Summative #2
For
Wanted Dead or Alive

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Summative #2

Assessment Description
Type of Assessment: Matching and short answer Summative Assessment

Assessment Activity Title: Summative #2

Duration: 20 minutes
Standard(s) Assessed: MAB.1.2.1 MAB.1.4.1   MAB.3.4.1   MAB.4.3.1
MAB.4.4.1   MAB.4.4.2
Description of Assessment Activity:
Students take a matching and written test in order to determine the amount of knowledge they have learned concerning how to measure diameter, height, volume of a tree in order to predict its merchantability. Although the test doesn't actually have students using the instruments needed to accurately estimate trees, they have to know what the instruments are and what their functions are.   This test measures that. The real world application is evident since paper companies hold vast amounts of land in northwest Florida. The knowledge students gain through doing this unit has real world applications for the economy.

Teacher Directions:
1. Duplicate the attached test for students.
2. Tell them that the essay question answers will not be graded for punctuation, spelling and capitalization unless they impede the meaning of the answer.

Student Directions:
Match the following ten terms from the Unit, "Wanted Dead or Alive" with their definitions. Answer the discussion questions to the best of your ability.

Scoring Method & Criteria:
An answer key is included for scoring purposes.
For students who have special needs, a proctor may read the definitions and questions aloud as the student marks the correct term. Students should be able to score at least 70% correct on the matching items. Sample discussion question answers are included in the key.

Wanted Dead or Alive
Name:

Match the following ten terms with their definitions.

_____1. DBH.

_____2. Saw Timber

_____3. Pace

_____4. Merchantable Tree Height

_____5. Pulpwood

_____6. Biltmore Stick

_____7. Volume

_____8. Hypsometer

_____9. Cord

_____10. Height of a Tree

a. wood suitable for chipping and processing into pulp for paper products.

b. generally accepted measure for true diameter of a tree.

c. Ruler like instrument used to measure the number of sixteen foot logs a tree will yield.

d. a device used in cruising and measuring trees to estimate timber

e. measurement of tree from ground level to the end of the tallest branch.

f. amount of space an object takes up products.

g. upper limit of harvestable wood on a tree stem.

h. measure of wood cut for fuel as arrange in a pile 8 ft. long, 4 ft. high and 4 ft. wide.

i. wood suitable for lumber products

j. the measurable distance between two normal relaxed steps.

--The forests of northern Florida have pine trees in them that are very valuable and play an important part in the economy. These trees are grown for specific purposes and are harvested by lumber companies and paper companies. How can these pine trees be measured accurately in order to determine their size and worth? Be specific in your answer. Include any knowledge learned from the unit, Wanted Dead or Alive.

--What is the formula used to determine area? perimeter? volume?

--How does a hypsometer work?

--Why is accurate estimating when measuring important? Give an example.

Answer Key for **Summative #2**

1. H (generally accepted measure for true diameter of a tree)

2. F (wood suitable for lumber products)

3. D (the measurable distance between two normal relaxed steps)

4. G (upper limit of harvestable wood on a tree stem)

5. C (wood suitable for chipping and processing into pulp for paper
      products)

6. J (a device used in cruising and measuring trees to estimate timber)

7. I (amount of space an object takes up)

8. A (ruler like instrument used to measure the number of sixteen foot
      logs a tree will yield)

9. B (measure of wood cut for fuel as arrange in a pile 8ft. long, 4ft.
      high and 4 ft. wide)

10. E (measurement of tree from ground level to the end of the tallest
      branch)

Sample discussion question answers might include:
--The only way a tree can be measured is through estimation using specialized
instruments such as the hypsometer and the Biltmore stick. Those who measure the
amount of trees in a specific amount of land use Gunther chains in the field to determine
estimated length. The merchantability can be determined by these estimates. Some parts
of the tree become saw timber and some become pulpwood. In order to determine the
worth of the trees, you have to know the estimated measure, approximately how many
trees there are on an acre, and what type of trees they are. Using tree volume tables and
estimated lengths, diameters, volumes, and quantity, the worth can be determined. Much
math is used in determining these things and it is important to be as accurate as possible.
Inaccurate estimates or figures could cost the owner money.

--Area (L X W) Perimeter (2L + 2W)   Volume of a cylinder (Πr^2 X height) (diameter
of the tree is determined at breast height)

--Hypsometers set up a proportion with lengths of segments and angles. This can then be
used to determine the height of a tree.

--Inaccurate measuring could cost money, time or effort, as well as create problems with
equipment, supplies or manpower.