

**Project FOCUS
Best Lessons
KINDERGARTEN**

Title of Lesson: Length and Weight

Theme: Physical Science

Unit Number: 1 **Unit Title:** Physical Properties of Matter

Performance Standard(s) Covered (enter codes):

SKP1

Enduring Standards (objectives of activity):

Habits of Mind

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):

Length, weight, measuring

Learning Activity (Description in Steps)

Abstract (limit 100 characters): This lesson develops a qualitative understanding of length and weight.

Details: Length:

Experiment 1- The facilitator of the experiment will have a sheet of paper with four lines drawn on it large enough for each student to see the paper clearly. Each line will be of a different length and color. The students should identify which line is the longest, the shortest, and which are of middle length according to the lines' corresponding colors. The students will then, on their own sheet of paper, draw the four lines they just observed in the correct order of lengths and colors.

Experiment 2- Strips of paper (prepared from poster board) of sequentially shorter length and alternating color will be given to each student. The students will then have to arrange themselves in order of longest to shortest strip in a line. Once they are lined up correctly, take all of the strips and overlay them to highlight why each strip was shorter than the next. Ask the students to point out which strips were theirs.

Experiment 3- Begin with a short discussion on the definition of a square (four sides of equal length). Five squares cut from different colored construction paper should be prepared. The five squares' sides will be of increasing length. The students will then place the five squares on top of each other to construct a "pyramid" with the largest square at the bottom.

Weight:

Experiment 4- Five objects of clearly varying weight will be presented to the students. Their task is to arrange the objects in order of heaviest to lightest. (recommended objects: balloon, book, pebble, feather, sheet of paper, wooden block, etc.)

Experiment 5- Using a balance, M&Ms will be used to balance objects of varying weight. The facilitator should ask the students which of the objects to be weighed will give them the most M&Ms. This is also a great exercise in counting and identifying colors.

Experiment 6- This experiment is designed to highlight that weight is not always tied to volume. Three sets of objects of similar size will be presented and the students will be asked to guess which object is heavier without touching the objects. Then the students will be allowed to pick them up and use the balance to determine which of the two is heavier (recommended objects: balloon filled with sand/water, shoeboxes empty vs. filled with books).

Materials Needed (Type and Quantity):

Experiments 1-3:

Enough paper for each student to have one sheet

Crayons

A minimum of 2 sheets of different colored poster board

Construction paper

Experiments 4-6:

M&Ms (peanut variety weigh more)

A children's balance

Objects of varying weight

Notes and Tips (suggested changes, alternative methods, cautions):

Before handing out peanut M&Ms, make sure no one is allergic to peanuts.

Sources/References:

- 1)
- 2)
- 3)