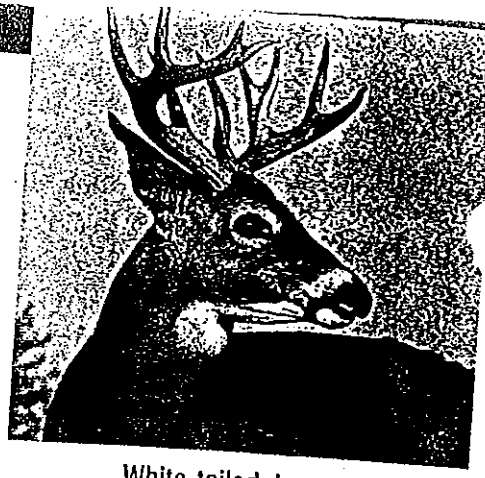
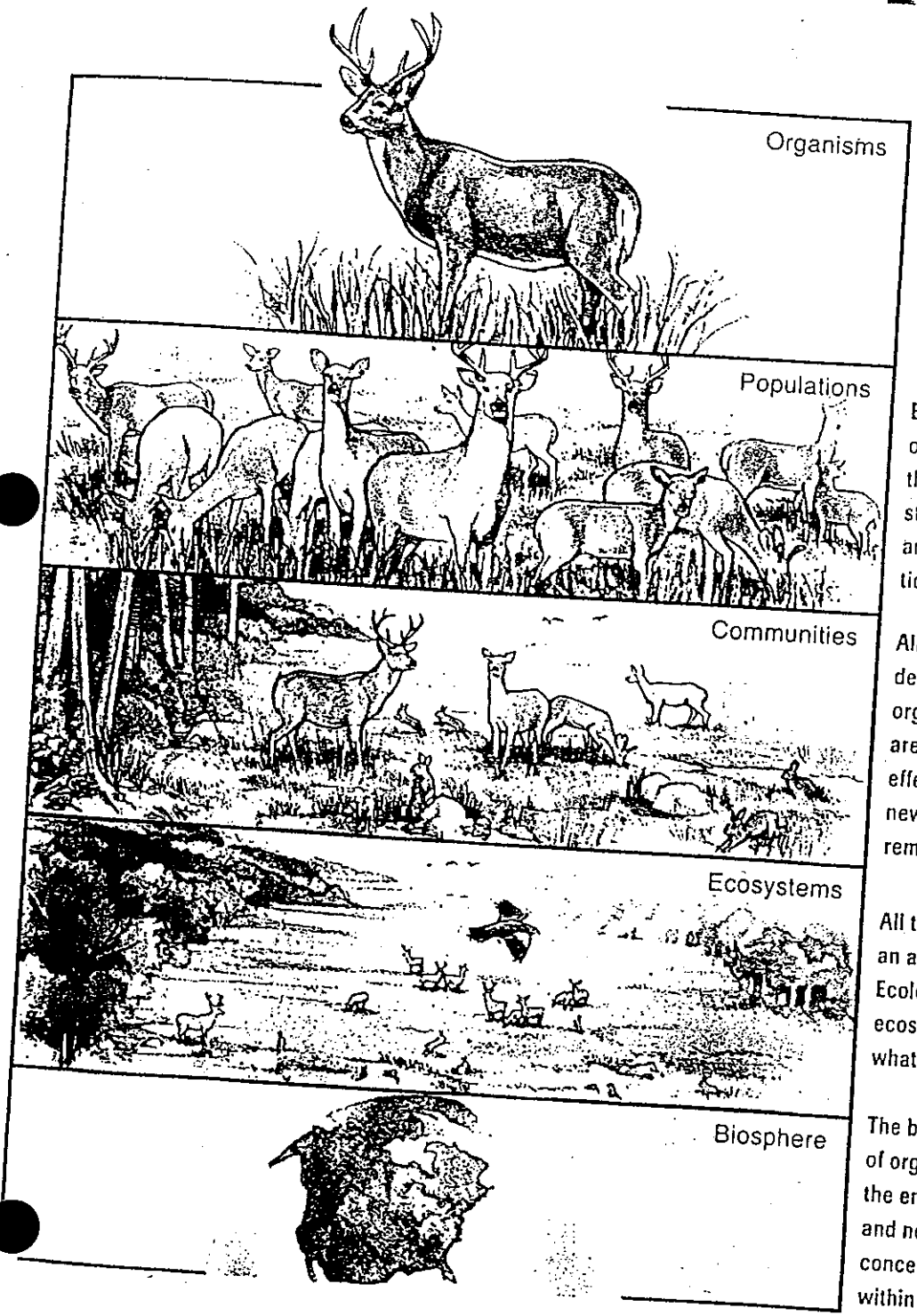
THE INSIDE STORY

The Organization of Life

All living matter can be organized into levels starting with the smallest subatomic particles and going all the way to Earth as a whole. Ecology deals with the levels of organisms, populations, communities, ecosystems, biomes, and the biosphere.



