



Ecosystem Events and Relationships

Activity

Organisms are dependent on biotic (living) and abiotic (nonliving) factors to survive. An organism may also compete with or for biotic or abiotic factors to survive. For example, deer depend on water, an abiotic factor, and shrubs, biotic factors, to consume. Deer also compete with other deer and other herbivores, biotic factors, for these resources. However, the relationship may not always be that direct and clear. Deer also depend on other abiotic factors — sunlight and soil composition — so that the shrubs can grow to provide them with the food they need.



Procedure

1. Use the table to record your data.

Organism	Factor	Biotic or Abiotic Factor?	Competitive or Dependent Relationship?



Ecosystem Events and Relationships

Activity, continued

2. Within your group, take turns rolling the Organism Dice and then the Factor Dice.
3. Record each group member's dice rolling outcomes in the graphic organizer.
4. After everyone has rolled both types of dice and recorded the outcomes, discuss and record within your group whether each factor is biotic or abiotic and whether the relationship is competitive or dependent.
5. When the rounds of activity are done, count how many show that the organisms were dependent upon the factor. In one or two sentences, explain what it means for an organism to depend upon a biotic or abiotic factor.
6. Count the relationships in which organisms are in competition with or for a factor. Explain what it means for an organism to compete with or for those factors.
7. Write a scientific explanation that describes the relationship between organisms and the factors that organisms depend on for life. Use specific examples from your graphic organizer to support your explanation.

Claim:

Evidence:

Reasoning: