10/22/10

Variables 5th Grade Science Kit

Title: Investigation 4-- Designing Controlled Flipper Experiments

Objectives:

1. Discuss and demonstrate the process of designing a controlled experiment.
    a. Find out the effect one variable has in a system
    b. Conduct the standard experiment and record results (There are NO variables tested in this experiment)
    c. Conduct a controlled experiment and record results
    d. Compare Data

Method:

- Whole group instruction
    - Angle Measurements
- Modeling
    - Standard Launch
        - Launch angle—0º (flat).
        - Position—Launch object between two short sticks. (Decide which side up)
        - Object—
        - Flip-stick position—all the way in.
        - Energy—flip stick depressed all the way.
- Guided/Independent practice
- Small groups

Background:

This is the final investigation in the Variables Science Kit

- Students are familiar with terminology and the flipper system

Materials:

- Flipper base
- Angle brace
- Flip sticks
- Popsicle sticks
- Pennies
- Rubber stoppers
- Cork
- Aluminum balls
- Meter sticks
- Science notebooks
    - Design an Experiment: Flippers
    - Two-coordinate graph (as needed) **and transparency**