White-tailed deer



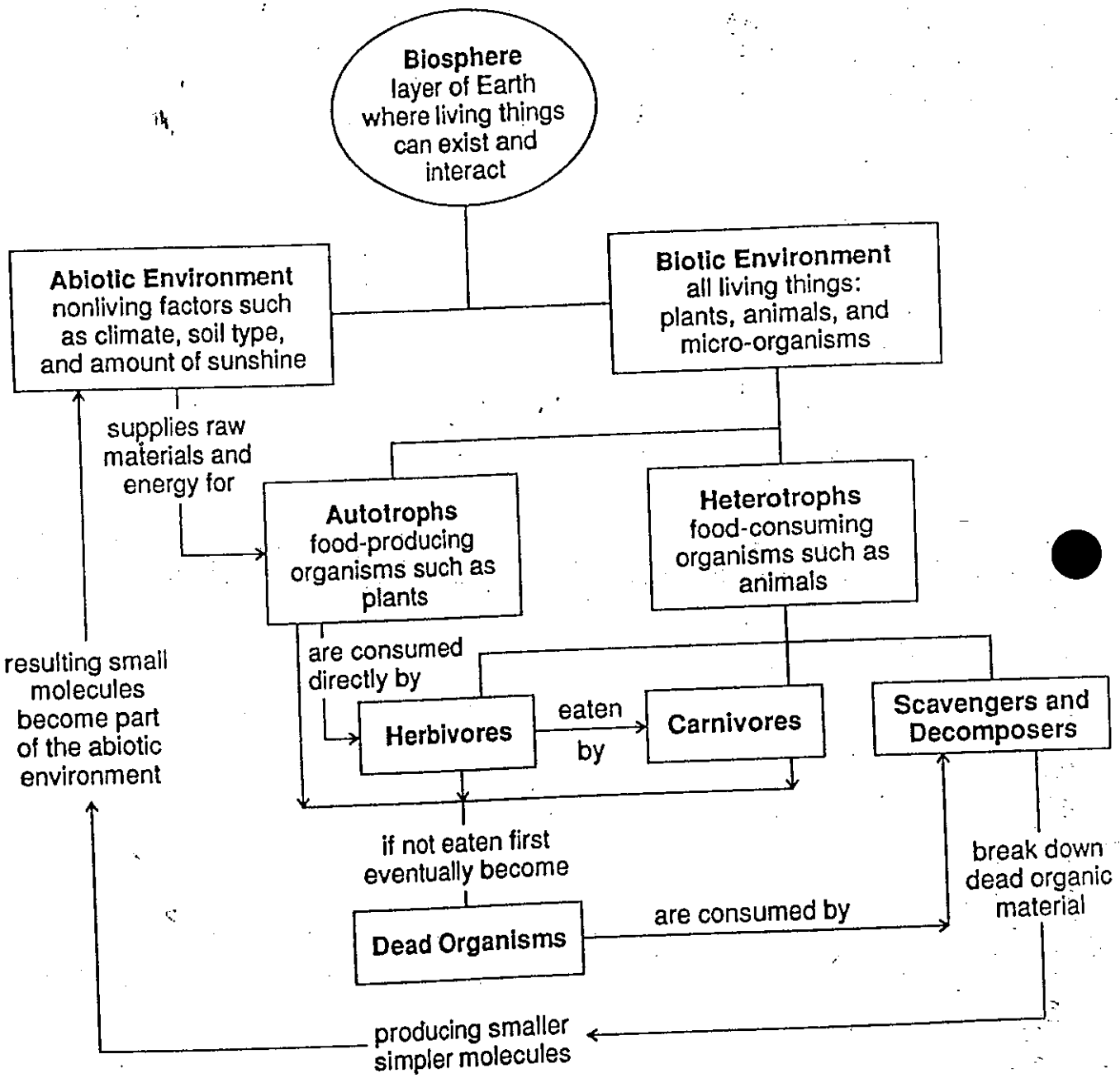
Ecologists may study the behavior of an individual organism. They may study its daily movements, feeding, or breeding behavior.

Ecologists may study the effects of populations of organisms on the environment. They may also study growth rates of populations and the future of certain populations.

