

DESE Model Curriculum

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

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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UNIT DESCRIPTION: Students will learn about greenhouse pests and diseases, as well as their impact on a greenhouse.		SUGGESTED UNIT TIMELINE: 7 Days CLASS PERIOD (min.): 50 MINUTES				
ESSENTIAL QUESTIONS: 1. What are greenhouse pests and diseases? 2. How do greenhouse pests and diseases affect the greenhouse?						
ESSENTIAL MEASURABLE LEARNING OBJECTIVES	CCSS LEARNING GOALS (Anchor Standards/Clusters)	CROSSWALK TO STANDARDS				
		GLEs/CLEs	PS	CCSS	AFNR Standards	DOK
1. Identify pests and diseases in the greenhouse and factors that contribute to their presence.				RST11-12.9	PS.03.03.01.b PS.03.03.02.a	1
2. Differentiate between various pest management methods.				RST11-12.1 RST11-12.4 RST11-12.7	PS.03.03.03.a PS.03.03.03.b	2
3. Explain safe usage and application of pesticides.				RST11-12.1 RST11-12.4 RST11-12.7 SL11-12.4 A-REI.4 G-MG.2	PS.03.03.04.a PS.03.03.04.b	3
4. Unit: Demonstrate an understanding of a plant pest and disease by writing a report on each that describes the pest and disease and identifies the control method.				RST11-12.1 RST11-12.4 RST11-12.7 SL11-12.4 W11-12.2	PS.03.03.01.b PS.03.03.02.a PS.03.03.03.a PS.03.03.03.b PS.03.03.04.a	3 4

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					PS.03.03.04.b	
ASSESSMENT DESCRIPTIONS*: (Write a brief overview here. Identify Formative/Summative. Actual assessments will be accessed by a link to PDF file or Word doc.)						
<p>Students will be assigned one plant pest and one plant disease. They will write a report on each that includes the effects the pest or disease has on the plant, warning signs the plant might exhibit to indicate the presence of the pest or disease, and a listing of any recommended treatments and their application methods. Students should include a picture with each report that illustrates the pest or disease. The reports also can be used to educate future students.</p> <p>Assessment will be based on the overall content and presentation of the reports. Spelling, grammar, punctuation, and capitalization will also be factors in the assessment.</p> <p>*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 #.)</p>						
Obj. #	INSTRUCTIONAL STRATEGIES (research-based): (Teacher Methods)					
1-3	1. Lecture, discussion					
4	2. Demonstration					
Obj. #	INSTRUCTIONAL ACTIVITIES: (What Students Do)					
1-3	1. Students will Respond to study questions in lessons 1 through 3.					
4	2. Students will complete “AS 6.1, Path of Destruction Part I: Insects and Arachnids”; “A.S 6.2, Path of Destruction Part II: Other Pests and Diseases”; “AS 6.3, Applied Pest Management”; and “AS 6.4, Integrated Pest Management.”					
	Additional activities that relate to the unit objective can be found under the heading “Other Activities and Strategies” in the following locations: p. 327, p. 361 (1, 2), and p. 378 (1, 2, 3)					
UNIT RESOURCES: (include internet addresses for linking)						
<ul style="list-style-type: none">• <i>Greenhouse Operation and Management.</i> University of Missouri-Columbia, Instructional Materials Laboratory, 2002.• Insects and Diseases Publications. MU Extension. University of Missouri-Columbia. Accessed January 17, 2012, from						

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<http://muextension.missouri.edu/explore/agguides/pests/index.htm>.

- McKinley, M. (Ed.). *Home Gardener's Problem Solver*. Ortho Books, 2001.
- “Nursery/Landscaping.” *Missouri CDE Handbook*. Accessed January 17, 2012, from <http://dese.mo.gov/divcareered/AG/CDE/Nursery-Landscape.pdf>.
- Plant Diseases Library. Kansas State Research and Extension. Accessed February 9, 2004, from <http://www.oznet.ksu.edu/library/plant2/>.
- Plants & Pests. Missouri Department of Agriculture. Accessed April 27, 2012, from <http://mda.mo.gov/plants/>
- Students may use additional outside sources to complete this activity.