

# Activity 4.1

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

## Unit Word Search

### Student Materials

Pencil

### Directions

Fill in the blank with the correct term from the word bank. Find each word within the word search.

- \_\_\_\_\_ 1. The top level of the taxonomic system is the \_\_\_\_\_ .
- \_\_\_\_\_ 2. One of the lowest levels of classification
- \_\_\_\_\_ 3. Latin word that means pink
- \_\_\_\_\_ 4. A plant that complete its entire life cycle within one growing season is a(n) \_\_\_\_\_ .
- \_\_\_\_\_ 5. This type of plant needs two growing seasons to complete its life cycle.
- \_\_\_\_\_ 6. Plants that slow their growth during the cold winter months are \_\_\_\_\_ .
- \_\_\_\_\_ 7. Plants that keep their leaves and green color throughout the year are \_\_\_\_\_ .
- \_\_\_\_\_ 8. A \_\_\_\_\_ has two seed leaves.
- \_\_\_\_\_ 9. A \_\_\_\_\_ has only one seed leaf.
- \_\_\_\_\_ 10. Green pigment in the leaves is called \_\_\_\_\_ .
- \_\_\_\_\_ 11. During photosynthesis \_\_\_\_\_ is released into the atmosphere.
- \_\_\_\_\_ 12. A plant's structure consists mostly of \_\_\_\_\_ .
- \_\_\_\_\_ 13. "Photo" means \_\_\_\_\_ .
- \_\_\_\_\_ 14. Plants obtain \_\_\_\_\_ from air, water, and minerals.
- \_\_\_\_\_ 15. Peat moss, sphagnum moss, and pine bark are examples of \_\_\_\_\_ media.
- \_\_\_\_\_ 16. Volcanic rock that has been crushed and heated

- \_\_\_\_\_ 17. The uppermost layer of soil is called \_\_\_\_\_ .
- \_\_\_\_\_ 18. A soil that has approximately equal amounts of sand, silt, and clay
- \_\_\_\_\_ 19. Humidity and wind are \_\_\_\_\_ conditions that affect soil formation
- \_\_\_\_\_ 20. Small rock particles in the soil
- \_\_\_\_\_ 21. Another term for organic matter in the soil
- \_\_\_\_\_ 22. The largest soil particle
- \_\_\_\_\_ 23. Soil particle that feels powdery to the touch
- \_\_\_\_\_ 24. The smallest soil particle

# Word Bank

annual  
biennial  
chlorophyll  
clay  
climate  
dicot

dormant  
evergreens  
genus  
humus  
kingdom  
light

loam  
minerals  
monocot  
nutrients  
organic  
oxygen

perlite  
rosea  
sand  
silt  
topsoil  
water

S R D D G W K Q X B O L D T T R R S O J A I  
 K B S E E F Y I Y S P X L H G A E N X A Y N  
 G N N E Y X U U V A A I G Y T R T E Y W W A  
 I U T D V G Y T S N Q I D K H F A E G C L N  
 S A C P N W P T L D L O O I F P W R E J F K  
 K M B I E N N I A L R T I N I A O G N C Q S  
 J A I T N E C L I M O E U G L E X R F R I E  
 A A V N I A I G A E S O R D I J V E O L G O  
 T Z N R E O G N T O C O N O M E B V T L Q L  
 M O T N S R T R J K G B C M B T L E S K H X  
 J U C P U A A E O H U M U S R I E O V N U C  
 N S O I Q A C L I M A T E V T L D O A Z Y Z  
 B T N M D J L G S G Q A D E H R W J M M T Q  
 A X Q V W F J Z R E L B W P I E D L O N M C  
 D R O N Y A L C D F R F E C O P H Z T J O D

## Activity 4.2

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

# Career Research

### Student Materials

Pencil and paper or computer/printer

Resources to research careers

Examples:

Online sites

America's Career Infonet

<http://www.acinet.org/acinet/>

Books

Magazines

Personal interviews

### Directions

Choose a career associated with plant and soil science that you are interested in finding out more about. There are many careers associated with plant and soil science such as florist, greenhouse grower, landscape architect, forester, agronomist, civil engineer, geologist, soil conservationist, and water quality specialist. If you need assistance in choosing a career, ask your instructor.

Write a paper over the career that is at least two pages in length. Answer questions about the career in your paper such as:

- What is the title of the career? Why did you choose that specific career?
- How does the career relate to plant and soil science?
- What types of businesses or organizations hire for this career?
- What type of degree or training is required for the career?
- What is the salary range or the average salary?
- What are some specific skills required for this career?
- What are some specific duties/responsibilities of this career?
- What are the working conditions and hours?

