

- _____ 1. This term describes the change from a common ancestor into a number of different species.
- _____ 2. The general term for the first organisms to survive and reproduce in an area.
- _____ 3. The term that refers to the changes that take place over time in the types of organisms in an area.
- _____ 4. Over years of succession, the mature community results also known as the _____ community.
- _____ 5. A huge rapidly moving ocean wave resulting from underwater earthquakes.
- _____ 6. This kind of succession results from bare rock being exposed by glaciers or lava flows.
- _____ 7. The first organisms to survive and reproduce on bare rock is this type of plant.
- _____ 8. An unusually long period of dry weather is called this.
- _____ 9. A forest fire that wipes out an ecosystem will begin this type of succession.
- _____ 10. The process in which, over time, the best adapted members of a species will survive and reproduce.
- _____ 11. Knowledge passed down from generation to generation involving human experience with nature.
- _____ 12. The clearing or logging of forests without replanting.
- _____ 13. The dying out of a species.
- _____ 14. The ability of an ecosystem to maintain ecological processes and keep its biodiversity over time.
- _____ 15. The general term for plants or animals that naturally inhabit an area.
- _____ 16. The general term for organisms that were transported intentionally or by accident into areas where they did not exist before.
- _____ 17. The general term for organisms from Q 16 that grew rapidly and overtake natural ecosystems.
- _____ 18. A resource like fish or forests that is used or extracted until it is depleted.
- _____ 19. The term resulting from land clearing leaving land bare so water and wind erosion removes topsoil.
- _____ 20. The four (or five) ways that a species new to an area can harm species naturally existing in the area.

21. List the steps in primary succession of a boreal forest ecosystem.

How does clear cutting forests affect ecosystems and list a sustainable approach to clear cut logging.

23. What is Eurasian milfoil? How it is spread? How does Eurasian milfoil affect ecosystems?

Read the following article and answer Q 24, 25, 26, and 27.

The battle against an invasive predator known as the snakehead fish isn't over. To ensure the snakehead cannot be brought live into British Columbia, the government has adjusted its Controlled Alien Species Regulation to include the snakehead. The toothy snakehead is native to fresh water in Russia and China and has few predators when fully grown. It is capable of surviving out of water as it squirms short distances over land. Imported snakeheads could pose a severe risk to BC's wild salmon stock if they were to reach the Fraser River. This voracious predator has no natural enemies in BC. Left unchecked it could devastate ecosystems and outcompete BC's wild salmon stock.

Burnaby officials used a dip net to capture the snakehead which had been spotted by a local resident. The captured snakehead was 70 cm long, very strong, and took a while to euthanize (put down). It is important that people understand that native species were at risk, so officials had to get on top of the problem quickly. Fortunately, officials were able to get to this predator before it was able to reproduce, establish itself, proliferate, and do any real damage.

24. If the snakehead fish reached the Fraser River, what relationship would exist between it and BC's wild salmon?

- A. parasitism B. mutualism, C. predator-prey D. commensalism

25. The snakehead fish in Burnaby is an example of:

- A. a detritivore B. an herbivore C. a native species D. a foreign species

26. Which of the following characteristics would make the snakehead fish a successful species in BC?

- A. II only C. II and III only I It has no natural predators in BC
B. III only D. I, II, and III II It can outcompete native species for resources
III It can move across land to occupy new habitats

27. The word proliferate is used a lot in the biology chapters. Find out what it means.

Answers:

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| 1. adaptive radiation | 9. secondary | 17. invasive species |
| 2. pioneer species | 10. natural selection | 18. overexploitation |
| 3. ecological succession | 11. traditional ecological knowledge | 19. soil degradation |
| 4. climax | 12. deforestation | 20. competition, predation,
disease / parasites, habitat alteration |
| 5. tsunami | 13. extinction | |
| 6. primary | 14. sustainability | |
| 7. lichen | 15. native species | |
| 8. drought | 16. introduced species | |

21. bare rock, lichens, mosses, small insects, grasses, shrubs, larger animals, larger trees begin to grow, first the deciduous type and then the conifers of the boreal forest. This is the climax community.

22. one possible answer: clear cutting destroys habitat for many organisms so they move away or die. Less food supply, less prey, less plants from soil degradation. Better forest industry practices like selective logging would help.

23. Eurasian milfoil is a lake weed plant that forms mats at lake surfaces. This cuts off sunlight to organisms below thus reducing normal populations of native lake plants and animals. It also interferes with recreational activities because who wants to swim or boat in a weedy lake. Yuk! Ew! What just touched my leg? It is spread by boats from plant fragments stuck on props and other parts. It is an invasive species.

24. C 25. D 26. D 27. To spread, grow, to increase rapidly in numbers, to multiply