Zooplankton is made up of many species of animals (mostly small crustaceans like copepods, amphipods, crab, shrimp, & krill). Some are larval (baby) forms of marine animals & others spend their whole lives as free-floating organisms. Many feed on each other & become the base for an entire food web, from the smallest fish to the largest whale. Most fish, birds & jellyfish eat zooplankton.

Phytoplankton, like land plants, have chlorophyll & need sunlight to live & grow. Phytoplankton are highly productive in Puget Sound because of its unique patterns of tides, rivers, & winds. They bloom in spring, summer, & fall, & provide food for a wide range of organisms including whales, shrimp, snails, zooplankton & jellyfish.

Insects are invertebrates. They are part of the base of the food web. They feed on plants & bacteria & are eaten by many species of fishes & birds in rivers & estuarine environments. Aquatic or terrestrial insects that are transported into Puget Sound waters provide an important high-energy food source for juvenile salmon & other pelagic fishes.

Eelgrass is not a seaweed; it is a blooming underwater grass which spreads by rhizomes or roots. Diatoms & bacteria gather on the leaves, providing food for many grazing invertebrates & birds. Its roots stabilize sediment & its leaves shelter small fishes like juvenile salmon. Eelgrass is also an important spawning habitat; herring in Puget Sound lay their eggs on its leaves.

Market Squid is a carnivore that primarily eats zooplankton (krill, copepods) & small fish like herring. Squid are also cannibalistic; they will eat other squid. Squid use tentacles to catch their prey & a parrot-like beak to tear food into pieces. Birds, harbor seals, gadids, & humans like to eat squid.

Crab species are important prey for many fishes (including salmon) & birds. Larval (baby) crab eat phytoplankton & zooplankton. Adult crabs live on the seafloor & eat small crustaceans, clams, & fish. Spiny dogfish prey on adult crabs, & crabs also sometimes prey on other crabs. Humans love to eat many crabs especially Dungeness crab.

Jellyfish are not fish; they are invertebrates. They thrive in warm, nutrient-rich waters & can tolerate low-oxygen environments. Jellyfish congregate into "blooms," or "smacks," of many individuals & can consume large amounts of phytoplankton & zooplankton. Few animals eat these soft, gelatinous creatures, so they are sometimes considered a "dead-end" in the food web.

Pacific Oysters filter plankton from the water, straining up to 60 gallons of water a day. They depend on their very thick shells to ward off attacks by crabs or birds who want to eat them. Humans also love to eat oysters; oyster farming is an important industry in the Pacific Northwest.

Spiny dogfish are small (< 1.5 m), long-lived (up to 75 years) sharks that are common here. They eat a diverse diet including herring, gadids, ratfish, flatfish, octopuses, crabs, & salmon. During World War II, millions of spiny dogfish were harvested for their vitamin A rich livers. They are popular recreational & commercial food fish for humans & are also eaten by harbor seals, birds, & lingcod.

Harbor Seals are the most common pinnipeds in Puget Sound. They live here year-round & often stay near a favorite haul-out site (a rocky area, dock or other surface near the water). Harbor seals primarily feed on fish, like gadids, forage fish, salmon & squid. They are eaten by Biggs transient killer whales, may also die as a result of human activities like fishing or hunting.

Humans love to eat seafood. Some of their favorites are shellfish (clams, mussels, crab, oysters) & fin fish (herring, salmon, cod), but they also eat seaweed, sea salt, & fish eggs. Humans do not have any predators that live in the ocean.

Cormorants can dive below the surface to catch food or look for fish, insects, or crustaceans in shallow water. Their hooked bill is a tool for hanging onto prey. They mostly feed on fishes, like surfperch, forage fishes & juvenile steelhead. They have few predators but may die accidentally by getting tangled in fishing gear.

Steelhead spend a year/two in rivers, eating insects, before they travel out to the ocean & eat zooplankton, small invertebrates, & other fish. They move offshore once they hit saltwater & travel great distances across the ocean; the longest of any salmon. They feed near the water's surface, so are at high risk of consuming floating marine plastics. Many die on their way to the ocean; they are eaten by predators (harbor seals).

Southern Resident Killer Whales are toothed whales that reside off the coast of the NW area of the US & Canada. The Southern Resident killer whale population is so small that they are listed as endangered. One important factor inhibiting their recovery is a lack of their favorite prey; the endangered Chinook salmon. Sometimes they feed on steelhead & chum salmon.

Gadids (hake, cod, pollock) **& green- lings** (lingcod) are recreationally important. They eat a variety of prey, including zooplankton, forage fishes, squid, rockfish, sculpins,
& some salmon. Adults can also cannibalize juveniles. Lingcod are one of the top predators in Puget Sound: they can get very large (> 1 m) & live for up to 20 years. Harbor seals, birds, & spiny dogfish prey upon these fish.

Salmon are ecologically, economically, & culturally significant in Puget Sound. Many populations have declined & are struggling to survive. Salmon feed on terrestrial & aquatic insects, amphipods, & other crustaceans when they are young. As they grow older, they consume marine zooplankton (like larval crab & krill) & forage fish. Salmon are an important food source for killer whales, harbor seals, & humans.

Bigg's (Transient) Killer Whales are toothed whales that reside in the North Pacific Ocean. They are fierce predators who sometimes hunt in packs. They are seen in Salish Sea waters in the fall & have increasingly been observed in Puget Sound. They don't have predators & primarily eat marine mammals, but also eat birds, squid, sharks, & other whales.

Forage fish are small, silvery fishes that are eaten by almost everything. They are generally high-lipid prey, & are often some of the most ecologically important species in marine ecosystems.
Puget Sound forage fishes include Pacific herring, northern anchovy, Pacific sand lance, & surf smelt. They eat zooplankton, including copepods, crab larvae, & krill.
They are important prey for salmon, birds, & harbor seals.

Bald Eagles are large, carnivo- rous birds that capture prey with their large talons. Their distinc- tive white heads are iconic. They build the largest nests of any bird in the world. They eat fish, other birds (like cormorants & ducks), & land mammals. They feed heavily on salmon carcasses after the salmon have spawned. Bald eagles have no predators but they may die accidentally from human activities like hunting or fishing.

Harbor Porpoises are common in some areas of the Salish
Sea & their abundance may be increasing in Puget Sound.
They are the smallest cetacean recorded in Puget Sound waters at < 2 m & < 100 kg. Observers rarely see more than their small dorsal fins, as they do not often leap from the water. Harbor porpoises primarily eat fishes & squids. They are eaten by Biggs transient killer whales.