

Data Collection and Analysis

Name: _____

Scientists ...

1. Ask questions: What is the impact of fish farming and sea lice on wild salmon?
2. Collect data:

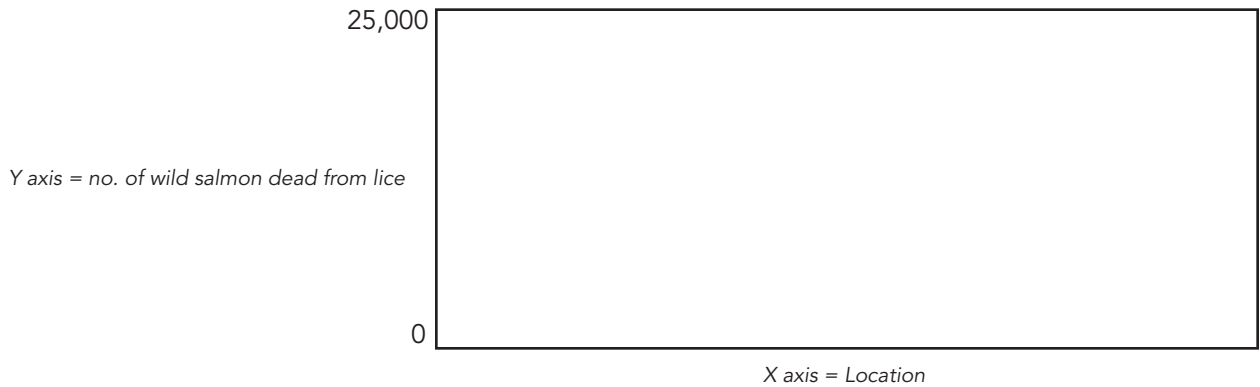
Game Round	Location	Sample Size	Number of wild salmon dead from sea lice	Percentage of sample that died from sea lice (number of dead salmon divided by sample size)
1	Away from fish farms	25,000		
2	Near fish farms	25,000		
3	Next to fish farms	25,000		

4	Number of salmon returning to spawn compared with the parent generation	<div style="border: 1px solid black; width: 100px; height: 40px; margin: 0 auto;"></div> <p style="text-align: center;">25,000</p>
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3. Display data:

Use the data from the chart above to create two bar graphs comparing the results from the three study sites.

A. Number of sampled wild salmon dead from sea lice



B. Percentage of sampled wild salmon dead from sea lice



4. Analyze data: Use the data from the bar graphs and chart to answer the following questions. Compare the number of salmon dying from sea lice at all three locations.

- How many times greater is the infestation rate (mortality) in locations **near** fish farms than away from them?
- How many times greater is the infestation rate (mortality) **next to** fish farms than away from them?
- What percentage of the wild salmon returned to spawn compared with their parents' generation? How might this affect future generations of wild pink salmon?

5. Make connections: Imagine you are a marine biologist specializing in the **orca**. Explain what the sea lice and the spawning numbers mean for orcas. Use your data to defend your ideas.
6. Inform others: What recommendations would you make to protect wild salmon and orcas? Defend your answer with your data.