

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

## Making Moon Craters Worksheet

### Prediction

I think that \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Data Collection

During the activity, record in the tables below the impact depth measurements (in cm or mm) for each trial. Later, you will use this data for graphing.

#### Trial 1

Height	Impact Depth	
	12 g	24 g
1 ft		
1.5 ft		
2 ft		

#### Trial 2

Height	Impact Depth	
	12 g	24 g
1 ft		
1.5 ft		
2 ft		

#### Trial 3

Height	Impact Depth	
	12 g	24 g
1 ft		
1.5 ft		
2 ft		

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## Graphing

Make a graph of your data so you can better visualize the energy in this experiment.

### Making a *height vs. impact depth* graph

1. Using graph paper, make a two-axis graph.
2. Make sure your x-axis and y-axis are each at least 10 squares long.
3. Number your y-axis.
  - For example, if you measured height in feet, put 1 ft at the lowest square and 2 ft at the highest square. (Each square represents 0.1 ft.)
  - For example, if you measured height in centimeters, put 30 cm at the lowest square and 60 cm at the highest square. (Each square represents 3 cm.)
4. Number your x-axis from 0 to 5 cm.
  - Put 0 at the furthest left square and 5 at the furthest right square. (Each square represents 0.5 cm.)
5. Plot the data points on your graph.
6. Using a ruler, connect all points that came from the 12 g trials.
7. Using a ruler, connect all points that came from the 24 g trials.

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## Optional Activity—Freefall Highscore

### Prediction

I think that \_\_\_\_\_

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### Data Collection

During the activity, record in the tables below the time it takes for the phone to fall for each trial. Later, you will need this data for graphing.

#### Trial 1

Height	Time
1 ft	
1.5 ft	
2 ft	

#### Trial 2

Height	Time
1 ft	
1.5 ft	
2 ft	

#### Trial 3

Height	Time
1 ft	
1.5 ft	
2 ft	

#### Trial 4

Height	Time
1 ft	
1.5 ft	
2 ft	

### Graphing

Use your data to create a *height vs. time* graph and a *height vs. average velocity* graph. Show your work.