

Activity 2

Sort and Classify.

You have gone fishing and caught some fish. Now you must identify them in order to know which ones you can keep for dinner and which ones you must throw back in the water.

Recognizing a species means that you must know its characteristics. For example, Georg Steller had never been to America before his expedition with Bering, but he knew about the American birds from a book he had studied. When he arrived on Kayak Island and saw a blue jay, unknown in Europe and Russia, he remembered it from that book. He said in his journal: "This bird alone sufficiently convinced me that we were really in America...."

To identify a plant or animal, you follow a trail that can branch many times until it leads to only one choice. Most identification and classification follows a path of paired observations. For example, this salmon identification begins with the observation that salmon have an adipose fin that non-salmon do not have. The adipose fin is a small fatty fin on the back just in front of the tail fin. When two features are listed, both must be present to continue placing the fish in that category.

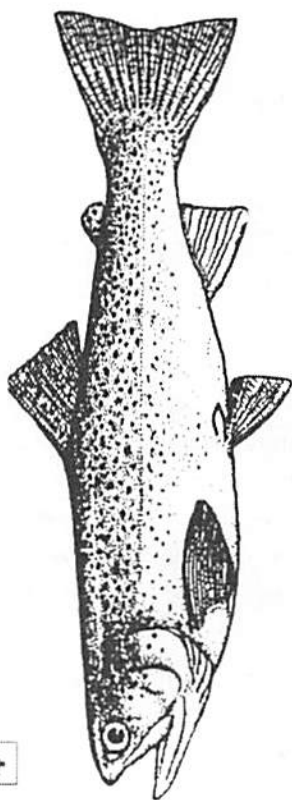
Many of these fish are actually beautifully colored—not black and white like these pictures. And they are many different sizes. Some of them only live in salt water; some only live in fresh water; and some live in both salt and fresh water. Their names are known world-wide by the Latin scientific name. The common names might be understood here, but completely unknown in another location. Scientific names are especially helpful because they are the code used in all countries, no matter what that country's language is. That means it's possible to know the fish's name whether you are in the United States or Russia or Chile, even though the common name changes in each country. For example, red salmon is *Oncorhynchus nerka* in all those countries, but its common name is red or sockeye in California or Alaska, and "krasno ryba" in Kamchatka.

With your fish cards in hand, sort them by identifying characteristics according to the "Classify the fish" chart, page 128. Your first step is to select all the members of the salmon family and separate them from the non-salmon family. Then follow the arrows to locate each specimen. Fish and Game says you may keep the arctic char, the rainbow trout and the red salmon for your dinner. You may also keep the starry flounder and whitespotted greenling as examples to show everyone which two fish were identified by Steller. But all the rest must be thrown back in the water. Good luck finding your dinner.

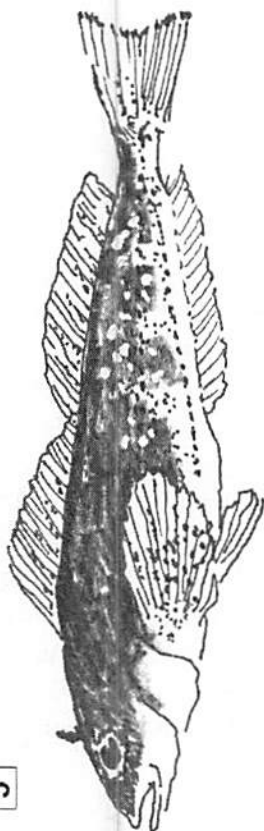
Put the number of each fish card in the space by the correct fish name below.

