

Life Stage Adaptation Cheat Sheet



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Eggs

- Eggs are buried in gravel to protect them
- Translucent color helps them blend in with the gravel sediment

Alevin

- Gills extract oxygen from water allowing them to “breathe” underwater
- The yolk sac provide alevin with food as they learn to swim and navigate their aquatic environment
- Avoid light so they are not detected by predators

Fry

- Scales provide salmon with protection against predators, pathogens, and their environment
- Most active at night to avoid being detected by predators
- Develop par marks (disruptive coloration) to help them avoid detection from predators
- Use camouflage (tan, brown, gray) to avoid detection from predators
- Rely on logs, gravel, boulders and other stream features for shelter and protection from predators
- Eat insects and small macroinvertebrates that are found in the stream
- Lateral line helps them detect movements and vibrations in the water

Smolt

- Undergo “smoltification” which allows them to be able to survive the transition from fresh water to salt water
- As they start spending time in the ocean they develop a silvery color to avoid detection from predators
- Take advantage of the food and shelter provided by estuaries
- Their tongues have “teeth” they use to catch and hold their prey
- Terminal-shaped mouth allows them to feed on organisms floating in the water column

Ocean Adult

- Salmon use their sense of smell to find food in the open ocean
- Fast swimmers- salmon have a fusiform shape, powerful muscles, and a large caudal fin. Can swim up to 20 miles per hour and swim thousands of miles
- Depending on the species, salmon spend 2-7 years in the open ocean in order to grow big and strong
- Adapt a countershading coloration to avoid detection from predators



Spawning Adult

- Female salmon lay between 3000-7000 eggs because only ~0.1% reach spawning age
- Salmon use their sense of smell to find their way back to their natal streams
- Fusiform shape and strong muscles enable them to swim upstream against strong currents and jump over obstacles
- Change color and develop features that help them attract a mate

