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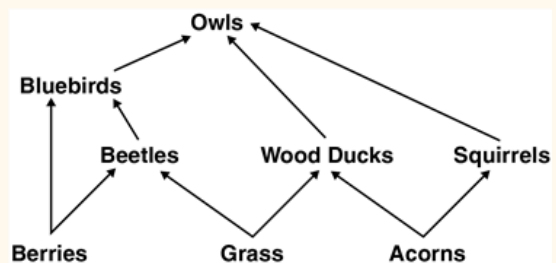
8TH GRADE Science

Study Guide for Ecosystems Unit Test on April 16th 2019

1. What gas makes up the majority of the Earth's atmosphere? _____
2. Know the difference and examples of the symbiotic relationships. Use words and diagrams.

Mutualism, Commensalism and Parasitism

3. Bluebirds, beetles, wood ducks, squirrels, and owls all will nest in holes in hollow trees. A food web that includes these animals is shown. If many hollow trees were removed from the area, which would MOST likely increase? Circle one.



competition for food between squirrels and owls

competition for nest sites between bluebirds and wood ducks

4. How does the lack of oxygen impact the formation of fossil fuels from organic debris?

5. It is estimated that half of the 10 million species of organisms on the planet live in the tropical rainforests. Deforestation of the rainforest causes the extinction of as many as 50,000 species per year. Clearing tropical rainforests causes the extinction of many species because _____

6. Some organisms obtain their food from a host organism. Write 2 examples that would best show this type of relationship.

7. Of the symbiotic relationships, which one is an example of cooperation? _____

8. Two different species of birds live in one particular spruce tree. Which would **best** allow the two bird species to coexist in the same tree?

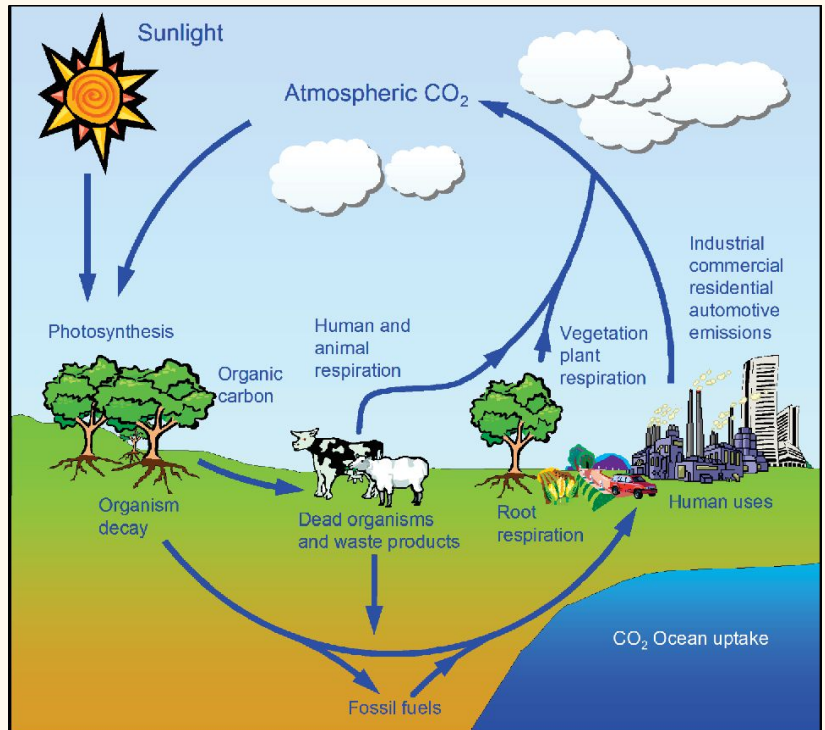


9. What is competition? Give an example.

10. From what source does most of the energy in an ecosystem come? Draw a picture of the energy source.

11. One way to decrease the number of flying insects on your property is to increase bat populations by building bat houses. What would be the limiting factor for the bat population? _____

12. In the carbon cycle, carbon moves from reservoir to reservoir as various organic and inorganic processes occur on Earth. Only a small percentage of the global carbon is moved in this cycle each year. The remaining carbon is stored in these reservoirs. Of the following **reservoirs**, which contains the **greatest** amount of stored carbon?



13. How does water exist on Earth? _____

14. Which movement of carbon between reservoirs takes the longest to achieve? _____

15. The single-celled protozoa which causes malaria lives and multiplies in the bloodstream. This parasite is transmitted by mosquitoes. What would the **most** effective way to prevent spread of malaria? (Remember, mostly affecting those that live in 3rd world countries)

16. A beach is formed when sediment is deposited along a shoreline. What would MOST likely happen if rivers that empty into the ocean were dammed?

