

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

ID: A

## Ecological Succession Common Assessment

### Multiple Choice

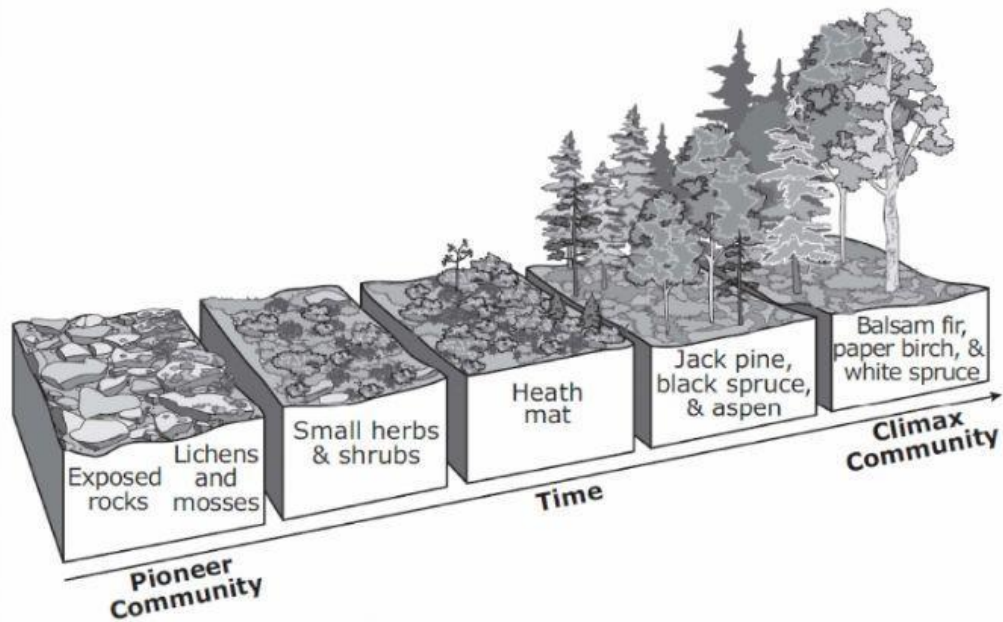
Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. When a volcanic eruption creates a new land form, the terrain is initially rocky and devoid of life. During the first stage of primary succession, pioneer species like mosses and lichens are the only populations that are able to survive. Eventually, vascular plants are introduced into the ecosystem where they will ultimately thrive and dominate the landscape. What process described below does not directly work towards the introduction of these new plants populations?
  - a. Decomposition of dead lichens and mosses adds nutrients to the ground.
  - b. Chemical and physical weathering breaks down the rocks creating finer soil.
  - c. Wind and water currents bring seeds to into the developing ecosystem.
  - d. The volcano remains active and continues to provide new land masses.
  
- \_\_\_\_\_ 2. During ecological succession, the conditions of the developing ecosystem are consistently changing. What determines which organisms will be able to thrive and dominate the ecosystem?
  - a. The organisms which are best adapted to the current conditions will succeed.
  - b. The species that are able to live in the harshest conditions will always be dominant.
  - c. The populations which avoid humans will have the greatest success.
  - d. Parasitic species will have an advantage over less aggressive organisms.
  
- \_\_\_\_\_ 3. A lichen results from an interaction between two organisms, a fungus and an alga. The alga supplies food, while the fungus traps water and keeps the alga moist. This is an example of which of the following?
  - a. Mutualism
  - b. Predation
  - c. Biomagnification
  - d. Parasitism

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4. The following diagram illustrates the process of a forest maturing into a climax community.

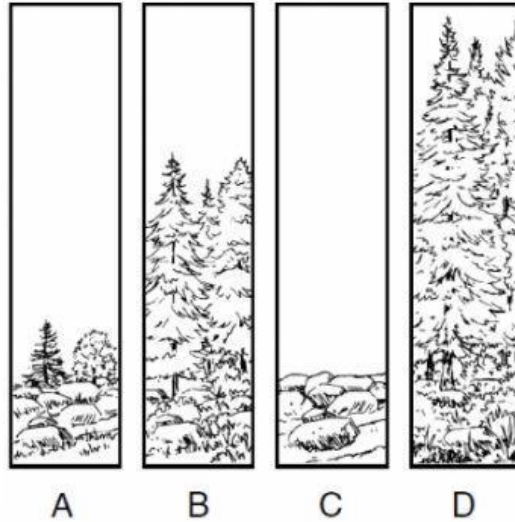


What general conclusions could an ecologist make when contrasting pioneer with climax communities?

