

Species Spotlight- Page 1 Student's Edition

1. In your group, read each species card (or each of you share one or two with the group). Share habitat, size, diet and interesting facts of each species. Answer the following questions:

- Who eats who? Use the cards to construct a food web. Draw your food web below.

- How might lower pH (acidification) and higher temperatures affect feeding, growth and interactions between species? Explain in the chart below.

	Crabs	Whelks	Abalones
Feeding			
Growth			
Interactions			

<p style="text-align: center;">Abalone <i>Haliotis rufescens</i></p> 	<p>Habitat: Rocky areas with kelp; British Columbia, Canada to Baja California, Mexico</p> <p>Size: to 30 cm (11.8 in.)</p> <p>Diet: herbivores: various kelp, coralline algae, bacteria</p> <p>Interesting facts: Largest species of abalone. People like to eat it and it's successfully farmed. May live 35 to 54 years. Facing problems due to overfishing, disease, predation of animals like sea otters and illegal poaching. Two species (out of 8 in CA) are listed as endangered and two species are listed as species of concern. Abalones catch passing seaweed for food. When the tentacles sense a piece, the abalone rears toward it, then grabs the seaweed with its big foot.</p>
<p style="text-align: center;">Lined Shore Crab <i>Pachygrapsus crassipes</i></p> 	<p>Habitat: west coast of North to Central America and in the western Pacific in Korea and Japan</p> <p>Size: to 5 cm (2 in.)</p> <p>Diet: omnivore; mussels, juvenile abalone and other animals in high tide zone and algae in low tide zone</p> <p>Interesting facts: Believed to be herbivore or scavenger for years then observed eating smaller mussels and juvenile abalones. This crab is flat and can hide in cracks in the rocks. It has few predators because of its speed and agility. However, if a predator snatches a shore crab's leg, it can shed the limb and escape. A new leg will grow back.</p>
<p style="text-align: center;">Mussels <i>Mytilus galloprovincialis</i></p> 	<p>Habitat: native to Mediterranean coast and Black and Adriatic Seas, invasive in much of the world</p> <p>Size: to 14 cm in length</p> <p>Diet: omnivore; filter feeder: eats plankton</p> <p>Interesting facts: Found attached to rocky shores with high water flow open coast. Evidence of people eating mussels dates to 4th century B.C. in Spain. Mussels are still farmed for food. They rarely live below the low tide mark. They prefer fast moving water free of sediment (like wave action) and areas where nutrient-rich upwelling occurs. They are considered a nuisance species (pest) for outcompeting and displacing other species of mussels around the world.</p>

Sea Lettuce
Ulva lactuca



Habitat: high and low intertidal, can grow in water up to 75 ft. deep

Size: to 20 cm (8 in.)

Diet: producer; photosynthesizes and absorbs nutrients from water

Interesting facts: This very green alga is only two cell-layers thick. It is delicate-looking but can withstand pounding waves and hot, drying sun. Sea lettuce overgrows bare rock and is soon eaten by crabs and snails, like abalone. It does well in moderate levels of nutrient pollution and is used to indicate amounts of pollution. It is also used in salads and soup, ice cream, food products and medicine.

Whelk
Nucella ostrina



Habitat: Aleutian Islands (Alaska) to Cayucus (San Luis Obispo area, CA)

Size: to 4 cm (often less than 3 cm)

Diet: carnivore; drills through shells of mussels, barnacles, periwinkles, oysters

Interesting facts: This sea snail drills through shells, injects digestive enzymes into the prey's body and sucks out the tissue using proboscis. Predators are the ochre star and red rock crab. Relatives of this whelk were used to make dye for the famous purple robes of Roman royals.