

## Data Analysis and Generalizations

## A Closer Look

### STUDENT ACTIVITY

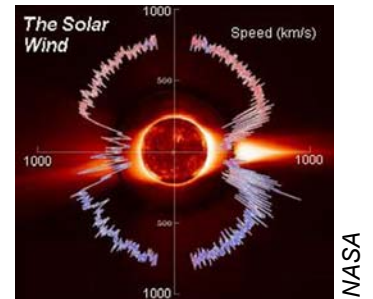
In this activity, you will design and conduct an investigation based on one of the questions that you had about solar wind as you completed the Student Activity, “A First Look.” As you follow the procedure below, you will be using the same method that scientific investigators use as they conduct research based on their observations. Have copies of your completed Student Activity, “A First Look,” and the Student Text, “Exploring Data,” available as you complete this student activity sheet.

#### Part 1. Designing Your Investigation

1. Select a question from your list of questions developed in Part 2 of the Student Activity, “A First Look.” Copy it in the space below.
2. Rewrite your question in the form of a **testable relationship** between two or more variables. The question should include the specific test group(s) or variables, the area to be covered, or the time limits during which you will test this relationship.
3. Now rewrite your question in the form of a **null hypothesis**
4. Describe a procedure for testing your hypothesis. Include the method that you will use to test your hypothesis, the materials and supplies that you will need, the variables to be tested, and the variables that you will hold constant.

**Materials needed:**

**Variables to be tested:**



The solar wind streams away from the Sun in all directions.



**Variables not to be considered or recorded:**

**Procedure:** List the specific details of your procedure in the order in which you will carry out your investigation.



**Part 2.** Carry out your procedure and record the results, including data tables and graphs resulting from your investigation, in the space below.

**Results:**



**Part 3.** Analyze your data. You will need to select the appropriate analysis package for your investigation. If you are using a computer software program, read the specific data qualifications for using the program. You may also consult your science instructor or your mathematics teacher for help in selecting the appropriate analysis program.

**Analysis of Data:**

**Testing for Significance:**

**Conclusions:**