Penny Catapult Lab

Problem: How high can you launch a penny using a homemade catapult?

Hypothesis: If I drop 1 penny from a height of 30cm then the penny will travel\_\_\_\_\_\_\_.

If I drop 3 pennies from a height 30 cm then the penny will travel\_\_\_\_\_\_\_\_\_.

If I drop 5 pennies from a drop of 30 CM then the penny will travel \_\_\_\_\_\_\_\_\_\_\_\_\_.

Materials: 3 rulers, pennies, one pencil, small strip of tape.

Procedures:

1. Tape you pencil down to the desk leaving plenty of space around it.
2. Place your first ruler on the pencil so the it is half way across the pencil.
3. Place your single penny at the end of the ruler.
4. Drop your different pennyweights on the other end of the ruler from a height of 30 cms.
5. Record on your chart how high the penny travels when launched.
6. Perform the experiment three times for each weight and record your answers.

Data Chart:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Number of pennies dropped | Height achieved trial 1 | Height achieved trial 2 | Height achieved trial 3 | Mean height  (average) |
| 1 penny |  |  |  |  |
| 3 pennies |  |  |  |  |
| 5 pennies |  |  |  |  |

Conclusion:

My hypothesis was correct/ incorrect. Why?

Follow up questions:

1. What was the thing that **you** changed that caused the penny to achieve various heights?
2. What else could a person change that would change how high the penny flew?
3. What things did you keep the same in order to make your experiment fair?
4. What do you think would happen if you changed the drop height from 30 cm to 50cms?
5. Identify the following variables:
   1. Independent variable-
   2. Dependent Variable-
   3. Control Variables-

Graph your results: give it a title and label you X axis “pennies dropped” and your y-axis label “Height”

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