# Making Craters - Student Worksheet

## Crater Diagram

Draw a cross section of a crater and label its features using proper terms:

Brainstorm a list of things about a crater that can be measured (**dependent variables**), and what can be changed in the experiment (**independent variables**).

| **Things we can change** (Independent variables) | **Things we can measure** (Dependent variables) |
|---|---|

Name: _____ Date: _____

## Experiment (#1)

**Our group will study how changing the:**

_____ **will affect the** _____.
(independent variable) (dependent variable)

Create a hypothesis for your experiment using an "If… , then…" statement:
(e.g. "If the impactor is heavier, then the crater will be deeper.")

_____

_____

List the value for each variable you are NOT changing:

_____ _____

_____ _____

_____ _____

## Data Table

| Trial | Independent Variable Values (What have you changed?) | Dependent Variable (What is the resulting measurement?) |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |

Name: _____ Date: _____

## Experiment #2 (Optional)

**Our group will study how changing the:**

_____ **will affect the** _____.
(independent variable) (dependent variable)

Create a hypothesis for your experiment using an "If… , then…" statement:
(e.g. "If the impactor is heavier, then the crater will be deeper.")

_____

_____

List the value for each variable you are NOT changing:

_____ _____

_____ _____

_____ _____

### Data Table

| Trial | Independent Variable Values (What have you changed?) | Dependent Variable (What is the resulting measurement?) |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |

Name: _____ Date: _____

## Making Craters - Discussion

1. Was your hypothesis correct? If not, try to explain why.

2. Describe any other patterns you noticed here.

3. Were all craters the same shape? Why or why not?

4. If you were to do this activity again, what would you change? Why?

5. How are our experiments different from what happens in space?

6. Why is impact cratering research important (what can we learn from it)?

Name: _____ Date: _____