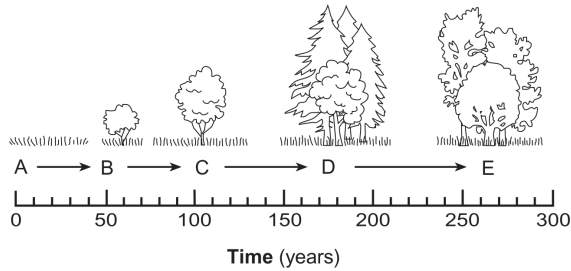


### Ecological succession Star 3

Name: \_\_\_\_\_

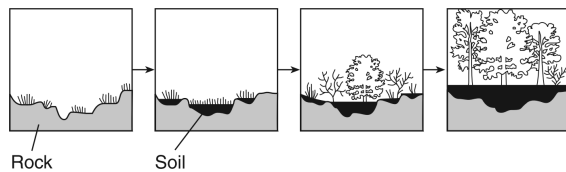
Date: \_\_\_\_\_

1. An ecological process is represented below. Which statement describes an event in this process?



- A. Community *B* modifies the environment, making it suitable for community *C*.
- B. Community *D* modifies the environment, making it suitable for community *C*.
- C. Community *E* will develop into community *A*, if the environment remains stable.
- D. Community *A* organisms will develop directly into community *D* organisms.

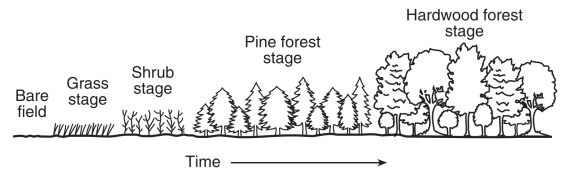
2. The diagram represents the changes in an area over time.



This series of changes in the area over hundreds of years is known as

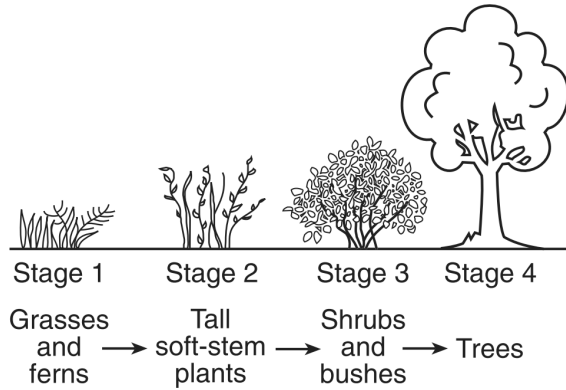
- A. evolution
- B. feedback
- C. ecological succession
- D. direct harvesting

3. Which concept is best represented in the diagram below?



- A. random mutations
- B. ecological succession
- C. genetic engineering
- D. direct harvesting

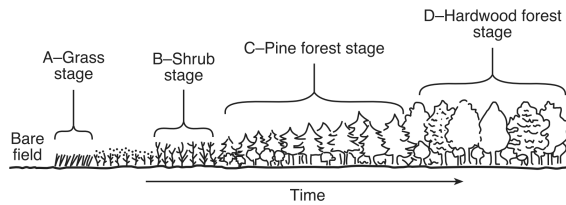
4. Changes in an ecosystem over a long period of time are shown in the diagram below.



These changes will most likely lead to a

- A. stable ecosystem that can last for many years
- B. loss of heterotrophs that cannot be recovered
- C. long-term rise in environmental temperatures
- D. forest consisting of only producers and decomposers

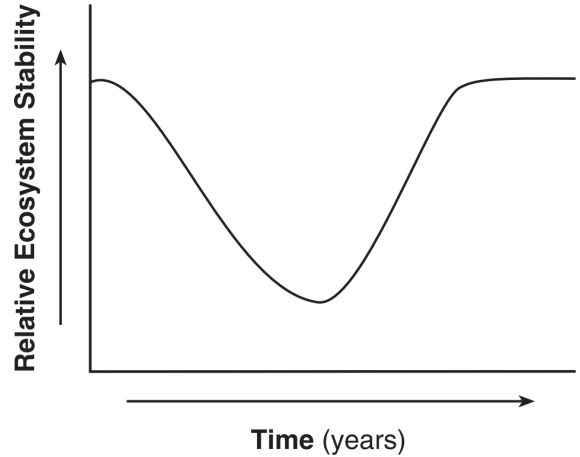
5. The diagram below represents different stages of an ecosystem over a period of time.



