1. Draw a food web for an ecosystem that you are familiar with. It should have 3 or more trophic levels (starting with plants), some decomposers (bacteria, scavengers) and consist of at least 10 species. Draw arrows connecting prey with all of their possible predators.

2. When you have completed your food web pass it to your neighbor and have them cross out 4 organisms of their choice as though they had gone extinct.

3. Redraw the food web with the missing organisms and answer the following questions.
   a. Would some organisms become more numerous after the extinction?
   b. Would ecosystem function be preserved?
   c. Which organisms in your food web are the most important to ecosystem function.

Food Web (Before Extinction)

Food Web (After Extinction)
4. The water cycle is one of the most familiar materials cycles. Draw a diagram of the water cycle including the processes of evaporation, condensation, precipitation, and runoff. Show that these processes create a cycle.

5. Diagram a food chain with four trophic levels and use arrows to indicate materials and energy transfer as was done on the powerpoint slide in class. **Challenge:** If each transfer of energy is 10% efficient, how much of the sun's original energy makes it to the fourth trophic level?