Activity: Creating a Food Web

Trophic levels can be complex and interrelated in surprising ways. Your exercise for today is to create a hypothetical food web that could reasonably operate in one of our southern Florida ecosystems.

Step One. Choose an ecosystem.
By now, you should have a basic understanding of some of the important ecosystems in our area. Select one of them, such as
- Everglades sawgrass
- Everglades hardwood hammock
- Estuary (outlet of a river into the ocean or bay)
- Mangrove forest
- Pine scrubland
- Coral reef
- Seagrass beds
- ...or another choice

Step Two. Identify the species.
What species of animals live in your ecosystem? Note that many of our native species inhabit more than one ecosystem, and may transfer both energy and nutrients from one habitat to another.

Your group is supplied with several color-coded sheets of some of our more recognizable mammals, birds, herpetofauna (reptiles and amphibians), fish, and invertebrates. Carefully go through these sheets and determine which of them would be found in the ecosystem you have selected. Cut them out and save them.

Step Three. Create your backdrop.
Each group will have a posterboard (you may choose black or white) upon which your food web will be created. Using the art supplies in your group’s art box, create the habitat you have chosen. Illustrate your flora and any important abiotic factors (e.g., water, soil, sun) with your supplies.

Step Four. Add the animals.
In a creative and clear way, arrange your animals so that their trophic levels are easy to identify. Be sure to identify which species are primary producers, and which are primary, secondary, tertiary, etc. consumers.

Remember that even a top carnivore can be a prey item when it’s a juvenile. Consider all the life cycle stages when you place your animals in their habitat.

Step Five. Make the connections!
Finally, make clear arrows connecting each species to another that eats or feeds upon it. You may decide how best to do this, but stay consistent with your labeling.

Step Six. Prepare your presentation.
This is another judged poster! Once your group has finished creating the food web, prepare a short presentation in which all group members participate to explain what’s going on in your ecosystem. Tell us which species are at which trophic level, and who eats whom. Which of the species would you expect to be present in the largest numbers? The smallest numbers? Why?

The posters will be judged by Dr. Krempels, the undergraduate facilitators, and the teachers on the basis of creativity, accuracy, and clarity of presentation. Go for it!