## Activity 4.3

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

# What's In a Name?

### Student Materials

Pencil

Resources to research Latin names

Examples:

Reference books

Online sites

### Directions

Write in the botanical name, or Latin name, of the following plants.

- \_\_\_\_\_ 1. American Elm
- \_\_\_\_\_ 2. Bermudagrass
- \_\_\_\_\_ 3. Blackeyed Susan
- \_\_\_\_\_ 4. Blackjack Oak
- \_\_\_\_\_ 5. Blue Wild Indigo
- \_\_\_\_\_ 6. Catclaw Sensitivebriar
- \_\_\_\_\_ 7. Eastern Cottonwood
- \_\_\_\_\_ 8. Eastern Redcedar
- \_\_\_\_\_ 9. Indian Blanket
- \_\_\_\_\_ 10. Johnsongrass
- \_\_\_\_\_ 11. Musk Thistle
- \_\_\_\_\_ 12. Plains Tickseed
- \_\_\_\_\_ 13. Poison Ivy
- \_\_\_\_\_ 14. Purple Coneflower
- \_\_\_\_\_ 15. Redbud

**Activity**  
**4.4**

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

# Weekly Eating

**Student Materials**

Pencil

**Directions**

Plants are directly or indirectly a source of all food for humans. Think about what you have eaten in the last week. Write 8 complete sentences about different foods you have eaten that come from plants.

Example: Last week I ate grilled chicken, and chicken feed is made from various plants.

- 1. \_\_\_\_\_  
\_\_\_\_\_
- 2. \_\_\_\_\_  
\_\_\_\_\_
- 3. \_\_\_\_\_  
\_\_\_\_\_
- 4. \_\_\_\_\_  
\_\_\_\_\_
- 5. \_\_\_\_\_  
\_\_\_\_\_
- 6. \_\_\_\_\_  
\_\_\_\_\_
- 7. \_\_\_\_\_  
\_\_\_\_\_
- 8. \_\_\_\_\_  
\_\_\_\_\_

## Activity 4.5

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

# Plant Perspiration

### Student Materials

large plastic bags  
twist ties  
rocks  
graduated cylinder

### Procedure

1. Using trees, cover a small branch with a plastic bag (use several different types of plants). The branch should have several leaves on it.
2. Add a small rock to the plastic bag to allow water collection to settle in the bottom of the bag.
3. Secure the plastic bag with a twist tie.
4. Record the beginning time of the experiment.
5. Allow the bag to remain on the branch for 24 hours.
6. Check for visible results after 24 hours. If water is not observed after that period of time, allow the bag to stay for an additional 24 hours.
7. Once water is visible in the bag, uncover the branch and measure the amount of water in a graduated cylinder.
8. Record results, record time of water collection, and calculate the amount of water produced during transpiration every hour.
9. Compare the amount of water obtained from the different plants.
10. Create a graph displaying the results of the different plants.

Plant Name	Water Amount 24 hours	Average Amount Per Hour



## Activity 4.7

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

# State Averages

### Student Materials

Almanacs

Internet access

### Directions

In this lesson you learned about the requirements necessary for plants to grow and develop. Sunlight and water were two of the main requirements. Search the Internet to find the average monthly temperatures and precipitation in your state. Complete the chart below.

	Average Temperature	Average Precipitation
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

