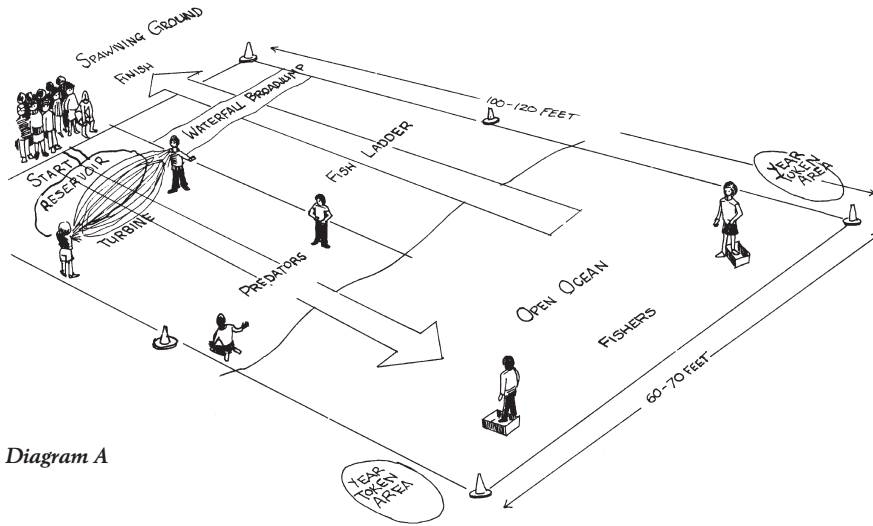


# 10th Grade IQ Time Fish & Ladders



## Human Fish Ladder

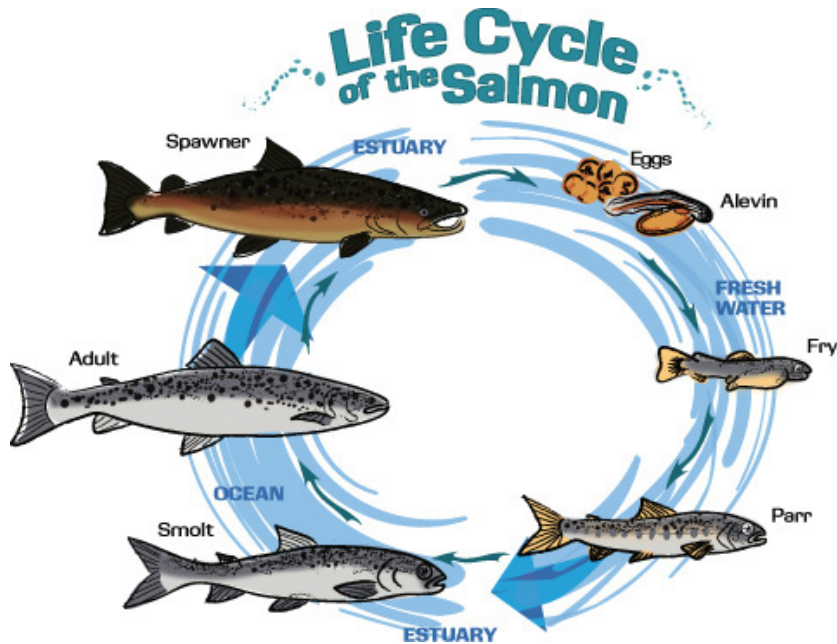
Students will be either salmon or salmon hazards

- Two students will be the turbine team / waterfall monitors
- Two students will be predatory wildlife
- Two students will be humans
- Remaining students are salmon

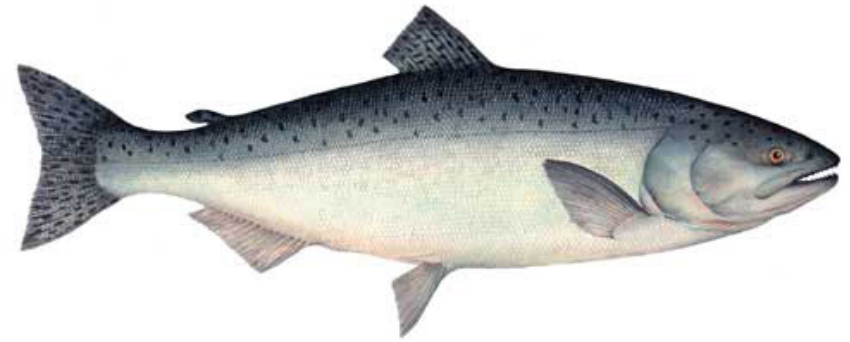


## Background

Chinook is the largest of five species of Pacific salmon. All Pacific salmon are "anadromous," hatching and living in fresh water for the first part of their lives, migrating to the ocean, and coming back to the stream where they hatched to lay their eggs.



Salmon need cold, clear, free-flowing rivers and streams free of pollutants and with deep pools and eddies to hide from predators and to find food. Wild salmon face numerous hazards, including hydroelectric dams (which block fish from migrating or shred them in turbines), overfishing, and competition from hatchery produced fish. Logging, grazing, mining, urban development, and water pollution from things like motor oil and pesticides all contribute to the loss and degradation of salmon habitats. These habitats include estuaries, salt marshes, and upland streams.



Chinook Salmon  
*Onchorhynchus tshawytscha*

Wild Chinook salmon as well as several other salmon species have been listed as endangered or threatened. Some salmon species have already become extinct.

## Recovery

Populations of many salmon species, including the Chinook, continue to decline. Dam removal and bans on fishing have been suggested but are very controversial. Projects to clean up pollution and related conditions in the watersheds that salmon inhabit are underway, but so far have had little impact. Until an integrated plan is developed and implemented, the plight of the salmon will continue to worsen.

## Extension Project

We will set up an outdoor field about 100 ft. long and 50 ft. wide. You will need to set up (a) spawning grounds, (b) reservoir, (c) downstream, (d) upstream, and (e) ocean areas. Students will be either salmon or salmon hazards. Check out the diagram on the back of this booklet to see what you're about to experience!

**Let's Head outside!**