- ___ Arctic char: *Salvelinus alpinus*
- ___ Arctic grayling: *Thymallus arcticus*
- ___ Chum salmon, dog: *Oncorhynchus keta*
- ___ King salmon, chinook: *Oncorhynchus tshawytscha*
- ___ Lake trout: *Salvelinus namaycush*
- ___ Pink salmon, humpback: *Oncorhynchus gorbuscha*
- ___ Rainbow trout: *Oncorhynchus mykiss*
- ___ Round whitefish: *Prosopium cylindraceum*
- ___ Silver salmon, coho: *Oncorhynchus kisutch*
- ___ Sockeye salmon, red, blueback: *Oncorhynchus nerka*
- ___ Starry flounder identified by Georg Steller: *Platichthys stellatus*
- ___ Whitespotted greenling identified by Georg Steller: *Hexagrammos stelleri*

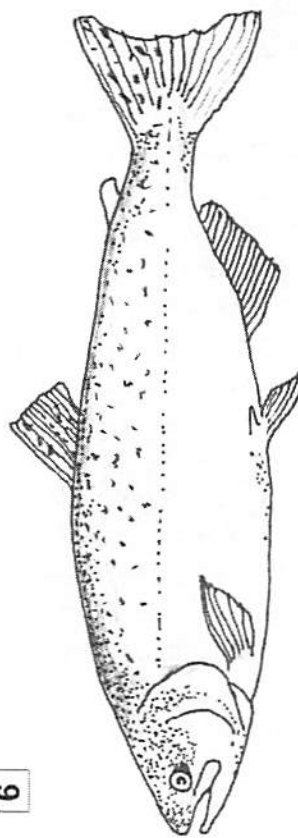
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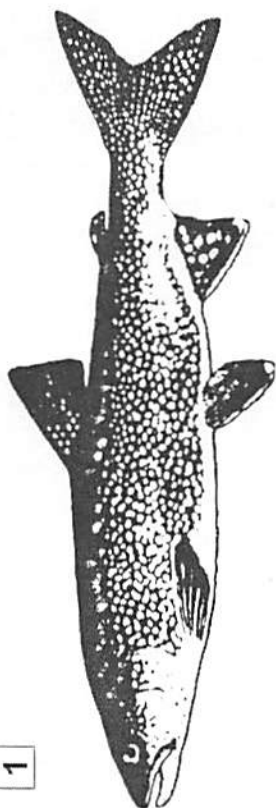
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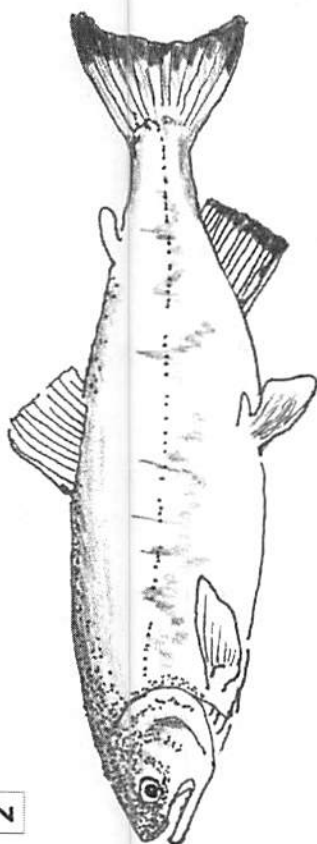
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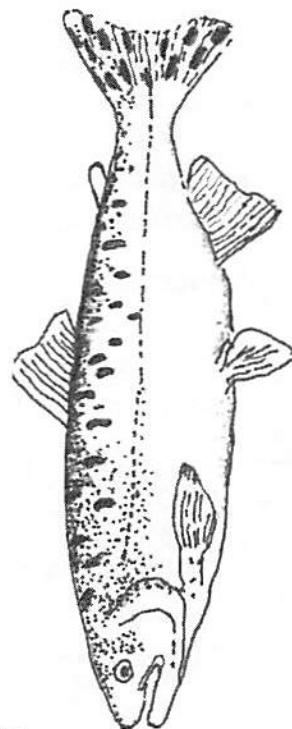
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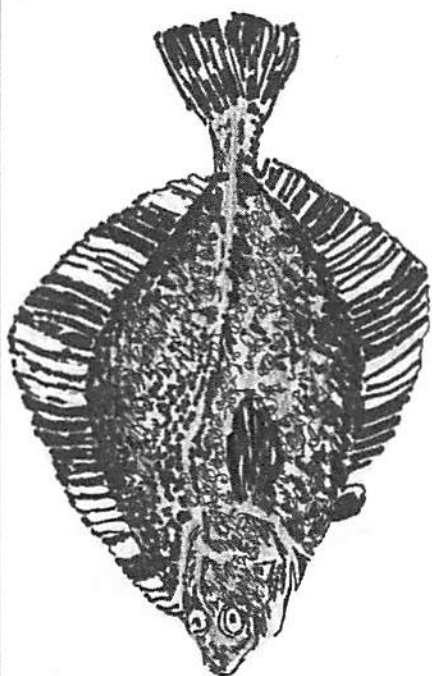


