

# Greenhouse Operation and Management

**Curriculum Guide:** *Greenhouse Operation and Management*

**Unit:** V. Plant Propagation

**Unit Objective:**

Students will apply principles of plant propagation by properly propagating a plant and describing the process in written form.

**Show-Me Standards:** 2.1, CA1

**References:**

*Greenhouse Operation and Management*. University of Missouri-Columbia, Instructional Materials Laboratory, 2002.

Reiley, H. E., & Shry, C. L., Jr. *Introductory Horticulture*, 6<sup>th</sup> ed., Delmar Learning, 2000.

**Instructional Strategies/Activities:**

- Students will engage in study questions in lessons 1 and 2.
- Students will complete AS 5.1, Transplanting a Seedling; AS 5.2, Asexual Propagation; and AS 5.3, Budding and Tissue Culture.
- Additional activities that relate to the unit objective can be found under the heading “Other Activity and Strategy” in the following locations: p. 287 and p. 302.

**Performance-Based Assessment:**

Each student will propagate a plant from the school’s greenhouse. After propagating the plant, students will write a procedure that will include the method used, materials required, and steps for the propagation method. Students will give the instructor the plant cutting sample along with the written procedure.

Assessment will be based on the overall content of the written procedure and the quality of the propagated plant specimen. Spelling, grammar, punctuation, and capitalization will also be factors in the assessment.



### Unit V—Plant Propagation 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. Have each student propagate a plant from the school's greenhouse. Students should use plants already in the greenhouse to prevent pest transfer.
  - a. Students may need to share a plant if there are not enough plants available.
  - b. Be sure to provide different types of plants so that a variety of propagating techniques are represented.
2. Have students determine the correct propagation method, propagate their plant, and write a procedure for the method they used. The written procedure will cover the following topics:
  - Statement of the method used
  - List of the materials needed
  - Steps for the propagation method
3. Have students turn in the planted cutting and written procedure.
4. The final assessment will be based on the content of the written procedure and the quality of the propagated plant specimen. Spelling, grammar, punctuation, and capitalization will also be factors in the assessment.



### Unit V—Plant Propagation Student Handout

1. Your instructor will provide a plant from your school's greenhouse for you to propagate.
2. Determine the correct propagation method, propagate your plant, and write a procedure for the method you used. The written procedure should cover the following topics:
  - Statement of the method used
  - List of the materials needed
  - Steps for the propagation method
3. Turn the planted cutting and written procedure in to the instructor.
4. Your final assessment score will be based on the content of the written procedure and the quality of the propagated plant specimen. Spelling, grammar, punctuation, and capitalization will also be factors in the assessment.



## Greenhouse Operation and Management

### Unit V—Plant Propagation Scoring Guide

Name \_\_\_\_\_

Assessment Area	Criteria	0 Points	1 Point	2 Points	3 Points	4 Points	Weight	Total
Procedure	<ul style="list-style-type: none"> <li><input type="checkbox"/> Includes all required elements</li> <li><input type="checkbox"/> Content is accurate</li> <li><input type="checkbox"/> Information is complete</li> <li><input type="checkbox"/> Well organized</li> </ul>	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 15	
Propagated Plant	<ul style="list-style-type: none"> <li><input type="checkbox"/> Correct method was used</li> <li><input type="checkbox"/> Propagated correct portion of plant</li> <li><input type="checkbox"/> Plant watered properly</li> <li><input type="checkbox"/> Plant is in good health</li> </ul>	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 7.5	
Technical Considerations (Procedure)	<ul style="list-style-type: none"> <li><input type="checkbox"/> Spelling</li> <li><input type="checkbox"/> Grammar</li> <li><input type="checkbox"/> Punctuation</li> <li><input type="checkbox"/> Capitalization</li> </ul>	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 2.5	
<b>TOTAL</b>								

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Final Assessment Total \_\_\_\_\_/100 pts.

Comments:

