## National Fish Hatchery System

The Service's Fisheries Program has played a vital role in conserving America's fishery resources since 1871, and today is a key partner with States, Tribes, Federal agencies, other Service programs, and private interests in a larger effort to conserve fish and other aquatic resources.

The National Fish Hatchery System helps research and restore many species of fish and aquatic animals. The survival of our salmon is dependent both on the care given to them during their short stay at the hatchery and the conditions of their natural environment once released. The challenge is great, due to ever increasing demands on the resource by over-fishing, habitat loss, pollution, introduction of non-native species, and land and water development.

The Junior Fish Biologist patch symbolizes the protection and conservation which runs through our aquatic resources; the protection and restoration of habitat; the recovery of native fish species; the enhancement of recreational opportunities; and the wise management of our fishery. This is Leavenworth National Fish Hatchery.

*Conserving America's Fisheries*

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U.S. Fish & Wildlife Service

# Junior Fish Biologist

## National Fish Hatcheries Program

## Activity Booklet

My name is _____

## Hi Kids!

Welcome to your National Fish Hatchery. We are glad you have decided to combine your visit to the hatchery with our Junior Fish Biologist program. This booklet of activities will give you an opportunity to learn more about the hatchery and have fun at the same time.

### How Can I Become a Junior Fish Biologist?

You can become a Junior Fish Biologist if you are between the ages of 6-14. Depending on your age, you must complete the required activities below.

Ages 6-8, you must complete 5 of the activities.
Ages 9-14, you must complete 7 of the activities.

To become a successful Junior Fish Biologist, your studies must include learning about all plants and animals that share the fish's watery world. Make your choice from the 12 activities in this booklet.

Once you have completed your required activities, return the booklet to a hatchery staff member in the visitor center or mail to the address on the back of this booklet. Your certificate will be signed, and you will receive a Junior Fish Biologist patch.

Have fun learning about your National Fish Hatchery!


## Certificate of Completion

**has completed the necessary activities to become a Junior Fish Biologist.**

**Awarded this day _____ by _____**

## The Rivers Run Wild?

Rivers are an important part of the earth, providing water for all to drink, habitat for many fish and wildlife, irrigation for crops, and energy for our homes.

Native Americans once lived along these rivers, using their waters for drinking, cooking, bathing, and fishing.

Looking at the river, do you think it has changed since Native Americans lived here many years ago?
Yes or No

How do we use the river today?

Do you think there are ***more*** fish or ***fewer*** fish in this river today compared to 100 years ago? (Circle one)

Do Native Americans still fish here?

## Safety Tips

We want you to have a safe and enjoyable visit to the hatchery. Please read these safety tips before beginning the program.

- When you stay on designated trails and walkways, you can avoid poison ivy and other toxic plants. Remember "leaves of three, let it be."
- When viewing the fish in the outdoor raceways, please stay outside the fences. Obey the signs.
- If you encounter a wild animal, do not approach it. Watch it from a distance. Some animals, such as black bears, may be just as curious as you are.
- If you eat your lunch at the hatchery, please pick up your trash before leaving. We want everyone to enjoy the beauty of the hatchery grounds.

This activity booklet was written by Susan Blair, Environmental Education Specialist, Leavenworth National Fish Hatchery Complex. (November 2002) Revised Sept. 2017.
Artwork by Cindie Brunner, Cathy Justis, Carl Bergren, and Gary Whitley.
Front cover artwork by Graham Thomas.

## Fish Observation

An easy way to learn about any animal is to observe it or watch it in its own environment. Biologists learn a lot about animals by watching animals feed, sleep, play, or just hang out with others of its own kind.

Become a biologist and observe a fish. Choose a raceway at the hatchery. Pick out one fish in the raceway, watch it for at least 5 minutes, and answer the following questions.

Do you know what kind of fish it is? Yes or No
If so, what is it?

Let's see how it compares to the other fish in the raceway. Is it **larger** or **smaller** or about the **same** size of the other fish? (Circle one)

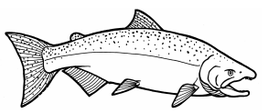
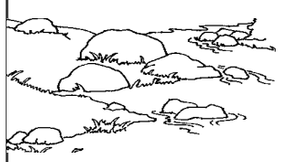
What fin does it seem to use the most for swimming?

