

# Greenhouse Operation and Management

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

**Unit:** VI. Plant Health

**Unit Objective:**

Students will 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.

**Show-Me Standards:** 1.4, SC3

**References:**

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

Insects and Diseases Publications. MU Extension. University of Missouri-Columbia. Accessed February 9, 2004, from <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 November 3, 2003, 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/>.

Plant Industries Division. Missouri Department of Agriculture. Accessed February 9, 2004, from <http://www.mda.mo.gov/WhoWeAre/i7.htm>.

Students may use additional outside sources to complete this activity.

**Instructional Strategies/Activities:**

- Students will engage in study questions in lessons 1 through 3.
- 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.

## **Greenhouse Operation and 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).

### **Performance-Based Assessment:**

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.

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.

### Unit VI—Plant Health 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. Assign each student one plant pest and one plant disease.
2. Have students write a report about the pest and another report about the disease. Reports should address the following topics:
  - Effects of the pest or disease on the plant
  - Warning signs the plant might exhibit to indicate the presence of the pest or disease
  - Recommended treatments and their application methods
3. Have students include pictures that illustrate the pest and disease.
4. Students may use material found in the unit or discussed in class as well as additional outside sources to complete their reports.
5. Students may not use the source material word for word and must provide a complete bibliography of their sources along with their reports.
6. The final 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.
7. ADDITIONAL ACTIVITIES:
  - a. Have students examine the school's greenhouse for evidence of pests and diseases. Use their findings as the basis for a class discussion. Topics could include the following:
    - Was there evidence of pests or diseases?
    - What was the evidence?
    - What was the cause?
    - What treatment would you recommend?
    - If you did not find evidence of pests or diseases, what management methods were being used to keep the plants free of pests and diseases?
  - b. Use pictures from students' reports as illustrations for a class discussion about pests and diseases or as flash cards for a matching activity or review.



### Unit VI—Plant Health Student Handout

1. The instructor will assign you one plant pest and one plant disease.
2. Write a report about the pest and another report about the disease. Reports should address the following topics:
  - Effects of the pest or disease on the plant
  - Warning signs the plant might exhibit to indicate the presence of the pest or disease
  - Recommended treatments and their application methods
3. Be sure to included pictures that illustrate the pest and disease.
4. You may use material found in the unit or discussed in class as well as additional outside sources to complete your reports.
5. You may not use the source material word for word and must provide a complete bibliography of your sources along with your reports.
6. Your final assessment score will be based on the overall content and presentation of your reports. Spelling, grammar, punctuation, and capitalization will also be factors in the assessment.



## Greenhouse Operation and Management

### Unit VI—Plant Health Scoring Guide

Name \_\_\_\_\_

Assessment Area	Criteria	0 Points	1 Point	2 Points	3 Points	4 Points	Weight	Total
Pest Report	<ul style="list-style-type: none"> <li><input type="checkbox"/> Covers all required topics</li> <li><input type="checkbox"/> Content is complete</li> <li><input type="checkbox"/> Information is accurate</li> <li><input type="checkbox"/> Picture clearly illustrates the pest</li> </ul>	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 11.25	
Disease Report	<ul style="list-style-type: none"> <li><input type="checkbox"/> Covers all required topics</li> <li><input type="checkbox"/> Content is complete</li> <li><input type="checkbox"/> Information is accurate</li> <li><input type="checkbox"/> Picture clearly illustrates the disease</li> </ul>	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 11.25	
Technical Considerations	<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>								

◆ Page 7 ◆

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

Comments:

