



pioneer

S20 Unit D: Living Systems: Environmental Change and Succession

Name: Key!Date: Dec 21st 2016

When life starts to form in an area, it grows in stages. This is succession. Look through your notes and read pages in your text (pg 470-481) to answer the following questions.

1. All environmental change occurs to increase the biomass of the region. Do you agree with this statement? Please explain your reason for or against. (2 marks)

Disagree. Changes to ~~decrease~~ decrease biomass might be.
-volcano, glacier retreat, meteor, fire.

2. What is a climax state? (1 mark)

Moment in time when ^{relative} stability is reached in an ecosystem.

3. Define succession. (1 mark)

Change from old population to a new population.

4. What is primary succession? (1 mark)

occurs after significant events (glacier, volcano, asteroid)

5. Outline the process of primary succession. (2 marks)

- after no existing organisms.
bare rock → lichen/moss → soil → grasses → shrubs → trees.

6. What is a pioneer species? Give one example. (2 marks)

First organism in succession. Lichen/moss.

7. Give an example of primary succession. (1 mark)

Reforestation in Jasper after glacier retreat.

8. Give an example of a climax community. (1 mark)

A forest with large trees of many different species.

9. What factors can change the balances of a climax community? (1 mark)

Increases/decreases to organism populations.
Natural/artificial disasters

5/28/2009

10. How long does a climax community usually stay? (1 mark)

Typically staying longer than the succession process took.

11. What is secondary succession? (1 mark)

Changing in populations, but starting from a basis of life (i.e. soil, small plants.).

12. Give an example of secondary succession. (1 mark)

Forest regrowth after fire/logging.
Regrowth after a flood.

13. How does secondary succession differ from primary succession? (1 mark)

Time Secondary succession is much faster.

14. Over many years, the following plants and animals appeared in an area where a forest fire occurred. In what order do you think they appeared? (1 mark)

Fireweed - Birch tree - Mouse - Bear - Grass

Fireweed → grass → mouse → birch → bear

15. Is the situation in previous question an example of primary or secondary succession? Give a reason for your answer. (1 mark)

Secondary → because no mention of a pioneer species.

16. How long does the process of succession take? (1 mark)

Decades (5-25 years)

17. A climax community is one in which no change is occurring. Defend or argue this statement. (1 mark)

In climax community, changes balance out so that max diversity is maintained.