Does it swim in the **same area** of the raceway or move **up and down the length** of the raceway?
(Circle one)

Would you like to be a fish? Yes or No
Why or why not?

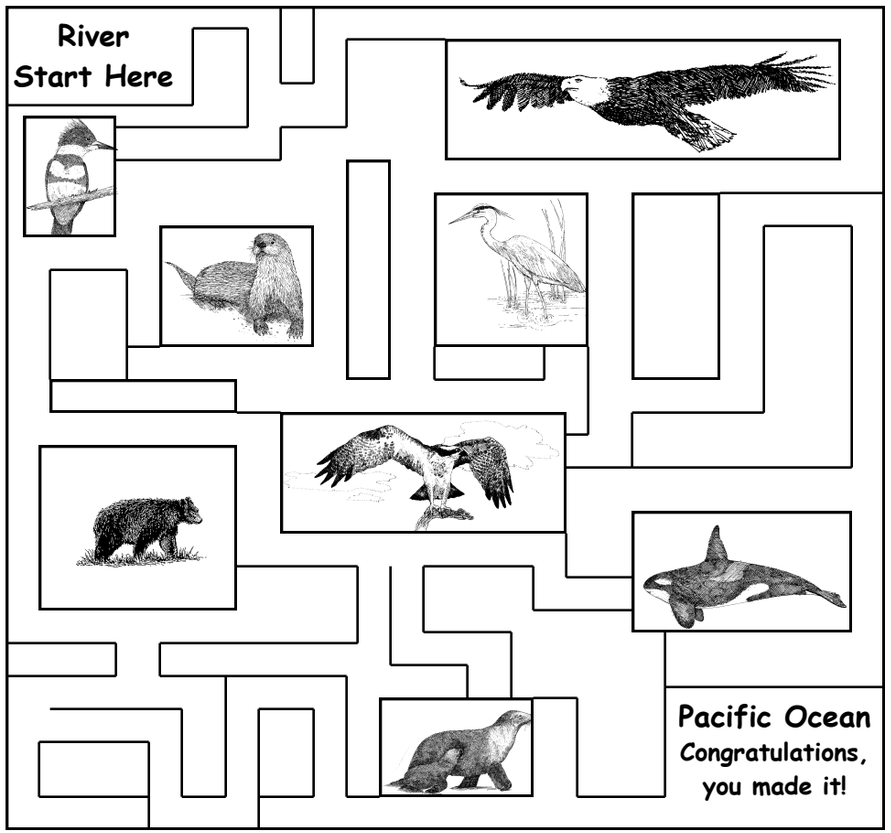
## Hatchery Bingo

Explore the hatchery grounds and find these things. Put an X on its picture. When you get three across, down, or diagonally, you have a hatchery bingo!

| | | |
|---|---|---|
|  Crow |  Tree |  Animal track |
|  Mountain |  Fish |  Great blue heron |
|  River |  Kingfisher |  Rock |

## Amazing Maze

Salmon begin and end their life in the river. Once they are old enough to travel, they start their long migration to the ocean. Become a salmon and see if you can make it safely to the Pacific Ocean without running into predators that want to eat you.




## Watershed Watcher

Everyone lives in a watershed. A watershed is the land area where water collects and flows downstream. Find a safe location to watch a stream and answer the following questions.

Is the water **cold** or **warm** or **hot**? (Circle one)

How fast is the water moving? (Circle one)

Slow Medium Fast Very Fast

Can you see the bottom of the river? Yes or No

What do you see on the bottom? (Circle what you see)

Grass Mud Sand Rocks Logs

What do you see along the edge of the river? (Circle what you see)

