BIO205 Lecture 9
Food Web Activity

Given your ecosystem, you will assemble the food web (**Part 1**) and identify species interactions and predict changes to the food web with species loss (**Part 2**).

You will work on this activity as a group and share your work with the class. There are many different ecosystems and food webs, so it **we can learn best by learning from each other**.

Ecosystem: Coastal Estuary

Part 1: Assemble the Food Web

You will assemble the food web, from primary producers and detritivores through primary, secondary, and tertiary consumers.

Organisms

Haematopus bachmani (Black Oystercatcher) = consumes sea stars, barnacles, mussels, and killifish
Euhaplorchis californiensis (Trematode) = infects the brain of the California killifish, inducing conspicuous behaviours that increase the risk of predation
Leptasterias hexacti (Sea Star) = consumes barnacles for food
Benthic algae = combination of cyanobacteria and diatoms that photosynthesize
Phytoplankton = combination of green algae, red algae, cyanobacteria, and diatoms that photosynthesize
Fundulus parvipinnis (California Killifish) = consumes benthic algae
Lottia spp. (Limpets) = consumes benthic algae
Mytilus californianus (Mussel) = stationary consumer of phytoplankton
Semibalanus carious (Acorn Barnacle) = stationary consumer of phytoplankton
Pollicipes polymerus (Goose Barnacle) = stationary consumer of phytoplankton
Larus glaucescens (Glaucous-Winged Gull) = consumes sea stars, barnacles, mussels, and killifish

Part 2: Species Interactions & Food Web Responses to Species Loss
In your food web, identify which organisms fall within these types of species interactions:

Mutualism

Competition

Predation

Herbivory

Parasitism

Note: You may not identify all types of species interactions in your food web and can just note NA

Refer back to your food web and predict what would happen without the following species:

How would the food web change without phytoplankton?

How would the food web change without acorn barnacles?