

## ACTIVITY

# 1

## AGRICULTURAL ECONOMIST • AGRICULTURAL SCIENCE AND BUSINESS TEACHER

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
- Posters

*Agricultural Economist*

*Agricultural Science and Business Teacher*

### DIRECTIONS

Use the clues and information in the posters to complete the crossword puzzle.

#### Across

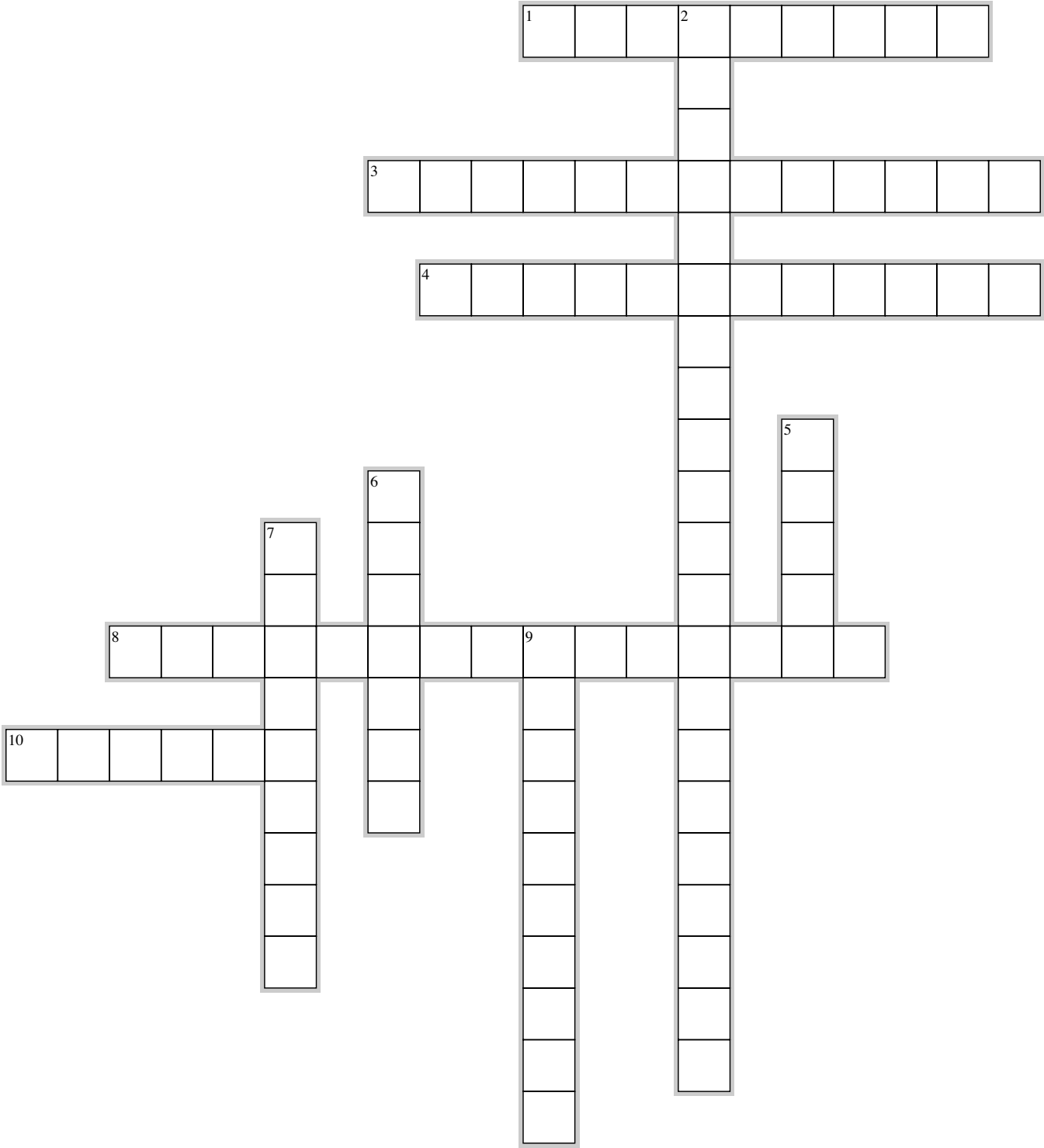
1. This type of institution may hire agricultural economists
3. Agricultural science and business teachers take courses in this and science in college
4. These firms provide things such as animal health, chemicals, seed and/or fertilizers
8. An undergraduate major in agricultural education is used to obtain this
10. Agricultural science and business teachers often work with these community members to teach agricultural production, business, or mechanical subjects

#### Down

2. Uses communication, analytical, and business skills to find success in sales, marketing, management, and finance
5. Many agricultural economists start their careers as this type of representative
6. Agricultural science and business teachers serve as this for the local FFA chapter
7. Along with the ability to work with people, agricultural economists must be able to make these
9. Agricultural science and business teachers emphasize this in addition to personal growth and career success

ACTIVITY  
**1**

AGRICULTURAL ECONOMIST • AGRICULTURAL SCIENCE AND BUSINESS TEACHER



## ACTIVITY

# 2

## AGRICULTURAL ENGINEERING • REMOTE SENSING SPECIALIST

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
- Posters

*Agricultural Engineering*  
*Remote Sensing*

### DIRECTIONS

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

- \_\_\_\_\_ 1. Agricultural \_\_\_\_\_ apply basic science and engineering principles.
- \_\_\_\_\_ 2. Agricultural engineers \_\_\_\_\_ agricultural machinery and facilities.
- \_\_\_\_\_ 3. Remote sensing specialists analyze \_\_\_\_\_ photographs and satellite images.
- \_\_\_\_\_ 4. Color \_\_\_\_\_ photos may be used to map forest types.
- \_\_\_\_\_ 5. Agricultural engineers are \_\_\_\_\_ by builders.
- \_\_\_\_\_ 6. Federal and \_\_\_\_\_ agencies may hire remote sensing specialists.
- \_\_\_\_\_ 7. Agricultural engineers should enjoy \_\_\_\_\_ problems.
- \_\_\_\_\_ 8. Remote sensing specialists enjoy working with \_\_\_\_\_ and computers.
- \_\_\_\_\_ 9. Most remote sensing specialists are knowledgeable in Geographic \_\_\_\_\_ Systems.
- \_\_\_\_\_ 10. Agricultural engineers take a wide variety of engineering \_\_\_\_\_ courses in college.
- \_\_\_\_\_ 11. High school students interested in becoming an agricultural engineer should get involved in \_\_\_\_\_ that allow them to communicate or lead groups.
- \_\_\_\_\_ 12. Remote sensing specialists create maps of land use and land \_\_\_\_\_, such as deforestation.
- \_\_\_\_\_ 13. Animal \_\_\_\_\_ systems are designed by agricultural engineers.
- \_\_\_\_\_ 14. Many agencies and industries hire agricultural engineers, including manufacturers of \_\_\_\_\_ systems.
- \_\_\_\_\_ 15. Most remote sensing specialists have earned a college degree in disciplines such as geography, forestry, or agronomy, then \_\_\_\_\_ in remote sensing.

# ACTIVITY

# 2

## AGRICULTURAL ENGINEERING • REMOTE SENSING SPECIALIST

### Word Bank

activities  
aerial  
changes  
confinement

control  
design  
engineers  
hired

information  
infrared  
maps  
sciences

solving  
specialized  
state

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

## ACTIVITY

# 3

## AGRONOMIST • SOIL SCIENTIST • RANGE MANAGER • WEED SCIENTIST

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
- Posters
  - Agronomist*
  - Soil Scientist*
  - Range Manager*
  - Weed Scientist*

### DIRECTIONS

Complete each sentence with a one-word answer using the information from the posters.

- \_\_\_\_\_ 1. Agronomists deal with \_\_\_\_\_ among plants, soils and the environment.
- \_\_\_\_\_ 2. Soil scientists map and \_\_\_\_\_ soils.
- \_\_\_\_\_ 3. Range managers care for the country's vast \_\_\_\_\_.
- \_\_\_\_\_ 4. Rangelands produce a sustained \_\_\_\_\_ of forage, wildlife, red meat, and clean water.
- \_\_\_\_\_ 5. Weed scientists teach, perform \_\_\_\_\_, and work in extension.
- \_\_\_\_\_ 6. Agronomists develop new crop hybrids and \_\_\_\_\_ that grow more efficiently.
- \_\_\_\_\_ 7. Private \_\_\_\_\_ hire range managers to manage ranches or other land.
- \_\_\_\_\_ 8. Soils \_\_\_\_\_ conduct research in everything from basic to applied issues of soil and water management.
- \_\_\_\_\_ 9. Soil scientists are hired by universities, private industries, \_\_\_\_\_ agencies, and chemical companies to name a few.
- \_\_\_\_\_ 10. Weed scientists work for agricultural \_\_\_\_\_ firms in research, development, sales, marketing and regulation.
- \_\_\_\_\_ 11. Range managers need a \_\_\_\_\_ degree in range science, management, or natural resources.
- \_\_\_\_\_ 12. Agronomists work for the USDA, state departments of agriculture or the Soil \_\_\_\_\_ Service.

