

# ECOLOGY TEST REVIEW

## Vocabulary

1. population
2. community
3. ecosystem
4. ecology
5. population density  
( = # of organisms / area )
6. birthrate
7. death rate
8. immigration (in)
9. emigration (exit)
10. migration
11. competition
12. biosphere
13. biotic potential
14. limiting factor
15. carrying capacity
16. predation
17. predator
18. prey
19. symbiosis
20. mutualism
21. commensalism
22. parasitism
23. parasite
24. host
25. habitat
26. biotic
27. abiotic
28. species
29. niche
30. consumer
31. first/second/third-level consumers
32. producer
33. carnivore
34. herbivore
35. omnivore
36. decomposer
37. food chain/web/pyramid
38. scavenger
39. succession
40. primary succession
41. secondary succession
42. pioneer stage
43. pioneer species
44. mossy stage
45. grassy/thicket stage
46. final stage
47. climax community
48. water cycle
49. evaporation
50. transpiration
51. condensation
52. precipitation
53. infiltration
54. runoff
55. carbon cycle
56. photosynthesis
57. respiration
58. decomposition
59. combustion
60. nitrogen cycle
61. nitrogen fixation
62. climate (temp. & precip.)
63. wetland
64. estuary
65. salinity
66. intertidal zone
67. coral reef
68. biome
69. grasslands (prairie/plains/steppes)
70. taiga or coniferous (boreal) forest
71. conifer (coniferous tree)
72. tundra
73. permafrost
74. temperate deciduous forest
75. temperate
76. deciduous tree
77. rain forest
78. canopy/understory/floor
79. desert

## Concepts

1. Interactions between populations: Know the difference between the following (remember to think about what happens to each of the organisms in the relationship, e.g., the first organism benefits and the second organism...)
  - predator/prey
  - mutualism
  - parasitism
  - commensalism
2. Succession
  - Know what succession is
  - Know the difference between primary and secondary succession
  - Know the stages of succession and their characteristics: pioneer stage → mossy stage → grassy/thicket stage → final stage (climax community)

### 3. Food Chains/Food Webs/Energy Pyramids

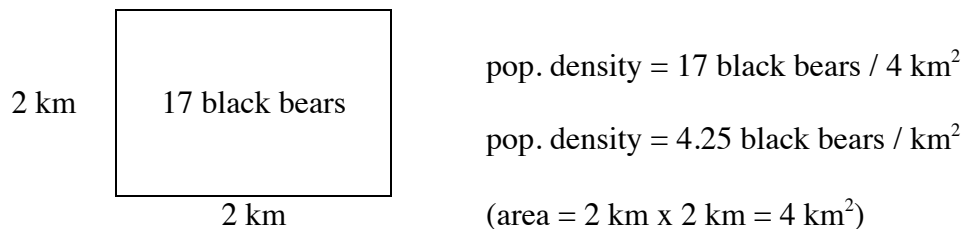
- Know the difference between a food chain and a food web (i.e., what does each show)
- Know how the following terms apply to a food web: producer, consumer (first level, second level), top carnivore, decomposer
- An energy pyramid shows loss of energy and relative population size in a food chain

### 4. Immigration/Emigration

- Know how to tell which one it is. Remember to look at it from the perspective of the population which gains or loses the individual, e.g., if a wolf leaves one population and joins another, it is an immigrant to the population it joins (**it came in**) and an emigrant from the population it left (**it exited**).

### 5. Population Density

- Solve population density problems with and without decimals
- Remember the equation: population density = # of organisms / area
- Here is one example:



### 6. Estuary

- Know what an estuary is and where they are found
- Draw the example (and non-examples) of an estuary as shown in class

### 7. Biomes: Know the main characteristics of each of the following biomes

- Grassland: also called prairie, grasses dominate, diverse herbivores
- Temperate deciduous forest: leaves fall off trees in the winter
- Coniferous (boreal) forest: conifers, needle bearing trees
- Tundra: cold, snowy, dark in winter; shrubs, lichens mosses; permafrost
- Desert: cacti, small shrubs; hot and dry
- Rain forest: most diversity of plants and animals; most precipitation

### 8. Cycles of Matter: Know the important steps of the cycles

- Water Cycle: evaporation and transpiration, condensation, precipitation, runoff, infiltration
- Carbon Cycle: plants obtain carbon through photosynthesis (using CO<sub>2</sub>), animals obtain carbon by eating plants, plants and animals release carbon through respiration, carbon is also released through decomposition and combustion
- Nitrogen Cycle: certain bacteria fix “free” nitrogen (nitrogen fixation), plants use fixed nitrogen, animals eat plants to obtain nitrogen, animals and plants release nitrogen to the soil through decomposition, other bacteria release nitrogen back into the atmosphere