

Lesson 2-5: Recovery and Rehabilitation

Time of Lesson: 1.5 hours

Instruction Objectives: Students can identify restoration and rehabilitation projects in the Nechako Watershed specific to Nechako white sturgeon and overall watershed health.

Strategies and Activities: Definitions of recovery and rehabilitation. Review different types of project occurring for Nechako white sturgeon. Design a recovery/rehabilitation project.

Materials:

- PowerPoint presentation: *Recovery and Rehabilitation*.
- Handout: *Worksheet 2g - Recovery and Rehabilitation*.
- Activity: Restoration project - paper, markers, pencils and other craft material.
- Take home Handout: *Home Tips for Healthy Streams*

Student Assessment:

- Observation and participation in class and small group activities.
- Ability to define terms in lesson.
- Ability to identify areas along the river that need rehabilitation and why.

Review (10 minutes)

Review habitat requirements of Nechako white sturgeon and impacts from humans on these habitats from previous lesson.

Activity (20 minutes)

Bring up the PowerPoint presentation *Recovery and Rehabilitation* on the SMARTboard. The beginning of the slideshow is review from the first introductory lesson (Unit 1 Lesson 1-1). Flip through these slides and review information.

Stop at the 'First Definitions' slide and go through these two important definitions.

Recovery: a return to a normal state of health (of the population). Currently the population is so low that it needs help in recovering to a healthy level (over 2,500 animals).

Rehabilitation: return to its former condition. Currently the shape, riparian zone and water in the Nechako River are very different than they were 20, 50, 100 years ago. Rehabilitation of areas along the river (eg. planting trees) helps return the habitat to its previous condition. You can also use the word 'restoration'.

The remaining slides show some of the work being done by the NWSRI. The list is not complete, and changes from year to year. Please visit www.nechakowhitesturgeon.org for an up-to-date list of Current Projects. This section of the slideshow is intended to give examples of recovery and rehabilitation projects that can occur to help Nechako white sturgeon. It is not intended that the students understand the science or methodology of any of these projects.

Key Points

Research has to occur at all levels, from eggs to adult fish (food and growth), habitat (where they spawn, rest, eat), to water quality (what conditions are best). Often research leads to new questions and more research.

Public awareness is a huge part of recovery and rehabilitation.

Transition to next activity.

Activity (45 minutes)

Based on the information covered in this lesson and what the students have learned about human impacts to sturgeon habitat, have the students create a recovery or rehabilitation project/plan for Nechako white sturgeon.

Working individually or in small groups, use *Worksheet 2g - Recovery and Rehabilitation* as a starting point.

The project can be for any part of the sturgeon life cycle, a specific location on the Nechako River, it can include further research, etc. The projects should include:

- The goal of the project.
- Location of the project.
- Time line for completion of the project.
- Materials needed.

Be creative! Use craft materials etc. Encourage the plan to be colourful and clear on what they are planning and why.

Review (15 minutes)

At the end of the lesson, post the plans on the wall for the class to see.

Ask

What were some of the challenges you faced creating a recovery/rehabilitation plan?

As the students leave, provide each student with the *Home Tips for Healthy Streams* pamphlet to take home to discuss with their parents.

Recovery and Rehabilitation

Because we know more about the importance of riparian areas to the health of watersheds, some riparian zones that have been damaged due to bad land use practices get **rehabilitated** (returned to original condition) through work done by volunteer groups, businesses and governments.

Example of rehabilitation project include:

- putting rocks along a river bank to protect the bank and slow down erosion
- putting up fences along streams in agricultural lands so that farm animals can not walk in and damage the riparian zone



ACTIVITY: Open a magazine, book or go out to a local creek or lake and draw a cross-section of the riparian zone in the space below. Be specific - take note of the number and height of plants, evidence of animals, evidence of human impacts, type of stream banks etc. Circle the areas that are unhealthy in red and the areas that are healthy in green. On a separate piece of paper, describe a rehabilitation project that would improve the habitat within or along a river and how that will affect Nechako white sturgeon.

GRADE: _____ TEACHER: _____

Feedback Form for Unit 2 - Lesson 2-5

Please fill in the information below. If you have additional comments, please make them directly in the lesson plan. Please feel free to email me any immediate concerns: michelle@mrconcepts.ca.

Background Information:

Was there enough information provided to conduct the lesson successfully?
Yes or No

If no, what additional information and/or resources would be useful for this lesson?

Activities:

Were the activities engaging to the students? Yes or No

Was the timeline of the activities a good estimate?
Too Long ____ Too Short ____ Just Right ____

Any comments?

Worksheets:

Were the worksheet(s) effective in teaching and/or reviewing the lesson material?
Yes or No

Was the answer key helpful? Yes or No

Additional Resources:

If used, were the resources suggested or provided for this lesson useful? Yes or No

What else would you suggest be needed for this lesson?