

Study Guide 13.1: Ecologists Study Relationships

KEY CONCEPT

Ecology is the study of the relationships among organisms and their environment.

VOCABULARY

ecology	ecosystem
community	biome

MAIN IDEA: Ecologists study environments at different levels of organization.

Write a description of each level of organization in the table. Also, provide an example for each level.

Level	Description	Example
1. organism		
2. population		
3. community		
4. ecosystem		
5. biome		

MAIN IDEA: Ecological research methods include observation, experimentation, and modeling.

6. What is observation?

7. What is the difference between direct and indirect surveys?

8. Complete the following table with a benefit and a drawback of conducting an experiment in the laboratory compared with conducting an experiment in the field.

Experiment	Benefit	Drawback
Laboratory		
Field		

9. When might a scientist use a model as a research method?

Vocabulary Check

10. What is ecology?

11. Of the three terms, **biome**, **community**, and **ecosystem**, which term contains the other two?

Study Guide 13.2: Biotic and Abiotic Factors

KEY CONCEPT

Every ecosystem includes both living and nonliving factors.

VOCABULARY

biotic	biodiversity
abiotic	keystone species

MAIN IDEA: An ecosystem includes both biotic and abiotic factors.

Use a word from the box below to complete the following sentences.

abiotic	animals	biotic
living	moisture	nonliving
plants	temperature	wind

1. All ecosystems are made up of _____ and _____ components.
2. _____ factors are living things, such as _____ or _____.
3. _____ factors are nonliving things, such as _____, _____, or _____.

MAIN IDEA: Changing one factor in an ecosystem can affect many other factors.

4. Describe what biodiversity means in your own words.

5. What is the term for an organism that has an unusually large effect on its ecosystem?

6. List a few reasons why a beaver is an example of a keystone species.

Vocabulary Check

7. What is the difference between a biotic and an abiotic factor?

8. Take another look at the Visual Vocab in Section 2. In architecture, a **keystone** is the stone at the center of an arch that holds the arch together. How does this definition relate to a keystone species?

Be Creative

In the box below, sketch a simple ecosystem and label the abiotic and biotic factors.

