



soil amendment

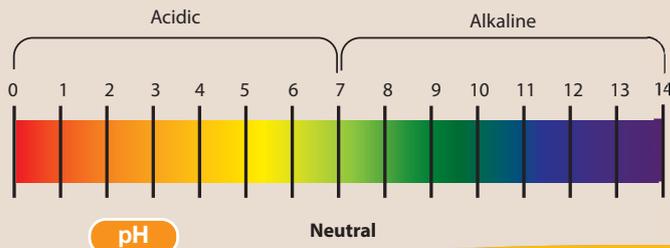


mulch



compost

The PH Scale



pH

Neutral

Get ready!

1 Before you read the passage, talk about these questions.

- 1 What do landscapers need to know about soil before planting?
- 2 How can landscapers improve soil quality?

Reading

2 Read the memo. Then, complete the table.

Task	Purpose
1 _____	To indicate which substances the soil needs
2 _____	To improve the nitrogen content in the soil
Reading the soil survey	3 _____
Spreading mulch over the ground	4 _____



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HOME

From: Bill Watkins, Supervisor
To: University Landscaping Staff
Subject: Proper Soil Preparation Measures

Landscaping Team Members,

I've noticed that many of our plants are doing poorly. Therefore, I want to remind everyone about the correct soil preparation measures. Follow these steps to ensure **fertile** soil.

- 1 Consult the university's **soil survey** results for an overall sense of the soil quality.
- 2 Do a **soil test** of the *specific* area that you are preparing.
- 3 Pay particular attention to the levels of **nutrients**. Also note the soil's **pH** level. These factors will determine which **soil amendments** you need.
- 4 If necessary, use **compost** as a soil amendment. We want the **C:N ratio** to be 25:1. Spread a layer of hay to provide essential **carbon**. Then coordinate with the cafeteria staff to receive kitchen **waste**. Adding this kind of organic matter **fixes** the soil with **nitrogen**.
- 5 Apply a two-inch layer of **mulch** to the bed. This will **smother** any weeds.

Email me if you have any questions.



Vocabulary

3 Match the words or phrases (1-7) with the definitions (A-G).

- | | |
|-----------------|-------------------|
| 1 ___ carbon | 5 ___ smother |
| 2 ___ C:N ratio | 6 ___ pH |
| 3 ___ fix | 7 ___ soil survey |
| 4 ___ mulch | |

A the relationship between two important nutrients in soil

B a number that measures how acidic or alkaline something is

C to prevent something from getting air or the space that it needs to live

D to convert nitrogen into a form that plants can use

E a substance that consists of decaying leaves or other organic material

F a chemical element that is present in all living things

G the process of studying the earth in a particular area

4 Write a word or phrase that is similar in meaning to the underlined part.

- The landscaper spread a substance that contains high quantities of decomposing organic matter over the flowerbed.
_ _ m _ o _ _
- The landscaper did an analysis of a sample of earth to assess its nutrient and contamination levels before planting.
s _ _ _ _ e s _
- The soil in the field was able to produce healthy crops and plants.
_ e r _ _ _ e
- A chemical element that plants need to live is one of the main ingredients in standard fertilizers.
_ _ t r _ _ _ n
- The store sells a variety of substances that improve the earth for growing.
_ o _ _ _ a _ _ n _ m _ _ t s
- The soil was filled with substances that living things need in order to grow.
_ u t _ _ e _ _ s

5 Listen and read the memo again. What is one of the nutrients that plants need?

Listening

6 Listen to a conversation between two gardeners. Mark the following statements as true (T) or false (F).

- ___ According to the soil test, the pH levels are too high.
- ___ The soil needs more nitrogen in order to be fertile.
- ___ The man suggests changing the ingredients in the compost.

7 Listen again and complete the conversation.

Gardener 1: Gretchen, I just finished the **1** _____ of the west flowerbeds. We need to discuss the results.

Gardener 2: Oh, no! That part of the grounds is always causing us trouble.

Gardener 1: Well, the good news is that the **2** _____ are finally suitable for our plants.

Gardener 2: And the **3** _____?

Gardener 1: There's an alarming lack of **4** _____ in the soil.

Gardener 2: I bet we're low on **5** _____ again.

Gardener 1: I'm afraid so. We need to really boost those levels to make the soil fertile.

Gardener 2: I suppose we could add another layer of **6** _____.

Speaking

8 With a partner, act out the roles below based on Task 7. Then, switch roles.

USE LANGUAGE SUCH AS:

I just finished ...

The good news is ...

I suppose ...

