

Title of Lesson Plan	How to Figure Board Feet and Cost of a Board
Prepared By	Jeff Wykrent
City and State	Paw Paw, Michigan
Grade Level(s)	6-12
Keywords (subjects covered)	Board feet vs. linear feet, length, width, thickness, grain direction, cubic inches, volume vs. area, solving equations
Brief Description	Students will learn how to figure the board feet and then figure the cost of a board to be used for a project.
Total Time Required	20 -30 minutes for lesson, 10 – 15 for activity
Setting	Woodshop or Math Class
Lesson Objectives/Goals	To teach students in woodshop how hardwood lumber for woodworking is sold and to give a “Real Life” application for math students having trouble learning differences between area and volume.
Materials Needed	Scrap pieces of wood of varying sizes and a current lumber price sheet (can be made up)
Standards Addressed	Applied Arts “Planning” C.1 (other curriculum will differ)
Procedure	<p>-Student will learn about the difference between Area and Volume (Board Feet is actually finding the Volume in cubic inches).</p> <p>-Student will be given the formula $T \times W \times L / 144 = \text{BDF}$ (Board Feet) and $\text{BDF} \times \text{Cost per BDF} = \text{Cost of the board}$</p> <p>-Students will learn the way to recognize the Thickness, Width, and Length of a board.</p> <p>-Students will then use the BDF formula and Cost Formula to figure the cost of different pieces of wood.</p>
Assessment	25 different pieces of wood placed at different stations around the room with a ruler and cost of the wood per board foot at each station. Students would record the measurements and cost per board foot of each piece. They would then return to their seats and figure the BDF and cost of each piece.
Literature Cited/References	NA
Forestry Tour Attended	Lake States 2008

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