



INTEGRATED PEST MANAGEMENT

Unit 1 Lesson 3 Dormant Demons

Focus Areas: Pest Identification, Science,
Math

Focus Skills: Observing, measuring,
predicting, recording data, critical
thinking

Level of Involvement: AVERAGE





*Dedicated
to Reducing
Pesticides*



University of
Connecticut
College of Agriculture
and Natural Resources
Cooperative Extension System

Unit 1 Lesson 3: Dormant Demons

Focus Areas: Pest Identification; Science, Math

Focus Skills: Observing, measuring, predicting, recording data, critical thinking

Level of Involvement: AVERAGE

Objectives

- * To identify the parts of a plant life cycle
- * To recognize that different habitats harbor various seeds
- * To recognize that mulching is an IPM method used to control weeds
- * To apply knowledge gained to weed management

Essential Questions

- * What life cycle adaptation aids weeds to survive in a variety of locations?
- * How can IPM tactics diminish the success rate of weeds?

Essential Understandings

- * Seeds can lie dormant until environmental conditions are optimum for germination.
- * Mulching and removing weeds before they produce seeds can diminish the number of weeds that germinate in a given area.

Background

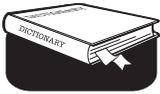
We tend to think of weeds only when they show up as big vigorous plants swallowing up our gardens. However, weed seeds are like little time capsules, living in the soil over long periods of time, waiting for just the right conditions to germinate.



Unit 1 Lesson 3: Dormant Demons

Background (continued)

From a weed management point of view, one of the best strategies to prevent long-term weed infestations is not allowing the weeds in your farm and garden to go to seed. Mulching before seeds can germinate is another option (but does not work as well on plants already growing that send out runners or rhizomes).



Vocabulary

competitive plants	plants that crowd out others over time
dormant	inactive state of a plant
germinate	a small plant that starts to grow from a seed in the soil
seedlings	small plants starting to emerge above the soil

Challenge

Reduce the germination rate of weeds

Logistics	Time: 10 minutes a day over the weeks of observation Group size: 2 to 35 Space: Room for flats to be kept in a sunny location
------------------	--



Unit 1 Lesson 3: Dormant Demons

Materials



shovel or trowel for digging up soil

flats to put the soil in

three types of mulch:

- organic residue: grass clippings, leaves, barks, etc.
- plastic
- paper
- participant's choice

Handout 1: Data Sheet for Plant Germination and Growth *

Handout 2: Lab Report Form *

Assessment for a Lab Report *

* single copy provided

Preparations

1. Collect soil from four to six different locations.
2. Fill up two flats with each kind of soil. One flat will be watered only. The other will be watered and then covered with some kind of mulch (grass clippings, plastic, paper or one of the participant's choices). Label each flat as to the kind of soil and date of watering.
3. Place flats in an area that receives sunlight.



Unit 1 Lesson 3: Dormant Demons

Activity

Involvement

1. Teams make a data sheet for each flat. Have the teams form hypotheses of which flats they think will:
 - a) germinate first
 - b) have the most plants
 - c) have the most different kind of plants
 - d) have the most competitive plants
2. Keep flats moist but not soggy. Wait for seeds to germinate.
3. Once seedlings start to emerge, have the teams begin to collect data.
4. Continue checking flats and recording data daily for two weeks.
5. At the end of the observation period, compare the original hypotheses to the actual results and draw conclusions.
6. Have each team member complete a lab report for assessment.

Assessment

Each team hands in data sheets and lab reports for evaluation.

