



# Campbell Creek Science Center

## Salmon Life Cycle Game

What does it take to make it through a Pacific salmon's life cycle? Play this game to explore the challenges these fish face as they go from egg to spawning salmon.

### Directions

1. In this game, you will become a Pacific salmon moving through its life cycle. You will travel from fresh water to the ocean and back again. Study the salmon life cycle diagram below to get ready for your journey.
2. To set up the game, print the following 22 game signs or scroll through them on your mobile device or computer. Directions on the signs will guide you through each part of a salmon's life cycle.

### If you print the signs:

- Cut signs along the dotted lines and lay them on the ground in order from 1-22. Go to Sign 1 and read the instructions to begin the game.

### If you are using your mobile device:

- Scroll to Sign 1 and read the instructions to begin.

### Materials

- Game signs (either printed or on your mobile device)

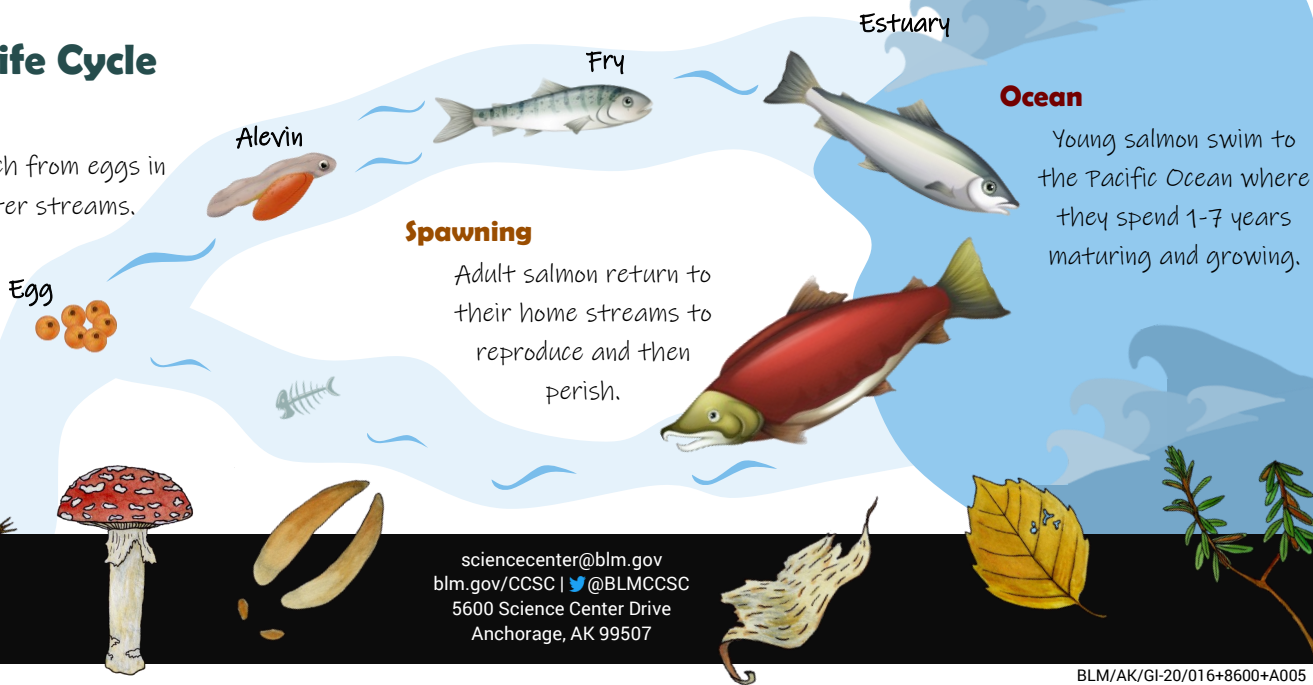
### Questions

- What challenges do salmon face during their life cycle?
- What does a salmon need to survive?

## Salmon Life Cycle

### Fresh Water

Salmon hatch from eggs in freshwater streams.





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## Fresh Water

# 1

You hatch from an egg in a freshwater stream in Alaska.



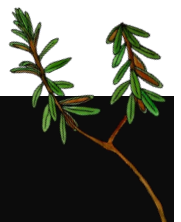
As an alevin, you hide in the stream bed gravel and survive on nutrients from your yolk sac.



You emerge from the gravel as a salmon fry. You must now survive to adulthood to return to this stream and spawn the next generation of salmon.



Pick a number from 2-7. Go to the game sign with that number to continue.





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## Fresh Water



# 2

In the stream where you live as a young salmon, there are lots of aquatic insects. You eat a steady diet of mayflies, stoneflies, and caddisflies. Go to Sign 4.

