

EOC Review Part 7

Unity and Diversity of Life, Ecological Relationships

Classification

What is the current eight-level classification system? (DKPCOFGS)

What is binomial nomenclature?

Fill in the following chart with the characteristics of the various kingdoms.

Characteristics	Archaea	Eubacteria	Protista	Fungi	Plantae	Animalia
Eukaryotic or prokaryotic						
Multicellular or Unicellular						
Autotrophic, heterotrophic or both						
Cell walls?						

Explain the relationship between sickle cell anemia and malaria.

Explain what vaccines do to the immune system.

Describe the life cycle of the malarial parasite. What is the vector? What are the symptoms?

Complete the following Chart of Animal Behavior.

Type of Behavior	Explanation of Behavior
Suckling	
Phototaxis	
Migration	
Estivation	
Hibernation	
Habituation	
Imprinting	

Classical Conditioning	
Trial and Error	
Pheromones	
Courtship Dances	
Territoriality	

Which of the above behaviors are innate (or instinct)?

Which of the above behaviors are learned?

Ecology

How do organisms, species, populations, communities, ecosystems, and biomes relate to each other?

What is a habitat?

What is a niche?

In the following chart, explain the symbiotic relationships.

Relationship	Who benefits?	Example
Mutualism		
Commensalism		
Parasitism		

What is carrying capacity?

List at least 3 biotic factors and 3 abiotic factors in an environment.

How does photosynthesis and aerobic respiration relate to the carbon cycle?

Explain the Greenhouse Effect in relationship to carbon dioxide in the atmosphere.

What effects might increased atmospheric carbon dioxide have on the environment?

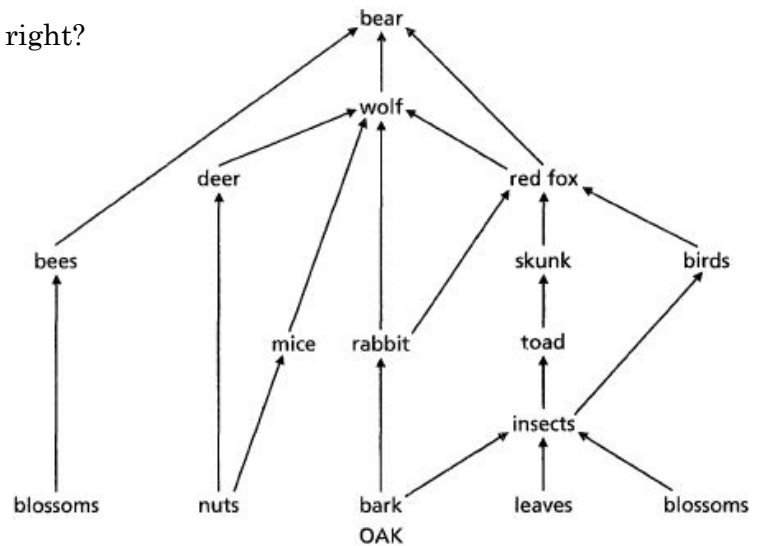
What are the producers in the food web to the right?

What are the primary consumers?

What are the secondary consumers?

What is the highest level consumer in this food web?

What is the ultimate source of energy for this food web?

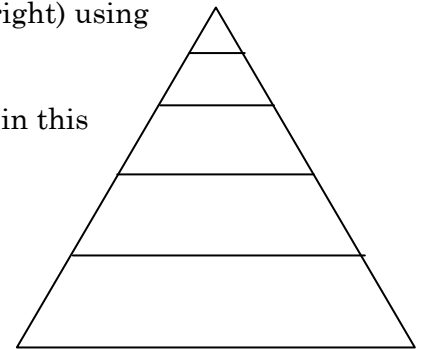


What is a food chain? Give an example of one from this food web.

Create an energy pyramid from the food chain (label the pyramid to right) using the following organisms: leaves → insects → birds → redfox → bear

Where is the most energy in this pyramid? Where is the least energy in this pyramid?

What happens to the amount of energy as it moves through the food chain/web?



Assume there are 10,000 kcal of energy in the leaves. Estimate the amount of energy in each of the other levels of the energy pyramid.

What is the role of decomposers in an ecosystem?

What are the effects of bioaccumulation (*biomagnification*) of pesticides on a food web?

Compare logistic growth and exponential growth.

Explain the effect of population size (think humans, introduced species, etc.) on the environment.

How do increases in human populations affect populations of other organisms?

What are some examples of sustainable practices and stewardship that can protect the environment?