


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

# Design Your Own Craters Lab



*Today, Friday, and Monday, you and your partner will be designing your own Craters Lab to test whether the impact craters that you create look similar to those found on the moon. The final draft of your lab report (one copy per group) must be finished Monday night and handed in on Tuesday.*

## **Goal:**

Determine whether the craters on the moon were caused by volcanic activity or caused by asteroid impacts by simulating impact craters and seeing whether their characteristics match those that are seen on the moon.

## **Hypothesis:**

I believe the craters on the moon were caused by asteroid impacts/volcanic activity (*choose one*).

## **Materials:**

List all of the materials that are required to do your experiment. Some suggestions include...

- |                                  |                   |                      |
|----------------------------------|-------------------|----------------------|
| - cocoa powder & sprinkler       | - flour           | - one large asteroid |
| - one scraper (clear MCAS ruler) | - one “waste cup” | - one small asteroid |
| - one meter stick                | - one large basin | - cell phone/camera  |

## **Procedure:**

Write a lab procedure that will allow you to simulate impact craters as realistically as possible, given your limited supplies. The procedure should include specific, numbered steps. Some variables you might want to consider testing include **asteroid size** and/or **drop height** and/or **trajectory**. But remember to only change one variable at a time!

## **Results:**

Publish your results in a data table. If you are going to include pictures (taken by a cell phone or Chromebook), then the photos must be included in your lab report.

## **Conclusions:**

Write a paragraph reflecting on your experiment. A good conclusion should tell the story of your experiment and should also include...

- A discussion of your results.
- Whether you believe your hypothesis was correct.
- Confirmation of your results via online research (*What did the Apollo astronauts find when they finally visited the lunar craters?*)