

Fisheries

STEM Sims

Lesson 2: Does the Method of Fishing Affect Fishery Size?

Most people who fish for recreation like to use only one fishing line to catch fish. Many commercial fishing enterprises prefer long lines with many hooks or the use of nets. So how does the method used to fish affect fish populations in a fishery?

Doing the Science

1. You must have completed Lesson 1 and have a complete set of data for four fishing seasons for all three fishing methods (Single Line, Double Line, and Net).
2. Enter data from Lesson 1 in Table 1 below.
3. Calculate the difference in the estimated fish population from Season 1 to Season 4 for the Single Line fishing method. Record this in Table 2. Repeat this process for the Double Line and Net methods. Make sure to record this data in Table 2.
4. Calculate and record in Table 2 the percentage change in the estimated fish population from Season 1 to Season 4 for the Single Line fishing method. Do this by using the following formula:

$$\% \text{ change} = \frac{\text{Difference in fish population Seasons 1 to 4}}{\text{Season 1 fish population}} \times 100\%$$

5. Repeat the process given in step 4 for the Double Line and Net fishing methods. Make sure to record your data in Table 2.

Table 1.

	Season 1	Season 2	Season 3	Season 4
Single Line: Estimated fish population				
Double Line: Estimated fish population				
Net: Estimated fish population				

Table 2.

Fishing Method	Difference in Fish Population from Season 1 to Season 4	% Change in Fish Population from Season 1 to Season 4
Single Line		
Double Line		
Net		

Do You Understand?

1. Which fishing method has the greatest impact on the long-term size of a given fishery? What implications for the long-term health of a fishery does your answer bring to light?