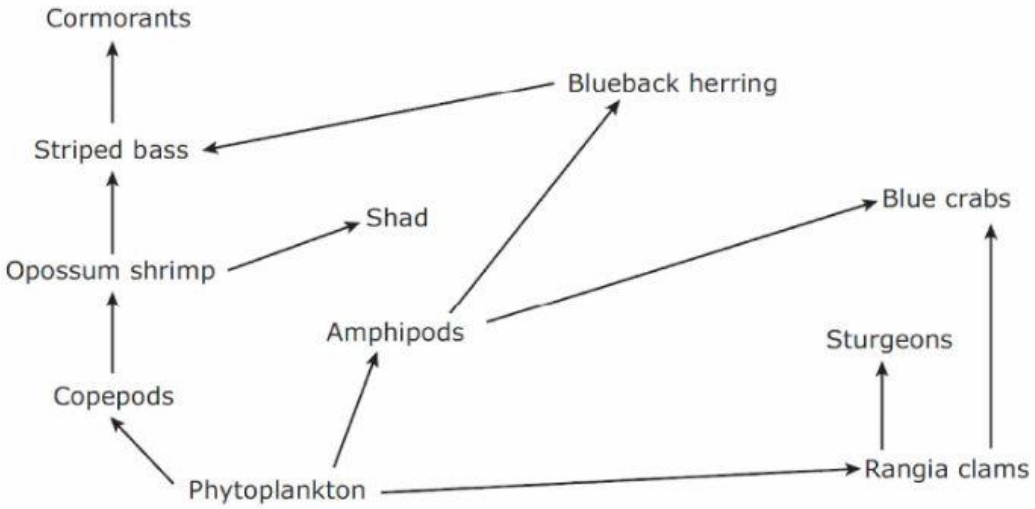
ETIVEMORKSHEETS

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Symbiosis Test

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. In the aquatic food web below, which two organisms have a predator-prey relationship?



a. Copepods and amphipods
b. Shad and sturgeons
c. Blue crabs and rangia clams
d. Sturgeons and blue crabs

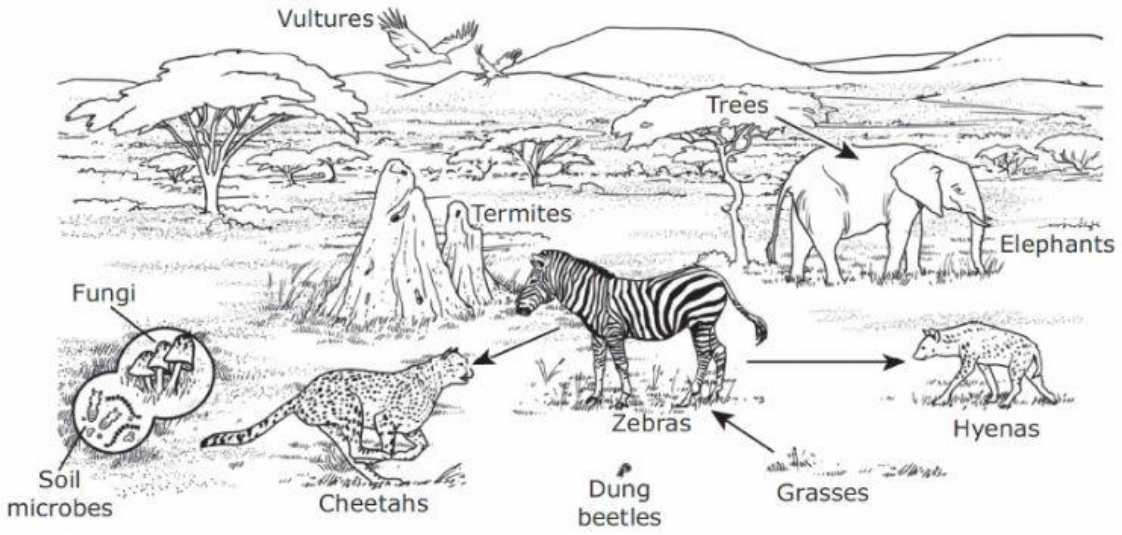
> Nitrogen-fixing bacteria called rhizobia enter the root hairs of bean plants. The bacteria are located in small root structures called nodules. The plants provide energy to the bacteria, and in return, the plants receive nitrogen for growth from the bacteria.

____ 2. According to the information in the box, which of these best describes the relationship between rhizobia and bean plants?

a. Parasitism
b. Opportunism
c. Commensalism
d. Mutualism

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___ 3. The African savanna is a grassland scattered with shrubs and small trees. Some of the organisms that live in the savanna are shown below.



Which two types of organisms have a producer-consumer relationship in this African savanna?

a. Trees and elephants
b. Zebras and hyenas
c. Hyenas and cheetahs
d. Fungi and dung beetles

___ 4. While exploring a lake in Argentina, Laguna del Diamante (Diamond Lake), scientists found rocks covered with mats made of photosynthetic microbes. Flamingos in the area filter the nutrient-rich microbes by pumping the lakewater through their bill. What is the relationship between the photosynthetic microbes and the flamingos in the Laguna del Diamante ecosystem?

a. The microbes are producers, and the flamingos are consumers.
b. The microbes are parasites,and the flamingos are hosts.
c. The microbes are carnivores, and the flamingos are predators.
d. The microbes are herbivores, and the flamingos are carnivores.