## ACTIVITY

# 3

## AGRONOMIST • SOIL SCIENTIST • RANGE MANAGER • WEED SCIENTIST

- \_\_\_\_\_ 13. Diagnosing problems in weed \_\_\_\_\_ systems for private crop consulting companies is a duty of weed scientists.
- \_\_\_\_\_ 14. People looking to become a soil scientist should like working in the outdoors and studying \_\_\_\_\_.
- \_\_\_\_\_ 15. Agronomists generally have interest in science and \_\_\_\_\_ issues.
- \_\_\_\_\_ 16. Range managers who desire to teach or conduct research should obtain a \_\_\_\_\_ degree.
- \_\_\_\_\_ 17. Weed scientists who desire to perform laboratory research should earn a degree in chemistry, \_\_\_\_\_, or plant physiology.
- \_\_\_\_\_ 18. Soil Scientist often are called upon to identify soil problems such as wetness or \_\_\_\_\_ that limit soil use.
- \_\_\_\_\_ 19. Soil scientist are interested in how nutrients and pesticides move through the soil \_\_\_\_\_.
- \_\_\_\_\_ 20. Agronomists can even be employed as \_\_\_\_\_ forecasters.

## ACTIVITY

# 4

## ANIMAL GENETICIST • ANIMAL NUTRITIONIST • ANIMAL PHYSIOLOGIST

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
- Posters

*Animal Geneticist*

*Animal Nutritionist*

*Animal Physiologist*

### DIRECTIONS

Use the clues and information in the posters to complete the crossword puzzle.

#### Across

1. In addition to a master's degree, many animal geneticists complete a \_\_\_\_\_ degree in a specialty area.
4. To become a physiologist, you should take classes and do \_\_\_\_\_ projects.
7. Animal nutritionists can teach the science and \_\_\_\_\_ of nutrition.
8. Animal nutritionists \_\_\_\_\_ diets for food, companion, or zoo animals.
10. Animal physiologists should be interested in animals and their \_\_\_\_\_.
11. In \_\_\_\_\_ sciences, animal geneticists try to understand gene functions.
14. Diets must be nutritionally sound, good-tasting, and \_\_\_\_\_.
15. Genes affect important \_\_\_\_\_ such as reproduction or behavior.
16. Marker-assisted \_\_\_\_\_ can be used to improve a wide range of important traits.
18. Animal nutritionists who desire research or management position should seek a \_\_\_\_\_ degree.

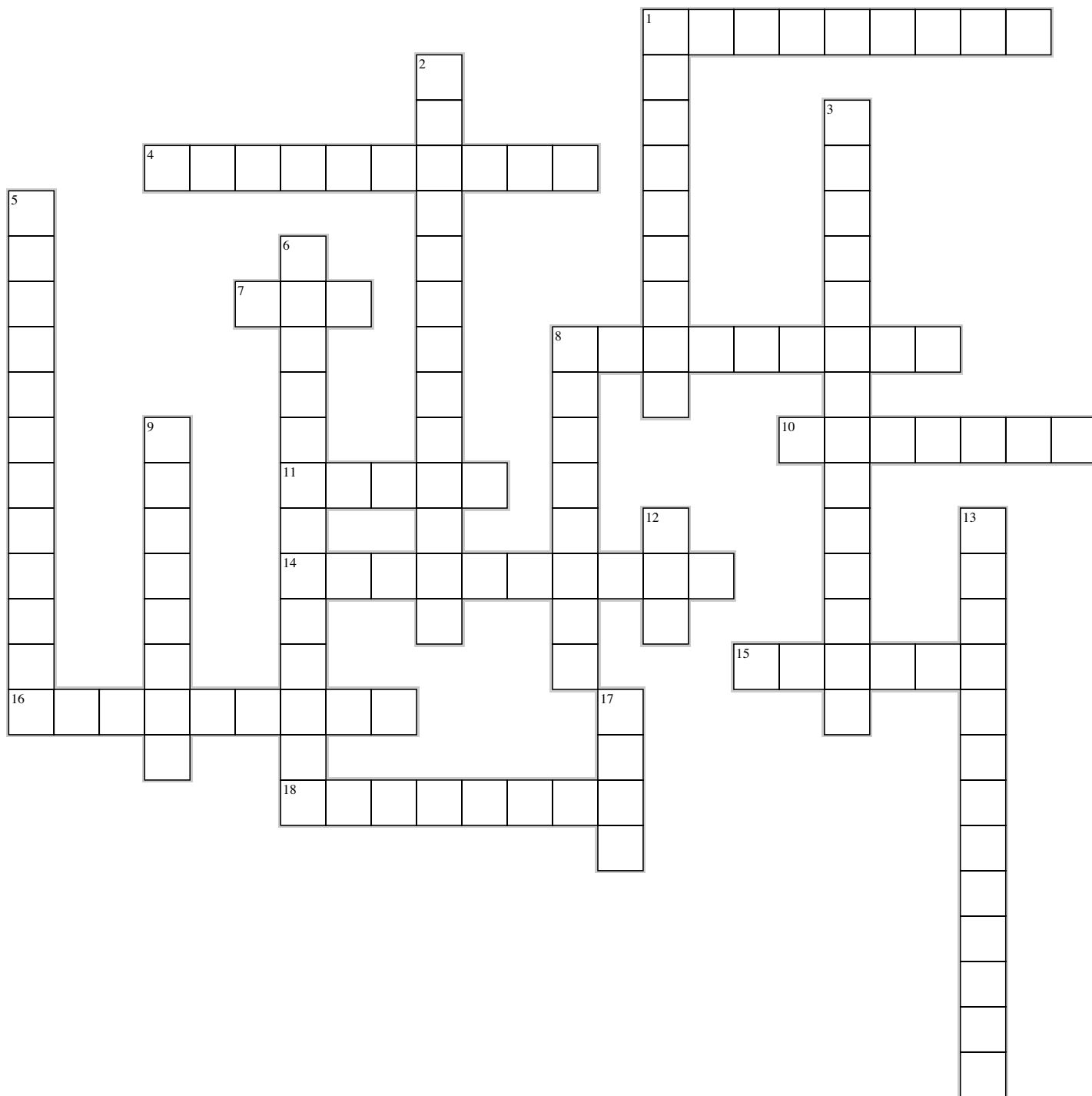
#### Down

1. Building \_\_\_\_\_ routinely consult animal physiologists as they plan space in animal housing.
2. Physiologists at universities teach students who want to become \_\_\_\_\_.
3. Animal geneticists may work for animal \_\_\_\_\_ companies.
5. Animal geneticists are hired by \_\_\_\_\_ to conduct research, teach, and perform outreach.
6. Some animal geneticists may focus on developing new mating strategies for \_\_\_\_\_.
8. Animal physiologists study how animals \_\_\_\_\_.
9. Geneticists may develop new drugs to combat \_\_\_\_\_.
12. Animal geneticists may try to \_\_\_\_\_ genes.
13. How animals interact with outside factors is one interest of animal \_\_\_\_\_.
17. \_\_\_\_\_ suppliers may consult animal physiologists on how diet affects the animals' systems.

# ACTIVITY

# 4

## ANIMAL GENETICIST • ANIMAL NUTRITIONIST • ANIMAL PHYSIOLOGIST



EclipseCrossword.com

## ACTIVITY

# 5

## ANIMAL WELL-BEING SPECIALIST • VETERINARIAN

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
- Posters

*Animal Well-Being Specialist  
Veterinarian*

### DIRECTIONS

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

1. Animal well-being combines fields such as behavior, immunology, \_\_\_\_\_ and neuroscience.
2. Veterinarians complete a D.V.M which is a Doctor of Veterinary \_\_\_\_\_ degree.
3. Veterinarians safeguard \_\_\_\_\_ health by controlling diseases that can spread from animals to humans.
4. To determine the best environmental conditions, animal well-being specialists plan and run \_\_\_\_\_.
5. Animal well-being specialists communicate information through publications or to farmers at \_\_\_\_\_ meetings.
6. Animal well-being specialists must be interested in both science and \_\_\_\_\_ perception.
7. Many veterinarians start their own \_\_\_\_\_ or join group practices.
8. To become a veterinarian, you must complete at least \_\_\_\_\_ years of education beyond high school.
9. Veterinarians can work for \_\_\_\_\_ or pharmaceutical companies.
10. Animal well-being specialists may work with \_\_\_\_\_ animals, zoo animals, or companion animals.
11. Animal well-being specialists must have the ability to effectively \_\_\_\_\_.
12. In addition to a minimum of three years of undergraduate work, four years of \_\_\_\_\_ curriculum is required to complete the D.V.M.
13. Basic math and \_\_\_\_\_ abilities are required of animal well-being specialists.
14. Graduate students in animal well-being take more \_\_\_\_\_ courses in specific disciplines.
15. Veterinarians may join the \_\_\_\_\_, work as researchers, teachers or clinicians.