Flowers Insects Grass

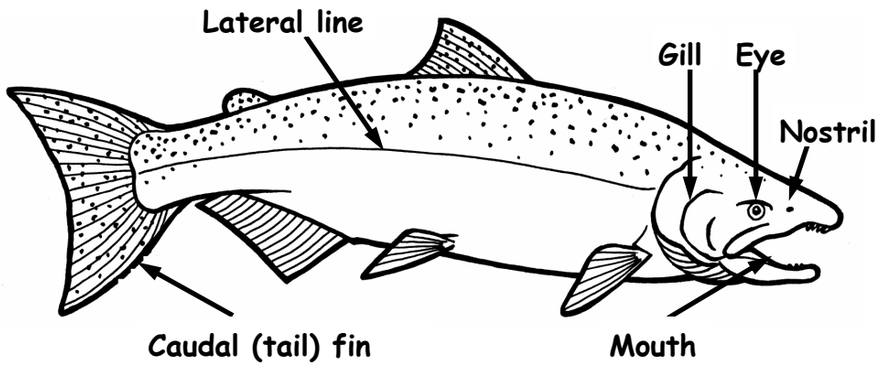
Trees Bushes Wildlife Animal tracks

Rocks Animal's Home Litter Logs

If you were a fish, would you want to live here?

## Parts of a Fish

Using the picture, match the word on the left with the phrase on the right that best describes the functions of each body part. Write the correct letter beside the numbered body parts listed below.




| | |
|---|---|
| __ 1. Eye | a. used for breathing, instead of lungs |
| __ 2. Mouth | b. used for smelling, instead of breathing |
| __ 3. Nostril | c. used for forward swimming |
| __ 4. Lateral line | d. used for vision and seeing colors |
| __ 5. Gill | e. used for feeling vibrations in the water |
| __ 6. Caudal fin | f. used mostly for eating |

## Interviewing Hatchery People

People that work at the hatchery perform a wide variety of duties to take care of our fish. Find a person that works at the hatchery and ask them about their job.

1. How long has she/he worked at the hatchery?

2. What job does she/he do?

3. What does she/he like best about their job?

4. Why did she/he want to work at the hatchery?

5. Can you think of any other questions to ask?

6. Would you like to work here?

_____

Employee's autograph here

## Discovery Hike

Go on a hike at the hatchery. Put a check mark (√) by the things you see, hear, smell, or feel on your journey. Please do not collect any plants or animals.

___ a pine tree

___ an animal home

___ a bird singing

___ a fish swimming

___ a feather

___ a soaring bird

___ an animal track

___ a sunny spot

___ something that is cold

___ something that has no place in nature

___ a person or animal fishing

___ the warmth of the sun

___ something that is young

___ an insect on a plant

___ a sweet smell

___ a flower blooming

___ the sound of water

___ something that is old

___ a rotting log

___ an animal with scales

## Hatchery Hunt

Go on a discovery hunt and explore the hatchery. Learn more about what makes this hatchery a special place.

When was the hatchery built?

What kind of fish are raised here?

What were the first ponds that were used at the hatchery?

What else lives or grows on the hatchery grounds?

## Home is Where the Habitat Is

All animals need food, water, shelter, and plenty of space to survive. All of these things can be found in a good habitat. Imagine you are a salmon. What would you need to survive in the river? Draw a fish in its habitat.

## Word Search

Can you find these words hidden in the puzzle?

| | | | |
|---|---|---|---|
| salmon | egg | river | anadromous |
| Chinook | alevin | gravel | fish ladder |
| hatchery | fry | estuary | raceways |
| migration | smolt | ocean | spawn |

| H | A | T | C | H | E | R | Y | B | R | T | F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M | R | O | V | S | A | P | C | L | A | R | I |
| K | N | W | A | P | S | T | E | S | C | R | S |
| G | O | C | E | A | N | V | S | T | E | E | H |
| F | Z | W | L | D | A | K | A | N | W | V | L |
| P | R | U | L | R | T | N | L | O | A | I | A |
| Q | I | Y | G | E | H | U | M | R | Y | R | D |
| A | N | A | D | R | O | M | O | U | S | T | D |
| L | R | P | S | J | R | Q | N | R | T | A | E |
| E | S | T | U | A | R | Y | B | W | T | I | R |
| V | N | O | I | T | A | R | G | I | M | G | B |
| I | U | R | T | A | S | M | O | L | T | G | S |
| N | M | V | K | O | O | N | I | H | C | E | T |