___ 5. Which situation best represents a mutualistic relationship?

a. An armadillo rooting in the soil at the base of an oak tree
b. A human losing blood to a feeding mosquito
c. An orchid being pollinated by a nectar collecting wasp
d. A tapeworm absorbing nutrients from the intestine of a dog

___ 6. Beechdrops (*Epifagus virginiana*) are leafless plants that lack chlorophyll. Beechdrops get their nourishment from the roots of beech trees, which reduces the amount of nutrients available to the trees themselves. This interaction is best described as —

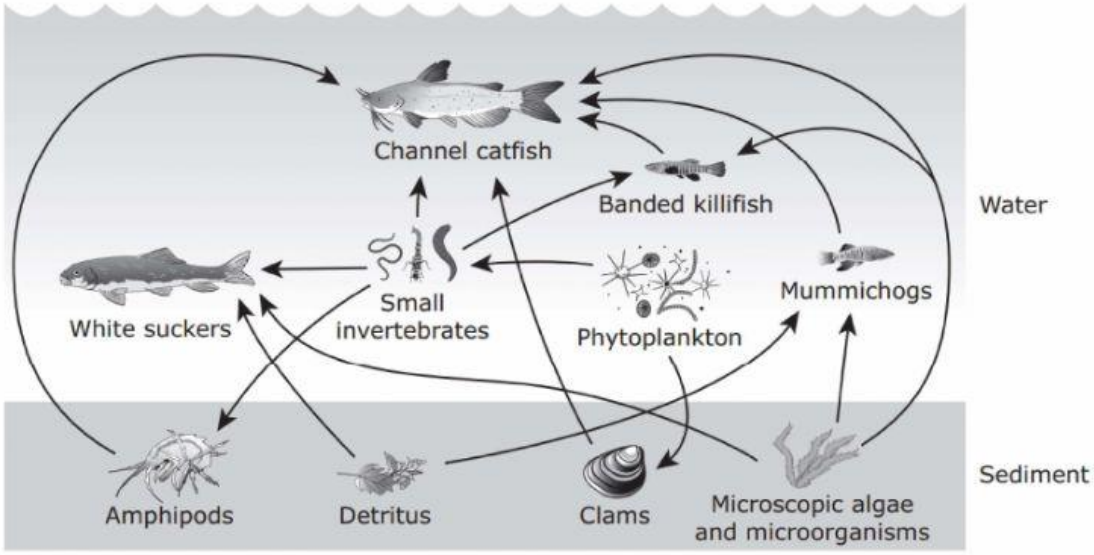
a. parasitic
b. commensalistic
c. mutualistic
d. predatory

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____ 7. Within a certain community, crows actively eat brightly colored beetles. Which interaction is being displayed between the population of crows and the population of beetles?
a. Commensalism
b. Predation
c. Parasitism
d. Mutualism

____ 8. Which of these best describes a parasite-host relationship?
a. Bacteria feed on a dead gypsy moth.
b. A gypsy moth caterpillar eats the leaves of a plant.
c. Birds catch gypsy moths and eat them for food.
d. A fungus lives in the body of a live gypsy moth catepillar.

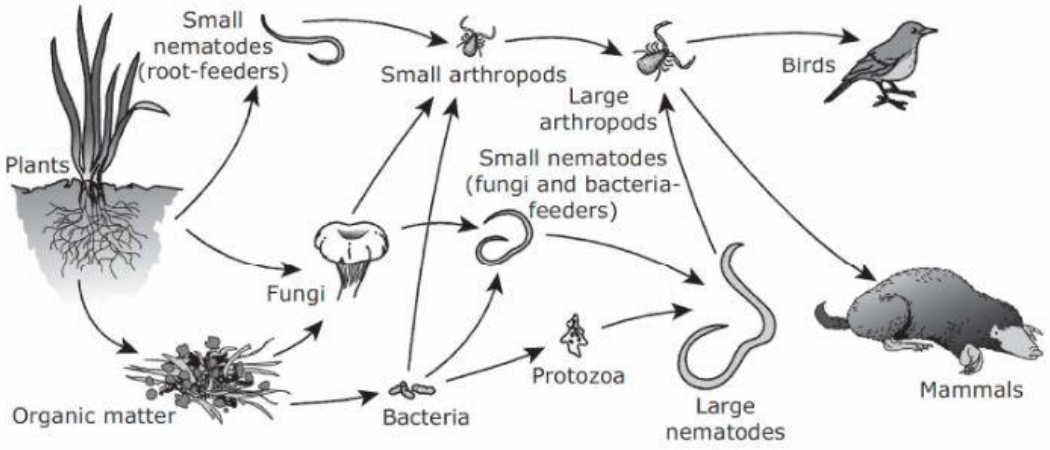
____ 9. The partial food web shown below is found in an aquatic environment. This type of environment has many organisms in the same trophic levels.



