

Lesson 2.2 Check for Understanding Answer Key

1. How do species in an ecosystem depend on one another?

Answers may resemble the following.

Plant species, such as algae, convert energy from the sun into food for consumers.

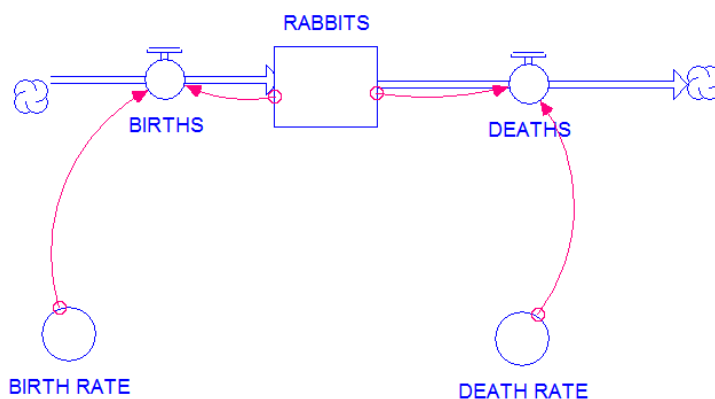
Organisms consuming plants and animals limit the population growth of other organisms and provide carbon dioxide to producers.

Bacteria and diatoms break down organic matter to provide nutrients for producers to grow.

2. What will happen in an ecosystem that loses decomposers, such as bacteria and fungi?

Services, such as decomposition, will not occur, and nutrients will not be available for plant life. With no plant life, primary consumers will not survive.

3. Draw a conceptual model representing the birthrate and death rate of a rabbit population. Then write a mathematical equation representing rabbits' birth rate if 50% of the population is female, and each female rabbit has four young.



$$\text{Births} = \text{rabbit population} \times 0.5 \times 4$$

4. What are the three limiting factors affecting species populations in an ecosystem?

Answers may include:

available area

available food

number of predators

5. How could a loss of a primary consumer in an ecosystem reduce the productivity of a secondary consumer?

Secondary consumers are dependent upon primary consumers for food. For example, wolves consume deer, which are primary consumers.