

## DESE Model Curriculum

GRADE LEVEL/UNIT TITLE: 11-12/Plant Propagation

Course Code:

### **COURSE INTRODUCTION:**

The Greenhouse Operation and Management course develops a basic understanding of greenhouse techniques. The production of greenhouse crops will be used to demonstrate procedures such as plants started from cuttings, seeds, grafts, and layering. Students will manage their own crop as a greenhouse project. (CD 016765, CIP 01.0604)

Course Rationale – Agriculture encompasses the food, fiber, conservation and natural resource systems, employing over 20% of the nation's workforce. Cutting, seeding, grafting, layering, and management of a greenhouse provide entry level and entrepreneurial opportunities for students with an interest in horticulture.

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<b>UNIT DESCRIPTION:</b>  Students will learn methods of plant propagation.		<b>SUGGESTED UNIT TIMELINE: 2 WEEKS</b>  <b>CLASS PERIOD (min.): 50 MINUTES</b>				
<b>ESSENTIAL QUESTIONS:</b>  1. What are methods of plant propagation?						
ESSENTIAL MEASURABLE LEARNING OBJECTIVES	CCSS LEARNING GOALS (Anchor Standards/Clusters)	CROSSWALK TO STANDARDS				
		GLEs/CLEs	PS	CCSS	AFNR Standards	DOK
1. Demonstrate the correct method for sexual propagation in the greenhouse environment.				SL11-12.4	PS.03.01.02.a PS.03.01.03.a PS.03.01.02.b PS.03.01.03.b PS.03.01.02.c PS.03.01.03.c	1
2. Differentiate between various types of asexual propagation procedures.				RST11-12.9	PS.03.01.02.a PS.03.01.03.a PS.03.01.02.b PS.03.01.03.b PS.03.01.02.c PS.03.01.03.c	2 3
3. Unit: Apply principles of plant propagation by properly propagating a plant and describing the process in written form.				W11-12.2 RST11-12.3 RST11-12.9	PS.03.01.02.a PS.03.01.03.a PS.03.01.02.b PS.03.01.03.b PS.03.01.02.c	4

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					PS.03.01.03.c
<p><b>ASSESSMENT DESCRIPTIONS*:</b> (Write a brief overview here. Identify Formative/Summative. Actual assessments will be accessed by a link to PDF file or Word doc. )</p> <p>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.</p> <p>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.</p> <p><b>*Attach Unit Summative Assessment, including Scoring Guides/Scoring Keys/Alignment Codes and DOK Levels for all items. Label each assessment according to the unit descriptions above ( i.e., Grade Level/Course Title/Course Code, Unit #.)</b></p>					
<b>Obj. #</b>	<b>INSTRUCTIONAL STRATEGIES (research-based): (Teacher Methods)</b>				
2	1. Lecture, discussion				
1, 3	2. Demonstration				
<b>Obj. #</b>	<b>INSTRUCTIONAL ACTIVITIES: (What Students Do)</b>				
2	1. Students will respond to study questions in lessons 1 and 2.				
1, 3	2. Students will complete “AS 5.1, Transplanting a Seedling”; “AS 5.2, Asexual Propagation”; and ‘AS 5.3, Budding and Tissue Culture.”				
	3. 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.				
<p><b>UNIT RESOURCES: (include internet addresses for linking)</b></p> <ul style="list-style-type: none"> <li>• <i>Greenhouse Operation and Management</i>. University of Missouri-Columbia, Instructional Materials Laboratory, 2002.</li> <li>• Reiley, H. E., &amp; Shry, C. L., Jr. <i>Introductory Horticulture</i>, 6<sup>th</sup> ed., Delmar Learning, 2000.</li> </ul>					

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