Which two types of organisms in this aquatic food web have a producer–consumer relationship?
a. Phytoplankton and mummichogs
b. Microscopic algae and white suckers
c. Small invertebrates and amphipods
d. Amphipods and channel catfish

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____ 10. Which of these correctly describes a relationship between organisms in the soil food web below?



a. Bacteria get nutrients from organic matter.
b. Mammals are predators of birds.
c. Nematodes prey on arthropods.
d. Protozoa get nutrients from small arthropods.

____ 11. A tick feeds on the blood of a deer and can transmit diseases. Which of these terms describes the relationship between the tick and the deer?

a. mutualism
b. competition
c. predation
d. parasitism

____ 12. A particular species of unicellular organism inhabits the intestines of termites, where the unicellular organisms are protected from predators. Wood that is ingested by the termites is digested by the multicellular organisms, forming food for the termites. The relationship between these two species can be described as

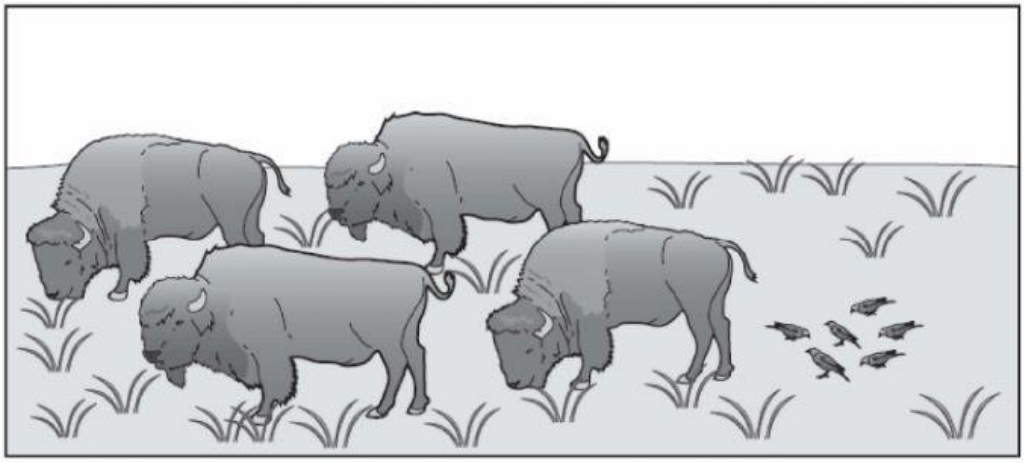
a. beneficial to both species
b. harmful to both species
c. predator/prey
d. parasite/host

____ 13. Which of the following best describes a difference between a mutualistic relationship and a parasitic relationship?

a. Parasitism involves only two organisms, while mutualism involves many organisms.
b. Parasitism harms both organisms, while mutualism harms only one organism.
c. Parasitism continues for many generations, while mutualism is limited to one generation
d. Parasitism benefits only one organism, while mutualism benefits both organisms.

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____ 14.



At one time large herds of bison roamed across the Great Plains. Brown-headed cowbirds often followed the bison, capturing and eating insects that scattered as the bison walked through the grasses. This relationship between the bison and the cowbird was —

a. parasitic
b. commensal
c. competitive
d. predatory

____ 15. A lichen is composed of two organisms, a fungus and a cyanobacterium. The fungus provides a growing surface, moisture, and nutrients to the cyanobacterium. The cyanobacterium provides food to the fungus. This relationship is considered to be an example of which of the following?

a. Parasitism
b. Commensalism
c. Neutralism
d. Mutualism

____ 16. Baleen whales eat zooplankton by taking a large amount of water into their mouth. These whales use special structures in their mouth to separate zooplankton from the water. Because baleen whales eat zooplankton, they are classified as -

a. parasites
b. producers
c. hosts
d. predators

Epiphytes

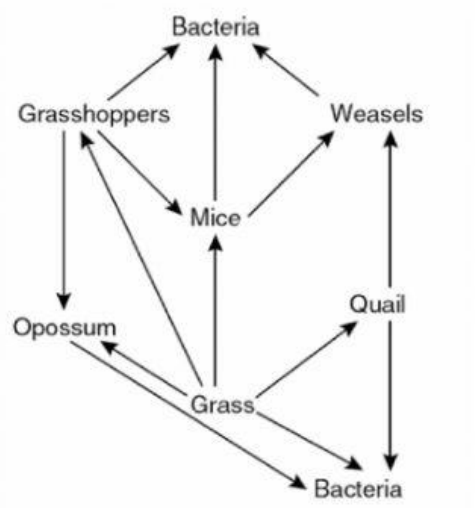
- Epiphytes (example: some orchids) live on trees so they can receive more sunlight.
- Epiphytes have aerial roots that absorb water and minerals from rainwater.
- Epiphytes do not affect the trees on which they live.

____ 17. Which of these best describes the relationship between epiphytes and trees?

a. Predation
b. Migration
c. Commensalism
d. Parasitism

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____ 18.



In this food web, the bacteria probably function as —

a. carnivores
b. herbivores
c. producers
d. decomposers