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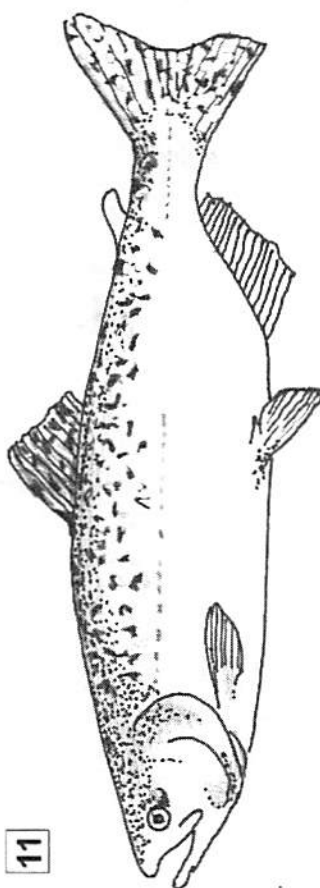


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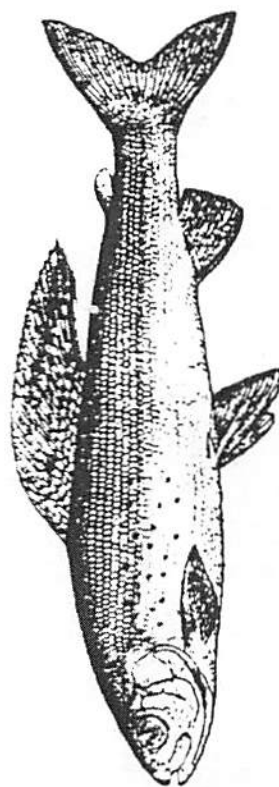




