Agricultural Science II

Curriculum Guide: *Forestry*

Unit Objective:
Students will demonstrate the ability to identify a forest area by identifying trees, measuring standing timber, and establishing a timber stand improvement plan for the area and assembling their findings in a binder or other format.

Show-Me Standards: 1.3, SC5

References:
Forestry. University of Missouri-Columbia: Instructional Materials Laboratory, 1986.

Instructional Strategies/Activities:
- Students will engage in study questions in lessons 1 through 6.
- Additional activities that relate to the unit objective can be found under the heading "Other Activities."

Performance-Based Assessment:
Students will work in groups to identify and analyze a native or managed forest area. Each group must locate a forest area, and identify in detail samples of the trees they find. Students will assemble their samples and findings in a binder, photo album, or other format, such as a computer presentation.

Assessment will be based on thoroughness, accuracy of identifications, and overall presentation of the project. At the instructor's discretion, students will contribute to the assessment process by providing a brief evaluation of the other members of their group.

Forestry
Instructor Guide

The instructor should assign the performance-based assessment activity at the beginning of the unit. Students will work toward completing the activity as they progress through the unit lessons. The assessment activity will be due at the completion of the unit.

1. Divide the class into groups.

2. Have each group locate a forest area.

3. Have students establish an area, 1/10 of an acre, and study it in detail.
    a. The study area is set at 1/10 of an acre to mirror the judging site size used in Forestry Evaluation Contests.
    b. Students must identify at least 10 different trees from the area, which they will identify by filling out an identification sheet for each tree. Leaf or bark samples should be collected from the trees.
    c. Students will measure standing timber by board-foot volume and cord volume.
    d. Students will form a timber stand improvement (TSI) plan for their forest area.
    e. Provide students with blank identification sheets or explain the format identification sheets should follow. Provide students with a cruising stick and reference handouts 1, 2, 3, and 4 in Lesson 5.

4. Depending on the time constraints of the project, have students examine their sample forest area at one particular point in time or return to the area over the course of the unit and record any developments and changes.

5. Have students assemble their samples and findings in a binder, photo album, or other format, such as a computer presentation, and label the collection according to the types of trees studied and their location.

6. Students may incorporate other elements, such as photos, to make the report interesting and informative.

7.   If desired, have students contribute to the assessment process by completing a short evaluation of their teammates' performance in helping to complete the project. A peer evaluation form is included following the scoring guide.
    a. Have students complete the peer evaluation form by following the instructions listed at the top. Students should base their assessment on how much each person contributed to the project.

b. If tasks are divided so that students do only one type of task to contribute to the project, have students adjust their peer evaluation form by disregarding the category that does not apply to a particular teammate. Instead of assessing teammates on two categories worth 0 to 3 points, students will assess teammates on one category worth 0 to 6 points.

c. To determine the final peer evaluation score, add up the scores that a student receives from the other members of the group and divide the total by the number of scores received. The maximum number of points possible for each student is 6.

8. The final assessment score will be a combination of the student's project score and final peer evaluation score.

Forestry
Student Handout

1. The instructor will divide the class into groups.

2. Your group must locate a forest area.

3. You will then establish an area, 1/10 of an acre, and study it in detail.

4. Identify at least 10 different trees from the area by filling out an identification sheet for each one. The instructor will provide identification sheets or explain what information each sheet must include. You will measure standing timber by board-foot volume and cord volume. You will form a timber stand improvement (TSI) plan for your forest area.

5. Assemble your samples and findings in a binder, photo album, or other format, such as a computer presentation.

6. Use other elements, such as photos, as needed to make the report interesting and informative.

7. If requested, you will contribute to the assessment process by completing a short evaluation of your teammates' performance.
   a. When the project is complete, fill out the peer evaluation score sheet.
   b. Give the completed score sheet to your instructor.

8. Your final assessment will be a combination of your completed project score and final peer evaluation score.

Forestry
Scoring Guide

Agricultural Science II

Name _____

Assessment Area	Criteria	0 Points	1 Point	2 Points	3 Points	4 Points	Weight	Total
Information and Content	☐ Information is complete ☐ Facts are accurate ☐ Includes at least 10 different trees ☐ Trees are correctly identified ☐ Provides measurement of standing trees ☐ Provides timber stand improvement plan	0 criteria met	1-2 criteria met	3 criteria met	4 criteria met	All 5 criteria met	X 18	
Presentation	☐ Clear and well organized ☐ Emphasizes key points ☐ No spelling, grammar, or punctuation errors ☐ Good use of supporting materials	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 5.5	
Peer Evaluation						6 pts. maximum		
TOTAL								

Final Assessment Total _____ **/100 pts.**

Comments:

Forestry
Peer Evaluation   Name_____

Write your name on the line above. Fill in the names of your teammates in the spaces provided below. For each category listed below, give each teammate a score from 0 to 3 based on his or her contribution to the project. Use the following guide.
• 0—no contribution
• 1—minimal contribution
• 2—average contribution
• 3—excellent contribution
Add the person's score in each category and place the total in the column at the right. Give the completed score sheet to your instructor.

Project development includes tasks such as tree identification and research. Project completion includes writing, assembling, or presenting the project. If tasks are divided so that you or your teammates do only one type of task to contribute to the project, consult the instructor about how to adjust your evaluation form.

Name of Teammate	**Project Development 0-3 Points**	**Project Completion 0-3 Points**	**Total (6 Points Max.)**