Exercises

1. Why do all humans belong to the same species? List evidence.

They are genetically and structurally similar enough that members of any "race" can produce fertile offspring.

2. What is biodiversity?

It's a measure of species richness and abundant variety within a community.

3. How is biodiversity measured?

By counting the species and the individuals of each species.

4. a) Give examples of the different species of plants found in a lawn that has not been treated with weed killer.

   White and red clover, dandelion, vetch, stitchwort

   b) Do the same for a lawn that has been treated.

   Grass

   c) Which has the greater biodiversity?

   (a)

5. What is the energy source of producers?

sun

6. What carbon-containing inorganic gas is needed by most producers?

Carbon dioxide

7. What nitrogen containing ion is also needed by producers?

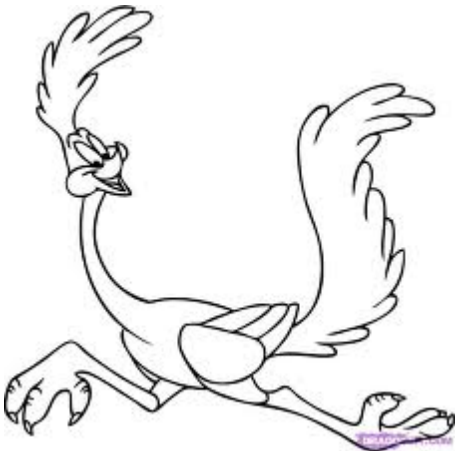
nitrate

8. What organic material is the primary product of producers?

glucose

9. Give an example of the primary producer found in deserts.

cactus



10. What first order consumers are found in temperate forests?

Mice, chipmunks, squirrels, hares

11. A road runner`s diet consists of 90% of animal matter (insects, scorpions, lizards, snakes, rodents and other small birds) and the remainder is fruit and seeds.

    Why isn`t the roadrunner a second order consumer?

    It's an omnivore. It's not only eating consumers but also eating plant material.

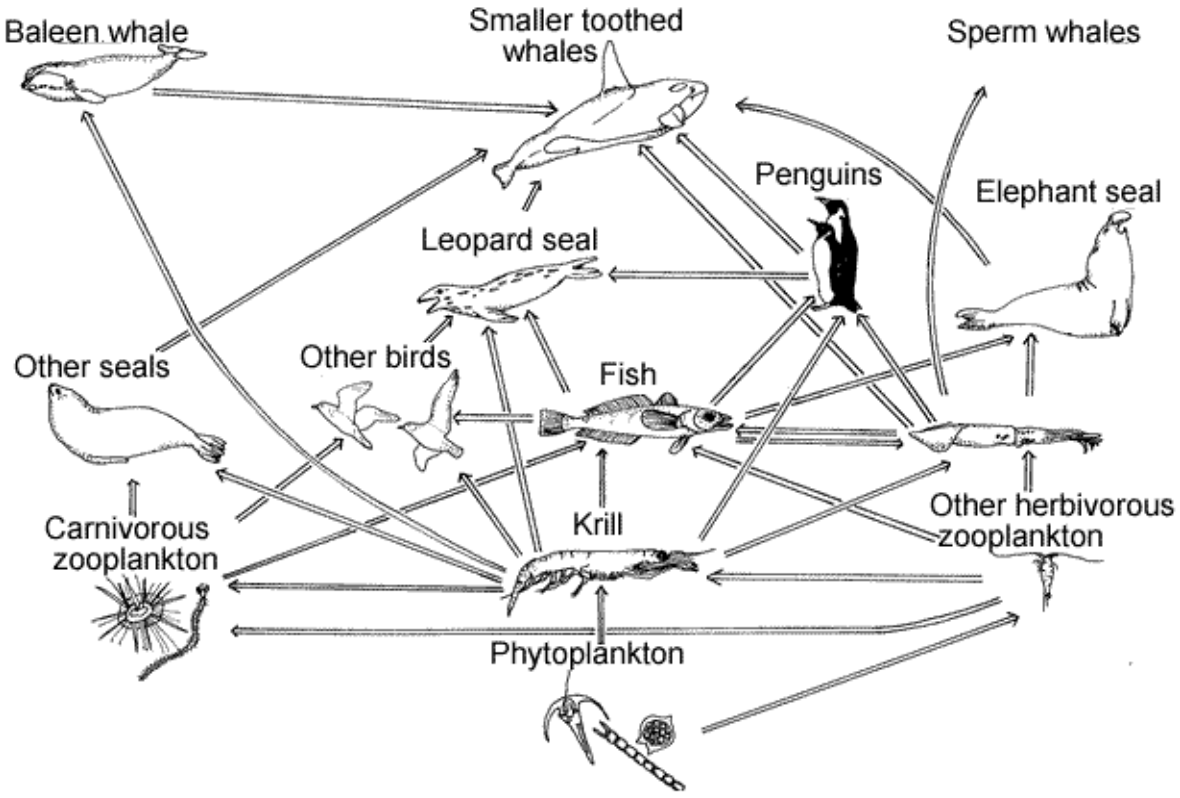
12. a) Aside from fungi, what other decomposers exist in nature?

    bacteria

    b) In what cycles do decomposers play a role in? Give examples.

    In the carbon cycle, decomposers return carbon dioxide to the atmosphere. In the nitrogen cycle decomposers convert animal waste into ammonium , nitrites and nitrates.

13. Use the food web to identify two mammals that are secondary consumers. Whales, seals



14. Which animal wastes the most energy if you consider all the trophic level exchanges needed to feed it?

Toothed whales because on top of the food pyramid. Between each trophic level, some heat is wasted.

15. What factors can affect primary productivity in the sea?

Light, nutrients, sea currents(which bring up nutrients), temperature