

Agricultural Science II

Curriculum Guide: *Crop Science*

Unit Objective:

Students will demonstrate an understanding of crops and crop production by creating, organizing, and participating in a mini Agronomy Career Development Event.

Show-Me Standards: 1.8, CA6

References:

Crop Science. University of Missouri-Columbia, Instructional Materials Laboratory, 1992.

Missouri CDE Handbook. Accessed March 4, 2003, from http://www.dese.state.mo.us/divvoted/ag_cde_guidelines.htm.

Instructional Strategies/Activities:

- Students will engage in study questions in lessons 1 through 9.
- Students will complete WS 3.1, Parts of a Bean Seed; WS 3.2, Parts of a Grass Plant and Leaf; WS 3.3, Characteristics of Selected Crop and Weed Plants; WS 3.4, Seed Identification Score Sheet; and WS 4.1, Seed Information and Germination Test.
- Additional activities that relate to the unit objective can be found under the heading "Other Activities" in the following locations: p. 20 (1, 2) and p. 83 (2).

Performance-Based Assessment:

Students will work in groups to create, organize, and participate in a mini Agronomy Career Development Event. Each group will be responsible for one class of seed or plant samples in the overall event and will also compete as a team in the whole event.

Assessment will be based on the overall content and presentation of the class in the event and on performance in the contest. At the instructor's discretion, students will contribute to the assessment process by providing a brief evaluation of their teammates' performance in designing and setting up their class in the event.

**Crop Science
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 students into groups and assign each group a class of seed or plant samples to organize in a mini Agronomy Career Development Event.
 - a. Each group will also compete in the whole event as a team.
 - b. The event will follow, as closely as possible, the format and guidelines of a larger event but will be scaled to the size and time constraints available for the project.
2. Explain or review event format, guidelines, and scoring as needed. Refer to the *Missouri CDE Handbook* for guidelines regarding Agronomy Career Development Events. The *Missouri CDE Handbook* is available from the Missouri Department of Elementary and Secondary Education at http://www.dese.state.mo.us/divvoted/ag_cde_guidelines.htm.
3. Students will be responsible for the content of their display and its overall presentation.
4. Sample classes could include, but are not limited to, seed identification, wheat judging, soybean judging, and alfalfa hay judging.
5. Students may consult the instructor for assistance if they have difficulty locating materials, but they must be responsible for the overall content, design, and presentation of their class in the event.
 - a. Seed samples are available from the Instructional Materials Laboratory, University of Missouri-Columbia, at <http://iml.coe.missouri.edu/subj/subj.htm> and from NASCO at <http://www.nascofa.com/prod/Home?seqid=0>, both accessed April 30, 2003.
 - b. Classes to be judged should only include seeds or plants or use judging factors that have been discussed by the instructor with all the students as a group.

Agricultural Science II

6. Scale down or divide classes as needed so that all groups do an equal amount of work.
 - a. For example, for seed identification, students could present 10 crop or weed seeds discussed in class, or seed identification could be assigned to more than one group.
 - b. If a class is assigned to more than one group, guide students as needed to ensure that each group presents different material.
7. Verify the students' placement of their assigned class prior to the contest and suggest corrections as needed.
8. If desired, have students contribute to the assessment process by completing a short evaluation of their teammates' performance in helping to design and set up their portion of the event. 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.
9. The final assessment score will be a combination of the student's class display score, contestant score, and final peer evaluation score.
10. Present an appropriate award to the high-scoring team and individual, if desired.

**Crop Science
Student Handout**

1. You will work with a group to organize a class of seed or plant samples to be judged in a mini Agronomy Career Development Event.
2. Your group will also compete in the whole event as a team.
3. The contest will follow the format and guidelines of a full-scale Agronomy Career Development Event.
4. You will be responsible for the content and presentation of your class of seeds or samples.
5. The instructor will verify your placement of your class of samples prior to the contest.
6. If requested, you will contribute to the assessment process by completing a short evaluation of your teammates' performance in helping to design and set up your class of seeds or samples in the event.
 - a. Following the event, fill out the peer evaluation score sheet.
 - b. Give the completed score sheet to your instructor.
7. Your final assessment score will be a combination of your class display score, your contestant score, and your final peer evaluation score.

Agricultural Science II

Crop Science Scoring Guide

Name _____

Assessment Area	Criteria	0 Points	1 Point	2 Points	3 Points	4 Points	Weight	Total
Thoroughness and Accuracy of CDE Project	Project includes all required seeds or samples and placement is correct	Failed	Poor	Fair	Good	Excellent	X 10	
Presentation of CDE Project	Project is well organized and eye-appealing	Failed	Poor	Fair	Good	Excellent	X 2.5	
TOTAL								/50 pts.

◆ Page 7 ◆

Assessment Area	Seed Identification 0-11 Points	Wheat Judging 0-11 Points	Soybean Judging 0-11 Points	Alfalfa Hay Judging 0-11 Points	Total
Agronomy Career Development Event					
Peer Evaluation				6 pts. maximum	
TOTAL					/50 pts.

Final Assessment Total _____/100 pts.

Comments:

**Crop Science
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 planning 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.)

