Assignment Food Webbing

Directions: in the food web of a Sierra Nevada ecosystem. After their group food web is complete, each student will complete an individual assignment.

You will work in a small group to draw the connections of the Sierra Nevada food web using the organism list provided.

1. Obtain a piece of butcher paper approximately 2' x 3' and a few colorful markers.
2. Write the name of each organism in the list of organisms found in the Sierra Nevada Ecosystem, randomly, to cover, the entire piece of butcher paper (don't write too big), and circle the name of each organism.
3. Draw arrows to connect each organism to the organism(s) it eats and/or that eat it. Arrows must be drawn to show the direction of the flow of energy in the ecosystem.
4. Write the name of each group member on the back of the food web.

Individual Assignment

1. Find and write out eight unique food chains from your team's food web (two of your food chains must have four trophic levels). Do not include decomposers in your food chains.
2. Select two of your food chains, and identify the producer and three levels of consumers.
3. Identify three organisms that are at the top of their food chains.
4. Speculate about what would happen if all of the primary consumers in the ecosystem became extinct.
5. Speculate about what would happen if all of the decomposers in the ecosystem became extinct.
6. Predict what could happen if a non-native beetle is introduced into the ecosystem and kills all of the oak trees.
7. Explain why food webs with many species are more resilient than those with few species.

Selected Organisms found in the Sierra Nevada Ecosystem (*food*) [*identity*]

- ❑ Jeffrey Pine
- ❑ California Bat (flying insects)
- ❑ Mountain Lion (deer, rabbits, rodents, bighorn sheep)
- ❑ Black Bear (berries, fish, insects, small mammals, nuts, tubers)
- ❑ Ione buckwheat [herbaceous plant]
- ❑ Bobcat (small mammals, birds, reptiles)
- ❑ Valley Oak
- ❑ Sugar Pine
- ❑ Oak Moth (oak tree leaves)
- ❑ Mosquito (aquatic plants, animal blood)
- ❑ Rainbow Trout (flying insects)
- ❑ Coyote (mammals, birds, reptiles, foliage)
- ❑ Broadleaf Lupine [herbaceous plant]
- ❑ Mountain Yellow-Legged Frog (insects, toads)
- ❑ Long-Eared Chipmunk (acorns, seeds, mushrooms, birds, insects)
- ❑ Yellow-Bellied Marmot (grasses)
- ❑ Ponderosa Pine
- ❑ Bracket Fungus [decomposer]
- ❑ Bigleaf Maple
- ❑ Mule Deer (grasses, shrubs, herbaceous plants)
- ❑ Stellar Jaybird (insects, worms, insect larvae)
- ❑ Great Horned Owl (small mammals)
- ❑ Purple Needlegrass
- ❑ California Horned Lizard (insects, beetles)
- ❑ Willow Flycatcher (flying insects)
- ❑ Caddisfly (aquatic plants)
- ❑ Western Toad (insects, spiders, flies)