Chapter 2 Problem Wrap-Up

Student Text Page
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Suggested Timing
30–45 min

Related Resources
BLM 2-13 Chapter 2 Problem Wrap-Up Rubric

Teaching Suggestions

- Have students read the Chapter Problem Wrap-Up. As a class, discuss why the government and anglers would be interested in fish populations. Allow students to use the Internet (or assign as research to be done outside of class) to find statistics pertaining to fish stocks. Suggest the Ontario Ministry of Natural Resources and the Canadian Department of Fisheries and Oceans as two places to look. Students are asked to write a report on declining fish stocks or increasing invasive species. Encourage them to include how probability and statistics are used to estimate fish and wildlife populations.

Level 3 Sample Response

The Northern Brook Lamprey is one species that is declining and therefore of special concern. The fish is found in the Great Lakes basin (except Lake Ontario) and in south-western Quebec. About 50% of streams it is known to inhabit are undergoing chemical treatment for sea lamprey which is parasitic, affecting Great Lake fisheries. If 50% of streams are chemically treated for lamprey, thereby killing the fish at the larval stage, one would expect to catch $\frac{1}{2}$ as many Northern Brook Lamprey as was previously possible.

Level 3 Notes

Look for the following:

- appropriate explanations with minor errors
- understanding of experimental and theoretical probability
- understanding of problem solving techniques
- organised solutions and clear justification of responses
- effective use of mathematical language

What Distinguishes Level 2

Look for the following:

- some appropriate explanations with some significant errors
- some understanding of experimental and theoretical probability
- some understanding of problem solving techniques, but has difficulty in applying the techniques
- somewhat organised solutions and some justification of responses
- somewhat effective use of mathematical language

What Distinguishes Level 4

Look for the following:

- appropriate and detailed explanations with very few or no errors
- thorough understanding of experimental and theoretical probability
- highly effective use of problem solving techniques
- highly organised solutions and clear, accurate, and detailed justification of responses
- highly effective use of mathematical language

Summative Assessment

- Use **BLM 2-13 Chapter 2 Problem Rubric** to assess student achievement.