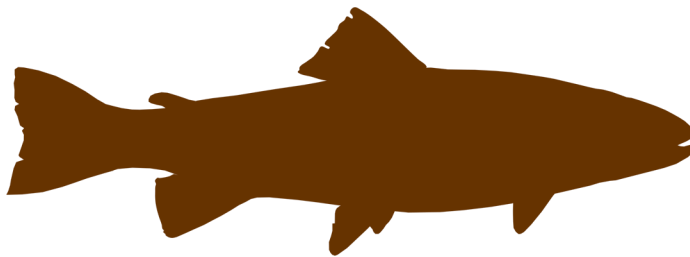


## Fresh Water

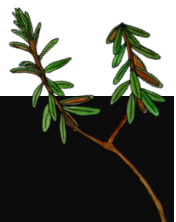


# 3

Look out! A hungry Dolly Varden approaches. Before you can escape, the other fish gobbles you up. You have died. Go back to Sign 1 to begin the game again as a new salmon.



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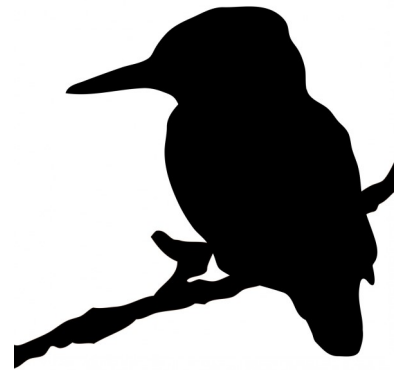
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## Fresh Water



# 4

WHOOOSH! Water explodes around you as the long beak of a belted kingfisher snatches up the salmon fry next to you. You flee for cover under a fallen log. Whew, that was close! Take 5 deep breaths, then go to Sign 5.



## Fresh Water

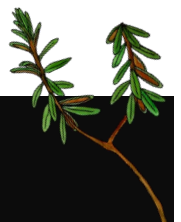


# 5

Large cottonwood trees shade the stream and keep the water cold. You need cold, clean water with lots of dissolved oxygen to survive. Go to Sign 8.



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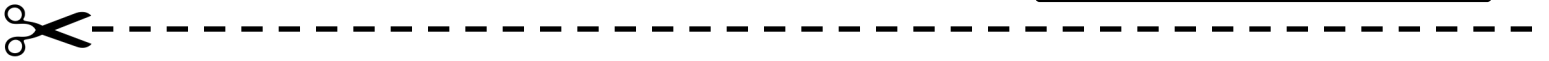
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## Fresh Water



# 6

RRRRRRR! A homeowner who lives next to the stream uses a chainsaw to cut down lots of trees along the water's edge. The water gets hot from lack of shade and cloudy from erosion along the bank. You need to move to another part of the stream. Go back to Sign 2.



## Fresh Water



# 7

Beavers cut down a few trees near your stream to build a dam and lodge. The fallen logs create slower moving pools where you like to rest, hide from predators, and hunt for prey. Go to Sign 8.



Leila Pyle





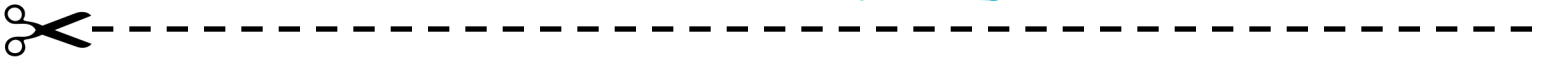
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## Fresh Water



# 8

After spending time in fresh water as a fry, you enter the smolt phase of your life cycle. You travel to the estuary—the place where fresh water meets the ocean. You need to give your body time to adapt to salt water before moving into the ocean. Slowly count to ten, then choose a number from 9-13. Go to the game sign with that number.

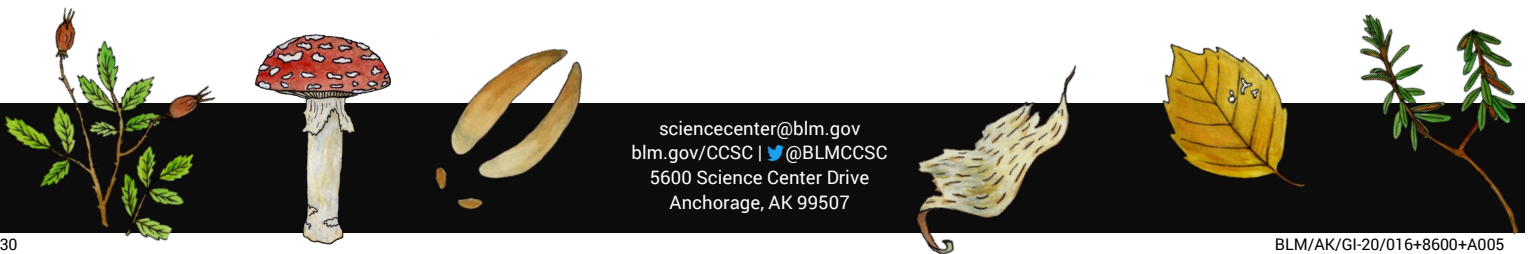
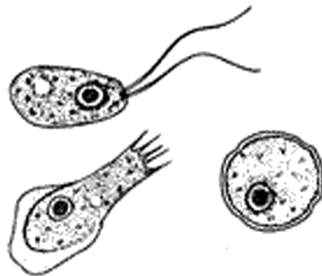