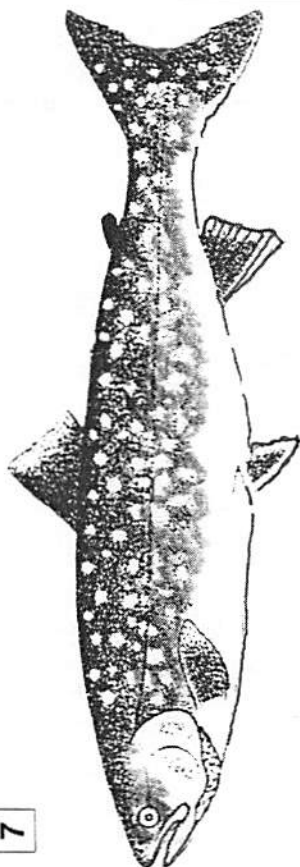
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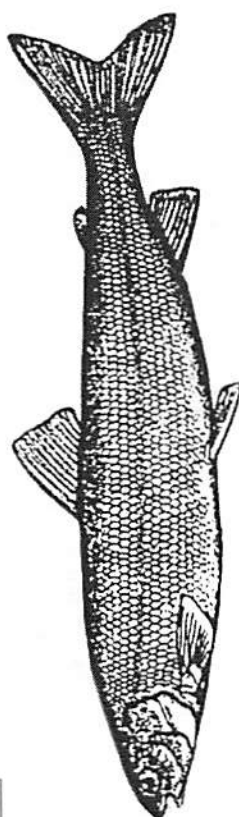
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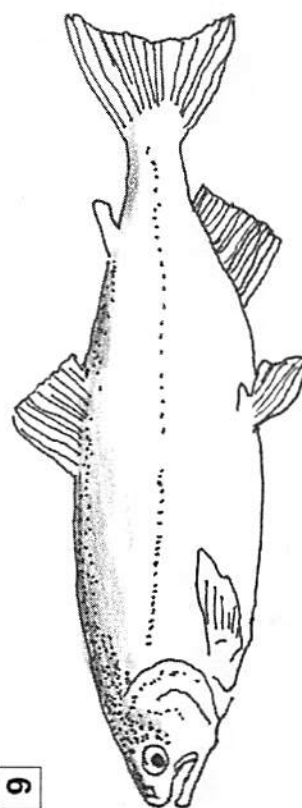
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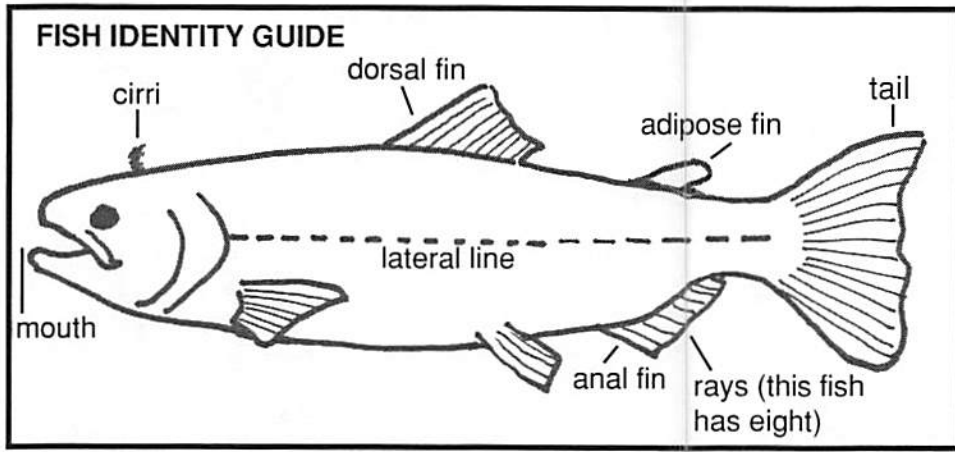
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Classify the Fish Chart

Long dorsal fin; no cirri: STARRY

Long dorsal fin with notch; cirri: WHITE-SPOTTED

Begin Here

Salmon family : All with adipose fin

OR

Not salmon: no adipose fin

Dorsal fin huge:
ARCTIC GRAYLING

Mouth large;
scales small

Mouth small;
scales large:
ROUND WHITEFISH

Black spots on light background or NO spots; tail not forked

Light spots on dark background; tail forked

Fewer than 12 rays on anal fin:
RAINBOW TROUT

More than 12 rays on anal fin

A few large, scattered spots; tail slightly forked:
ARCTIC CHAR.

Many small oval spots; tail deeply forked:
LAKE TROUT

No spots on tail

Spots on tail

Black on tip of tail:
CHUM SALMON

No black on tip of tail:
RED SALMON

Large oval spots on tail and back:
PINK SALMON

Irregular spots on back and tail:
KING SALMON

Irregular spots on back and upper half of tail only:
SILVER SALMON

ANSWERS to Activity 2
Sort and Classify.

- 7 Arctic char: *Salvelinus alpinus*
- 12 Arctic grayling: *Thymallus arcticus*
- 2 Chum salmon, dog: *Oncorhynchus keta*
- 11 King salmon, chinook: *Oncorhynchus tshawytscha*
- 1 Lake trout: *Salvelinus namaycush*
- 3 Pink salmon, humpback: *Oncorhynchus gorbuscha*
- 4 Rainbow trout: *Salmo gairdneri*
- 8 Round whitefish: *Coregonus quadrilateralis*
- 6 Silver salmon, coho: *Oncorhynchus kisutch*
- 9 Sockeye salmon, red, blueback: *Oncorhynchus nerka*
- 10 Starry flounder identified by Georg Steller: *Platichthys stellatus*
- 5 Whitespotted greenling identified by Georg Steller: *Hexagrammos stelleri*