

Name(s): \_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_ Course/Section: \_\_\_\_\_

Grade: \_\_\_\_\_

## Impact Craters

### Objectives:

The goal of this lab is for students to learn how impact craters are formed, develop a basic understanding of the magnitude of the forces involved, and learn how to measure the impact crater height using basic geometry.

### Checklist:

- Complete the pre-lab quiz with your team (if required).
- Compile a list of resources you expect to use in the lab.
- Work with your team to complete the lab exercises and activities.
- Record your results and mark which resources you used.
- Share and discuss your results with the rest of the class.
- Determine if your team's answers are reasonable.
- Submit an observation request for next week (if required).

### Resources:

## Pre-Lab Quiz

Record your group's answers to each question, along with your reasoning. These concepts will be relevant later in this lab exercise.

1.

2.

3.

4.



## Part 2: Recreate the Barringer Crater

1. What were the dimensions of the crater your team produced that came closest to the dimensions of Barringer Crater?

Diameter:	Depth:
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2. What were the parameters of the impact event used to create this crater? Explain your team's reasoning behind any assumptions you made.

Impactor Diameter:	Impactor Density:	Impact Angle:	Impact Velocity
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3. Simulate the hypothetical Ames, IA impact event described in the lab and find the diameter of the impact crater.

Crater Diameter:
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4. What kind of damage would be felt from this event in Iowa City?

### Part 3: Estimating the Diameter of a NEO

Use provided images (or your own if you are lucky enough to catch a close encounter with a NEO) to estimate the diameter of the asteroid. Explain how you made your measurements and show your calculations.