**Practice Questions**

1. Explain why the energy available to the predators in a food chain is much less than that fixed by the producers.
2. Compare and contrast the movement of energy through aquatic and terrestrial environments. Be sure to explain why the differences exist.
3. Explain how the first law of thermodynamics is relevant to the movement of energy through ecosystems.
4. Explain how the second law of thermodynamics is relevant to the movement of energy through ecosystems.
5. Define “system.”
6. Define “synergy.”
7. What percentage (roughly) of energy is passed from one trophic level to the next trophic level?
8. Construct a simple flow diagram to show the movement of energy through an ecosystem of your choosing.
9. Figure 1:

1. Describe and explain what is happening to energy along the food chain in **Figure 1**.
2. Describe the process by which the sun’s energy is used by plants.
3. What happens to the energy between trophic levels? That is, why doesn’t all the energy get transferred to the next level?