

# LANDSCAPE AND TURF MANAGEMENT

## Lesson 18: TURFGRASS

### I. LESSON DESCRIPTION

Students review a document that was assigned as homework before the class, then complete a table describing four types of turfgrass. *Estimated time requirement for this lesson is 35 minutes.*

**Curriculum Standards:** National Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards, National Council for Agricultural Education, 2009:

- AFNR LifeKnowledge® and Cluster Skills Standards (CS):
  - CS.01.01.01.a. Work productively with a group or independently.
  - CS.03.01.01.a. Use basic technical and business writing skills.
- Plant Systems (PS):
  - PS.02.03.04.a. Identify fertilizer sources of essential plant nutrients, explain fertilizer formulations and describe different methods of fertilizer application.
  - PS.03.01.02.a. Demonstrate sowing techniques and provide favorable conditions for seed germination.
  - PS.03.02.02.a. Explain the reasons for preparing growing media before planting.

*Proper seed selection, fertilizing, watering, and other maintenance techniques are keys to a successful lawn.*

**Student Preparation:** In advance of the class, print and reproduce the handout on turf for all students to read before the scheduled day of class: 18\_Turfgrass\_Reading.doc. Students do not have to read “Segment Two – Establishing a Lawn”; they can just keep it for future reference.

**Student Learning Objectives:** After completing this class, students will be able to:

- (1) Describe four types of grass seed
- (2) Reference a checklist on how to establish a lawn
- (3) Design a turf fertilization program for the entire growing season
- (4) Summarize maintenance practices for mowing, watering, weeding and dethatching turf.

**Instructional Method:** Reading Assignment, Exercise.

## II. LESSON PLAN

Legend:

Text in normal face - Represents teacher's words.

*Text in italic face - Represents suggestions for the teacher.*

### Interest Approach:

- (Write this quotation on the board.)* "Grass is the forgiveness of nature--her constant benediction. Forests decay, harvests perish, flowers vanish, but grass is immortal."  
Brian Ingalls
- Many gardeners would echo this sentiment; frequently the flower bed may lose a troubled shrub or a diseased perennial, but the grass just keeps going and going.
- The lawn is one of the most important components of the landscape. It enhances the beauty of the other landscape plantings as it provides an attractive setting for the home, business, school or recreational site. Lawns also reduce erosion, mud, dust, heat, noise and glare.

### Relevancy:

- To develop and maintain an attractive lawn, certain cultural practices such as mowing, watering and fertilizing should be performed regularly. Weeds, insects and diseases should be controlled soon after the early signs of their development. Other problems, such as thatch and compaction of the soil, also need to be controlled to maintain healthy turf and prevent deterioration of the lawn.

### Learning Objectives:

- After attending this class, you will be able to:
  - (1) Describe four types of grass seed
  - (2) Reference a checklist on how to establish a lawn
  - (3) Design a turf fertilization program for the entire growing season
  - (4) Describe maintenance best practices for mowing, watering, weeding and dethatching turf.
- Now let's take a look at the establishment and maintenance requirements of turfgrass.

### Instructional Methods

**Reading Assignment:** 15 minutes estimated

- Distribute to each student a copy of the reading assignment, 18\_Turf\_Reading.doc, if you haven't pre-assigned it.*
- Please take 15 minutes to review the reading assignment that you were assigned. If you haven't read it for homework, then read at least the first and last segments now in class.

**Verbal quiz:** 15 minutes estimated

- Distribute to each student a copy of the exercise, 18\_Turf\_Task.doc.*
- Refer to the information in your handout, and fill out this table. You'll have 10 minutes.
- After 10 minutes, discuss the results by referring to your answer sheet for the exercise, 18\_Turf\_TaskTEACHER.doc.*

**Summary:**

- By completing this table you've put in perspective some of the key features you'd expect in a grass or a seed mixture that suits a given situation in the landscape.
- We've concluded the series of lessons on landscape plants and turf management; next we'll move into the field of landscape design and installation.

### **OPTIONAL ACTIVITIES**

- Assign students the task of visiting a garden center and writing down the complete list of contents found in some of the seed mixtures.
- Identify a small plot on the school property to create a test site for several types and mixtures of turfgrasses. Find the instructions in the lesson to establish a lawn; follow as many instructions as you feel are necessary for the limited purposes of a test, not a permanent lawn. Keep a journal of the grass types and mixtures that were planted, and periodically visit the plot to record the results.
- Question the greenskeeper of a local golf course about the possibility of bringing the class to the golf course for a brief orientation on turfgrass issues. Alternatively, invite the greenskeeper or a landscape contractor to speak in the classroom about types of turfgrass and essential maintenance tasks.

## RESOURCES

### Free publications:

- There is an abundant list of turf publications available at the Publications site for Penn State University. Visit <http://pubs.cas.psu.edu/Publications.asp> and in the title field, type "turf" without the quotation marks; a long list of turf publications will appear. The items most closely related to this lesson include "Turfgrass species for Pennsylvania", CAT EC395; "Turfgrass Establishment", Special Circular 163; and "Renovation of Lawns", Extension Circular 412 or CAT EC412

### Websites:

- <http://www1.extension.umn.edu/garden/yard-garden/lawns/> - The University of Minnesota Extension Website offers an abundance of useful information.
- <http://www.ntep.org/> - National Turf Evaluation Program – Find the latest information on seed types and mixtures.

18\_Turf\_LessonPlan