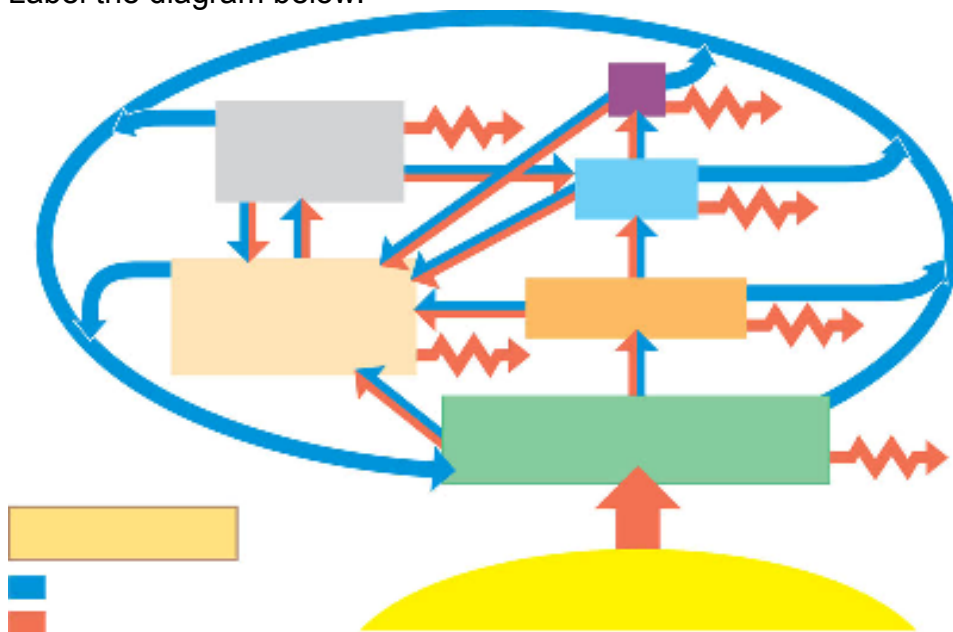
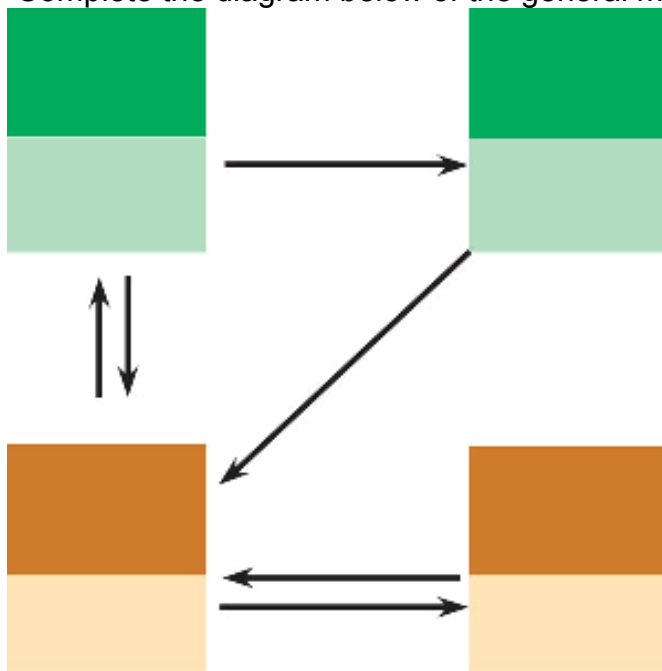


1. What is an ecosystem and why would we study energy flow in relation to the ecosystem?
2. Label the diagram below.



3. Why are detritivores essential to an ecosystem?
4. Define the following terms:
  - a. Gross primary production
  - b. Net primary production
5. How do light limitations and nutrient limitations impact primary production?

6. What is eutrophication and is it considered a “positive” for the a lake environment?
7. What impacts evapotranspiration?
8. What is secondary production?
9. Why is the energy transfer between trophic levels limited?
10. What is the difference between production efficiency and tropic efficiency?
11. What is the green world hypothesis?
12. Complete the diagram below of the general model of nutrient cycling.



13. Briefly detail the water cycle. You can write this response or draw the cycle.

14. Briefly detail the carbon cycle. You can write this response or draw the cycle.

15. Briefly detail the nitrogen cycle. You can write this response or draw the cycle.

16. What is the difference between nitrification, denitrification, ammonification and nitrogen fixation?

17. Briefly detail the phosphorus cycle – you can write your response or draw a picture.

18. Imagine you are at the dinner table and are asked to explain what acid rain is and why it is a problem. Write your response here.

19. What is biological magnification and how does it relate to the health warnings given to pregnant women about the consumption of certain fish?