Board Feet

Subject(s): Math

Grade Level: 5th- Junior High

Time Required: 60 minutes

Materials Needed:
Math manipulatives – 1" cubes, calculators, paper, pencils, ruler, overhead projector, 7 boards cut 1"x12"x 12", 7 boards cut 2"x 4"x 12", 7 boards cut 2"x 6"x 18", 7 boards cut 2"x 4" x 24"

Overview: Students will use the inch cubes to learn how to calculate the amount of board feet in the boards.

Procedure:
1. Pass out a 1"x 12"x 12" board to each team. Have students measure boards with their inch ruler and share results. Explain that those in the lumber industry call this a board foot and that is their basic unit of measure.

2. Ask students to place their inch cubes on their desk in such a way that if they were to glue them together they would be the same size as the BOARD FOOT. Have the students count how many inch cubes they needed to make a board foot. (144)

3. Place a 2"x 4"x 12" on each team's table. Ask students to lay out their inch cubes to form the same size board. Have students count their cubes. (96) Was this MORE or LESS than a BOARD FOOT? (less) How much less? (96/144 or 67%). How many board feet would that be? (0.67) Begin a chart on the overhead recording the dimension of the wood, the number of cubic inches, the percentage of board feet and the decimal number for board feet.

4. Follow the same procedure for the 2"x 6"x 18" and 2"x 4"x 24" boards. Continue to ask questions as in #3 above. Have students record the results of their experimentation on paper.

5. Allow time for teams to share their completed charts. Place results on the overhead chart so that all students end the class with an accurate chart on board feet.