Study guide

Chapter 28

Name _____

Form two food chains from the following lists of organisms. Use and organism only once.

Human	Plant lice	Blue heron	leaves	Fish	Plant algae
Hawk	Snake	Mayfly	Rabbit	Bullfrog	
Tadpole	Spider	nymph	Grass	Small bird	

1. Food chain 1: Producer _____

   1st order consumer _____

   2nd order consumer _____

   3rd order consumer _____

2. food chain 2: Producer _____

   1st order consumer _____

   2nd order consumer _____

   3rd order consumer _____

Circle the letter of the choice that best completes the statement.

3. All consumer organisms
   a. occupy the same niche as other organisms
   b. feed upon themselves.
   c. depend on autotrophs for energy
   d. are photosynthetic autotrophs

4. All producer organisms are
   a. herbivores
   b. carnivores
   c. omnivores.
   d. photosynthetic autotrophs

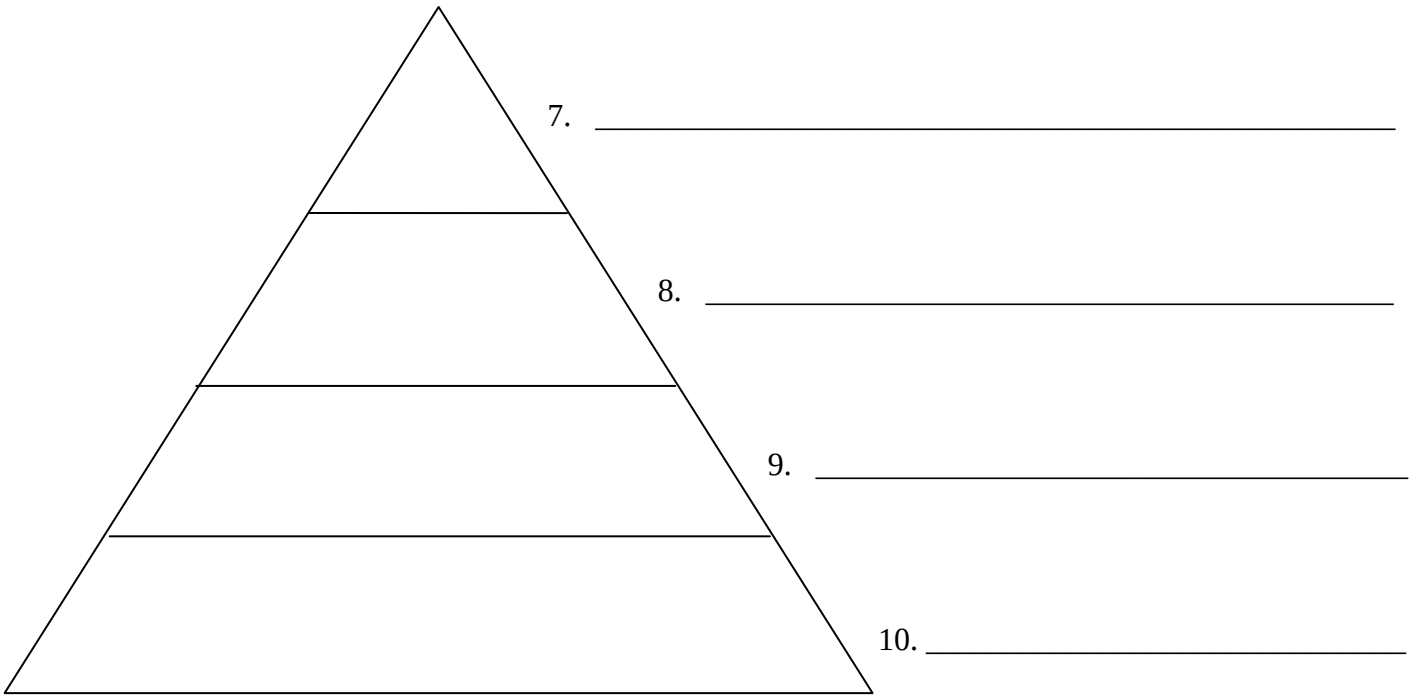
5. Decomposer
   a. make their own food.
   b. use bacteria for food.
   c. cannot make their food.
   d. are first-order consumers.

