

Lesson 3-3: Sturgeon Habitat

Time of Lesson: 1 hour

Instruction Objectives: Students can explain the habitat requirements of Nechako white sturgeon.

Strategies and Activities: Discuss habitat and food requirements of the Nechako white sturgeon. Allow work on Unit Project.

Materials:

- SMARTboard PowerPoint presentation: *NWS Habitat and Food*
- Handout: *Worksheet 3d - Habitat & Food T-Chart.*
- Handout or Interactive: *Worksheet 3e - Wordsearch Review*

Student Assessment:

- Observation and participation in class and small group activities.
- Ability to name habitat and food needs of Nechako white sturgeon.
- Ability to define terms from Unit.

Activity (30 minutes)

During the life cycle lesson, students learned about some of the habitat requirements for Nechako white sturgeon. Review the life cycle as a class.

On the SMARTboard put up the PowerPoint presentation *Habitat and Food*. Using *Worksheet 3d - Habitat & Food T-Chart* go through the habitat requirements for each life cycle stage and include their food needs (see Answer Key for information).

Key Points

Have the students call out their ideas of what sturgeon eat at each life stage before advancing the slide.

Activity (15 minutes)

Allow students time to review all they have learned to date.

Bring up on the SMARTboard the interactive *Wordsearch Review* (*Double-click the index.html file in the 'Wordsearch Review Interactive' folder. Allow the page to open in a browser like Explorer, Safari, Firefox etc. To solve the puzzle, click, hold and drag over the letters of the word you are solving. Ask for hints if necessary*). Hand out the hardcopy versions of the wordsearch *Worksheet 3e - Wordsearch Review* so the students can finish on their own, or work along with the class.

As the students find the words, ask for definitions for each word.

Activity (15 minutes)

Allow students to work on their Unit Project.

Habitat & Food T-Chart

Fill in the following chart with what you have learned about sturgeon habitat and food requirements at each life stage.

	<i>Nechako white sturgeon habitat requirements</i>	<i>Nechako white sturgeon food requirements</i>
<i>Egg</i>		
<i>Larval</i>		
<i>Juvenile</i>		
<i>Adults</i>		

Habitat & Food T-Chart - Answers

Fill in the following chart with what you have learned about sturgeon habitat and food requirements at each life stage.

	<i>Nechako white sturgeon habitat requirements</i>	<i>Nechako white sturgeon food requirements</i>
<i>Egg</i>	<p><i>clean gravel and rock substrate</i></p> <p><i>fast flowing water</i></p> <p><i>water temperature between 14-18°C</i></p> <p><i>relatively deep</i></p>	<p><i>None! They are developing within the egg.</i></p>
<i>Larval</i>	<p><i>clean gravel and rock substrate</i></p> <p><i>fast flowing water</i></p>	<p><i>for the first 12 days or so they feed from their yolk sac.</i></p> <p><i>after the yolk sac is gone, they feed on macro-invertebrates (organisms that are large enough to be seen with the naked eye and have an exoskeleton)</i></p>
<i>Juvenile</i>	<p><i>deep areas in the river</i></p> <p><i>slow back eddies</i></p> <p><i>fast flowing sections (areas for finding food and spawning)</i></p> <p><i>lakes</i></p> <p><i>cool areas of the river</i></p>	<p><i>feed primarily on benthic (bottom) invertebrates and fish</i></p> <p><i>invertebrates include: amphipods, isopods, mysids, clams, snails</i></p> <p><i>fish include: sculpins and other juvenile fish and fish eggs</i></p>
<i>Adults</i>	<p><i>deep areas in the river</i></p> <p><i>slow back eddies</i></p> <p><i>fast flowing sections (areas for finding food and spawning)</i></p> <p><i>lakes</i></p> <p><i>cool areas of the river</i></p>	<p><i>large fish including salmon (the large salmon runs in the Nechako River are thought to be highly important annual food sources for sturgeon)</i></p>

Wordsearch - Review!

Now that you know everything about Nechako white sturgeon, try and find some important terms you learned in the box below.

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

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|--------------|----------|-------------|----------------|
| AWARENESS | SALMON | DAM | REHABILITATION |
| RIVER | YOLKSAC | FISHERY | PREDATOR |
| EXTINCT | NECHAKO | RECRUITMENT | ENDANGERED |
| SILT | BARBEL | TRIBUTARY | HABITAT |
| HATCHERY | RECOVERY | SURVIVAL | WATERSHED |
| INVERTEBRATE | SCUTE | JUVENILE | STURGEON |
| SPAWN | COOL | LARVAE | |
| TURBIDITY | GRAVEL | DEEP | |

