UNIT 2 – ECOLOGY STUDY GUIDE ANSWERS

1. Food chains and food webs both show how energy moves from one organism to another in an ecosystem. Food chains show one feeding relationship; one path of energy movement. Food webs are made up of many food chains and show different paths of energy movement within an ecosystem.

2. Sunlight is important to ecosystems because it provides the energy needed for plants to produce food.

3. decomposers

4. habitat

5. Producers are autotrophs and make their own food using energy from the sun or chemicals. Consumers are heterotrophs and must eat other organisms to get energy.

6. Energy in a food web originates with the sun, which enable plants to make their own food. The energy is transferred from the plants (Producers) to the primary consumers to the secondary consumers to the tertiary consumers to the quaternary consumers.

7. Herbivores – organisms that eat plants or primary producers; considered primary consumers
   Omnivores – secondary consumer that eats plants and animals
   Carnivores – organisms like a wolf that eats other consumers (animals); tertiary or quaternary consumer

8. niche

9. Predators hunt and kill their prey; a hawk hunts and kills a snake

10. Predation helps prey populations by naturally limiting prey populations by preventing overcrowding and starvation.

11. A competitive relationship is when two organisms compete (hunt for) the same resource in an area.

12. | Species Harmed | Species Benefits | Species Neutral (neither harmed nor benefits) |
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13. Competition between organisms can cause one population to move in order to find resources. It may also cause the weaker population to die due to lack of resources.

14. limiting factors

15. The producer level in an energy pyramid has the most available energy.

16. Primary succession – changes that occur slowly in an area where no soil or organisms exist, such as a volcanic island
   Secondary succession – changes that occur rapidly in an area where the ecosystem has been disturbed, but soil and organisms still exist, such as after a natural disaster – hurricane, fire, etc.

17. Pioneer species are the first organisms to populate an area when primary succession occurs.

18. A climax community is a place where animals and plants have reached a stable stage.

19. Matter recycles between organisms and their environment as organisms carry out life functions.
   Producers use carbon dioxide in the atmosphere for photosynthesis, giving off oxygen needed by consumers. Nitrogen is recycled going from the air to the soil, into living things, and back into the air.