

# Eco Word Puzzle

## Summary

A crossword puzzle.

## Objective

To familiarize students with the definitions of important ecology vocabulary.

## Standards

**Science:** Strand II, Standard II (Life Science), BM I, PS1: Identify the components of habitats and ecosystems (producers, consumers, decomposers, predators); PS2: Understand how food webs depict relationships between different organisms; PS3: Know that changes in the environment can have different effects on different organisms.

**Language Arts:** Strand I (Reading and Listening for Comprehension), Standard I, BMI-D, PS1: Applying reading strategies.

**Career Readiness:** Standard I (Identify Career Interests), BM I: Students will explore areas of interest and possible career choices (ecologist).

## Time

25 to 40 minutes

## Materials

Per student:

- copy of Eco Word Puzzle
- copy of word bank
- pencil

## Background Information

If your students have a working knowledge of these terms they will get much more out of their visit to the Sandia Mountain Natural History Center. These terms are the foundation from which we will teach all day. You may need to explain to students than an organism is a living thing.

## Procedure

Familiarize your students with ecology terms.

1. Discuss what an ecosystem is. Start with a general description: An ecosystem is what you're in when you walk out into nature—everything around you is part of it; the web of life is part of it. Then give a definition: An ecosystem is a place where non-living and living things are connected. Next give an example of an ecosystem—forest— and have them come up with other types of ecosystems (desert, river, ocean, etc.)
2. Tell your students that every ecosystem has four parts: non-living things and



three types of living things: producers (make their own food), consumers (take in food to get their energy), and decomposers (break down dead and non-living things into their component parts, turning them into soil). Discuss the other words with your students as well. If you wish you may use the sentence hints at the end of this teacher's guide to help your students figure out what the words mean.

Option 1: Read the words aloud and discuss what they mean.

Option 2: Give a copy of the word puzzle sentence hints to each student and explain how the sentences can help them figure out the crossword (using context to understand the meaning of the words).

3. After teaching your students what an ecosystem is, the roles of the component parts, and the meanings of the other words, give them the Eco Word Puzzle and word bank and let them fill in the puzzle. You can challenge them to see how much they can do without the sentences or word bank.

### **Conclusion**

After your students have finished the puzzle, review it with them and discuss any questions they have.

### **Modifications**

1. You can do a peer-teach: students each look up one word and explain the word to each other (either as a whole class or individually in stations.)
2. This activity can be done individually or in small groups, or as a whole-class activity if the puzzle is projected on a wall.



## Eco Word Puzzle Sentence Hints

Use these sentences to help you figure out the meaning of the ecology terms.

**Adaptation:** A yucca's funnel-shaped leaves are an adaptation to help it catch more water.

**Ecology:** The ecosystems scientist studied ecology.

**Decomposer:** The mushroom was a decomposer: it was breaking down the dead tree.

**Niche:** The part the lizard played in nature—what it ate and used and what used it, where it lived, and so on—was its niche.

**Population:** The deer population in Yellowstone National Park went down from 400 to 320 in one year.

**Elevation:** The top of the Sandia Mountains is at a high elevation.

**Carnivore:** A mountain lion is a carnivore—it only eats meat.

**Non-living:** Rocks and water are non-living things.

**Photosynthesis:** A plant goes through photosynthesis to make food from the sun's energy and other resources.

**Ecologist:** The ecologist loved studying ecosystems.

**Scat:** We found coyote scat with berries and nuts in it. It was not like dog scat.

**Omnivore:** Sally is an omnivore—she loves burgers and fruit.

**Habitat:** A meadow is a rabbit's habitat.

**Herbivore:** A deer eats only grass and other plants, so it is an herbivore.

**Precipitation:** Rain and snow are types of precipitation.

**Consumers:** Consumers consume, or eat, other things.

**Ecosystem:** Producers, consumers, decomposers, non-living things, and their connections make up the ecosystem.

**Producer:** A plant that makes food using the sun's energy is a producer.

**Species:** American black bears are all the same species.



# Eco Word Puzzle

## Teacher's Answer Key

### Across

1. niche
3. decomposer
6. precipitation
7. scat
9. population
- 11 non-living
13. herbivore
14. elevation
17. adaptation
18. omnivore
19. ecology

### Down

2. carnivore
4. photosynthesis
5. ecosystem
8. consumer
10. ecologist
12. producer
15. species
16. habitat



