Biodiversity Review Answers

1. a) Abiotic = non-living i.e. water, rocks, temperature

b) Biotic = living

c) Heterotroph = organism that cannot make its own food

d) Decomposer = organism that feeds on dead and/or decaying materials

e) consumer = organism that must eat producers or other consumers

f) autotroph = organism that can make its own food

g) Producer = an autotroph
= all plants

h) population = all of the members of a species living in a particular area

i) Community = the collection of all the populations

j) Ecosystem = the set of relationships between populations and the abiotic factors in the environment

k) Omnivore = a carnivore which eats both plants and animals

l) Carnivore = an animal that only eats other animals

m) Herbivore = an animal that only eats producers (plants)

n) Habitat = an organisms physical address

o) Niche = the role an organism plays in its habitat

p) Organism = one individual of a species

r) Trophic level = feeding level where they are feeding at ie Primary, Secondary etc

s) Food Pyramid = displays how energy is lost as you move up a food chain or web

q) ecology - the study of interactions of living things in the environment

t) primary consumer - the first consumer in the food chain/web, normally eats producers

u) secondary consumer- the second consumer in the food web/chain, eats other animals.

v) exotic species - new species to the ecosystem that normally does not live there

w) ecotone - the transition area between two ecosystems, contains organisms from both ecosystems.

x) detritus - waste from plants and animals, including their dead remains

y) biodiversity- the number of species in an ecosystem

2. a) i. Primary Consumers = rabbit, insects, mice, deer, bees
ii. Secondary Consumers = wolf, bear, red fox, toad, birds

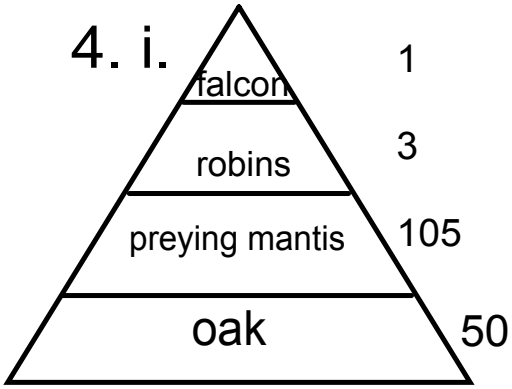
iii. Carnivore = wolf, toad, skunk, red fox, birds, bear
iv. Herbivore = insects, rabbit, mice, deer, bee
v. Omnivore = none

b. If the bark was removed the insects, rabbits, wolves, toads, skunks red foxes birds etc would be affected. Anything that eats the bark will have to locate another food source and their numbers may decrease, which could decrease the number available for the next species in the food chain to eat.

c. If there was an increase in the number of red foxes the number of skunks, birds and rabbits would decrease which would cause the organisms they eat to increase.

3. i. (b)
ii. (a)
iii. (c)
iv. (e)
v. (d)

4. i.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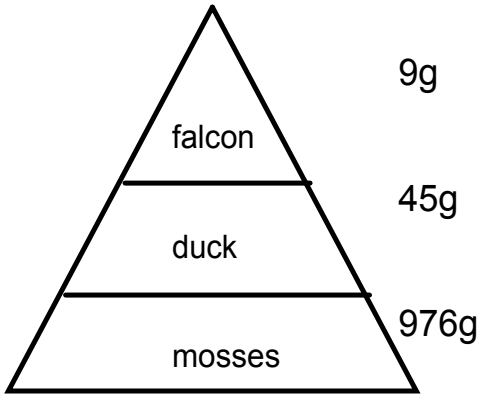
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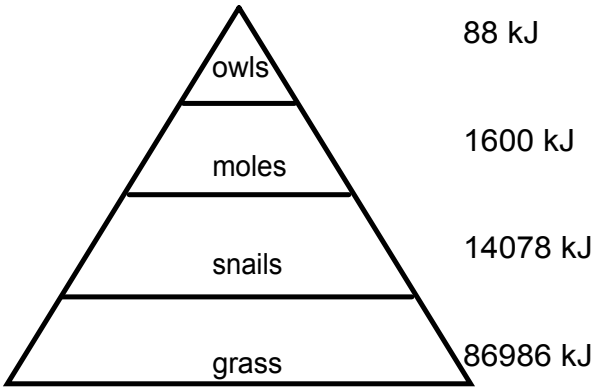
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moles
snails
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88 kJ
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86986 kJ

5. a. Biodiversity is important in an ecosystem because biodiversity determines the amount of species in an ecosystem. The more species in the ecosystem the more options for food and the less competition that will occur.

b. i. Most = rainforest
Least = tundra

ii. Most = forest-field ecotone
Least = open field

c. The rainforest is the most stable. Stable ecosystems have a high bio diversity, so that if an organism was to die out there are other food options, in a place like the tundra which has low bio diversity if an organism was to die there would be a greater impact.

6. Habitat Destruction, catching and selling birds and other animals as pets, hunting animals for their fur, tusks or for sport, cutting too many trees down to use as resources and overfishing are just some of the activities.

7. Frogs are dissappearing due to chytrid fungus, increased uv radiation, habitat destruction, climate change, and pollution.

8.a) Bringing items home from trips to exotic places, ballast water in ships, releasing pets into ecosystems etc

b) checks at the borders between countries, educating people about what these species can do, having boats dump ballast water before they enter a new area.

9. Organisms lose energy as heat through the movement of their muscles to chase their prey or run away from the predator. The entire organism is not eaten and the parts that are eaten are not fully digested.

10. Food chains, webs and pyramids all show the relationships between organisms eating each other, however they do it in different ways. Food chains show a one to one relationship whereas food webs show more organisms eating each other, therefore a food web gives a more accurate representation of the ecosystem. A food pyramid is showing energy being transferred from organism to organism through food chains and webs. There are three different types of pyramids numbers, biomass and energy.