1. How do temperature and precipitation correlate? \_\_\_\_\_

\_\_\_\_\_

2. How do they affect farmers? \_\_\_\_\_

\_\_\_\_\_

**Activity  
4.8**

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

# What's the Texture?

## Student Materials

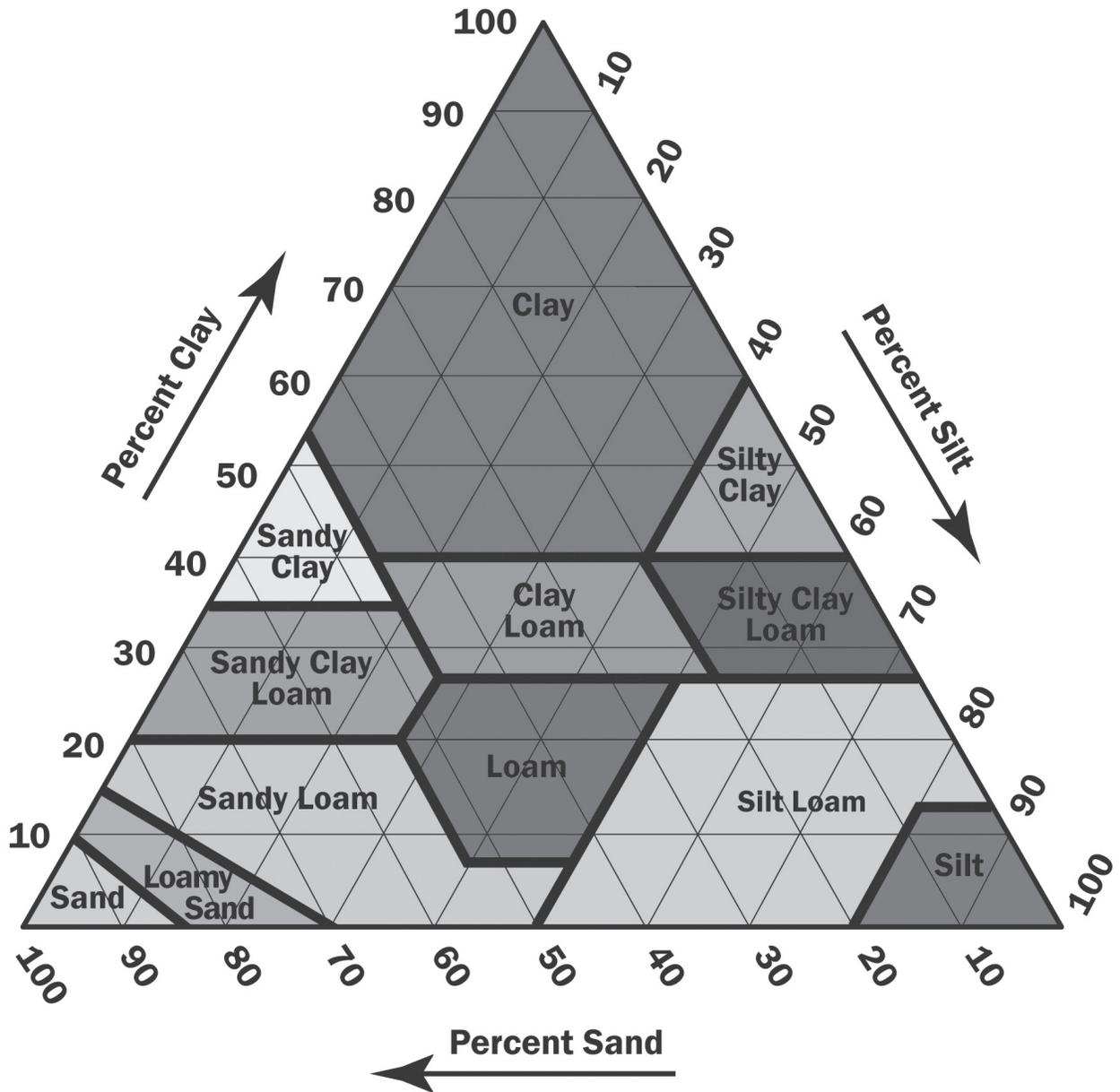
Pencil

Soil textural triangle

## Directions

Use the soil textural triangle to determine the soil textural class of the soils.

