

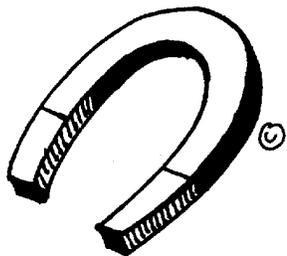


“What is Inside?”

LAB CRAWL 2007

MAGNETIC RESONANCE IMAGING ACTIVITY #1

Summer 2007



MRI = *Magnetic Resonance Imaging*

MRI is an interesting way to use non-optical data to create an optical picture. For several rea-

Activity Directions

The simplest way to construct your “mystery boxes” are to put some common materials into a sealed box. Have students collect data about the contents of the box

Materials that have different properties will have the greatest effect on student observations. For example, a sealed shoe box containing 2 different coins, a pencil, a pen and an eraser, should be readily

“What’s Inside?”

sons, this can be a difficult concept to get across to students.

This first activity is designed to get students used to the idea that accurate pictures can be made using data that enters their brain from senses other than sight.

This activity can be set-up in a variety of ways. The directions

identifiable by most students.

The variations on this activity are almost limitless. For example, for students where simply identifying the contents is not challenging enough, boxes could be set up containing only a ball and a pre-made path for the ball to roll. Students could be asked to determine what the path looks like based on indirect observations only.

MRI Activity 1

below are for building your own “mystery boxes” out of readily available materials. The boxes can be constructed in very complex ways or can be pre-purchased (in several different incarnations). Keep the level of student in mind when choosing how complex to make the boxes.

For more advanced students, boxes could be constructed in such a way that, while indirect evidence of the boxes contents can be collected, the box and its contents will be destroyed when the box is actually opened.

In any case, the focus should be on emphasizing to students the idea that you do not have to be able to see something to have a good idea of what is inside.

MATERIALS

- PRE-MADE MYSTERY BOXES
- JOURNAL SHEETS

S.S.S. Science Addressed:

SC.A.1.3
2.3

SC.B.1.3
2.3

SC.C.1.3
2.3

SC.F. 1.3

SC.H.1.3
2.3
3.3

Black Box Activity

Describe your BLACK BOX:

descriptions

Sight:	
Touch:	
Hear:	
Smell:	

Place your box flat on your desk and draw an overhead “map” of your box. Label everything you have identified.