

## **Background Information**

### **Life Cycle of the Pacific Salmon**

In the life cycle of the Pacific salmon, nature recycles the parents to feed the babies. Mature salmon leave the Pacific Ocean as saltwater fish, never again to eat as they battle their way up the Columbia River to spawn in the home stream where they were born. Those born in the upper reaches of the Columbia River's tributary stream, the Snake River, travel more than 1,000 miles inland to lay their eggs and fertilize them, roughly one fourth of the distance across the United States. Without enough reserves in their bodies to get back to the Pacific, the adult fish spawn and die. To spawn, a female salmon scoops a nest in stream-bottom gravel by waving her tail and deposits her eggs in the hole. The male releases milt (sperm) into the water that covers the eggs and fertilizes them. Then the female brushes gravel over the eggs, and both parents lie exhausted in the stream until they die.

Microorganisms in the water decompose their bodies during the winter, and this process increases the population of microorganisms in the stream. Come spring, the salmon eggs hatch into the tiny fish called "fry," whose first food is the microorganisms in the stream. The Pacific salmon never see their parents, but are nourished by their decomposed bodies. When they grow large enough to be "fingerlings," the young salmon make the dangerous trip downstream, past dams and waterfalls to the ocean. There they grow into adults, averaging six pounds in weight. In its life cycle, the Pacific salmon takes five forms and sizes: a pea-sized egg, one-half-inch embryo, one- to three-inch fry, four- to five-inch fingerling, and fully grown, six-pound adult one to two feet long. Nature fully recycles Pacific salmon. (Atlantic Salmon, in contrast, travel up rivers only 150 to 250 miles long and can return to the sea after spawning.)