

Name _____

Plants and Ecology

bees, other plants
animals

rocks, soil, sun, H₂O



1. What biotic and abiotic factors do plants need?

2. What artificial thing do we give plants to help them grow bigger and better?

fertilizers

3. What is the main element in it? N

This is called a limiting factor: A factor that constrains the productivity of an area.

4. What might happen in a area if the limiting factor is no longer limited? It is now in abundance? (think....) competition

5. List in order the organization of life. (review)

organism → pop → community → ecosystem → biosphere
biotic/abio

6. What is the niche of a plant? producer (O₂, food)

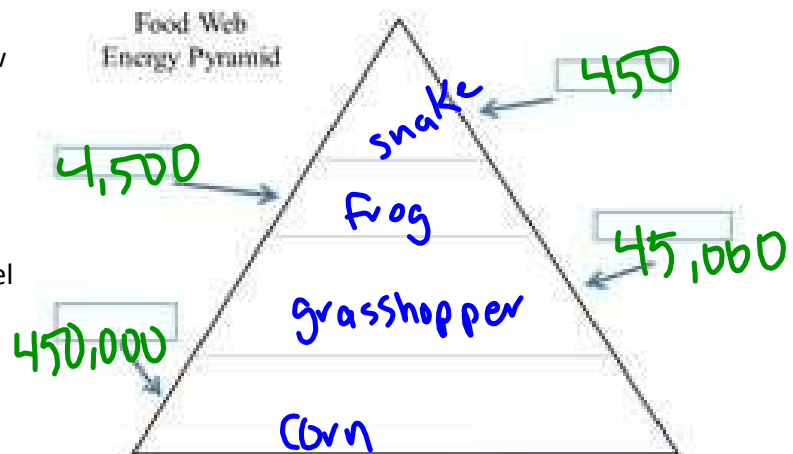
7. Draw a forest food chain with 4 trophic levels.

8. What two things are passed through the chain? energy nutrients

9. Complete the energy pyramid below by placing your food chain you created above into it.

If the plant has 450,000KJ of energy, how much is passed on?

Complete the boxes by putting in the amount of energy that each trophic level has available.



10. What 2 things does the pyramid represent?

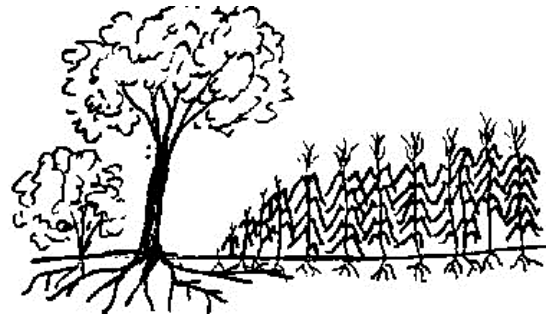
Biomass
Food chain (passing of E)

11. What do plants do in an ecosystem compete for?

space, light, H₂O, N

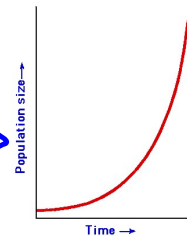
12. What do animals compete for?

space, food, H₂O, mate, O₂



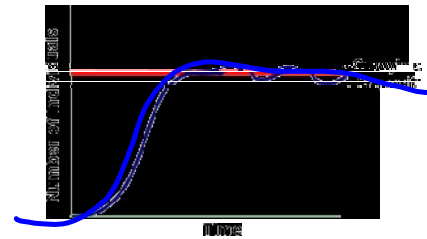
Sometimes a new area becomes available for organisms to live (ex. Reef, after a volcano, clear cutting a forest, a fish tank).

13. When organisms, naturally, begin to settle into the new area, what type of growth will they exhibit? exponential



14. Will the new organism be able to sustain this growth indefinitely? What will then happen?

no, compete, get sick, fit survive



This natural balance is called carrying capacity.

15. What factors affect the carrying capacity of a fox?

food, illness, predators

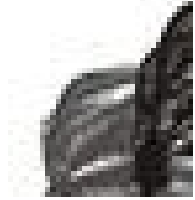


Sometimes the population of a coconut trees is dependent upon the density (how many) coconut trees live in an area.

16. Give an example of a density-dependent factor that affects the coconuts.

H₂O, light, nutrients, competition, illness

Sometimes an event will affect the coconut trees and that event will be completely independent of the population (density) of the trees.



17. Give an example of a density independent factor that might affect the population of coconut trees.

erosion drought natural disaster

18. Give an example of a density dependent and independent factor that might affect a fox in a forest ecosystem.

competition space food tornado

19. Give an example of a density dependent factor that might affect humans?

disease, food

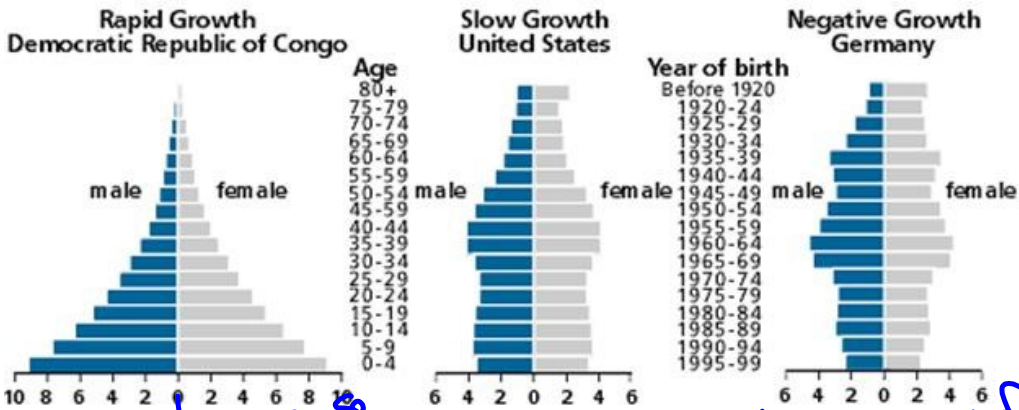


20. Density independent factor that might affect humans?

natural disasters



Analyze the population pyramids below.



21. What factors might prevent a rapid growth country from stabilizing?

disease

poor H₂O conditions

poor medicine

high death rates