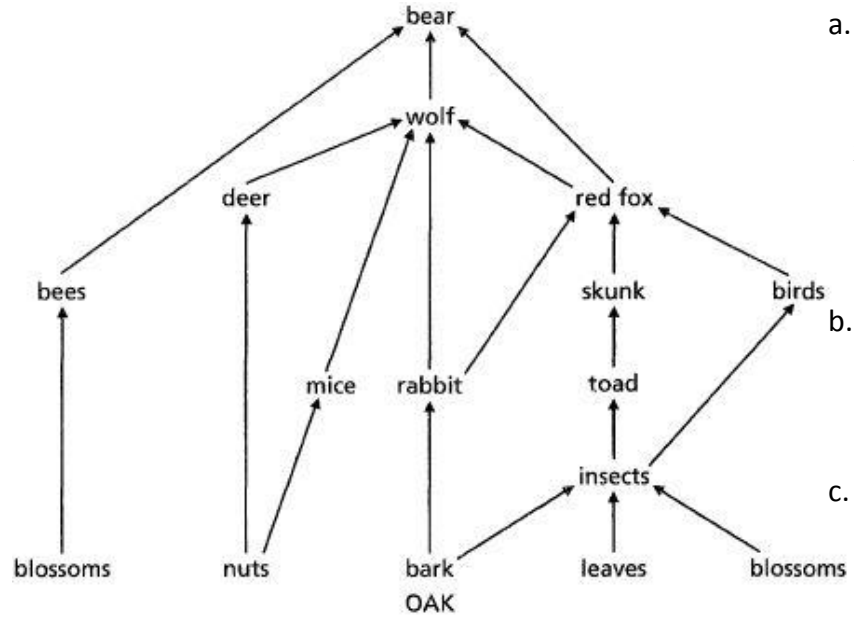
Science 9
Ecosystem Unit Review

1. Be able to match each of the following words to their definition.
   a. Abiotic
   b. Biotic
   c. Heterotroph
   d. Decomposer
   e. Consumer
   f. Autotroph
   g. Producer
   h. Population
   i. Community
   j. Ecosystem
   k. Omnivore
   l. Carnivore
   m. Herbivore
   n. Habitat
   o. Niche
   p. Organism
   q. Ecology
   r. Trophic level
   s. Food pyramid
   t. Primary consumer
   u. Secondary consumer
   v. Exotic species
   w. Ecotone
   x. Detritus
   y. biodiversity

2. Given the following food web answer each of the following questions.



a. Which of the animals in the food web represent
   i. Primary Consumers
   ii. Secondary Consumers
   iii. Carnivore
   iv. Herbivore
   v. Omnivore

b. If the bark was removed from this diagram what other organisms would be effected and in what ways?

c. If there were an increase in the number of red foxes, explain how would it affect the other organisms?

3. For each of the following descriptions about animals state if it is
   a. Endangered
   b. Extinct
   c. Extirpated
   d. Threatened
   e. Vulnerable

i. The do-do bird is no longer found anywhere
ii. The eastern cougar is close to extinction in all parts of Canada
iii. The blue whale is no longer found in Atlantic Ocean, but it is found in the pacific.
iv. A particular bird species numbers have been declining in recent years.
v. The piping plover is likely to become endangered if factors that ensure its survival are not improved.

4. For each of the following draw the pyramids also label them as either

a. Pyramid of energy

i. 50 oak
3 robins
1 falcon
105 preying mantis

b. Pyramid of numbers

ii. 976g mosses
45g duck
9g falcon

c. Pyramid of biomass

iii. 86 986 kJ grass
88 kJ owls
14 078 kJ snails
1600 kJ moles

5. a. Explain why biodiversity is important in an ecosystem.

b. Which of the following ecosystems would have the most and least biodiversity

i. rainforest or arctic tundra
ii. forest, open field, or the forest-field ecotone

c. Between a rainforest or the arctic tundra, which of these ecosystems would be the most stable and why.

6. Humans have an impact on the number of extinctions that happen every year. List several reasons why humans are increasing the number of endangered animals and plants.

7. Be able to give several reasons why frogs are disappearing and why this disappearance is an environmental concern.

8. a) What human activities are leading to the increase in exotic species throughout various ecosystems?

b) What is being done to prevent the introduction of exotic species?

9. What accounts for the 90% energy loss between plants and animals as we move through food chains and food webs?

10. Compare and contrast food chains, food webs and food pyramids.