Lesson Plan

Teacher's Name: Jennifer E. Litts   **Subject:** Science

Date: March 9, 2009

SOL(s): K.1   The student will conduct investigations in which

    a) basic properties of objects are identified by direct observation;

    c) objects are described both pictorially and verbally;

    g) a question is developed from one or more observations;

    j) unusual or unexpected results in an activity are recognized.

  K.3   The student will investigate and understand that magnets have an effect on some materials, make some things move without touching them, and have useful applications. Key concepts include

    a) attraction/nonattraction, push/pull, attract/repel, and metal/nonmetal

Objective(s): Students will make predictions about what will or will not be attracted to a magnet and then test their predictions.

Materials Needed: Box of paper clips, strong magnet, white trays, 8 sets of: magnetic wands on strings attached to pencils, metallic scrubbing pad, nail, paper clip, metal spoon, plastic spoon, rubber band, aluminum foil, key, penny, bingo chip, cotton ball, twist tie, and toothpick, prediction sheets.

Group Size: whole-group

Duration: 20 minutes

Introduction: (build background, make connections)

1. Ask students to sit in a circle on the floor. "Accidentally" drop a box of paper clips in the circle and ask students to pick them up.

2. If students pick them up quickly, "accidentally" spill them again but say you have a special tool which can help us pick them up. If students pick the paper clips up slowly, tell them you have a special tool which can help us pick them up more quickly.

3. Ask students what they noticed about the tool.

Statement of Objectives:

    Tell students that today we will be learning what magnets can do. We will be scientists to see how magnets do or do not effect other objects.

Input: (Step-by-Step Procedure, Questions)

1. Place students into seven groups of two and one group of three if all students are present. Otherwise break students into pairs as evenly as possible.

2. Place the color copy of the prediction sheet on the board and show the students how each real item matches with one of the items on the sheet. Demonstrate on a student copy of the prediction sheet how students are to circle "YES" or "NO" depending on what they think will happen. Ask students to explain the directions back to you and have a few students demonstrate.

3. Give each pair a bag of supplies on a white board as well as a prediction sheet and pencil. Do NOT give students the magnet wands yet.

4. Tell students that they are to work with their partner to make predictions about what the magnet will attract and what it will not. They should touch the items and circle the appropriate response.

5. Once all the predictions are made, tell students that they are to test each prediction one at a time. They will place one of the items on the tray and try to fish for it with the magnet. If their prediction was correct, they should put an X on the image of the item.

6. Once one student has gone, the pair will switch to a new test item and the next student will get a turn. This process is to be repeated until all items are tested.

Assessment Activity:

Observe students as they make predictions and test their ideas. Review students' group sheet to see if students accurately confirmed their predictions or proved their predictions to be false.

Closure:

Bring students together as a group. Ask them to describe what they found out about magnets. Write down words they use such as pull, move, or stick on the dry erase board. Ask the students what kind of things the magnets did or did not attract. Tell students that we will continue investigating what magnets can do tomorrow.

Group Names: _____

Circle YES if you think the magnet will pick up the object.
Circle NO if you do not think the magnet will pick up the object.
Once you make predictions, test the objects.
Put a large X on the pictures which were correct.

YES NO	YES NO	YES NO	YES NO
YES NO	YES NO	YES NO	YES NO
YES NO	YES NO	YES NO	YES NO