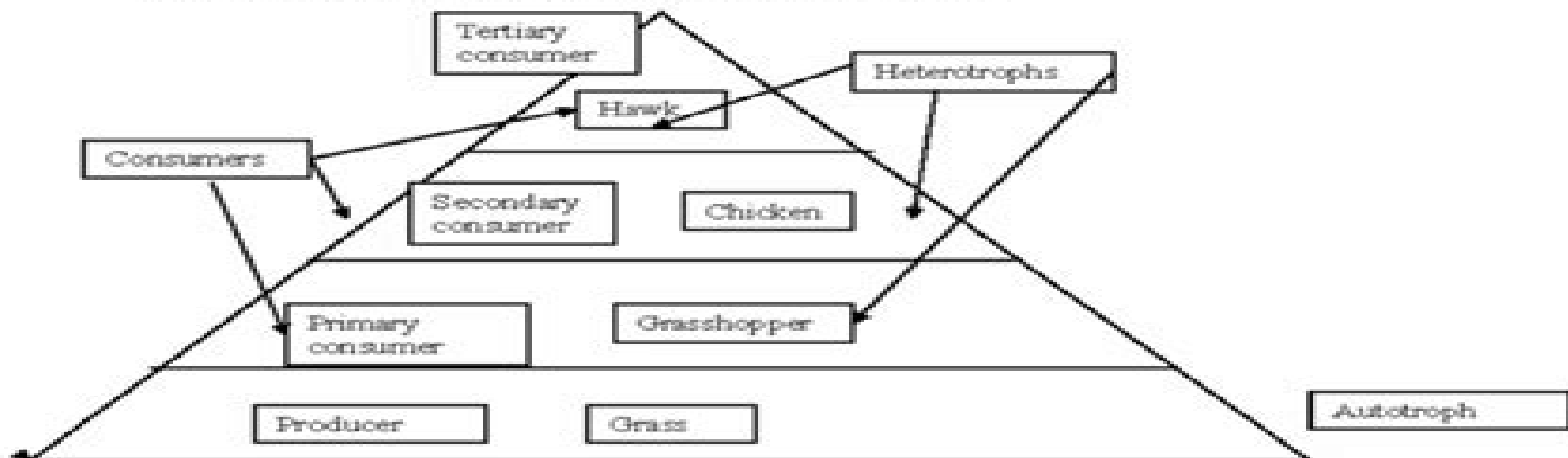


Ecological Pyramids Worksheet

1. Give one example of a food chain that exists in nature. **Grass-mouse-snake-hawk**
2. In an ecological pyramid, what happens to energy, biomass and # of species as you move up? **Why?**
They all decrease because energy is lost as it moves up each trophic level. Each trophic level requires more energy to sustain it, increasing competition for resources and causing number of organisms to drop.
3. What is biomass? **Biomass is the total mass of dry organic matter per unit area.**
4. In an ecosystem, can there be more carnivores than herbivores? **Explain** why or why not?
No, there must be more herbivores because the herbivores provide food for the primary consumers. If the carnivores outnumbered the herbivores, the herbivores would die out and the carnivores would begin to starve.
5. What is the 10% rule? What is its significance? Why is energy lost? **10% rule refers to the fact that only 10% of available energy is transferred from one trophic level to the next as an organism eats. It is significant because it determines the amount of organisms at each trophic level and creates the pyramidal shape. Energy is lost due to heat, inedible parts, and the simple fact that not all prey are eaten by predators.**
6. Brainstorm to create a list of 2 human activities that interfere with ecosystems, food chains and food webs.
Pollution (incineration, factories, fuel combustion), Overhunting/fishing, Deforestation etc.
7. Label the ecological pyramid below with the following words: producers, tertiary consumer, secondary consumer, autotroph, heterotroph, primary consumer, decomposers, hawk, grass, chicken, grasshopper. **Also** label and explain what happens to energy, biomass and number of organism.



8. Discuss what trophic level humans can occupy on an ecological pyramid, and explain what happens to contaminants and environmental pollution (such as mercury) as you move down and up the ecological pyramid (what is this called?). **Humans can occupy any consumer trophic level depending on what they are eating. Contaminants accumulate in greater concentrations as you move up the pyramid. This is called biomagnification.**
9. Look at the food web on the first page of the article. Who does the Mated Geese depend on for survival? **Sedge**

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