## Ocean



# 9

The ocean where you spend time maturing is full of tiny, floating creatures called zooplankton. You gain weight and grow quickly on this nutritious diet. Go to Sign 11.





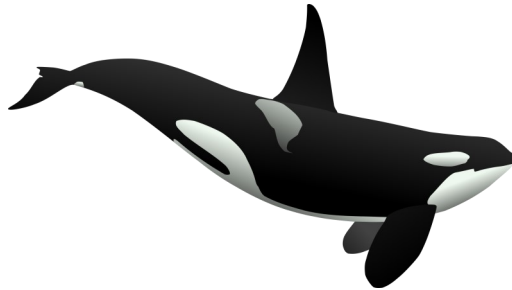
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## Ocean



# 10

Watch out! A pod of orca is heading your way! You swim as fast as you can, but you are no match for one of the ocean's top predators. You have died. Go back to Sign 1 to begin the game again as a new salmon.



## Ocean



# 11

Two shadows appear near the surface, one small and one big. You have never seen a purse seiner or a skiff—boats used for commercial fishing—so you swim closer to investigate. Suddenly, you are yanked sideways by a net! As the opening gets smaller, you squeeze closer to other fish. At the last second, you use your powerful tail to swim down and out of the net. Rest for 30 seconds, then go Sign 14.





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## Ocean



# 12

Uh oh! The lateral line along the sides of your body senses movement in the water nearby. A sea lion's large, whiskered face appears. Its teeth graze your side, but the slime covering your scales allows you to slip out of harm's way. Go to Sign 14.

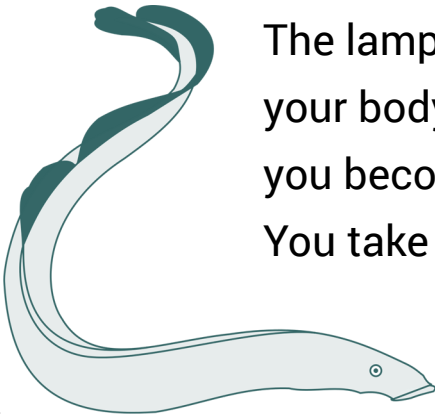


## Ocean



# 13

OUCH! The sharp teeth of a Pacific lamprey latch onto the side of your body. As a salmon fry, you ate young lamprey in the stream. But in the ocean, adult lamprey prey on you. The lamprey, a parasite, uses its tongue to drill a hole in your body. As it feeds on your blood and other body fluids, you become weak. Once the lamprey is full, it detaches. You take a long time to recover. Go back to Sign 9.







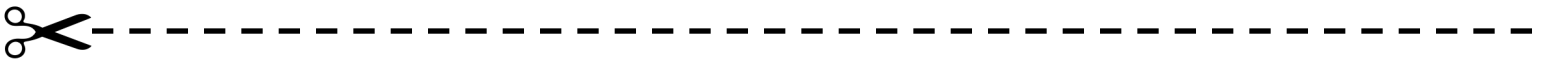
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## Ocean



# 14

After spending time at sea, you reach maturity. You want to produce the next generation of salmon by spawning—laying and fertilizing eggs. Clues from the Earth’s magnetic field guide you across open ocean back to your home region. You use your incredible sense of smell to find the exact stream where you hatched from an egg. Sniff 5 times to locate your home stream, then choose a number from 15-20. Go to the game sign with that number.



## Spawning



# 15

As you swim upstream, you run into a weir, a kind of fence placed across a river or stream that funnels you into one opening. Scientists use weirs to trap and count migrating fish. Swim in a circle 5 times while you wait to be counted and released, then go to Sign 20.