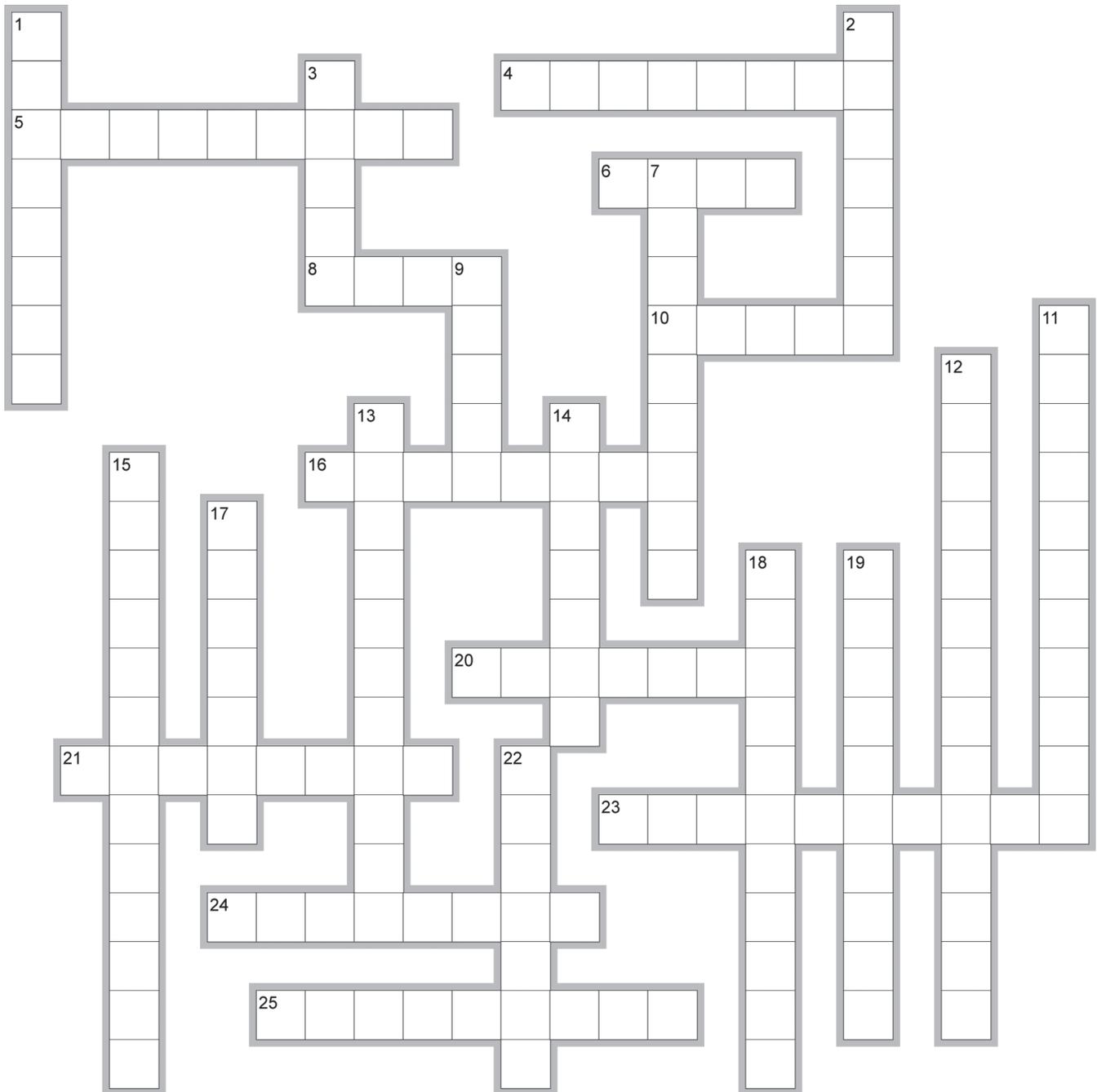
1. 30% sand, 40% silt, 30% clay \_\_\_\_\_
2. 50% sand, 10% silt, 40% clay \_\_\_\_\_
3. 60% sand, 20% silt, 20% clay \_\_\_\_\_
4. 40% sand, 10% silt, 50% clay \_\_\_\_\_
5. 20% sand, 70% silt, 10% clay \_\_\_\_\_
6. 90% sand, 5 % silt, 5% clay \_\_\_\_\_
7. 50% clay, 50% silt \_\_\_\_\_
8. 40% sand, 20% silt, 40% clay \_\_\_\_\_
9. 65% sand, 10% silt, 25% clay \_\_\_\_\_
10. 22% sand, 48% silt, 30% clay \_\_\_\_\_
11. What percentage range of clay would need to be present for a sandy loam soil? \_\_\_\_\_
12. What percentage range of silt would need to be present for a loamy sand soil? \_\_\_\_\_
13. If a soil has a low percentage of sand and silt, what problems could there be?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# Activity 4.9

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

## Unit Review Crossword



EclipseCrossword.com

### Across

4. A plant that needs two growing seasons to complete its life cycle is a \_\_\_\_ .
5. Plants that lose their leaves are called \_\_\_\_ .
6. Optimum soil for plant growth
8. Soil particle that feels gritty and allows water to drain quickly
10. Soil used as a building material
16. Has high water and nutrient retention capabilities
20. Many ornamental flowers are \_\_\_\_ .
21. About half of an average soil
23. Plants that keep their leaves throughout the year
24. Often used by nurseries
25. Plants that grow season after season

### Down

1. Plants receive this nutrient from water
2. All plants belong in the kingdom \_\_\_\_ .
3. Small spaces between soil particles
7. All of these that live on or in the soil affect its formation.
9. Plant that has two seed leaves
11. Method of growing plants without soil
12. Original matter from which soil particles are formed
13. Heated mica compound
14. Some plants lose their leaves during the \_\_\_\_ period.
15. Process in which plants lose water via openings in the skin of the leaf
17. One of the lowest levels of classification that gives the plant its individual scientific name
18. Process in which the plant uses oxygen to convert the stored sugar into usable energy
19. Variation of the earth's surface
22. Latin term meaning yellow
23. Soil used as a building material