

Agricultural Science II

Curriculum Guide: *Agricultural Mechanics Unit for Agricultural Science II*

Unit: VII. Painting and Finishing

Unit Objective:

Students will apply principles of painting by finishing a project using air spray or airless spray equipment.

Show-Me Standards: 2.5, CA3

References:

Agricultural Construction Volume II. University of Missouri-Columbia, Instructional Materials Laboratory, 1989.

Agricultural Mechanics Unit for Agricultural Science II. University of Missouri-Columbia, Instructional Materials Laboratory, 2002.

Healthy Indoor Painting Practices. U. S. Consumer Product Safety Commission. Accessed November 25, 2003, from <http://www.cpsc.gov/cpscpub/pubs/456.pdf>.

Safe Use, Storage and Disposal of Paint. Household Hazardous Waste Project. MU Extension. University of Missouri-Columbia. Accessed November 20, 2003, from <http://muextension.missouri.edu/explore/wasteman/wm6001.htm>.

Instructional Strategies/Activities:

- Students will engage in study questions in lesson 1.
- Students will complete AS 1.1, Spray Painting.
- Additional activities that relate to the unit objective can be found under the heading “Other Activities” in the following location: p. VII-8.

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Performance-Based Assessment:

Students will finish a project using air spray or airless spray equipment. Acceptable projects would include those made for the Agricultural Science II class or outside projects that the instructor determines are appropriate for the curriculum. Students will choose the appropriate primer, paint, and other necessary supplies.

Assessment will be based on the overall quality of the work and the ability to safely and correctly complete the project within the available time.

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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. Use or adapt AS 1.1, Spray Painting, to assess student competency at painting with spray equipment. Review or supplement the lesson as needed, based on student mastery of these procedures and the equipment the students will be using. **NOTE: Students should only complete this performance-based activity if they have mastered all the relevant competencies and have the instructor's permission to perform the activity.**
2. For the performance-based assessment activity, have students apply the skills and procedures discussed in the unit to finish a project using spray painting equipment.
 - a. Choose projects based on the skill level of the students and the time available to work on the project. For example, if students built projects for the Agricultural Science II class, have them paint these projects.
 - b. If students bring in outside projects to be painted, screen these projects to determine if they are appropriate for the curriculum and can be completed in the time available.
3. Have students choose appropriate primer, paint, and other necessary supplies. Review and approve students' material and equipment selection before they begin working.
4. The student handout for this activity is a Project Completion Checklist and Project Evaluation Checklist. Students can use the checklists to track the progress of their project and evaluate their work. Supplement or modify the student handout to reflect actual projects as needed.
5. Have students turn in their completed projects.
6. The final assessment score will be based on the overall quality of the work and the ability to safely and correctly complete the project within the available time.

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Unit VII—Painting and Finishing
Student Handout**

Name _____

Use the Project Completion Checklist and Project Evaluation Checklist to track the progress of your project.

Project Completion Checklist

Procedure	Date Due
<input type="checkbox"/> Master all competencies necessary to complete the project.	
<input type="checkbox"/> Receive instructor approval for the materials and equipment you plan to use. Are they appropriate for the project?	
<input type="checkbox"/> Review safety precautions for the materials and equipment you will use. You can lose points for not following safety precautions and other assigned procedures.	
<input type="checkbox"/> Prepare the project surface.	
<input type="checkbox"/> Apply the primer coat.	
<input type="checkbox"/> Paint the project.	
<input type="checkbox"/> Clean all equipment using the appropriate cleaner. Return the equipment and materials to their proper place and dispose of rags and other hazardous materials properly. You can lose points for not following assigned cleanup procedures.	
<input type="checkbox"/> Perform a quality control inspection of the project following completion. Use the Project Evaluation Checklist.	
<input type="checkbox"/> Turn in the completed project. Your final assessment score will be based on the overall quality of the work and your ability to safely and correctly complete the project within the available time.	

Project Evaluation Checklist

Quality Control and Shop Procedures	Criteria
Quality of Work	<ul style="list-style-type: none"><input type="checkbox"/> Primer is appropriate for the project.<input type="checkbox"/> Primer is properly applied.<input type="checkbox"/> Paint is appropriate for the project.<input type="checkbox"/> Paint is properly applied.<input type="checkbox"/> Paint job is of high quality and pleasing to the eye: no runs, streaks, or orange peeling.<input type="checkbox"/> Project is good enough to sell.<input type="checkbox"/> Work was completed on time.
Safety and Work Habits: Observe these safety procedures whenever you are in the shop.	<ul style="list-style-type: none"><input type="checkbox"/> Know how to use the equipment and materials before you attempt to use them. Only use equipment and materials the instructor has approved you to use.<input type="checkbox"/> Wear appropriate personal protective equipment.<input type="checkbox"/> Follow safety guidelines from your instructor and safety information on labels, equipment, and signs in the work area.<input type="checkbox"/> Do not use primers, finishes, or other products with missing or unreadable labels.<input type="checkbox"/> Follow assigned setup and cleanup procedures.<input type="checkbox"/> Return equipment and materials to their assigned places.

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Unit VII—Painting and Finishing
Scoring Guide**

Name _____

Criteria	0 Points	1 Point	2 Points	3 Points	4 Points	Weight	Total
Primer is appropriate and properly applied	Failed	Poor	Fair	Good	Excellent	X 5	
Paint is appropriate and properly applied	Failed	Poor	Fair	Good	Excellent	X 5	
Paint job is of high quality and pleasing to the eye	Failed	Poor	Fair	Good	Excellent	X 5	
Project is good enough to sell	Failed	Poor	Fair	Good	Excellent	X 5	
Work was completed on time	Failed	Poor	Fair	Good	Excellent	X 5	
Student followed all safety precautions	Passed				Failed	X (-25)	Negative Points *
Student followed all assigned procedures	Excellent	Good	Fair	Poor	Failed	X (-10)	Negative Points *
TOTAL							

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Final Assessment Total _____/100 pts.
*Overall combined score cannot be below 0.

Comments:

