

COMMUNICATING RESULTS

Writing a Lab Report

Even after you have collected and organized data, decided on a way to present the data, and determined what the data mean, you must still write a report to communicate your results. Written lab reports are organized in specific ways so other people can clearly understand what you did, how you did it, and what you found.

A lab report should contain the following sections in the order shown below.

- a **title** that describes what you did
- an **introduction** containing the problem, any necessary background information, and the hypothesis that you are testing
- a **materials** list
- the step-by-step **procedure**
- **data** displayed in tables and graphs
- a **discussion** of your results and what they mean
- the **conclusion**, where you state whether or not the data support the hypothesis, as well as suggest questions for further research

The data shown below were collected by a group of students that placed a different number of steel balls inside similar-sized balls made of modeling clay. The students dropped these balls into a pan full of flour in order to create impact craters.

Table 1. Craters Produced by Different Objects

Number of Steel Balls	Crater Depth (cm)			
	Trial 1	Trial 2	Trial 3	Mean
1	3.1	4.0	3.8	3.6
2	3.6	3.9	3.8	3.8
3	4.1	4.0	3.8	4.0

Use the guidelines above to assess the title and introduction written for this experiment.

Impact Craters

We got interested in impact craters after we saw *Deep Impact*. In the movie a comet wipes out the whole eastern seaboard. We wondered how the mass of an object will affect how deep a hole it would make. Objects from outer space have actually reached Earth a few times. There is a big crater near Winslow, Arizona, where a meteorite smashed into Earth. Supposedly one that crashed into the ocean near the Yucatan Peninsula killed all the dinosaurs. We couldn't test the actual process of smashing a meteorite into Earth, so we dropped objects into a pan of flour instead. We gave them different masses by putting a different number of heavy steel balls inside each one. Our

