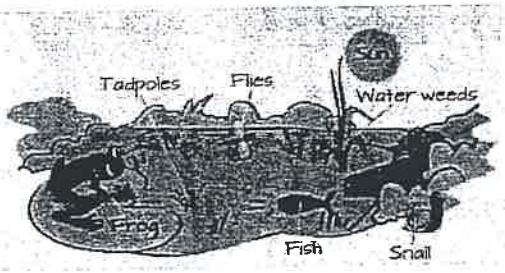
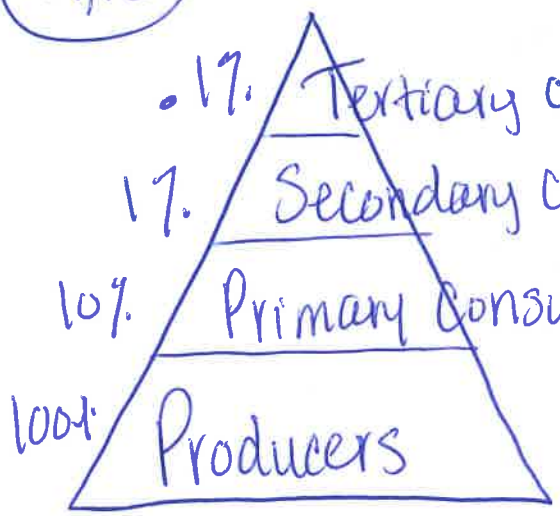
Ecology Unit Review Guide



Be sure you can answer all of the essential questions in the power point.

1) Differentiate between abiotic and biotic factors. A = non-living B = living
2) Give 2 examples of biotic factors AND 2 examples of abiotic factors. B = cat, cactus A = water, sun
3) List the levels of organization. Species → population → community → Ecosystem → Biome
4) What is the difference between predation and parasitism? Prey-vs-Predator ; host-vs-parasite
5) What is the difference between mutualism and commensalism? M = Both benefit ; C = 1 Benefit, 1 not helped or harmed
6) What is the difference between herbivory and competition? - compete for a resource
7) Compare and contrast an autotroph and heterotroph. A = makes own food H = consumes food
8) List the 4 main types of heterotrophs and an example of each. Herbivore, omnivore, carnivore, decomposer
9) What is a detritivore? Give 2 examples. eat "scraps" crab, worm
10) What is a decomposer? Give 2 examples. breaks down organic matter - bacteria/fungi
11) Where and what is a trophic level? each step of a food chain
12) Define food chain. flow of energy of what is eaten
13) Define food web. interconnected food webs
14) Draw the ecological energy pyramid with the correct type of organism. } over
15) Draw the ecological energy pyramid according to the 10% rule.
16) What is biomass and how does it relate to the ecological pyramid? - total amount of living tissue in a trophic level
17) Describe the pyramid of numbers. (over)
18) Explain how the water cycle works. Evaporation - Condensation - Precipitation - Runoff - Transpiration Groundwater
19) How much of all water on Earth is fresh? Of this, how much is frozen? Fresh = 3%. Frozen = 69%.
20) Explain the difference between nitrogen fixation and denitrification. lower
21) Why is phosphorus important? needed for DNA & RNA
22) How does the carbon-oxygen cycle work? (over)
23) Differentiate between primary and secondary succession. PS - No topsoil SS = topsoil present
24) What is a pioneer species? 1st species
25) What is a climax community? mature stable community
26) What is the difference between weather and climate? W = day 2 day C = over a long period of time
27) Name the main greenhouse gases. CO_2, methane,
28) Differentiate among the main biomes in terms of climate, plants, animals, temperature, and location. (tropical rainforest, tundra, temperate forest, savannah, desert, boreal forest) — see your chart
29) Explain the 3 types of population dispersion. clumped random uniform
30) What is a keystone species? 1 species that exerts strong control on structure of community
31) Compare density dependent and density independent factors. over
32) Be able to use the growth rate equation with a given set of data. Growth rate = (Birth + Immigrants) - (Death + Emmigrant)
IN - OUT
33) Compare a developing and developed country. over
34) What is Population density? people per area
35) List 3 things that are affecting our biosphere's biodiversity. pollution, habitat fragmentation, depletion of Natural Resources
36) Explain how we can conserve biodiversity using one method.
↳ your opinion

#14/15



#17

Pyramid of Numbers

- # of organisms per level
- decreases as you go up

#20 Dentrification = bacteria in soil take Nitrogen in soil & convert it to N gas
Nitrogen fixation = capture of N into usable form for plants

#22 C + O Cycle

Autotroph → Heterotroph Fossil fuels burn CO_2

#31

Density Independent Limiting Factors	-vs-	Density Dependent Limiting Factors
- affects population No matter the size or density		- depends on Pop. density - closer together more affected
Ex = hurricane, tornado, fire		Ex = predation, disease

#53

Developed	vs-	Developing
US		Haiti
- lots of technology		- poor technology
- more wealth per person		- not as much wealth per person
- lots of jobs		- not a variety of jobs
- lots of medical care		- poor medical care