Which stage of the ecosystem has the greatest long-term stability?

- A. A
- B. B
- C. C
- D. D

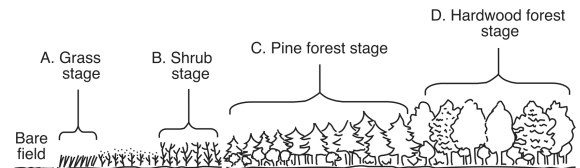
6. The graph below shows changes in the stability of an ecosystem over a period of time.



Which statement best describes the change in ecosystem stability shown in the graph?

- A. A stable ecosystem can be altered, then it can recover to a point of stability.
- B. An ecosystem remains unchanged as its stability decreases.
- C. The stability of an ecosystem remains unchanged but its biodiversity decreases.
- D. A stable ecosystem cannot recover after it is altered.

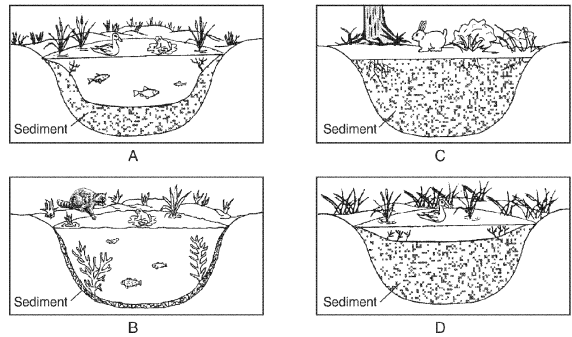
7. The diagram below represents the various stages of ecological succession in New York State. If the ecosystem is not altered, which stage would be the most stable?



- A. grass
- B. shrub
- C. pine forest
- D. hardwood forest

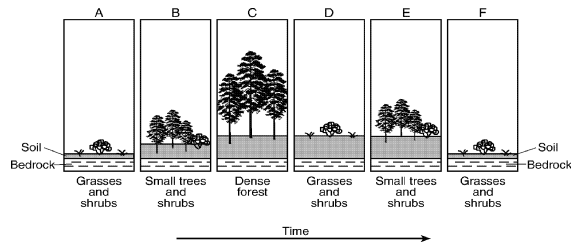
8. Explain why most ecologists would agree with the statement “A forest ecosystem is more stable than a cornfield.”

10. Base your answer(s) to the following question(s) on the diagrams of stages of succession and on your knowledge of biology.



Identify one factor that could disrupt the final stage of this ecosystem.

9. Base your answer(s) to the following question(s) on the diagram below, which represents the changes in an ecosystem over a period of 100 years, and on your knowledge of biology.



State one biological explanation for the changes in types of vegetation observed from A through C.

1.  
Answer: A
2.  
Answer: C
3.  
Answer: B
4.  
Answer: A
5.  
Answer: D
6.  
Answer: A
7.  
Answer: D
8.  
Answer: A forest ecosystem has greater biodiversity. This leads to a more stable ecosystem since more interrelationships and interdependencies among the organisms exist in a forest than in a cornfield.
9.  
Answer: As more soil accumulated (from the decomposition of dead vegetation), plants with deeper root systems could live there and shade out the earlier plants. OR ecological succession
10.  
Answer: natural disasters (fire, flood, etc.), human activity, disease, introduction of a new species, OR climatic change