



Area and Volume

Grade Level: 3

OVERVIEW Students sometimes need a break from paper and pencil math problems in order to keep them interested and stimulated in math. For some kids certain math concepts are too abstract and need to be made more hands-on.

PURPOSE Many students have a difficult time understanding the concepts of area and volume. Textbooks have pictures that don't always allow the students to grasp the ideas. This activity takes away the abstract idea and replaces it with a concrete model.

OBJECTIVE(s) Students will be able to describe the difference between area and volume and also be able to understand how various units of measure relate to one another.

RESOURCES/MATERIALS Newspaper, scissors, rulers and meter sticks, cardboard (and something to cut it with), markers to identify finished models.

ACTIVITIES AND PROCEDURES Following an introduction to area and volume students will work in groups to build models of square centimeters, square inches and then cubic centimeters, cubic inches. The teacher can also produce the models with larger units of measure such as feet and meter and show them to the class if materials of that size are available. This becomes a good cooperative team effort at problem solving. Students are provided with materials, but no initial instruction is given on how to build their models.

TYING IT ALL TOGETHER: When the groups have completed their projects they will send a spokesperson to the front of the room to share with the class what they have built, what it is called, and how it compares to some of the other models built by other groups. This activity leaves students with a lasting memory of these ideas that are otherwise hard to grasp

SUGGESTIONS/ MODIFICATIONS:

- Units of measurement must be adjusted to the units used in each region.
- Students may be allowed to decorate their models in ways that will enhance their understanding and presentations to the class.
- If materials are unavailable students may bring in clean garbage such as containers, boxes, and bottles in order to build models.

AUTHOR: Timothy Welch, Greenwood Elementary School, LaGrande, OR
<http://www.col-ed.org/cur/>