

TEACHABLE MOMENTS

Your surroundings will provide inspiration for questions and discussion. Look, smell, and listen, not only to the natural or human-made sounds around you, but also to the observations others have to share. Connect those observations to salmon while also connecting to the people with you.

OBSERVATION	DISCUSSION
Adult fish are in the stream!	<p>Chum are the most abundant in Kitsap Peninsula streams, but coho can also be common and other species may be present. Use the illustrations in this guide to explore what you're seeing and the differences.</p> <p>Young salmon have an extraordinary sense of smell. When young, they imprint on the combination of molecules (amino acids in particular) unique to their stream. They use that imprint and possibly Earth's magnetic field to return to their birth stream. Pollutants can interfere with this sense of smell.</p>
Some salmon appear to be swimming in place, others seem to be moving forward and others are flopping a lot.	<ul style="list-style-type: none"> » Those swimming in one place may be resting before pushing upstream or standing guard over a redd. » Those moving forward are moving to suitable redd habitat. » The flopping salmon are spawning. Females are either digging or defending the redd or laying eggs. Males may be fertilizing eggs or fighting over females.
Some areas of the stream gravel look cleaner than others.	<p>An area of clean-looking gravel may be a redd. While building the redd, female salmon move a lot of gravel, much of which gets turned over, exposing the underside where diatoms and algae haven't been able to grow. (Refer to the stream/redd cross section). The redd tends to be an elongated oval. A chum redd is about the size of a large dining room table.</p>
The water level seems really low.	<p>Adult salmon can swim up and spawn in surprisingly shallow water. If the water is too low though, the salmon may wait, or try to spawn lower in the stream. If salmon are prevented from entering their natal or birth stream, they may stray to a nearby stream where they can enter and attempt to spawn. Unfortunately the delays can reduce the likelihood of successful spawning. Reducing water consumption can help maintain flows during the dry winter months.</p>

OBSERVATION	DISCUSSION
There are dead fish in the stream and at the water's edge.	<p>Dead salmon "feed" the surrounding environment! Most obviously, they're eaten by raccoons, bear, opossum, eagles, gulls and even deer. Bushes and trees of the watershed are fertilized with nutrients the salmon have accumulated and brought from the ocean.</p>
Good habitat and water quality are essential for salmon survival.	<ul style="list-style-type: none"> » Good habitat includes cool, clear water, a consistent flow in the stream, and habitat for spawning—such as a clean gravel bed at the bottom of the stream. » A healthy estuary is especially important for chum salmon. Their offspring leave the freshwater environment immediately after emerging from the gravel in the spring. They live and feed for many weeks in the near-shore marine environment before heading out to the open sea. » Bridges provide free movement of sediment and fish, while culverts can restrict both and create washouts and flood hazards. » Large wood in the stream creates different types of habitat that benefit fish in resting, hiding, feeding, and moving. » Stormwater outfalls can deliver sediments and pollutants to streams, as well as large volumes of fast-flowing water that can damage habitat.
Fish swim away when we get close to the stream or when our dog runs through.	<p>It is important not to scare the fish away or poke at them, because it is possible that this will use the last of their energy and cause them not to spawn.</p>
Young fish are schooling along the marine shoreline.	<p>Habitat along marine shorelines is important for young salmon to feed and hide as they migrate from their stream to the ocean. Just as in the stream, plants along the water's edge provide shade, cooling, water quality and quantity benefits, and opportunities for food.</p>
Adult fish have white or off-yellow areas on their bodies.	<p>This is saprolegnia fungus. It grows when there is a wound. When this happens, the fungus causes the fish to absorb their skin and lose their color. This is the same fungus that can sicken and even kill dogs. Do not let dogs eat spawning salmon.</p>