

Wanted Dead or Alive Unit Plan Overview

This is a real-world, problem solving activity in math since in the occupation of forestry land management, decisions that are not based on accurate resource measurements may lead to serious errors, misjudgments or financial losses to the parties involved. Please note that in some cases, only part of a benchmark is taught or assessed primarily in the measurement areas of length, height, volume, and diameter. Individual lesson plans contain links to Beacon's Student Web Lessons. These interactive lessons review math concepts. You will need to determine how to use them in your class, based on your students' abilities in math and the availability of computers or labs.

This unit is conducted inside the classroom as well as outside in a wooded area. You will need to determine trees that can be used during the course of this unit. An easy way of marking the trees would be to tie different colored ropes, cloth, etc. around them and assign each group or student a color. That way, you can determine the measurements of the "red" tree, "green" tree, etc., so that students will have a gauge to use when assessing their measurements, in order to see how accurate their calculations and measurements are. If this isn't the method that you want to use, just make sure that students indicate on their written work which tree they are working with so that you and they can determine the accuracy of what they measure and decide.

Day 1

Diagnostic Assessment: *Diagnostic Assessment for Wanted Dead or Alive (Multiple Choice)*

Instructions and handouts can be found in the attached unit file called Diagnostic Assessment.

Days 2-4

Lesson Plan: *Wanted Dead or Alive...How Big Is it?*

Students learn to approximate the measurement of a tree using unconventional methods.

Days 5-8**Lesson Plan:** *Pacing a Gunther Chain*

In this activity, students learn to pace a Gunther Chain, which is a unit of measurement used by foresters to determine distance and area.

Days 9-11**Lesson Plan:** *Measuring the Merchantable Height of a Tree*

In this activity, students learn techniques that determine the merchantable height of a tree and the number of logs a tree provides.

Day 12**Lesson Plan:** *Determining Mercantile Volume of a Pine Tree*

Students determine timber volumes as sawtimber or pulpwood like a forester would for market purposes.

Days 13-15**Summative Assessment:** *Field Trip to the Woods (Performance)*

Instructions and handouts for Summative #1 can be found in the attached unit file called Summative #1.

Summative Assessment: *Written Assessment for Wanted Dead or Alive (Multiple Choice)*

Instructions and handouts for Summative #2 can be found in the attached unit file called Summative #2.