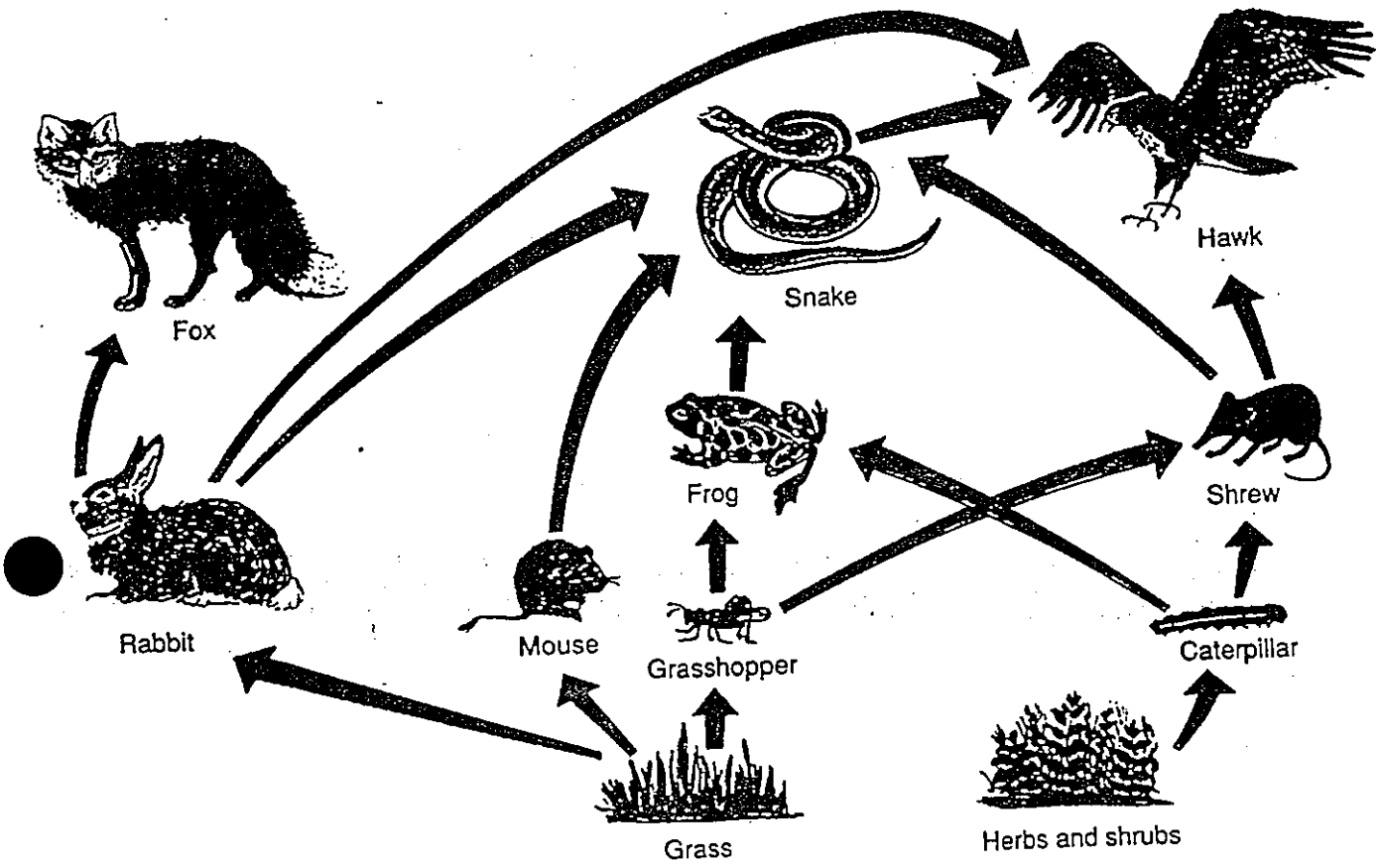
All organisms in a community depend in some way on the other organisms living there. Ecologists are concerned with studying the effects on the community when a new species is added or one is removed.

All the biotic and abiotic factors in an area form an ecosystem. Ecologists are concerned with ecosystem stability and knowing what keeps ecosystems stable.

