

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

Connections to A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas

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



Mystery Tube®

