

ACTIVITY 4: RESEARCH & DESIGN LAMPREY SOLUTIONS

This activity invites students to research existing solutions, or generate novel ideas for potential solutions, for sea lamprey population control. As part of their research project, they will design a proposal for what they think is the best solution possible and defend their proposal in a town hall presentation to a group of stakeholders.

Other students can be selected to be the stakeholders, or you can also find adults to volunteer to play this role and take part in the debate on proposal presentation day. You can even consider reaching out to *Great Lakes Now* via email to get connected to some of our experts who can be stakeholders virtually to hear student presentations and ask follow-up questions about their proposals: gln@dptv.org.

First, inform students that they will be working with a small group to research solutions to control the sea lamprey population and pitch their idea to a panel of people from different roles in the community. Ask for some volunteers to recall what population control methods they remembered learning about from the *Great Lakes Now* video segment. List those ideas out for all to see. Add additional solutions to the list if students do not mention them, such as: odors, traps, barriers, lampricides, genetic engineering, and natural lamprey predators.

Then, give each group time to research one of the solutions* on their own. Encourage them to jot down notes and sketch a model of how their solution would work.

Next, have students prepare a presentation that would explain their solution and give them time to prepare for presenting to the stakeholders in the town hall.

***Teaching Tip:** You can assign a different solution to each group to research or let them choose a solution of their own to investigate.



Image Credit: Great Lakes Now

Select a panel of 4 people (students or adults) and assign each of them a different community role to "play" in the town hall, e.g., scientist, fisher, resident, business owner. Instruct the panel to be prepared to ask follow up questions.

Last, give groups 5 minutes to present their solution to the town hall panel and field questions from the stakeholder panelists. At the end of the presentation time, the panelists should each give the solution a score on a (least) 1-4 (most) scale of how likely they would be to support this solution in the Great Lakes. Add up all the scores for each presentation from all the panelists. Once all the groups have presented, tally up the scores to reveal which solution(s) had the best scores.

Once everyone knows which solution(s) had the top scores, ask students to discuss with a partner what considerations there might be for carrying out that solution on a large scale in the Great Lakes. Invite a few students to share their ideas and engage the class in dialogue about limitations of solutions when they are done at different scales.

Conclude the activity by having students complete the **Rose Thorn Bud Protocol** individually to reflect on their research proposal and presentation experience. Distribute the handout, give students 5 minutes to complete it, and then allow them time to share the ideas they generated with a partner before a whole-group shareout of roses, thorns, and buds.