Boxes-A-Weigh

Description: In this activity, students will put a set of boxes in order by weight, from lightest to heaviest.

Age Group: All.

Estimated Time: 15 minutes (can be combined with other measuring activities)

Key Question: Is it possible to accurately compare the weights of various objects by estimating?

Content Expectations Addressed: Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.

Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.

Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science through history and within society.

Physical Properties- All objects and substances have physical properties that can be measured.

Teacher Information: The process of estimating is used to compare the weights of the boxes in this activity. A person can estimate when an exact answer is not needed, or to be sure that there is enough time, money or materials for a certain project. An estimate can usually be made quickly and can provide information as to how to proceed. An estimate may suffice if the necessary tools to obtain an exact answer are unavailable. The process skill of making an estimate is much like making a prediction that has a numerical component.

*Also see “Tips for Boxes-A-Weigh Measuring”*


Materials: Sets of five nesting boxes:
- Weighed, labeled, and coded by RMSC for quick sorting and evaluating

Procedure:
- A set of five boxes will be prepared by event coordinator/volunteer for students to assemble by weight.

- Before the Inquiry begins, be sure to have the following done for the students:
  - Provide an assortment of different sizes, shapes and weights for students to evaluate and sort.
Assemble boxes by labeled code (you find this on bottom of box) allowing coordinator/volunteer to quickly identify and sort by weight.
  - See “Boxes-A-Weigh Color Key” for coding.
- Place on a table and mix boxes up.

**For the Inquiry:**
- The supervisor/volunteer will give a signal to begin and the student will lift the boxes and try to put them in order by weight, from lightest to heaviest.
- When the student is finished, the supervisor/volunteer lets them know if they are correct.
- If not, they repeat the procedure until they successfully order the boxes.
  - *Also see “Tips for Boxes-A-Weigh Measuring”*
- Use balance scale to compare actual weights and predictions.
- Fill out Boxes-A-Weigh Student worksheet.

**Resources:**

*Measuring and Sorting*, A First Grade Unit/Kit supporting the Battle Creek Area Common Core Curriculum, 1995.


*Pienkowski, Jan, Sizes*

*Pluckrose, Henry, Math Counts Weight*, Children’s Press, 1995