# ACTIVITY

# 5

## ANIMAL WELL-BEING SPECIALIST • VETERINARIAN

### Word Bank

agricultural  
businesses  
communicate  
endocrinology

experiments  
extension  
human  
medicine

military  
nutrition  
professional  
public

seven  
specialized  
statistics

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

## ACTIVITY

# 6

## AQUACULTURIST • FISHERIES SCIENTIST

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
- Posters

*Aquaculturist*

*Fisheries Scientist*

### DIRECTIONS

Complete each sentence with a one-word answer using the information from the posters.

- \_\_\_\_\_ 1. Fisheries scientists are concerned with effective management, use, and \_\_\_\_\_ of aquatic plants and animals.
- \_\_\_\_\_ 2. Aquaculturists raise a variety of \_\_\_\_\_ plants and animals with the goal of producing food or stocking bodies of water.
- \_\_\_\_\_ 3. The first job of many aquaculturists is stocking \_\_\_\_\_ ponds.
- \_\_\_\_\_ 4. Aquaculturists who become managers are charged to supervise workers, purchase feed and equipment, and plan \_\_\_\_\_.
- \_\_\_\_\_ 5. Fisheries scientists use their knowledge to protect and enhance recreational, \_\_\_\_\_, and aquacultural fisheries resources.
- \_\_\_\_\_ 6. Large operations are often \_\_\_\_\_ integrated and have their own feed mills and processing plants.
- \_\_\_\_\_ 7. Fisheries scientists are often employed as federal \_\_\_\_\_.
- \_\_\_\_\_ 8. Aquaculturists often work for governments or in \_\_\_\_\_ research.
- \_\_\_\_\_ 9. Fisheries scientists should earn a \_\_\_\_\_ degree.
- \_\_\_\_\_ 10. Aquaculture is a type of \_\_\_\_\_.
- \_\_\_\_\_ 11. Feed companies may hire an aquaculturist to \_\_\_\_\_ products to fish farmers.
- \_\_\_\_\_ 12. Entry level aquaculturists are normally required to complete a high school \_\_\_\_\_.

- \_\_\_\_\_ 13. Aquaculturist managers often have college degrees and understand \_\_\_\_\_ quality, nutrition, business, and economics.
- \_\_\_\_\_ 14. High school students aspiring to become aquaculturists should take courses in repair and maintenance of machinery and engines, \_\_\_\_\_, construction, and other shop classes.
- \_\_\_\_\_ 15. Some fisheries scientists work as \_\_\_\_\_ specialists.

## ACTIVITY

# 7

## MARINE SCIENTIST • HYDROLOGIST

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
  - Posters
- Marine Scientist*  
*Hydrologist*

### DIRECTIONS

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

- \_\_\_\_\_ 1. Hydrologists concerned with water supplies manage \_\_\_\_\_ and ground water to avoid problems.
- \_\_\_\_\_ 2. Hydrologists assess how land use affects water \_\_\_\_\_.
- \_\_\_\_\_ 3. A few marine scientists conduct environmental studies for the \_\_\_\_\_ industry.
- \_\_\_\_\_ 4. Hydrologists working on water quality problems deal with the chemical, physical, biological, and \_\_\_\_\_ properties of water.
- \_\_\_\_\_ 5. New opportunities are available for marine scientists in bioengineering, \_\_\_\_\_, and conservation biology.
- \_\_\_\_\_ 6. A marine scientist needs a keen interest in conservation and \_\_\_\_\_ and marine resources.
- \_\_\_\_\_ 7. State agencies and \_\_\_\_\_ associations dealing with natural resources also employ hydrologists.
- \_\_\_\_\_ 8. Hydrologists help assess and \_\_\_\_\_ our water supplies and water quality.
- \_\_\_\_\_ 9. Marine scientists address problems and issues facing marine \_\_\_\_\_.
- \_\_\_\_\_ 10. The \_\_\_\_\_ agencies which manage our natural resources all hire hydrologists.
- \_\_\_\_\_ 11. Marine scientists \_\_\_\_\_ gather data in the field or laboratory.
- \_\_\_\_\_ 12. Marine scientists are often called upon to help solve problems of great \_\_\_\_\_ or political importance.
- \_\_\_\_\_ 13. Hydrologists appreciate natural \_\_\_\_\_ and enjoy working with people.
- \_\_\_\_\_ 14. Marine scientists should have a keen interest in \_\_\_\_\_ and coastal/marine resources.
- \_\_\_\_\_ 15. Many hydrologists work as private consultants and are concerned with \_\_\_\_\_ production.

# ACTIVITY

# 7

## MARINE SCIENTIST • HYDROLOGIST

### Word Bank

aquaculture  
coastal  
conservation  
economic

federal  
life  
petrochemical  
protect

quality  
radiological  
resources  
surface

sustainable  
systematically  
watershed

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

## ACTIVITY

# 8

## BIOCHEMIST • BIOLOGICAL ENGINEER • SCIENCE WRITER

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
- Posters

*Biochemist*

*Biological Engineer*

*Science Writer*

### DIRECTIONS

Use the clues and information in the posters to complete the crossword puzzle.

#### Across

1. Where science writers can work writing science and technology stories, environmental stories, or business stories about science-based corporations
7. Some biochemists will ultimately end up working in research and \_\_\_\_\_.
11. Biological engineers study this kind of organisms
12. Conducted in a laboratory; at the heart of what most biochemists do
14. Where a biochemist works

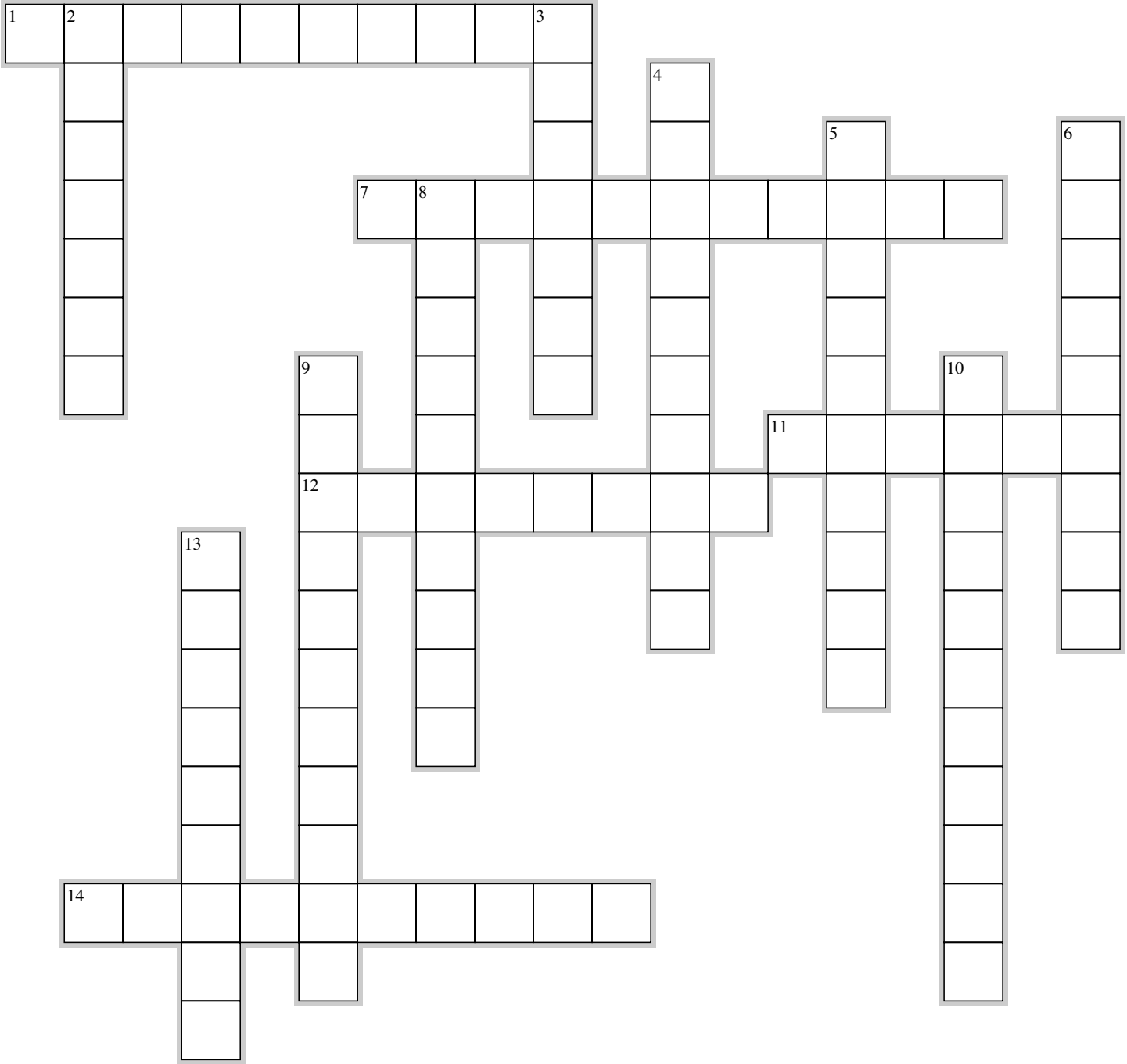
#### Down

2. A strong background in this is needed to be a science writer
3. Science writers describe this without using scientific terms
4. This type of engineering has the potential to be very different than traditional engineering disciplines
5. Some biochemists earn medical or \_\_\_\_\_ degrees then practice medicine.
6. Biochemists work to figure out how cells protect themselves from these
8. Science writers should be able to communicate with this
9. Knowledge collected by biochemists can be translated to products that benefit human health, consumers and what other industry
10. They explore the chemical events that cause biological phenomena in living organisms
13. An important area of biological engineering is the development of this type of natural resources for the use in energy applications

ACTIVITY

8

BIOCHEMIST • BIOLOGICAL ENGINEER • SCIENCE WRITER



## ACTIVITY

# 9

## BIOMETRICIAN • NANOTECHNOLOGIST

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
- Posters

*Biometrician*

*Nanotechnologist*

### DIRECTIONS

Complete each sentence with a one-word answer using the information from the posters.

