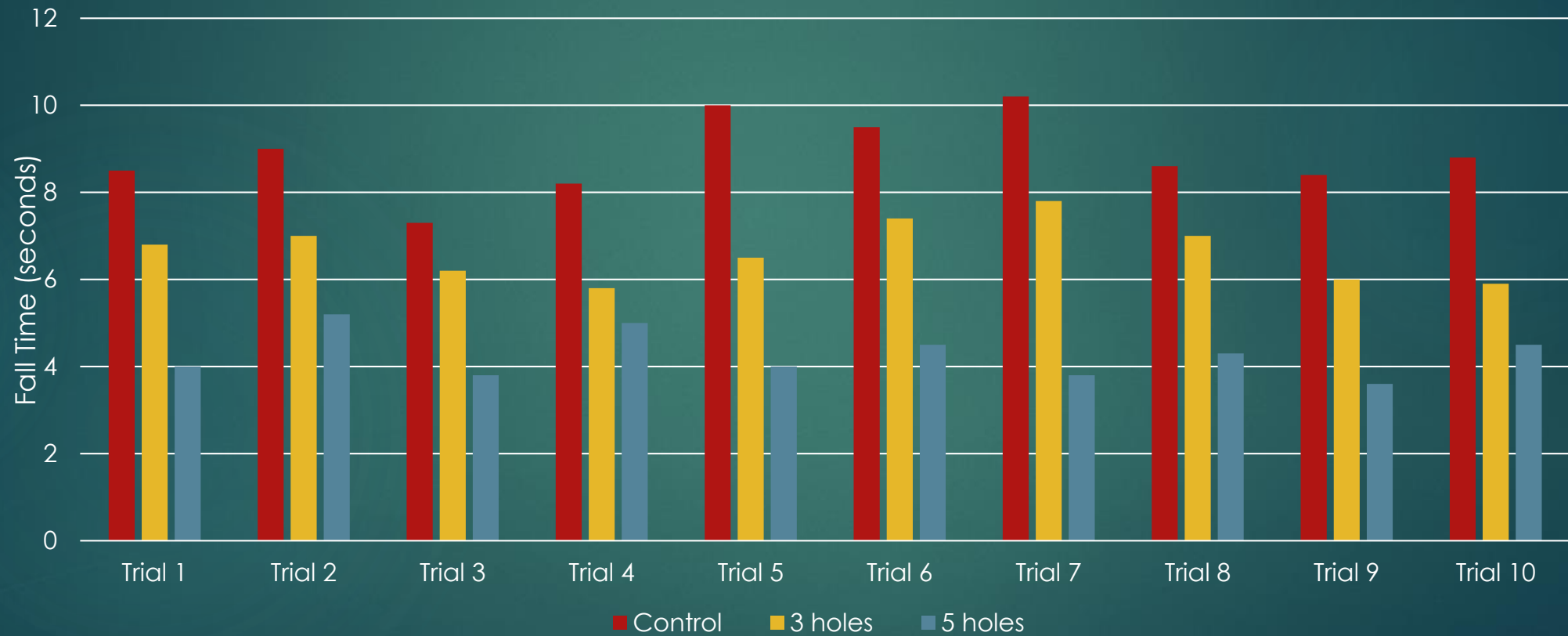
Independent: Design

Dependent: Fall time

# Results (Graph)



Fall Time of Each Parachute





# Results

*My results were that the parachutes with no holes fell the slowest, followed by the ones with 3 holes, and then the ones with five holes.*

# Conclusion

My hypothesis was concluded because I thought that the ones with no holes would fall the slowest, and that is what happened.