The biosphere is the highest level of organization. It is made up of the entire planet and all its living and nonliving parts. Ecologists are concerned with all interactions within the biosphere.



ood Web


Fox
Snake
Hawk
Frog
Shrew
Rabbit
Mouse
Grasshopper
Caterpillar
Grass
Herbs and shrubs

Worksheet #57

Food Web

Name_____

Class_____ Date _____

1. Which of the organisms shown in the diagram are producers? _____

2. Which of the organisms shown in the diagram are second-order consumers? _____

3. Which of the organisms shown in the diagram are herbivores? _____

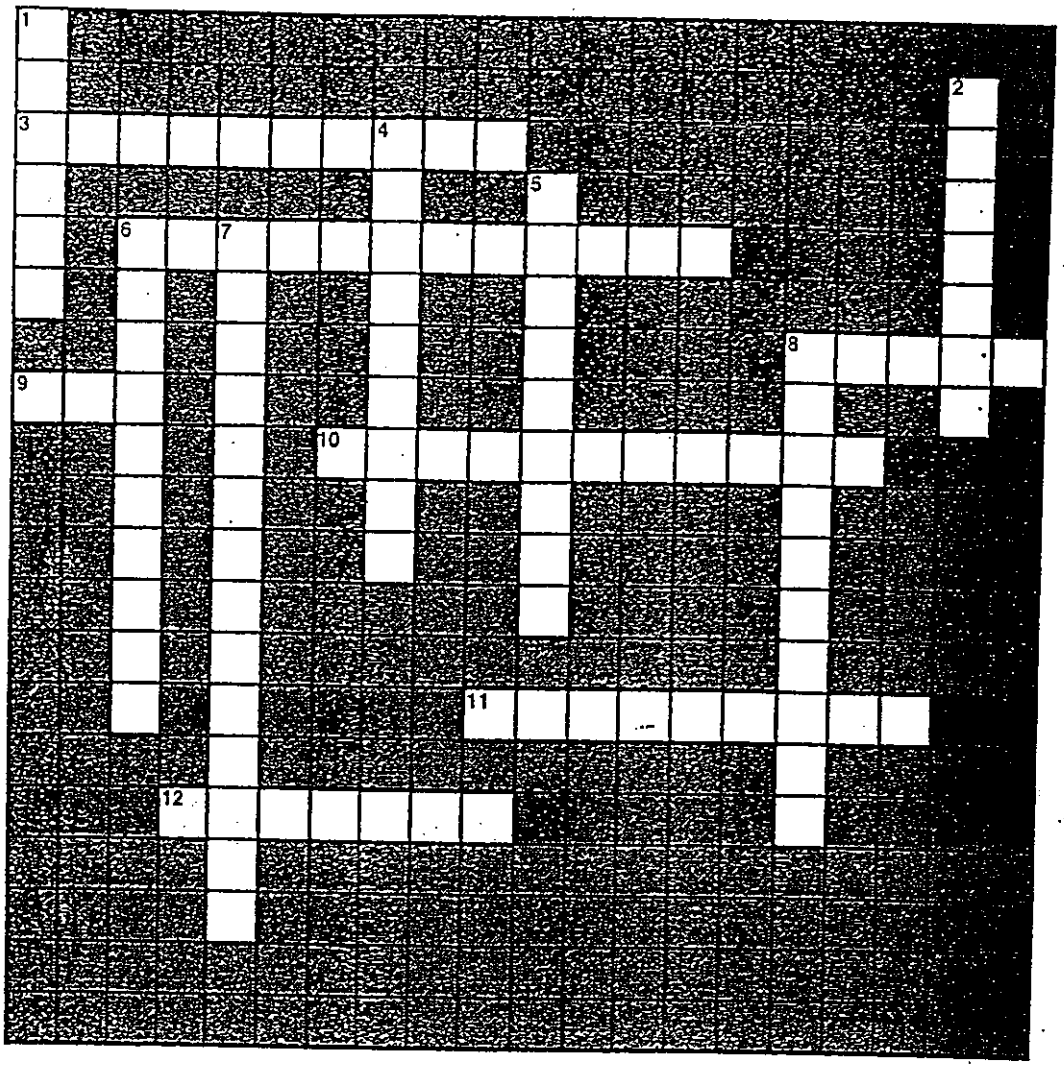
4. The diagram shows that the hawk eats what organisms? _____

5. Which of the organisms shown in the diagram are third-order consumers? _____

6. How does the mass of dry organic matter of the grass compare with the mass of dry organic matter of the grasshoppers it supports? _____

7. What is the source of energy for the grass and for the herbs and shrubs shown in the diagram? _____

8. Which of the organisms shown in the diagram receive the least amount of the energy that is present in the grass and in the herbs and shrubs? Explain your answer. _____



Across

3 Organisms that make their own food
6 Organisms that cannot make their own food
8 A food _____ is a series of producers and consumers
9 A food _____ is a series of interlocking food chains
10 They break down organic wastes from other organisms
11 Organisms that eat both plants and animals
12 The measure of living material in an ecosystem

Down

1 These food chains originate with plants consumed by herbivores
2 A way of expressing energy transfer in an ecosystem
4 Another name for autotrophs
5 Another name for heterotrophs
6 Animals that eat plants
7 Laws that describe energy transformation
8 Animals that eat other animals