

Biome Food Webbing Activity

- Directions: On a single sheet of unlined paper create a food web for a particular biome or sub-biome of your choosing-examples might include area such as the savannahs of Argentina, the tropical rainforest of Madagascar, the Anza-Borrego desert of California, the coastal estuaries of San Diego, the deciduous forests of Pennsylvania, etc. Your food web must include at least (5) types of primary producers (plants, phytoplankton, cyanobacteria, etc.), (5) 1st order consumers, (5) 2nd order consumers, (3) 3rd order consumers, (3) 4th order consumers, and (1) 5th order consumer. **Make sure to draw in arrows demonstrating the direction of matter and energy flow within your particular ecosystem, and be sure to include some type of general decomposers somewhere on your food web.**

- Once your food web is complete, answer the following questions below on a separate piece of paper and staple your food web to your answers when finished.

1. Identify a potential symbiotic relationship in your food web and describe it.
2. Define the concept of a **keystone species** (p. 99). Identify the species in your food web you would consider to be keystone and explain your rationale for your choice(s).
3. Identify and describe two examples of predator-prey relationships in your food web.
4. Which of the species in your food web do you know or think are native? Which are non-native or exotic species introductions?
5. Describe and rate the **species richness** (p. 94/95) of your particular biome area.
6. Describe the concept of an **indicator species** (p. 97). Which of the organisms might act as an indicator species for your particular biome?
7. How would **resource partitioning** (p. 106) influence the evolutionary development of organisms if their niches begin to overlap?
8. Describe both the **persistence** and **resilience** (p. 121) of your biome.
9. If some kind of disturbance, either human induced, or due to some type of natural cause occurred in your biome area, how do you think the secondary succession process would develop? How long do you think the process would take re-establish the mature climax community?
10. Describe a situation or real example that would be indicative of primary succession. What kind of species would you expect to play the *pioneer species* roles in your example?
11. List any organisms in your food web that have specialized defenses against predation and describe what those adaptations are and how they work to decrease predation and mortality.