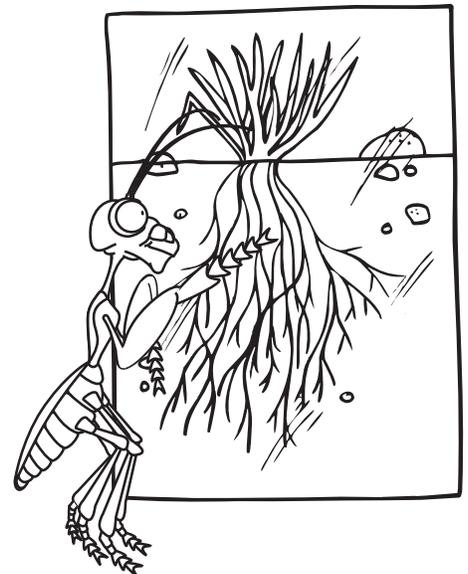
Follow Up

Have students discuss the management implications of their observations or experiments.



Unit 1 Lesson 3: Dormant Demons

Notes





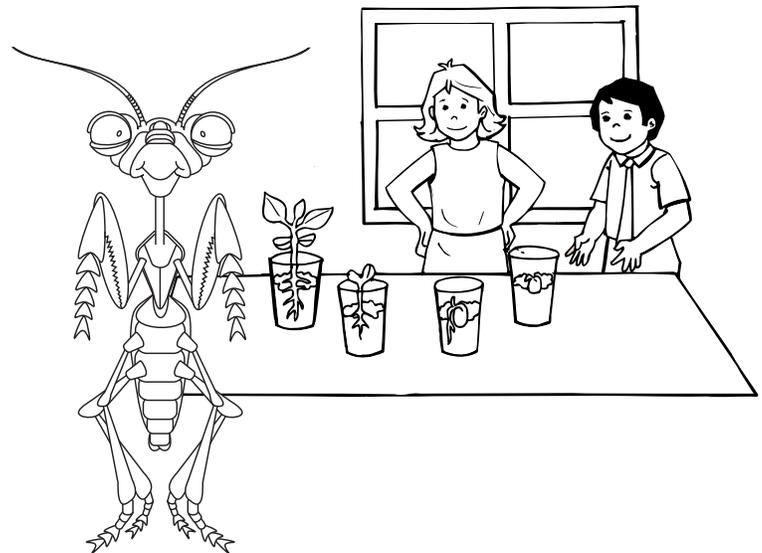
Unit 1 Lesson 3: Dormant Demons

Notes



Unit 1 Lesson 3: Dormant Demons

Notes





Unit 1 Lesson 3: Dormant Demons

Notes



Unit 1 Lesson 3: Dormant Demons

Lab Report Form

Handout 2

Heading: _____

Lab Report Title: _____

Objective: _____

Materials: _____

Procedure: (what you did) 1. _____

2. _____

3. _____

4. _____

5. _____

Results: (what you observed / discovered) _____

Continue on reverse side if necessary

Conclusion/Further Questions: (what you learned or want to learn)



Unit 1 Lesson 3: Dormant Demons

Assessment for a Lab Report

1. Title clearly reflects purpose.	10 points	_____
2. Objective explains purpose.	10 points	_____
3. Material list is accurate and complete.	10 points	_____
4. Procedure is accurate, clear and complete.	20 points	_____
5. Results are detailed, clear and relevant.	20 points	_____
6. Conclusion and/or Question reflects an understanding of the lab's purpose.	20 points	_____
7. Report is neatly done.	5 points	_____
8. Report is mechanically correct.	5 points	_____
Comments:	Total Points	_____

Assessment for a Lab Report

1. Title clearly reflects purpose.	10 points	_____
2. Objective explains purpose.	10 points	_____
3. Material list is accurate and complete.	10 points	_____
4. Procedure is accurate, clear and complete .	20 points	_____
5. Results are detailed, clear and relevant.	20 points	_____
6. Conclusion and/or Question reflects an understanding of the lab's purpose.	20 points	_____
7. Report is neatly done.	5 points	_____
8. Report is mechanically correct.	5 points	_____
Comments:	Total Points	_____



University of
Connecticut
College of Agriculture
and Natural Resources
Cooperative Extension System

