

Project #

Grade 7-Red St. Joseph School

Herndon, VA

Mrs. Hurley

Physics

Will heavier people crush the egg cartons when they stand on them?

The purpose of the experiment was to determine if people from different weight classes could stand on cartons of eggs without breaking them. The hypothesis is that if people of different weight classes stand on the cartons of eggs, then their weight would be evenly distributed and the eggs would not break.

To conduct the experiment, subjects were divided into three weight classes; Group A (15 kilograms to 37 kilograms), Group B (38 kilograms to 60 kilograms), and Group C (61 kilograms to 82 kilograms). The weight class of the subjects was the independent variable. The dependent variable was if the eggs did or did not crack. The subjects were instructed to step off of a book with their right foot onto two cartons of Grade A Eggs, each a dozen, and then step off. Then the eggs were checked to see if any cracks were made. The data was then recorded.

It was concluded that the hypothesis was incorrect because a small percentage of the subjects cracked the eggs. In group A 100% of the subjects did not crack the eggs, in group B 75% of the subjects did not crack the eggs, and in group C 50% of the subjects did not crack the eggs. One thing that was noted was that the eggs cracked only while the subjects had one foot on the cartons during their first step, forcing their weight to be pushed into one spot and causing their weight to be unevenly distributed.