- \_\_\_\_\_ 1. Biometricians advise \_\_\_\_\_ who are planning experiments.
- \_\_\_\_\_ 2. Sometimes biometricians forecast \_\_\_\_\_ conditions of resources like forests or watersheds.
- \_\_\_\_\_ 3. Nanotechnologists enjoy learning new things, working with cutting-edge science, and developing \_\_\_\_\_ to society's problems.
- \_\_\_\_\_ 4. Nanotechnologists work in research and \_\_\_\_\_ in universities or industry.
- \_\_\_\_\_ 5. \_\_\_\_\_ particles are used to help solve a particular problem for nanotechnologists.
- \_\_\_\_\_ 6. The biometrician's \_\_\_\_\_ are important to quality control and assurance in research and operations management.
- \_\_\_\_\_ 7. Often biometricians work as part of a \_\_\_\_\_.
- \_\_\_\_\_ 8. A person should be intensely \_\_\_\_\_ and enjoy facing a challenge to be a nanotechnologist.
- \_\_\_\_\_ 9. Increasingly, researchers are studying the \_\_\_\_\_ effects of nano-sized particles to make sure these new materials are safe.
- \_\_\_\_\_ 10. Large environmental consulting firms want biometricians' skills in \_\_\_\_\_ and evaluation.
- \_\_\_\_\_ 11. Nanotechnologists must communicate with many different people to stay informed about this \_\_\_\_\_ field.
- \_\_\_\_\_ 12. Universities hire biometricians to support \_\_\_\_\_ researchers.
- \_\_\_\_\_ 13. Nanotechnologists usually \_\_\_\_\_ their own research topics.

## ACTIVITY

# 9

## BIOMETRICIAN • NANOTECHNOLOGIST

- \_\_\_\_\_ 14. Biometricians may conduct their own research to improve \_\_\_\_\_ methods or the understanding of subjects like crop development or climate change.
- \_\_\_\_\_ 15. Biometricians work for state agencies seeking staff \_\_\_\_\_ for research, planning, or information management.

**ACTIVITY****10****CONSERVATION BIOLOGIST • RENEWABLE ENERGY SPECIALIST •  
ENVIRONMENTAL SCIENTIST • WILDLIFE BIOLOGIST**

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**STUDENT MATERIALS**

- Pencil
- Posters

*Conservation Biologist**Renewable Energy Specialist**Environmental Scientist**Wildlife Biologist***DIRECTIONS**

Use the clues and information in the posters to complete the crossword puzzle.

**Across**

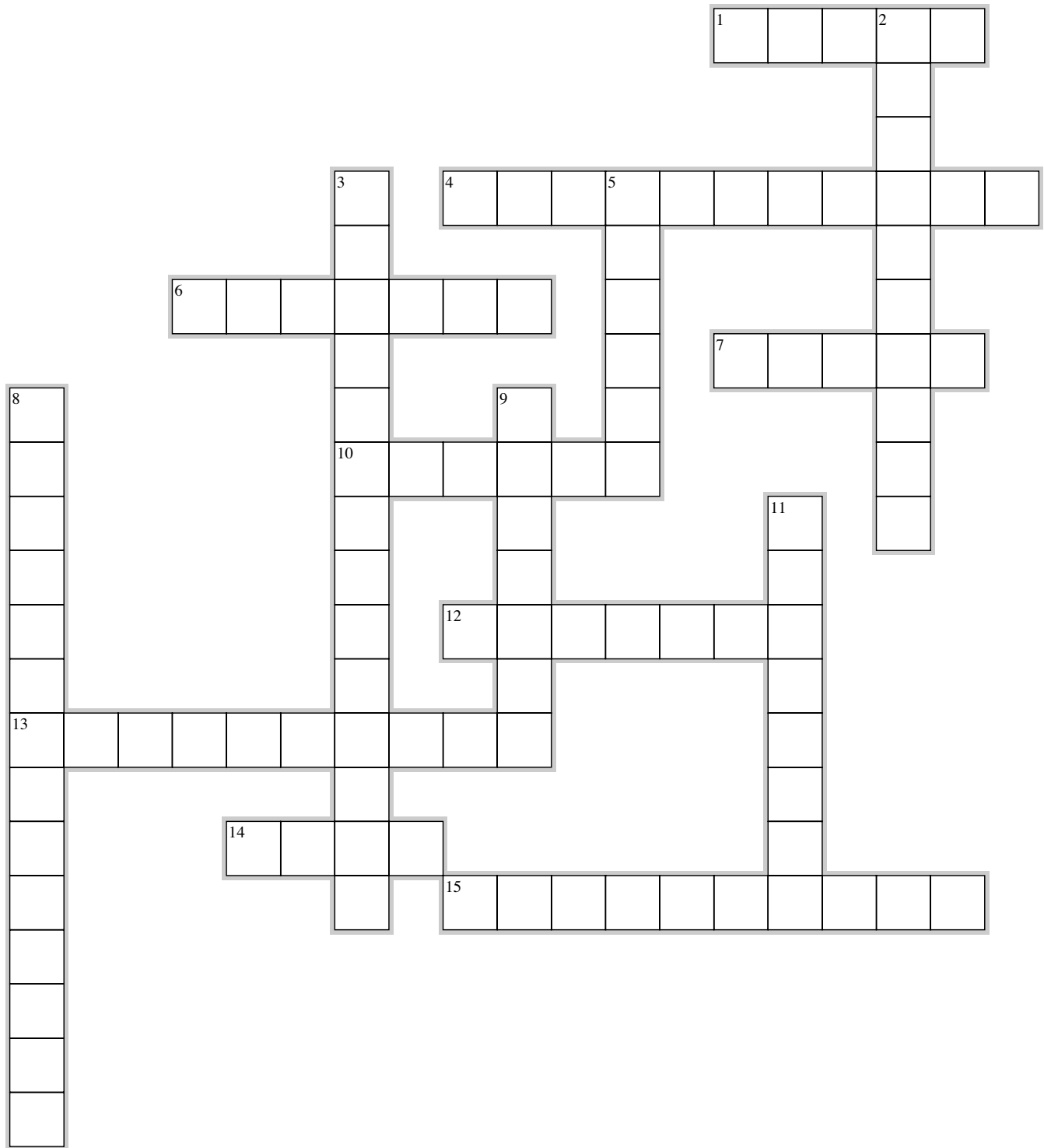
1. Environmental scientists find ways to protect air, \_\_\_\_\_, and land.
4. While wildlife biologists enjoy working outdoors with wildlife, much of their job involves \_\_\_\_\_ with people.
6. Many environmental scientists \_\_\_\_\_ the environment.
7. Corporations which discharge \_\_\_\_\_ in the air, water, or land also hire environmental scientists.
10. After the enactment of the National Environmental \_\_\_\_\_ Act of 1969, environmental and other consulting firms began employing more wildlife specialists to produce environmental impact statements and other planning documents.
12. Federal agencies like the Environmental Protection Agency and the \_\_\_\_\_ Resources Conservation Service hire environmental scientists.
13. Whole \_\_\_\_\_ are also protected and managed by conservation biologists.
14. Some conservation biologists work with captive animals in \_\_\_\_\_.
15. Conservation biologists study rare and \_\_\_\_\_ species.

**Down**

2. Conservation biology grew when people became more and more concerned about species \_\_\_\_\_.
3. Many parks hire wildlife biologists for wildlife \_\_\_\_\_.
5. A renewable energy specialist helps ensure that we can meet the world's \_\_\_\_\_ needs in the future.
8. Renewable energy specialists often act as \_\_\_\_\_ between divergent groups and bring groups together through networking.
9. Creating energy from the wind, \_\_\_\_\_ crops, agricultural residues, municipal wastes, or solar energy requires work from the renewable energy specialists.
11. \_\_\_\_\_ biologists do research that help us better manage our natural resources.