## Eco Word Puzzle

Here is the word bank for the Sandia Mountain Natural History Center Eco Word Puzzle. Write the correct word in each of the numbered rows or columns, according to its corresponding clue.

adaptation

ecology

decomposer

niche

population

elevation

carnivore

non-living

photosynthesis

ecologist

scat

omnivore

herbivore

precipitation

consumer

ecosystem

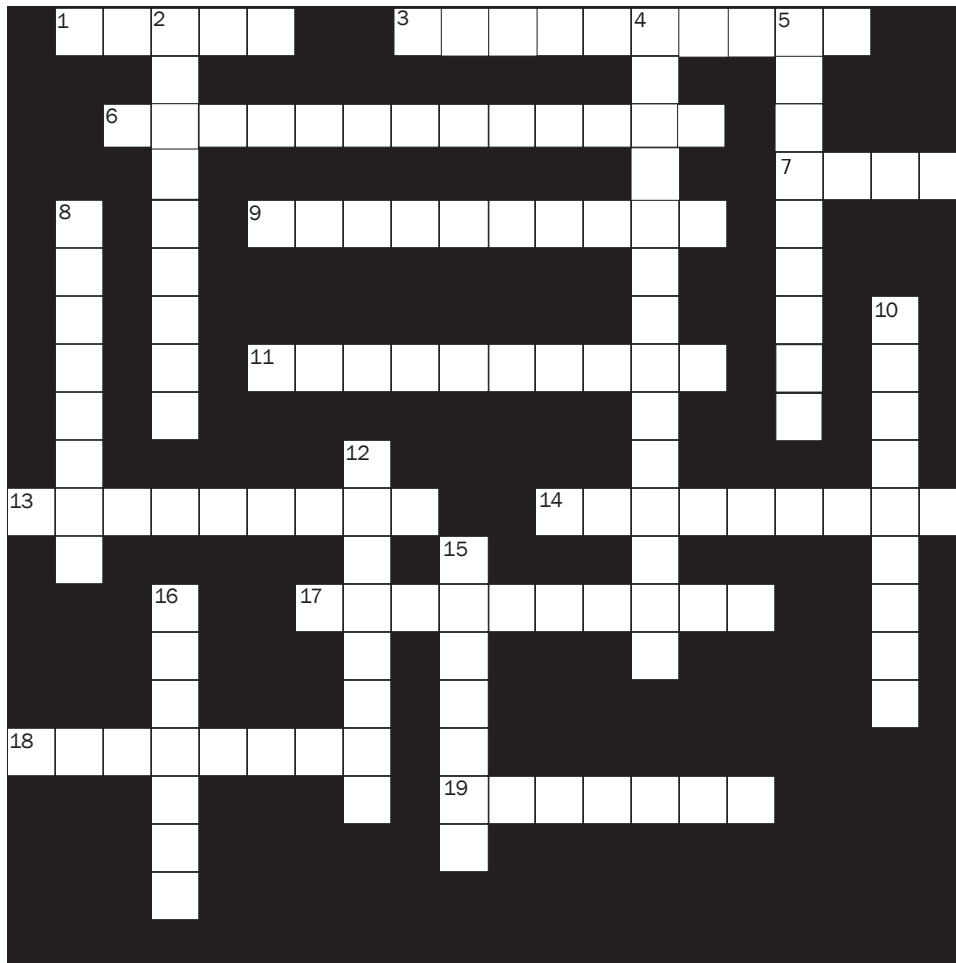
producer

species

habitat



## Eco Word Puzzle



### Down

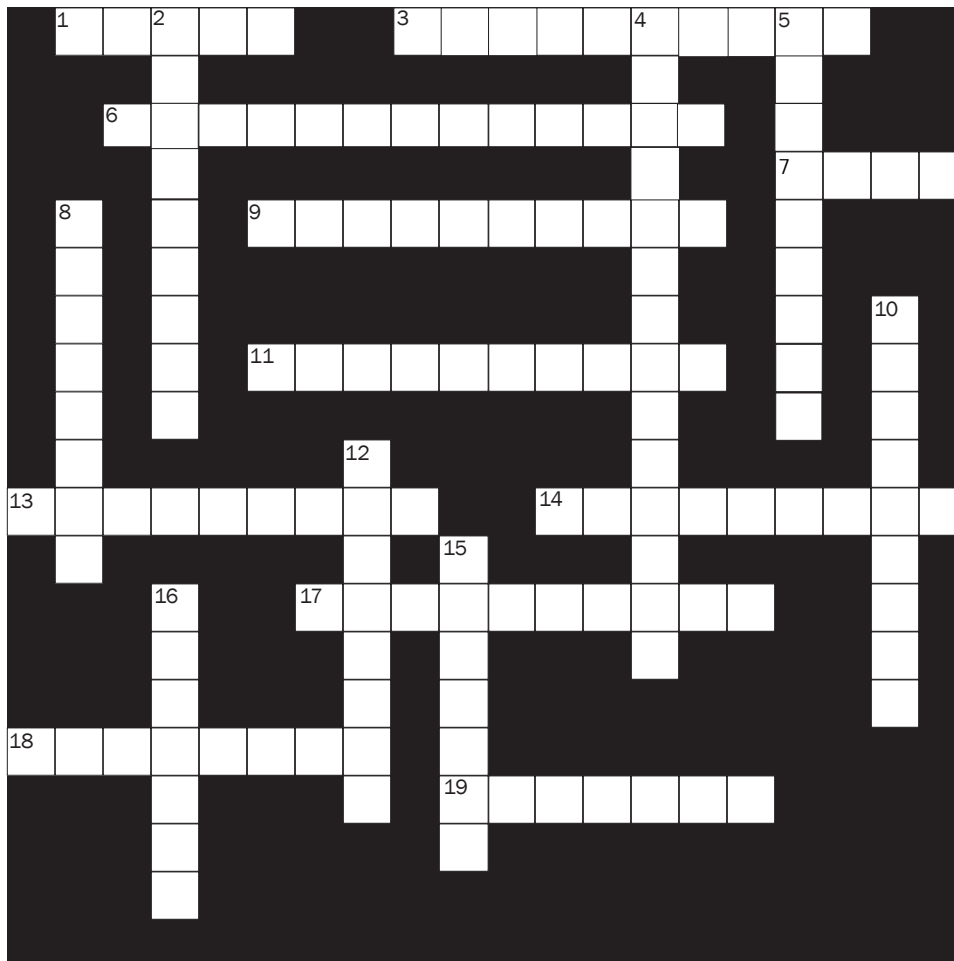
- 2. a consumer that eats only meat
- 4. the process where plants turn sunlight into food
- 5. a place where living and non-living things are connected
- 8. an organism that gets its energy by eating other organisms
- 10. a person who studies eco-systems
- 12. an organism that gets its energy from photosynthesis
- 15. a particular group of organisms that can interbreed
- 16. the place where an organism lives

### Across

- 1. the unique role of an organism
- 3. an organism that gets its energy by breaking down dead matter
- 6. any form of water that falls from the sky
- 7. animal droppings
- 9. a group of organisms of the same species living in the same ecosystem
- 11. parts of the ecosystem that have never been alive
- 13. a consumer that eats only plants
- 14. height above sea level
- 17. the way a plant or animal changes to fit its environment
