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| **Course(s):**  Environmental Science 3205 |
| **Curriculum Expectations:**   * 1.28 identify reasons why some organisms become species at risk * 1.29 recognize the importance of protecting species * 1.32 recognize the process of classifying an organism as a species at risk (species at risk assessment, COSEWIC’s recommendation, government action/inaction) * 1.33 identify the COSEWIC listings that categorize species at risk * 1.34 describe the recovery process of a species at risk (research, monitoring, stewardship, education, socio-economic, recovery teams)   (<http://www.ed.gov.nl.ca/edu/k12/curriculum/guides/science/envsci3205/3205_unit_1_revised_July2010.pdf>) |
| **Overview:** Students will participate in a stakeholders meeting in order to explore the process and effects of designating all three species of wolffish in Newfoundland and Labrador. |
| **Materials:**  *Teacher*   * Wolffish SMARTBoard   *Students*   * Computers (access to the Internet) * Stakeholder assignment cards |
| **CURRA Reference:** Marine fish, local ecological knowledge and the Species at Risk Act in Canada: lessons from a case study of three species of wolffish – Jennifer Dawe (<http://www.curra.ca/documents/Report_Dawe_Marine_Fish_LEK.pdf>). For more research on this topic see “Marine wildlife of the Gros Morne national park region” – Joeseph S. Wroblewski or visit [www.curra.ca](http://www.curra.ca). |
| **Lesson Details:**  *Lesson One*   * SMARTBoard lesson on the process of classifying an organism as a species at risk (COSEWIC, SARA) and how it relates to the three species of wolffish in Atlantic Canada * Students will be split into small groups to research and prepare themselves for the “town meeting” between the science community and fisheries industry   *Lesson Two*   * Students will be given time to collaborate and finalize their arguments (2 larger groups-science community and fisheries industry) * “Town Meeting”- Teacher will act as mediator * Allow both sides to present their arguments, and then each side has a chance for rebuttal * Once both sides have been argued, ask students to think of a solution that will please both sides * Finish lesson with the actual policies put in to place regarding the wolffish |
| **Assessment:**  Discussion Questions   * What is local ecological knowledge? * How can it result in a better understanding of potentially threatened fish species? * What role does stewardship play with respect to the survival of the wolffish? * Is there a policy that can be put into place that will please both the scientific community and the fishery industry? Are the current requirements of live release enough? |
| **Notes:** |

**Town Meeting-Role Play Summaries**

**Science Community**

You are a biologist working with COSEWIC to ensure that the wolffish’s “at risk” status is still accurate for the upcoming introduction of the Species At Risk Act (SARA). You understand that the livelihood of many community members relies on the success of the fishing industry, but you also know the importance of protecting species at risk and maintaining biodiversity.

Use these questions to get you started:

1. Why is biodiversity important? How can we maintain biodiversity?
2. What is the ecological importance of the wolffish?
3. Why is the wolffish especially susceptible to anthropogenic (human) effects?

**Fishery Industry**

You are a fisherman/fisherwoman and depend on the fisheries industry to make a living and provide for your family. You understand and appreciate the need for catch quotas. You also understand the importance of protecting vulnerable species, but you are concerned that the listing of the wolffish will greatly affect your ability to use efficient fishing technologies and strategies.

Use these questions to get you started:

1. What threats does the fishing industry pose to the wolffish? How important are those aspects (strategies, equipment) to the fisheries?
2. How are wolffish and ground fisheries related? Talk about the importance of the ground fisheries to economic sustainability on the west coast of Newfoundland.