ACTIVITY  
**10**

CONSERVATION BIOLOGIST • RENEWABLE ENERGY SPECIALIST •  
ENVIRONMENTAL SCIENTIST • WILDLIFE BIOLOGIST



EclipseCrossword.com

## ACTIVITY

# 11

## ECOLOGIST • NATURALIST • CLIMATOLOGIST

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
- Posters
  - Ecologist*
  - Naturalist*
  - Climatologist*

### DIRECTIONS

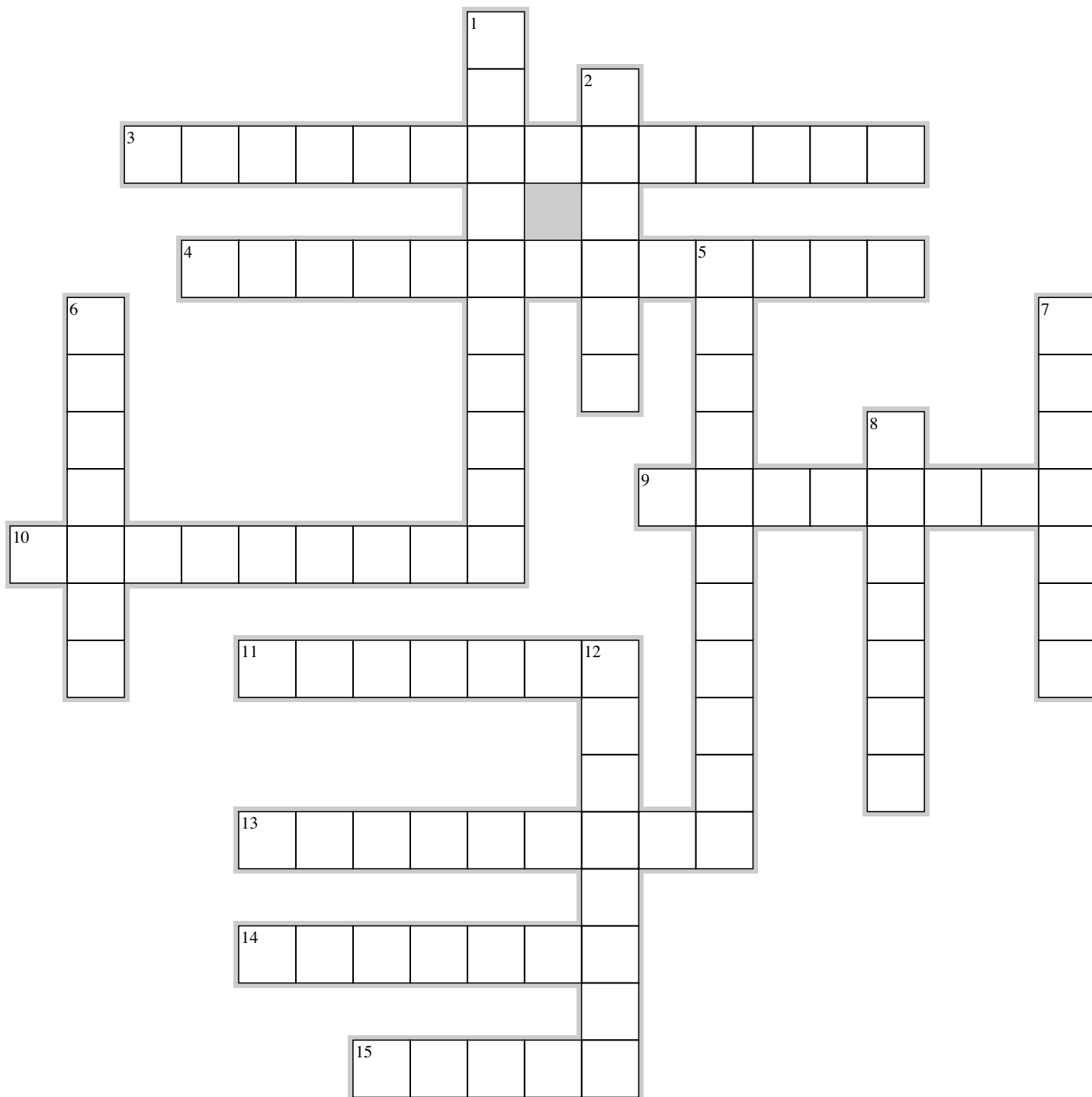
Use the clues and information in the posters to complete the crossword puzzle.

#### Across

3. Study climate change, climate variability, and the effects of climate on the biosphere
4. Naturalists should earn a degree in this type of science
9. As this increases in the environment, ecologists work becomes more important
10. Ecologists ask scientific questions about the relationships between the environment and what
11. The type of classrooms naturalists teach school groups in
13. Climatologists use these to predict the effect of weather or climate on the growth and development of grain, vegetables, fruit and other crops
14. Climatologists work for state and federal governments as this type of station network supervisors
15. Naturalists help people learn to live here without destroying the environment

#### Down

1. They ask scientific questions about the relationships between organisms and their environment
2. Naturalists teach but rarely in this type of classroom
5. Are scientists and skilled communicators
6. Ecologists study ways to protect and manage this kind of resources
7. A strong background in math and this is needed to be a climatologist
8. What climatologists study
12. Ecologists usually choose their own type of topics



## ACTIVITY

# 12

## ENTOMOLOGIST • NEMATOLOGIST

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
  - Posters
- Entomologist*  
*Nematologist*

### DIRECTIONS

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

- \_\_\_\_\_ 1. An \_\_\_\_\_ is a broadly trained and educated professional in a discipline that touches almost every aspect of our daily lives.
- \_\_\_\_\_ 2. Entomologists are needed \_\_\_\_\_ to help farmers and ranchers produce crops and livestock.
- \_\_\_\_\_ 3. \_\_\_\_\_ are found everywhere: in soil from both poles to the tropics, in bodies of insects, and in humans and all domesticated and wild animals.
- \_\_\_\_\_ 4. \_\_\_\_\_ live on ocean bottoms and forest floors.
- \_\_\_\_\_ 5. Many nematologists who work with these roundworms are interested in plant and animal \_\_\_\_\_.
- \_\_\_\_\_ 6. Entomologists help farmers and ranchers produce crops and livestock more efficiently by using sound \_\_\_\_\_ management.
- \_\_\_\_\_ 7. Entomologists also help prevent the spread of serious \_\_\_\_\_ in plants and animals.
- \_\_\_\_\_ 8. Nematologists may work as agricultural scientists concerned with crop pest \_\_\_\_\_.
- \_\_\_\_\_ 9. Some nematologists specialize in basic research in \_\_\_\_\_ biology.
- \_\_\_\_\_ 10. Entomologists help produce information about \_\_\_\_\_ species.
- \_\_\_\_\_ 11. As an entomologist, your natural curiosity and enthusiasm will help solve some the world's \_\_\_\_\_ problems.
- \_\_\_\_\_ 12. Some nematologists model systems for the study of \_\_\_\_\_.
- \_\_\_\_\_ 13. Nematodes are found in the \_\_\_\_\_ from both poles to the tropics.
- \_\_\_\_\_ 14. A major in \_\_\_\_\_ is the best preparation for someone wanting to become an entomologist.
- \_\_\_\_\_ 15. A college degree in a biological science is good preparation for \_\_\_\_\_.

# ACTIVITY

# 12

## ENTOMOLOGIST • NEMATOLOGIST

### Word Bank

agriculture  
diseases  
endangered  
entomologist

entomology  
genetics  
management  
molecular

nematodes  
nematology  
pest  
roundworms

soil  
toughest  
worldwide

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

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**STUDENT MATERIALS**

- Pencil
- Posters  
*Horticulturist*  
*Botanist*

**DIRECTIONS**

Complete each sentence with a one-word answer using the information from the posters.

- \_\_\_\_\_ 1. The Latin words \_\_\_\_\_ and cultura together form horticulture.
- \_\_\_\_\_ 2. Today horticulture is more than garden plant \_\_\_\_\_.
- \_\_\_\_\_ 3. Horticulturists make plants more \_\_\_\_\_ to different climates.
- \_\_\_\_\_ 4. A botanist studies \_\_\_\_\_ and giant trees.
- \_\_\_\_\_ 5. Botanists may study the effects of \_\_\_\_\_ on plants and work toward environmental protection.
- \_\_\_\_\_ 6. Some botanists produce entire plants from single cells with a technique called tissue \_\_\_\_\_.
- \_\_\_\_\_ 7. Other botanists use \_\_\_\_\_ to develop new or improved plants.
- \_\_\_\_\_ 8. Botanists who like to be outdoors may be plant \_\_\_\_\_.
- \_\_\_\_\_ 9. Horticulturists work in a variety of fields some of which are plant \_\_\_\_\_, plant breeding, plant physiology, and plant biochemistry.
- \_\_\_\_\_ 10. Other fields that horticulturists work are crop production, \_\_\_\_\_ engineering, and landscape design.
- \_\_\_\_\_ 11. Horticulturists want to improve crop yield, quality, \_\_\_\_\_ value, and resistance to insects, diseases, and environmental stresses.
- \_\_\_\_\_ 12. Some botanists work in \_\_\_\_\_ resources laboratories.
- \_\_\_\_\_ 13. Some horticulturists work as tissue culture specialists with fruit, vegetables, \_\_\_\_\_, and turf.