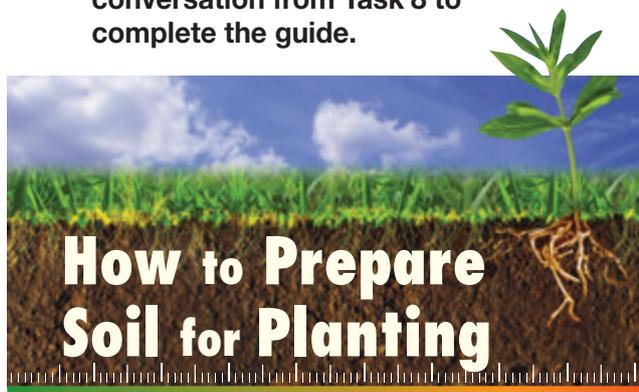
Student A: You are a gardener. Talk to Student B about:

- the results of a soil test
- some good news about the soil
- some bad news about the soil

Student B: You are a gardener. Talk to Student A about results of a soil test.

Writing

9 Use the memo and the conversation from Task 8 to complete the guide.



How to Prepare Soil for Planting

To ensure fertile soil, please follow the steps below.

- Do a soil test. This is important because _____.
- _____. This is important because _____.
- _____. This is important because _____.

Glossary

- abrade** [V-T-U9] To **abrade** something is to rub it hard enough to damage its surface.
- air circulation** [N-UNCOUNT-U3] **Air circulation** is the movement of air around something.
- arid** [ADJ-U14] If an area is **arid**, it is dry and receives little rain.
- automatic** [ADJ-U6] If something is **automatic**, it is designed to work on its own without requiring someone to operate it.
- B&B trees** [N-COUNT-U8] **B&B** (ball and burlap) **trees** are dug out of the ground and then have their roots wrapped in burlap until they are ready for transplanting.
- back brace** [N-COUNT-U15] A **back brace** is a device that fits around a person's torso in order to support his or her back and prevent injury.
- bacteria** [N-COUNT-U12] **Bacteria** are single-celled organisms that can cause disease in other organisms.
- bag** [V-T-U8] To **bag** a tree is to wrap fabric around its roots and secure it with twine.
- bare-root** [ADJ-U8] If a plant is **bare-root**, it is sold in a dormant state with visible roots.
- barrier** [N-COUNT-U12] A **barrier** is a physical obstacle that prevents access to something.
- beneficial** [ADJ-U12] If something is **beneficial**, it is helpful in some way.
- berm** [N-COUNT-U7] A **berm** is a low wall made from dirt or sand.
- bite** [N-COUNT-U15] A **bite** is an action in which an animal or insect uses its mouth to tear someone's skin.
- blister** [N-COUNT-U15] A **blister** is an area of a person's skin that becomes raised or broken due to irritation.
- brace** [V-T-U8] To **brace** something is to provide support for it so that it does not fall down.
- broadcast spreader** [N-COUNT-U11] A **broadcast spreader** is a container on wheels that distributes something over the ground in an arc.
- bubbler** [N-COUNT-U6] A **bubbler** is a type of sprinkler nozzle that emits water at a slow speed, over a small area.
- bury** [V-T-U9] To **bury** something is to place it in the ground and cover it with dirt.
- C:N ratio** [N-COUNT-U1] A **C:N** (carbon to nitrogen) **ratio** is the amount of carbon relative to the amount of nitrogen in soil, and is one factor in the measurement of soil fertility.
- cage** [N-COUNT-U4] A **cage** is a wire structure that holds up the branches of a plant.
- carbon** [N-UNCOUNT-U1] **Carbon** (C) is a chemical element that is present in all living things.
- certified** [ADJ-U13] If a farm is **certified**, it is officially recognized or approved for something.
- climate** [N-COUNT-U14] A **climate** is the general pattern of weather in a particular region over a long period of time.
- companion plant** [N-COUNT-U3] A **companion plant** is a plant that is planted near another one in order to help the other plant grow.
- compost** [N-UNCOUNT-U1] **Compost** is a substance that contains high quantities of decomposing organic matter.
- concentrate** [N-COUNT-U2] A **concentrate** is a strong, pure form of a liquid substance.
- container-grown** [ADJ-U8] If a plant or tree is **container-grown**, it develops in a planter or other container instead of in the ground.
- controller** [N-COUNT-U6] A **controller** is a part of a machine that is responsible for a particular process.
- crossing branches** [N-COUNT-U9] **Crossing branches** are two branches of a tree or shrub that grow into each other's paths. This often causes the branches to become tangled or otherwise disrupts their growth.
- cultivate** [V-T-U9] To **cultivate** land is to prepare it so that it is suitable for plants to grow.
- culvert** [N-COUNT-U7] A **culvert** is a wide pipe that carries water under a road or railway line.
- dam** [N-COUNT-U7] A **dam** is a wall that is built across a river to prevent water from flowing. People usually construct a dam in order to form a lake or to produce electricity.
- deadhead** [V-T-U4] To **deadhead** a flower is to remove dead blossoms from it.
- deadwood** [N-UNCOUNT-U9] **Deadwood** is a plant or portion of a plant that is no longer living.