

****PLEASE DO NOT WRITE ON THIS PAPER****
CW: Making Data Tables & Graphs
PARTNER A



Part A: HANGING WEIGHTS

Students at Marshall middle school went on a physics field trip to an amusement park. One of the rides looked like a giant spring. The students wanted to know if the number of objects hanging from a spring had any effect on the length the spring stretched. They decided to try an experiment in their classroom to determine the answer.

Help the students by organizing their data to answer their question

THE EXPERIMENT PROCEDURE:

The students investigated with a number of washers hanging from the spring. Each of the items stretched the spring to different length. They started by placing 1 washer on the end of the spring, conducted 3 trials with 1 washer hanging from the spring. They then added washers one at a time, conducting 3 trials each time, until there were a total of five washers suspended from the spring.

BELOW IS THE DATA COLLECTED FROM THE EXPERIMENT:

With 1 washer the spring was 12cm long, 11.5cm, and 12.5cm. With 2 washers the lengths recorded were 14.2cm, 13.8cm, and 14.0cm. With 3 washers it was 16.5cm, 16.1cm and 15.9cm. With 4 washers, the lengths recorded were 17.8 cm, 18.1cm and 18.1cm. Finally, with 5 washers hanging from the spring, the lengths were 20.2cm, 20.cm and 19.7cm.

YOUR TASK: (Use your “SCIENCE EXPERIMENT GUIDEBOOK” to help you)

1. ON THE WHITEBOARD: Write a testable question for the experiment
2. ON THE WHITEBOARD: Create a data table to organize the data collected
*****HAVE TEACHER CHECK BEFORE PROCEEDING*****
3. ON THE WHITEBOARD: Create a graph to display your data. You will graph the averages, not each trial.
*****HAVE TEACHER CHECK BEFORE PROCEEDING*****
4. Leave room to write a conclusion paragraph later

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PARTNER B

Part B: BOUNCING SPHERICAL OBJECTS

Yesterday in the lab, the students of LAMP middle School made super balls. Today, they wanted to test how high they bounce. They wondered if dropping the ball from a higher starting point would make it bounce higher off the ground.

BELOW IS THE DATA COLLECTED FROM THE EXPERIMENT:

The students used meter sticks to measure the distance from which their ball was dropped and how high it bounced. They conducted the investigation from 4 different heights. It was hard to measure exactly, so the students did three trials at four different “drop” heights. Dropped from a height of 20cm, the ball bounced back to the following heights: 15cm, 17cm, and 16. cm. At 40cm high, the bounce back results were: 33.7 cm, 34.5cm, and 34.1cm. At a height of 60 cm, the bounce back heights were: 46cm, 45cm and 46.5cm. Finally, at 80cm high the ball bounced back: 55cm 54.5cm, and 55. cm

YOUR TASK: (Use your “SCIENCE EXPERIMENT GUIDEBOOK” to help you)

1. ON THE WHITEBOARD: Write a testable question for the experiment
2. ON THE WHITEBOARD: Create a data table to organize the data collected
*****HAVE TEACHER CHECK BEFORE PROCEEDING*****
3. ON THE WHITEBOARD: Create a graph to display your data. You will graph the averages, not each trial.
4. *****HAVE TEACHER CHECK BEFORE PROCEEDING*****
5. Leave room to write a conclusion paragraph later