- \_\_\_\_\_ 14. There are botanists that work in botanical gardens, \_\_\_\_\_, herbariums, and zoos.
- \_\_\_\_\_ 15. To be a botanist, a bachelor's degree in \_\_\_\_\_ is needed.
- \_\_\_\_\_ 16. Educational institutions hire botanists as \_\_\_\_\_ and researchers.
- \_\_\_\_\_ 17. Horticulturists can work in storage, processing and transit of fruits, berries, nuts, vegetables, flowers, trees, shrubs and \_\_\_\_\_.
- \_\_\_\_\_ 18. Horticulturists can be found in offices, laboratories, \_\_\_\_\_, and out in production or research fields.
- \_\_\_\_\_ 19. Horticulturists can work in industry, government, or educational \_\_\_\_\_.
- \_\_\_\_\_ 20. Many different areas complement \_\_\_\_\_ science and horticulture coursework for college.

**ACTIVITY****14****FLORIST • TURF SCIENTIST • VITICULTURIST**

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**STUDENT MATERIALS**

- Pencil
- Posters
  - Florist*
  - Turf Scientist*
  - Viticulturist*

**DIRECTIONS**

Use the clues and information in the posters to complete the crossword puzzle.

**Across**

1. Viticulturists work in all 50 states in \_\_\_\_\_.
3. As turf scientists advance in their careers, they become coordinators, managers, or assistant or \_\_\_\_\_ managers in corporations.
6. Supermarkets, wholesale florists, large hotels, and \_\_\_\_\_ also hire florists.
9. For a florist a typical business is \_\_\_\_\_.
11. A \_\_\_\_\_ may find himself or herself working in vineyard pruning, trellising, canopy management, and irrigation.
13. A florist can design \_\_\_\_\_ arrangements.
15. Interest in \_\_\_\_\_ production has increased tremendously in the United States.
16. \_\_\_\_\_ scientists must be skilled in science, business, and personnel management.
18. Many florists start their \_\_\_\_\_ small businesses.
19. Viticulturists may also work in \_\_\_\_\_ fertilization and mineral nutrition.

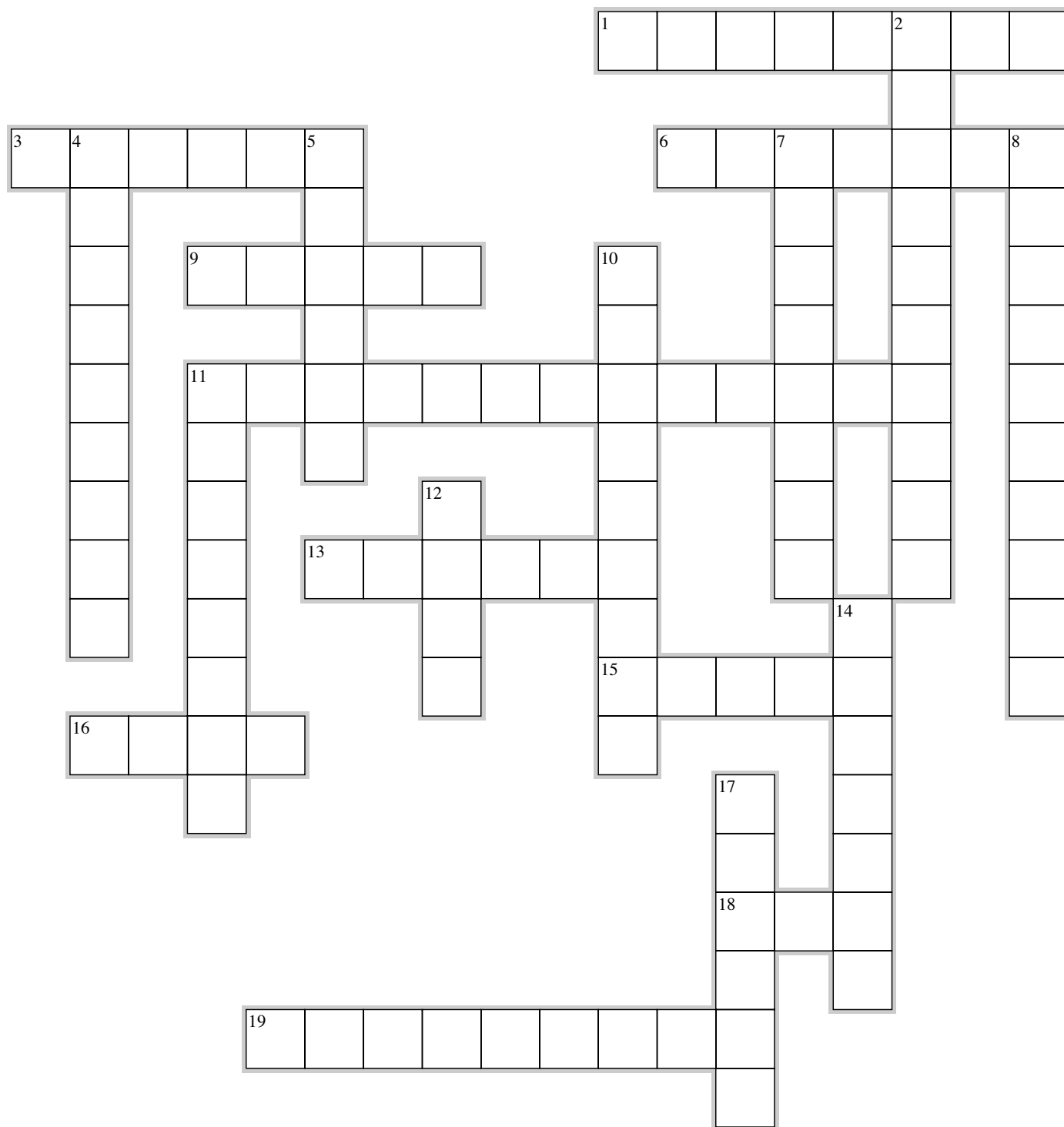
**Down**

2. Turf scientists help maintain turf, as well as operate computer-controlled \_\_\_\_\_ equipment.
4. Some viticulturists work with pest management and disease control through \_\_\_\_\_ selection.
5. With people becoming more and more concerned about the environment and \_\_\_\_\_, viticulturists today often work with government regulations.
7. Turf scientists can be golf course superintendents, turf managers for sports \_\_\_\_\_, park managers, and grounds managers for corporate headquarters.
8. Turf scientists in advanced positions rely on their \_\_\_\_\_ expertise to make good purchasing decisions.
10. Courses that should be taken are turf management and plant \_\_\_\_\_.
11. Opportunities are expanding for viticulturists in research and development as the industry improves \_\_\_\_\_ management methods.
12. One of the many first jobs a turf scientist can have is working for a \_\_\_\_\_ course.
14. Florists who become managers conduct sales interviews to secure \_\_\_\_\_, commercial, and special events accounts.
17. A \_\_\_\_\_ shop employee processes incoming flowers.

# ACTIVITY

# 14

## FLORIST • TURF SCIENTIST • VITICULTURIST



EclipseCrossword.com

**ACTIVITY****15****FOOD PROCESS ENGINEER • FOOD SAFETY SPECIALIST**

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**STUDENT MATERIALS**

- Pencil
- Posters

*Food Process Engineer*  
*Food Safety Specialist*

**DIRECTIONS**

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

- \_\_\_\_\_ 1. Food \_\_\_\_\_ engineers (FPEs) research and develop new and existing products and processes.
- \_\_\_\_\_ 2. Food \_\_\_\_\_ specialists preserve our food supply by assuring that it is wholesome, sound, and safe.
- \_\_\_\_\_ 3. FPEs also design processing, handling, and \_\_\_\_\_ equipment.
- \_\_\_\_\_ 4. When FPEs are hired as project engineers, they supervise the design, \_\_\_\_\_, installation, and start-up of processes.
- \_\_\_\_\_ 5. Food safety specialists use their knowledge of food \_\_\_\_\_ principles, food science, bacteriology, microbiology and HACCP theory.
- \_\_\_\_\_ 6. HACCP stands for Hazard Analysis \_\_\_\_\_ Control Point.
- \_\_\_\_\_ 7. Food safety specialists understand and apply \_\_\_\_\_ governing food protection.
- \_\_\_\_\_ 8. Food process engineers work in food, chemical, \_\_\_\_\_, and pharmaceutical industries.
- \_\_\_\_\_ 9. FPEs work with processors, equipment suppliers, design and consulting firms, and \_\_\_\_\_ suppliers.
- \_\_\_\_\_ 10. Food safety specialists are good \_\_\_\_\_ who can think on their feet.
- \_\_\_\_\_ 11. Food safety specialists work for food services, hotels, resorts, \_\_\_\_\_, and government agencies.
- \_\_\_\_\_ 12. \_\_\_\_\_ and investigations on food products are conducted by food safety specialists.
- \_\_\_\_\_ 13. To be a food safety specialist a bachelor's degree in \_\_\_\_\_ science should be earned.
- \_\_\_\_\_ 14. FPE's typically enjoy solving \_\_\_\_\_.
- \_\_\_\_\_ 15. To be a successful food process engineer \_\_\_\_\_ and science should be enjoyable.