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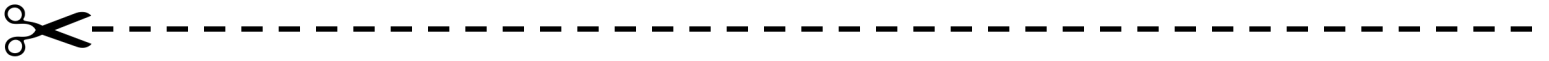
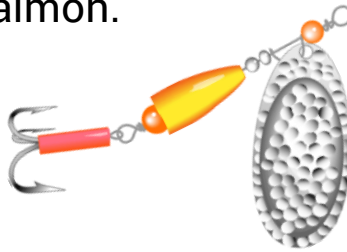
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## Spawning



# 16

Something colorful flashes right in front of you! You bite it and feel a sharp pain in your mouth. Oh no! A fisherman reels you in to shore and puts you into a cooler for dinner. You have died. Go back to Sign 1 to begin the game again as another salmon.

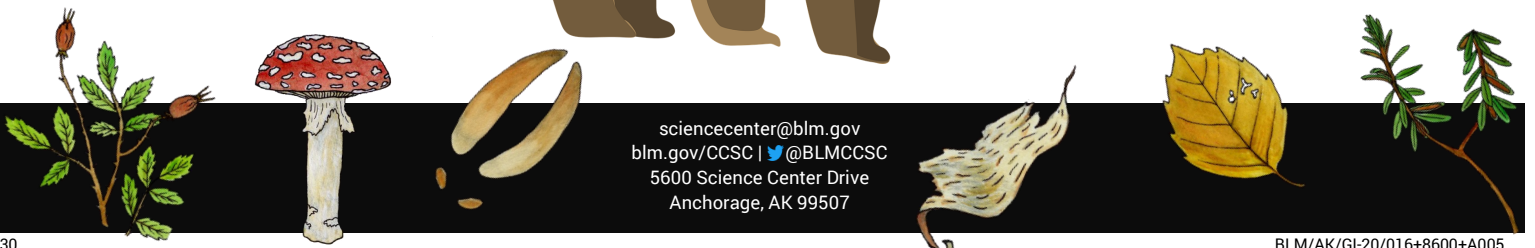


## Spawning



# 17

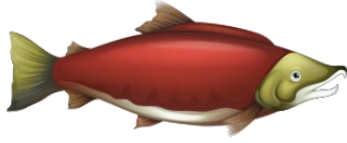
You notice a shadow over the water. A bear! The giant face moves toward you, but you dart out of the way. Take 10 deep breaths as you recover from your close call, then move to Sign 21.





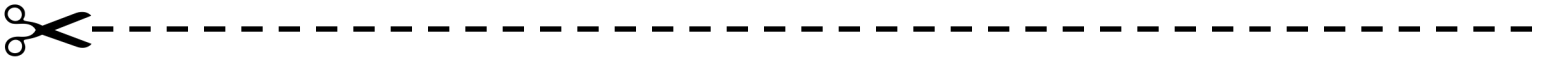
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## Spawning



# 18

After more than a week of swimming upstream, you come to a huge waterfall. You must make it up and over to continue your journey. Give 10 of your best salmon leaps, then go to Sign 21.

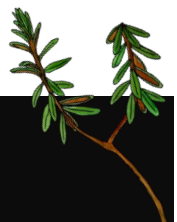


## Spawning



# 19

As you swim, you notice the top of your body is above the water. Suddenly, you are stuck! There is not enough water in the stream to keep swimming forward. Wiggle 5 times to free yourself, then go back to Sign 18 to wait for more rain to raise the water level.





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## Spawning



# 20

Once you reach your upstream spawning grounds, you search for a good place to spawn. You choose a perfect spot, but a bigger salmon with a large hump, hooked jaw, and sharp teeth fights you for it. You lose the fight and must find a new spot. Go back to Sign 17.

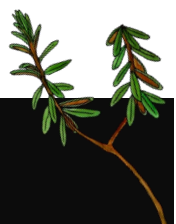


## Spawning



# 21

Congratulations! You have made it all the way to the end of your journey. You migrated from fresh water to the ocean and back again to produce the next generation of salmon. You find a mate and create several redds—nests in the gravel where you lay and fertilize eggs. Move to Sign 22.





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# 22

## Perish



After spawning, you die. Your body becomes food for the plants and animals that live in and around the stream. Bears, ravens, foxes, eagles, and other animals eat parts of you to gain weight for the winter.



Once animals have eaten their fill, the remaining nutrients from your body go into the soil. Trees absorb the nutrients and grow strong and tall. They provide shade for the developing eggs you spawned. Baby salmon hatch in the spring, and the salmon journey begins again.



To play as a salmon of the next generation, go to Sign 1 and begin the game again.

