

Scientific Method Stick

Student: _____ Partner 1: _____

Group Name: _____ Partner 2: _____

Date: _____ Partner 3: _____

I. Initial Observations:

1. List the obvious components of the object of study:

- a. _____ c. _____
b. _____ d. _____

2. What are the obvious properties of each of these components? List them respective to the previous list:

- a. _____
b. _____
c. _____
d. _____

3. Label the strings with the masking tape. Pull on one string at a time and jot down your observations.

II. Scientific Problem: What is the scientific “problem” of this exercise?

III. Initial Hypothesis: Write an initial hypothesis and draw a figure in the box below.



Figure 1.

(don't forget to label the components)

IV: Test Project and Data Gathering:

1. Write a question, that if solved, would help you prove your hypothesis. (Avoid the obvious, like “what would it look like inside if I opened it?”)

2. What can you do to try to answer this question, other than opening up the stick? Be specific.

3. What tools may help you to further understand the workings of the scientific method stick?

V: Further Tests and Data Collection:

1. Observe the stick again. This time, use the magnet to probe further into the workings of the stick. What do you observe? Be specific.

2. Determine and describe the approximate length/shape of the unknown object inside using a magnet.

3. Describe your new hypothesis about the object inside.

4. Draw a new figure of your hypothesis, using the information you determined so far.



Figure 2.

(don't forget to label the components)

5. Begin pulling two strings at once slowly. Use your senses to discover any changes. Use the magnet to detect any differences in the unknown object.

VI: Generalizations or conclusions:

1. With the last procedure above in mind, describe in detail what the unknown object inside the stick may look like and how it may work.

2. Draw a new figure in the box below with the conclusions you just made.

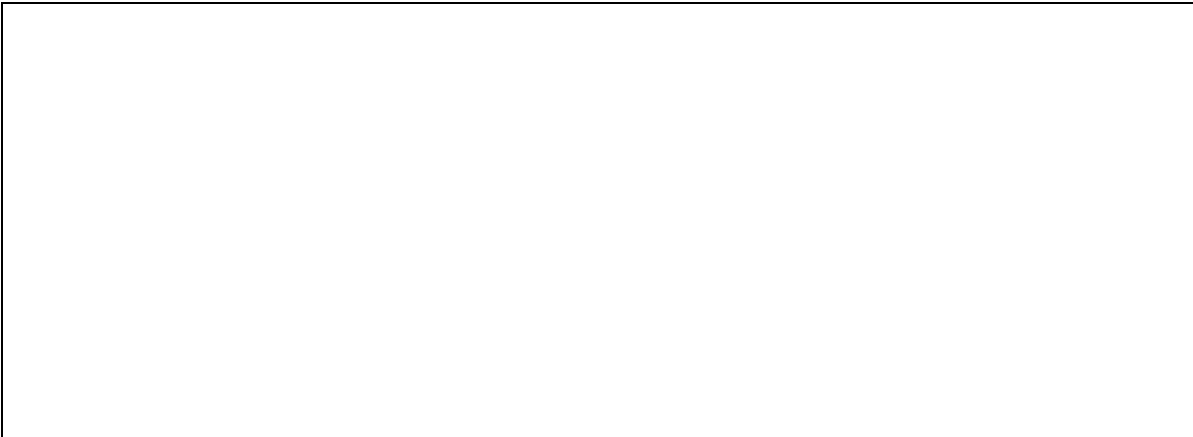


Figure 3.

(don't forget to label the components)

NOW THE MOMENT YOU'VE BEEN WAITING FOR ...

Go ahead and OPEN the stick to see what's inside!!!

VII: Reflections:

1. Did your hypothesis explain the scientific problem? Explain.

2. What events (things you did or thought about) helped you change your hypothesis?

3. If there is anything you would do differently ant any point throughout this project, what would it be?