# ACTIVITY

# 15

## FOOD PROCESS ENGINEER • FOOD SAFETY SPECIALIST

### Word Bank

biochemical  
construction  
critical  
food

ingredient  
inspections  
math  
observers

packaging  
problems  
process  
protection

regulations  
restaurants  
safety

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

**ACTIVITY****16****FOOD SCIENTIST • NUTRITIONIST/DIETITIAN**

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**STUDENT MATERIALS**

- Pencil
- Posters

*Food Scientist**Nutritionist/Dietitian***DIRECTIONS**

Complete each sentence with a one-word answer using the information from the posters.

- \_\_\_\_\_ 1. Food scientists preserve our food supply by assuring its \_\_\_\_\_, color, texture, nutritional quality, and safety.
- \_\_\_\_\_ 2. Food scientists use their knowledge of chemistry, biochemistry, microbiology, and engineering to convert grain, livestock, fruit, and vegetables into new food \_\_\_\_\_.
- \_\_\_\_\_ 3. Nutritionists/\_\_\_\_\_ help people look and feel well by making the connection between food, nutrition, and health.
- \_\_\_\_\_ 4. A nutritionist can be a healthcare worker, researcher, manager or \_\_\_\_\_.
- \_\_\_\_\_ 5. Dietitians are part of the \_\_\_\_\_ team with doctors, nurses, or therapists to speed patients' recoveries.
- \_\_\_\_\_ 6. Food scientists work as production \_\_\_\_\_, quality assurance specialists, product developers, and managers of processing plants.
- \_\_\_\_\_ 7. Some nutritionists/dietitians counsel families, the elderly, \_\_\_\_\_ women, children and the disabled.
- \_\_\_\_\_ 8. A nutritionist/dietitian is responsible for \_\_\_\_\_ nutrition therapy for disease conditions.
- \_\_\_\_\_ 9. \_\_\_\_\_ foods or diet recommendations are found through experiments by nutritionists/dietitians.
- \_\_\_\_\_ 10. A food scientist conducts food research and acts as a trouble-shooter in solving \_\_\_\_\_.
- \_\_\_\_\_ 11. Food \_\_\_\_\_, researchers and laboratory workers are a few jobs that food scientists do.

- \_\_\_\_\_ 12. Other food scientists develop government \_\_\_\_\_ to safeguard our food.
- \_\_\_\_\_ 13. Nutritionists/dietitians can work in healthcare institutions, schools, \_\_\_\_\_, restaurants, daycare centers, health and recreation clubs, government agencies, and food and pharmaceutical companies.
- \_\_\_\_\_ 14. To become a registered dietitian, an undergraduate American Dietetic Association accredited \_\_\_\_\_ program and supervised practical experience, then pass the Registration Examination for Dietitians.
- \_\_\_\_\_ 15. Food scientists need a bachelor's degree in \_\_\_\_\_ science.

**ACTIVITY****17****LOGGING ENGINEER • FORESTER • WOOD SCIENTIST**

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**STUDENT MATERIALS**

- Pencil
- Posters

*Logging Engineer**Forester**Wood Scientist***DIRECTIONS**

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

- \_\_\_\_\_ 1. Logging engineers help design \_\_\_\_\_ transportation and harvesting systems.
- \_\_\_\_\_ 2. Foresters may spend one day in the \_\_\_\_\_ and the next in the field.
- \_\_\_\_\_ 3. Wood scientists and technologists expertly convert \_\_\_\_\_ to wood products.
- \_\_\_\_\_ 4. Logging engineers also supervise timber harvests and ensure protection of soil, water, and other natural resources during \_\_\_\_\_.
- \_\_\_\_\_ 5. Logging engineers work with people, highly \_\_\_\_\_ machines and computers, and natural resources.
- \_\_\_\_\_ 6. Foresters must be highly trained technically, but they must also be good \_\_\_\_\_.
- \_\_\_\_\_ 7. As \_\_\_\_\_ of forest resources, foresters must be able to convince others that forests are vital to the welfare of humanity.
- \_\_\_\_\_ 8. Wood is a \_\_\_\_\_ resource.
- \_\_\_\_\_ 9. Wood scientists can work in manufacturing, marketing, technical service, and \_\_\_\_\_.
- \_\_\_\_\_ 10. Wood scientists and technologists in technical service positions make operations more \_\_\_\_\_ for the chemical companies, machinery manufacturers, and wood products manufacturers.
- \_\_\_\_\_ 11. Some foresters are private \_\_\_\_\_ who advise landowners on the multiple-use management of their timberlands.
- \_\_\_\_\_ 12. A logging engineer needs to be a problem \_\_\_\_\_.
- \_\_\_\_\_ 13. A logging engineer also needs to have an interest in \_\_\_\_\_ resources.
- \_\_\_\_\_ 14. Foresters have long-range \_\_\_\_\_ on environmental issues.
- \_\_\_\_\_ 15. Wood scientists need a bachelor's degree in wood science and \_\_\_\_\_.

# ACTIVITY

# 17

## LOGGING ENGINEER • FORESTER • WOOD SCIENTIST

### Word Bank

communicators  
consultants  
efficient  
laboratory

logging  
natural  
renewable  
research

solver  
stewards  
technical  
technology

timber  
views  
wood

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

**ACTIVITY****18****GENETICIST • MOLECULAR BIOLOGIST**

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**STUDENT MATERIALS**

- Pencil
- Posters

*Geneticist**Molecular Biologist***DIRECTIONS**

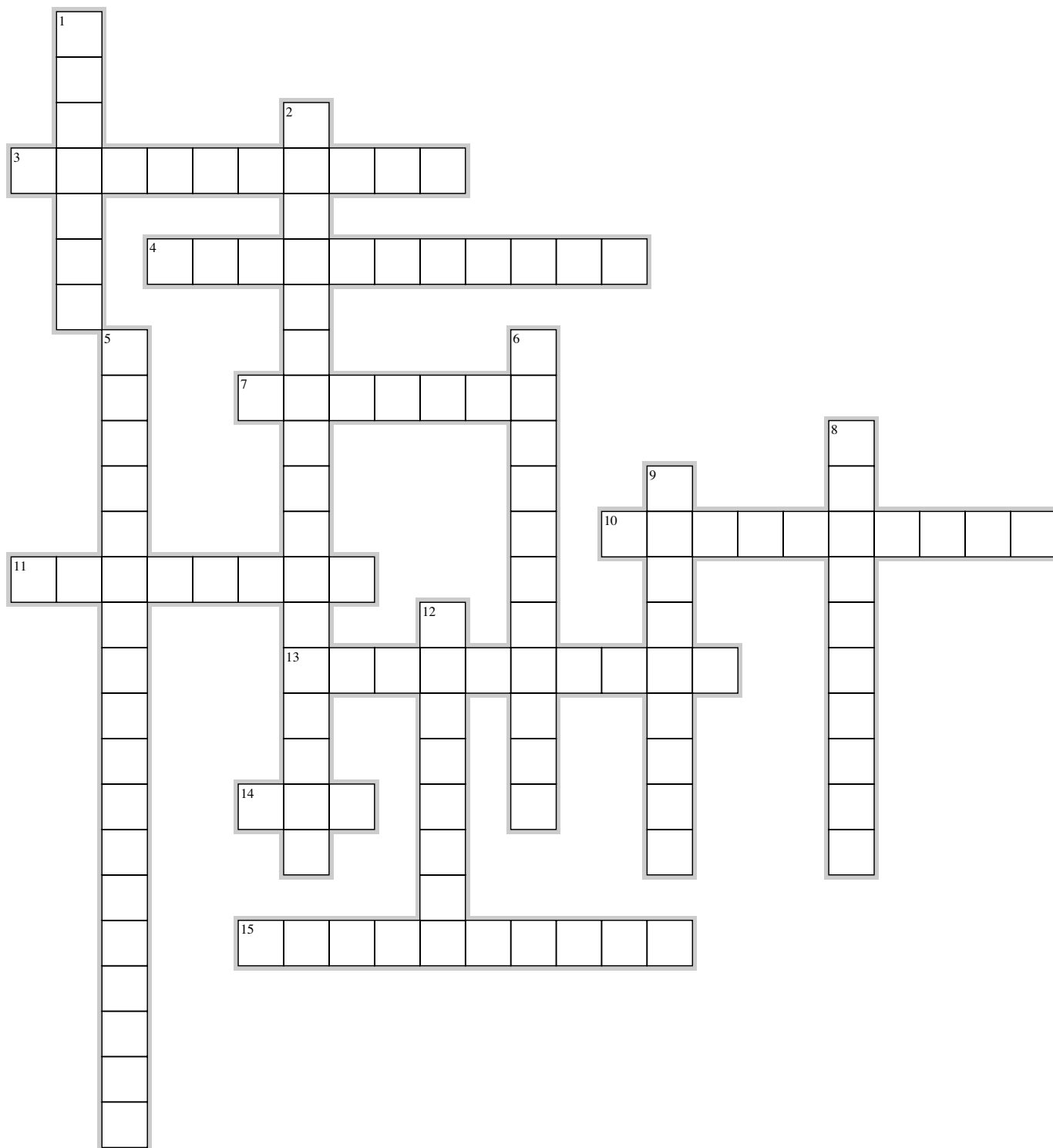
Use the clues and information in the posters to complete the crossword puzzle.

