# Teacher Notes

**The Mystery Tube®**

**Teacher**

A. Use the Mystery Tube® as a tool to introduce students to keeping a laboratory journal.

B. Have students work in groups of two or three for this activity. Collaboration is an important skill to develop in the field of science.

C. There are two versions — A and B — in the mystery tube construction. Have students discuss that different constructions can lead to similar behavior.

D. An answer key is not provided to preserve the integrity of the Mystery Tube® and provide an authentic experience for both the teacher and the students.

E. Warn students not to pull the strings too hard or pry off the end caps. Breaking the Mystery Tube® defeats the purpose of the activity.

**Classroom Extensions**

A. Have the students design a model to test their hypothesis. Inexpensive materials may include paper towel tubes, string, rubber bands and various fasteners.

B. Have students present and defend their hypothesis to other group members.

C. Discuss technological developments that have occurred which allow researchers to “extend their senses”. For example, the development of the microscope has allowed examination of a specimen beyond the range of normal human eyesight.
National Framework


Dimension 1
Scientific and Engineering Practices
1. Asking questions and defining problems
2. Developing and using models
6. Constructing explanations and designing solutions
7. Engaging in argument from evidence

Dimension 2
2. Cause and effect: Mechanism and explanation
4. Systems and system models

Dimension 3
PS 2: Motion and stability: Forces and interactions
ETS 1: Engineering design