EOC Ecology Review - key

1. Define the following terms:
	1. Competition – ***two or more organisms trying to utilize the same resources***
	2. Predation – ***one organism hunts and kills another***
	3. Symbiosis – ***a long term relationship between organisms of different species***
	4. Mutualism – ***symbiotic relationship in which both species benefit***
	5. Commensalism – ***symbiotic relationship in which one species benefits and the other is unaffected***
	6. Parasitism – ***symbiotic relationship in which one species benefits and the other is harmed***
2. Give one example of each of the symbiotic relationships
	1. Mutualism – ***flower and bee***
	2. Commensalism – ***Bird building a nest in a tree***
	3. Parasitism – ***Flea and dog***
3. Describe how energy flows through a food chain/web.

***Energy flows from the sun, to producers, to primary consumers, to secondary consumers and finally to top predators (tertiary consumers)***

1. Use the food web to answer the following questions:
	1. List the producers of the food web

***Grass and shrubs***

* 1. List the primary consumers

***Caterpillar, rabbit, squirrel, mouse***

* 1. List the secondary consumers

***Thrush, hawk, fox, weasel***

* 1. List the tertiary consumers

***Hawk and fox***

* 1. If all the caterpillars died, describe the effects on the other members of the food web

***Grass will increase, thrush will decrease***

1. Identify each of the following organisms as autotrophic or heterotrophic.
	1. Fungus - ***HETEROTROPHIC***
	2. Dog – ***heterotrophic***
	3. Maple Tree - ***autotrophic***
	4. Starfish - ***heterotrophic***
2. Define decomposer and give examples of organisms capable of decomposition.
***Obtain nutrition by using digestive enzymes to break down dead and decaying organism and ingesting the nutrients***
3. Define the following terms:
	1. Carnivore – ***Eats only animals***
	2. Omnivore – ***Eats both plants and animals***
	3. Herbivore – ***Eats only plants***
4. What is a limiting factor? Give 3 example of limiting factors.

***Resource that controls the size of a population – water, food, shelter.***

1. What is the carrying capacity of a habitat?

***The maximum number of an organism that an ecosystem can hold.***

1. List the organization of living things from smallest to largest AND define: species, organism, population, ecosystem, biosphere, biome, community
	1. Organism : ***One living thing***
	2. Population / Species : ***Multiple living things of the same species***
	3. Community : ***All of the living things (biotic factors) with an area***
	4. Ecosystem : ***All of the living (biotic) AND nonliving things (abiotic factors) within an area***
	5. Biome : ***Large group of ecosystems with similar biotic and abiotic factors***
	6. Biosphere : ***Anywhere there is life on Earth***
2. Describe each of the following terms:
	1. Primary succession – ***The replacement of an ecosystem which begins on bare rock***
	2. Secondary succession – ***The replacement of an ecosystem which begins on topsoil***
3. Describe in which situations primary succession will occur vs. when secondary succession occurs.
***Primary – following a volcanic eruption ; Secondary – following a forest fire***
4. Label the following Water Cycle diagram using these terms (may be used for than once): transpiration, precipitation, evaporation, condensation, run-off



***Transpiration***

***Runoff***

***Evaporation***

***Condensation***

***Precipitation***

***Condensation***

1. Describe the process of the carbon cycle.

***Carbon travels in and out of the biotic and abiotic environmets. Carbon dioxide exists in the atmosphere and is taken in by plants through photosynthesis. Plants either use the carbon are they are consumed and the carbon is used by other organisms. Carbon is returned to the atmosphere through the process of respiration and through the burning of fossil fuels.***

1. In the Venn Diagram below, compare and contrast the Nitrogen and the Phosphorus Cycles. You must list at least 5 differences for each and 3 similarities.

**P Cycle**

**N Cycle**

***Atmospheric nitrogen must be “fixed”***

***Both involve the cycling of an element***

***Element goes in and out of different forms***

1. Fill-in the table below with the appropriate information about biomes. – ***USE CHAPTER 3, SECTION 2 IN BOOK***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Tundra | Boreal Forest | Temperate Forest | Woodland/ Shrubland |
| Avg. Precipitation |  |  |  |  |
| Temp Range |  |  |  |  |
| Plant Species |  |  |  |  |
| Animal Species |  |  |  |  |
| Geographic Location |  |  |  |  |
| Abiotic factors |  |  |  |  |
|  | Savanna | Tropical Rainforest | Desert | Grassland |
| Avg. Precipitation |  |  |  |  |
| Temp Range |  |  |  |  |
| Plant Species |  |  |  |  |
| Animal Species |  |  |  |  |
| Geographic Location |  |  |  |  |
| Abiotic factors |  |  |  |  |