6. In a food chain
   a. energy and materials are transferred.
   b. consumers always feed on one source.
   c. producers & consumers are interchangeable
   d. trophic levels are replaced by ecosystem

Ecosystems

Use all the terms in the list below to label the levels of the pyramid of biomass. The level for each level should include two or three terms.

third order consumers
carnivores
producers
39 g/m^2
first-order consumers
10 g/m^2
carnivores
second order consumers
775 g/m^2
herbivores
1.5 g/m^2



Complete the statements about the pyramids of energy, numbers, and biomass. Use these choices:
less more

11. In a pyramid of energy, _____ energy is available at higher levels than at lower levels.

12. Organisms are _____ abundant at the lower end of a food chain except where smaller organisms feed on a large organism.

13. _____ energy is stored by the consumers than by the producers.

14. Large animals get _____ energy from small prey than large prey.

15. Aquatic producers have _____ biomass at a given time than land producers.

16. In most land ecosystems, there is _____ biomass at the lower levels of a pyramid of biomass

17. A food molecule loses _____ than half its potential energy as heat energy during cellular respiration.

Abiotic factors of the Environment

How does temperature affect certain organisms? For each organism in Column A, write the letter of the appropriate temperature condition in Column B.

Column A	***Column B***
_____ 1. preach trees	a. metabolic rate and body temperature decrease during hibernation.
_____ 2. Bacteria	b. skin arteries expand to increase heat loss or contract to save heat
_____ 3. gypsy moth pupae	c. must be chilled during winter
_____ 4. Caribou	d. migrate annually because of winter temperature and weather changes
_____ 5. Frogs	e. some can withstand temperatures above the boiling point and below the freezing point of water.
_____ 6. Desert lizards	f. need freezing temperature to develop into adults
_____ 7. Bats	g. go through period in summer dormancy
_____ 8. Humans	h. hide under rocks to keep cool

Complete each statement

9. Although the balance of an ecosystem can be temporarily altered by natural biotic and abiotic factors, the main disruption of balance is caused by _____

10. Some natural events that can disrupt an ecosystem's balance are _____, _____ and volcanic eruptions.

11. Detergents dumped into lake community can cause a dramatic increase in _____.

12. A thriving and rapidly growing algae population is called an _____.

13. _____ and _____ provide important nutrients for algae.

14. When dead algae decompose, less _____ is available for _____ .

Vocabulary

From the list below, select the term that fits each description. You will not use all the terms.

abiotic factor	**ecosystem**	**niche**	**second order consumer**
algal bloom	**estivation**	**omnivore**	**third order consumer**
biomass	**first order consumer**	**pyramid of biomass**	**trophic level**
biotic factor	**food web**	**pyramid of energy**	
carnivore	**herbivore**	**pyramid of numbers**	
commensalism	**humus**		

_____ 1. animal that eats both plants and animals

_____ 2. physical, nonorganic factor in an environment affecting organisms in an ecosystem

_____ 3. relationship in which a parasite benefits from a host without either harming or helping the host

_____ 4. all the feeding relationships that exist in an ecosystem

_____ 5. the interaction of a community with its environment

_____ 6. the interactions of organisms with their own and other species

_____ 7. sudden proliferation of algae, due to excess phosphates and nitrates in a body of water

_____ 8. plant eater, a first order consumer

_____ 9. total amount of dry weight of organic matter at defferent trophic levels

_____ 10. period of dormancy in the summer for certain organisms

_____ 11. decayed remains of dead organisms in the soil

_____ 12. a feeding step in the transfer of energy among the organisms in an ecosystem

_____ 13. an organism's habitat, food, and mode of interaction with biotic and abiotic parts of the ecosystem.