- |   |   |
|---|---|
| a. The biomass and biodiversity increase over time. | c. The biomass increases over time while the biodiversity remains constant. |
| b. The biomass and biodiversity decrease over time. | d. The biomass increases over time while the biodiversity decreases.        |

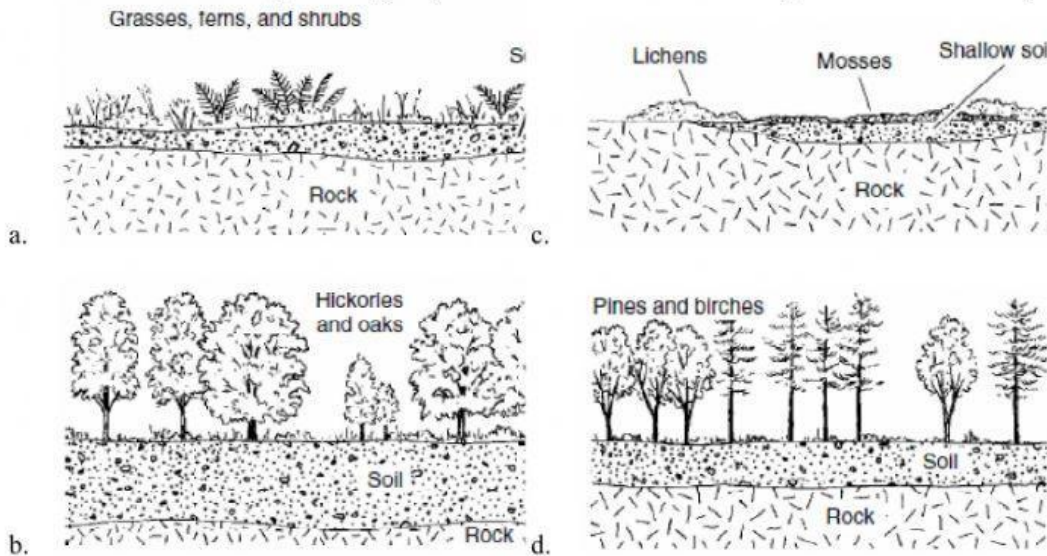
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5. Which order of diagrams would show primary succession in an area that had never before been occupied by living organisms?
- |               |               |
|---------------|---------------|
| a. A, C, B, D | c. D, B, C, A |
| b. C, A, B, D | d. B, A, C, D |

6. Each drawing represents different stages in community succession within the state of Virginia. Which of the following drawings represents the climax community in this succession pattern?



7. Which factor is most likely to initiate the process of succession in which a deep freshwater lake becomes a woodland area?
- |                              |  |
|------------------------------|--|
| a. accumulation of sediments | c. change in the pH of the lake water  |
| b. growth of microorganisms  | d. increase in invertebrate population |



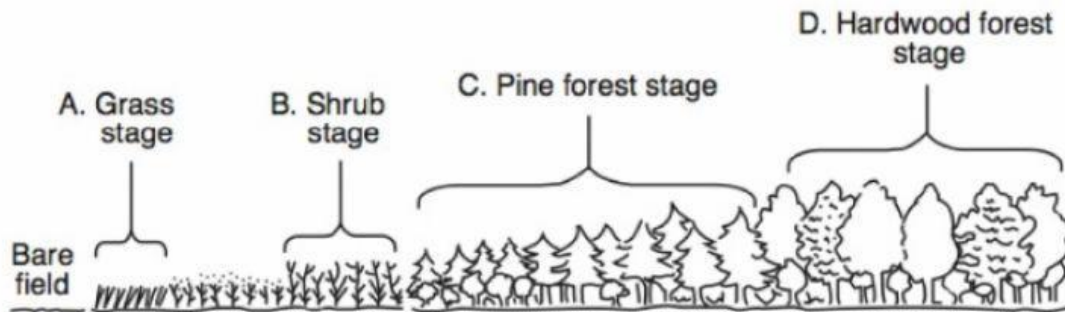




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- \_\_\_\_ 14. Which of the stages in the diagram below consists of plant species that modify the environment, eventually making it more suitable for another community?



- a. grass stage, only  
b. grass, shrub, and pine forest stages  
c. shrub, pine forest, and hardwood forest stages  
d. hardwood forest stage, only
- \_\_\_\_ 15. After fire destroys a forest, the area will most likely
- a. remain barren land indefinitely  
b. develop into a desert area  
c. develop into an entirely different type of forest after hundreds of years  
d. recover through gradual changes back to a point of long-term stability