

<b>Title of Lesson Plan</b>	Basic Tree and Forest Measurements
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<b>City and State</b>	Wilmot, NH
<b>Grade Level(s)</b>	9-12
<b>Keywords (subjects covered)</b>	Forest, stand, breast height, basal area, DBH-diameter at breast height, log rule, log scale, Scribner rule, merchantable height, silviculture, clinometers, calipers, diameter tape
<b>Brief Description</b>	An introduction to how trees are measured for diameter, height, and density. The concept of merchantable height is introduced. Different methods of measuring are discussed, i.e.: low tech/high tech. Tools are introduced, methodology is explained, then the class is moved to the field where students break up into groups and practice the different techniques. Results are compared and discussed.
<b>Total Time Required</b>	Two class periods, 50 minutes each.
<b>Setting</b>	Classroom, outside, rear of high school at edge of forested portion of campus.
<b>Lesson Objectives/Goals</b>	Consider forests and trees from the production and supply side, rather than the consumer. Introduce measurement and evaluation techniques as a means to open up discussions careers beyond the consumer/wood working side.
<b>Materials Needed</b>	Measurement tools, diameter tape, log scale, calipers, etc.
<b>Standards Addressed</b>	Different methods of evaluating height and basal area result in varying degrees of accuracy: why do one over the other? When do you need more accuracy? Less?
<b>Procedure</b>	Introduce the concept. Raise questions as to why, how, and issues of accuracy. Explain techniques and methodology. Demonstrate tools. Move the class outside, begin lab. Proceed through letting students work with the tools, each other, and through problems. Facilitate the lab, collect data, compare, discuss. If available, cut down tree and take actual measurements and compare to findings.
<b>Assessment</b>	Concurrent, “over-the-shoulder,” final evaluation. This is an introductory unit to promote awareness and doesn’t require a firm final grade.
<b>Literature Cited/References</b>	Paul Smith College literature, information from Johnson Forest Products, and Eco-Links.
<b>Forestry Tour Attended</b>	2007 Northeastern Tour, Saranac NY

**Lesson Plan Disclaimer**

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