**Across**

3. Molecular geneticists create designer genes for production of these kinds of plants and animals
4. Geneticists also work to further \_\_\_\_\_ animals for improved well-being.
7. Molecular biologists often ask how genetic information in DNA can change and cause this
10. These can be detected and removed from the environment through the work of molecular biologists
11. Molecular biologists can be researchers, technicians and these
13. A geneticists' goal is to improve the \_\_\_\_\_ of production and the quality of food and fiber.
14. Genetic information encoded in molecules
15. Geneticists work with all species important for this kind of agricultural production

**Down**

1. Some employ geneticists to \_\_\_\_\_ breeds and strains of livestock, poultry, and fish
2. Geneticists use this when producing superior plants and animals
5. Following the flow of genes between and within populations to understand forces of evolution
6. Try to understand how genes work or where genes are
8. Genetics training is desirable for those who are planning to go into this field and health professions
9. Type of biologist that studies the phenomena of living things
12. Molecular biologists can develop new methods to do this and treat disease



## ACTIVITY

# 19

## PLANT GENETICIST • PLANT PATHOLOGIST • PLANT PHYSIOLOGIST

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### STUDENT MATERIALS

- Pencil
- Posters

*Plant Geneticist*

*Plant Pathologist*

*Plant Physiologist*

### DIRECTIONS

Complete each sentence with a one-word answer using the information from the posters.

- \_\_\_\_\_ 1. Plant geneticists can work to understand how \_\_\_\_\_ work.
- \_\_\_\_\_ 2. Structural \_\_\_\_\_ are where genes are located.
- \_\_\_\_\_ 3. Plant geneticists can also follow the flow of genes between and within \_\_\_\_\_ to understand forces of evolution.
- \_\_\_\_\_ 4. Plant \_\_\_\_\_ deal with the symptoms, causes, damage, spread, and control of plant diseases.
- \_\_\_\_\_ 5. Plant pathologists study \_\_\_\_\_ processes and look for genetic, biological, chemical, or cultural controls for diseases of the plants we use for food and fiber.
- \_\_\_\_\_ 6. Some work as \_\_\_\_\_ plant pathologists with the Cooperative Extension Service.
- \_\_\_\_\_ 7. Plant physiologists study the \_\_\_\_\_, chemical, and biological functions of living plants.
- \_\_\_\_\_ 8. Plant physiologists often work as members of \_\_\_\_\_ teams.
- \_\_\_\_\_ 9. Plant physiologists study the effect that genes have on plant growth, \_\_\_\_\_, and seed yield.
- \_\_\_\_\_ 10. Plant physiologists also carry out experiments to reveal how plants respond to \_\_\_\_\_ and insect pests or to environmental stresses.
- \_\_\_\_\_ 11. Plant pathologists also work for companies that develop chemical and \_\_\_\_\_ control products.
- \_\_\_\_\_ 12. Some plant geneticists are plant \_\_\_\_\_.

- \_\_\_\_\_ 13. Private corporations hire plant geneticists to develop such things as new \_\_\_\_\_ or new varieties of fruit trees, vegetables, grains, and trees.
- \_\_\_\_\_ 14. Plant physiologists must be willing to \_\_\_\_\_ and must continue their education.
- \_\_\_\_\_ 15. A bachelor's degree in biological \_\_\_\_\_ is needed to be a plant pathologist.

**ACTIVITY****20****TOXICOLOGIST • VIROLOGIST • BIOTECHNOLOGIST**

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**STUDENT MATERIALS**

- Pencil
- Posters
  - Toxicologist*
  - Virologist*
  - Biotechnologist*

**DIRECTIONS**

Use the clues and information in the posters to complete the crossword puzzle.

**Across**

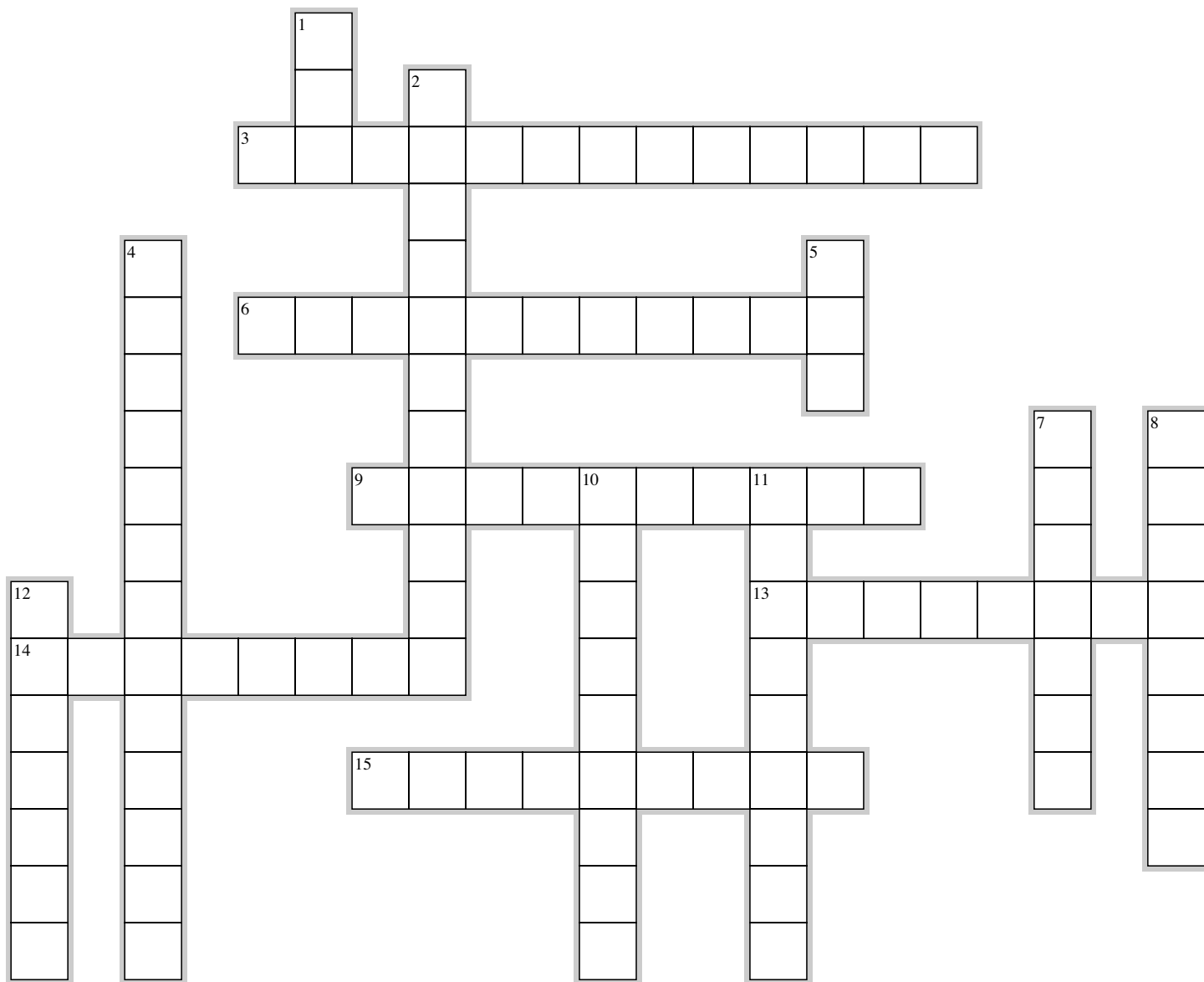
- \_\_\_\_\_ study the effects of potentially harmful chemicals on people, animals, and the environment.
- Virologists can discover new viruses or identify viruses causing \_\_\_\_\_ in plants or animals.
- A biotechnologist understands \_\_\_\_\_ processes and may use that knowledge to diagnose or treat a disease.
- Toxicologists use their knowledge to devise strategies to reduce or control \_\_\_\_\_ to these chemicals.
- Biotechnologists can be researchers, technicians, or \_\_\_\_\_.
- Virologists can discover new viruses or identify viruses causing \_\_\_\_\_ in plants or animals.

**Down**

- A toxicologist needs at least \_\_\_\_\_ years of study beyond a bachelor's degree.
- \_\_\_\_\_ study the structure of viruses.
- \_\_\_\_\_ trained in toxicology work in animal health diagnostic laboratories.
- Biotechnologists use a variety of ways to change the genetic information in \_\_\_\_\_.
- Virologists ask how \_\_\_\_\_ interact with cells.
- Other biotechnologists look for new, individualized treatments for gene-based \_\_\_\_\_ of crops or livestock.
- Epidemiologist is a type of virologist that monitors virus \_\_\_\_\_ throughout the world.
- Toxicologists employed by the government or industry make sure that \_\_\_\_\_ we use are safe and effective.
- Biotechnologists work to improve the processes for making biofuel such as \_\_\_\_\_.

# ACTIVITY 20

## TOXICOLOGIST • VIROLOGIST • BIOTECHNOLOGIST



EclipseCrossword.com