- 18. a consumer that eats both plants and animals
- 19. the study of ecosystems



## Eco Word Puzzle—en español



### Horizontal

- |   |   |
|---|---|
| 1. la función principal de un organismo   | 11. partes del ecosistema que nunca han vivido                                |
| 3. un organismo el cual recibe su energía con la desintegración de materia muerta | 13. consumidor de solamente plantas   |
| 6. cualquier forma de agua que cae del cielo                                      | 14. altura sobre el nivel del mar   |
| 7. excremento animal  | 17. proceso que sufre una planta o animal para acomodarse a un nuevo ambiente |
| 9. conjunto de organismos de la misma especie que viven en el mismo ecosistema    | 18. consumidor de plantas y de animales                                       |
|   | 19. el estudio de los ecosistemas   |

### Vertical

- |  |
|--|
| 2. consumidor de solamente carnes  |
| 4. proceso donde las plantas convierten la luz en alimento                 |
| 5. lugar donde seres vivos y no vivos se interconectan                     |
| 8. organismo que recibe energía por medio del alimento de otros organismos |
| 10. persona que estudia los ecosistemas                                    |
| 12. organismo que captura su energía por medio de la fotosíntesis          |
| 15. grupo de organismos que puede ser cruzados                             |
| 16. lugar donde vive un organismo  |