17. In an ecosystem, not all of the energy that is available is used by the organisms. Some energy becomes unavailable before it can be transferred to organisms in the next trophic level. How does the energy MOST likely become unavailable? _____

18. Forest fires can benefit an ecosystem. Which abiotic factor does a forest fire MOST likely positively impact? Circle one and example what is the abiotic factor.

Fire changes the average temperature of the ecosystem.

Overall water increases because of methods used to fight the fire.

Ashes become part of the soil when plants burn.

Rain decreases because of added particles in the air during the fire.

19. A woodland area where deer live is partially cleared to build homes for people. Which **best** describes how the deer population will change as a result of clearing the land to build homes? _____

20. Wildlife corridors are areas where wildlife can travel between two natural areas that are separated by urban development, such as highways. The development of wildlife corridors is an attempt to decrease the effect of which factor? _____

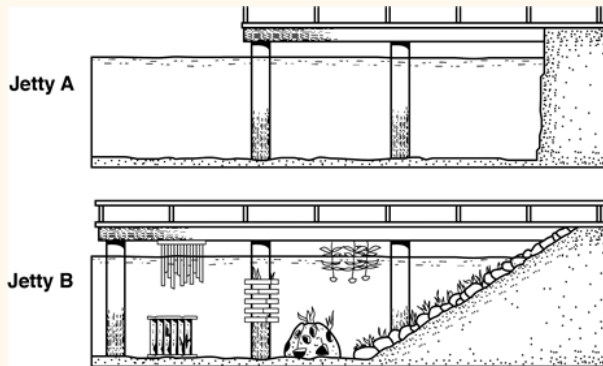
21. Which **best** describes the role of water in the process of photosynthesis? Write the chemical equation and label all parts.

22. Which **most likely** describes the effect of removing shelter from an ecosystem while increasing a population?

23. Leaves fall from deciduous trees onto the forest floor. These leaves decay slowly and become part of the topsoil. What change is MOST likely to have a positive impact on the nutrients available in the topsoil?

24. Draw a diagram showing the flow of energy through an ecosystem.

25.



Which jetty would be better for native fish and why?

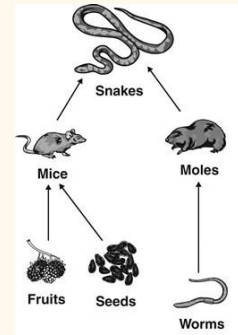
26. Through which process do organisms release carbon dioxide into the atmosphere? _____

27. Which **best** represents the niche of phytoplankton and algae in a marine ecosystem? _____

Define niche. _____

28. Some bacteria, fungi, and insects can decompose other organisms. What BEST describes the role of insects in the decomposition process?

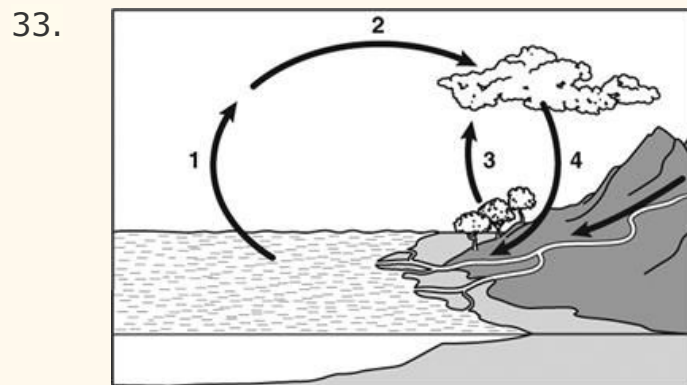
29. Many different organisms live in Amanda’s garden. The diagram shows a simple food web of some of the organisms in her garden. Predation helps maintain the stability of an ecosystem. What would BEST describe how this garden ecosystem can benefit from the presence of snakes?



30. What would a drought **most likely** affect in an ecosystem?

31. What event would MOST likely occur if the number of nitrogen fixing bacteria were reduced within an ecosystem?

32. *Actinomyces* are bacteria that live in soil and give soil its moist, earthy smell. *Actinomyces* break down cellulose and chitin even after soil conditions have become uninhabitable to many other organisms. *Actinomyces* also produce certain antibiotics. What term BEST classifies *Actinomyces*? _____



The Water Cycle

- 1=
- 2=
- 3=
- 4=

34. A rainforest area is experiencing a severe drought. As a consequence, the insect population has decreased. What will the insect-eating birds MOST likely do as a result of the drought?

