Energy Transfer Through an Everglades Ecosystem

Designing food webs and food chains

http://fcelter.fiu.edu/schoolyard/

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Work in small groups 3-4 to draw each of the connections in a food web of a shoreline costal ecosystem of the Everglades (mangrove).

Group Assignment

1. On a piece of butcher-block paper, construction paper or poster board, write the names of each organism randomly over the entire piece of paper.
2. Identify the role of each organism in the ecosystem by writing one of the following letters beneath the name of the organism: (P) Producers, (C) Consumer, (D) Decomposer, (S) Scavenger,(DI) Detritivores .
3. Circle the name and letter of each organism (color optional).
4. Draw an arrow from all food, which points towards the organism which its it.

Individual Assignment

1. Find and write as many food chains as you can from your team's food web. (minimum of 6)
2. Two of the food chains must include a producer and three levels of consumers (primary, secondary, tertiary). **Label them.**
3. Explain what would happen if all of the primary consumers became extinct.
4. Describe what would happen if all the decomposers became extinct.
5. Predict what would happen if a non-native species is introduced into the food web.
6. Explain why food webs with many species (biodiverse) are more resilient than those with few species.

Plants
Red mangrove (both)
White mangrove (both)
Black mangrove(both)
Buttonwood(shore)
Seaside daisy(shore)
Seagrass (water)
Glasswort (water)
Animals
Shrimp (arthropods)
Lobster (arthropods)
American crocodile (reptile)
Garfish (fish)
Raccoon (mammal)
Opossum (mammal)
Amphipods (zooplankton)
Mysids (zooplankton
Copepods (zooplankton)
Garfish (fish)
Snook(fish)
Mullet (fish)
Snapper (fish)
Crested Goby (fish)
Barracuda (fish)
Bull Shark (fish)
Tarpon (fish)
Hermit crab (arthropods)
Osprey (bird)
Great Blue Heron (bird)
Egret(bird)
Ibis (bird)
Bald Eagle (bird)
Lady fish (fish)
Seatrout(fish)
Queen conch (mollusk)
Otter (mammal)
Fiddler crab (arthropods)
Water moccasin (reptile)
Bottlenose dolphin (mammal)
Mosquito larvae (insect)
Other
Algae (phytoplankton)
Protozoa
Bacteria
Fungi