

Name: EXAMPLE WORKSHEET

Date: _____

Edgelands and Fractured Forests

Exercise 2: Geometry of Edge Effects

AREA = Length x Width	PERIMETER = (2 x Length) + (2 x Width)
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1. Record the dimensions of Foster Forest in the data table below. Label your answers with the correct units.

	Length	Width	Total Perimeter	Total Area
Foster Forest				

2. In the space below, calculate the area and perimeter of Foster Forest. *Don't forget to multiply (length + width) x 2 when calculating the total perimeter!* Record your results in the table above.

3. Record the dimensions of Twin Timbers in the data table below. Label your answers with the correct units.

	Length	Width	Perimeter	Total Perimeter	Area	Total Area
Twin Timbers						

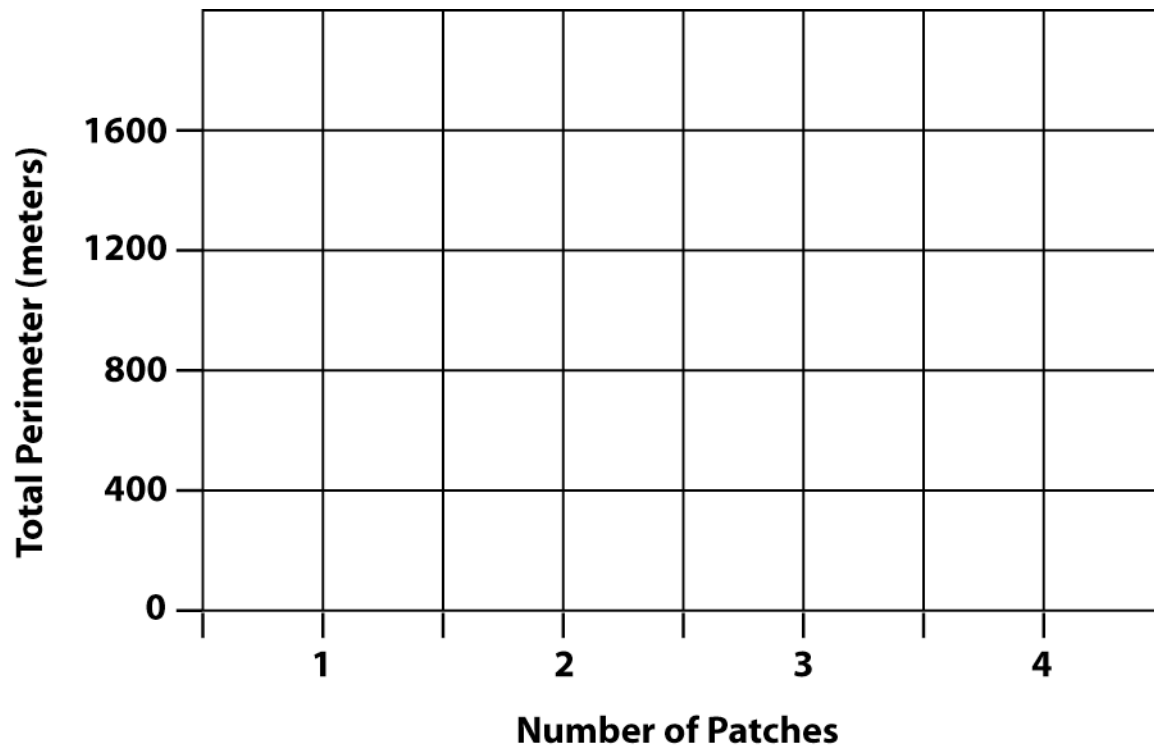
4. In the space below, calculate the TOTAL area and TOTAL perimeter of forest habitat in Twin Timbers forest. Record your results in the table above. Be sure to show your work!

5. Record the dimensions of Four Square Woods in the data table below. Label your answers with the correct units.

	Length	Width	Perimeter	Total Perimeter	Area	Total Area
Four Square Woods						

6. In the space below, calculate the TOTAL area and TOTAL perimeter of forest habitat in Four Square Woods. Then record your results in the table above. Be sure to show your work!

7. Look at your data table and make sure the **areas** of forest habitat in each of the three sites are the same. If they are different, you need to go back and check your data and math since they should be the same!
8. Make a line graph of your results below. Refer back to your data tables from Questions 1 to 6. To graph your data, find the number of patches corresponding to the data you want to record on the x axis (labeled "Number of Patches"). (Each rectangle is considered a patch. Twin Timbers would have two patches.) Then find the total perimeter you recorded for that number of patches on the y axis (labeled "Total Perimeter"). (Twin Timbers would have a total perimeter of 1200 meters.) Draw a dark dot at the point on the graph where the vertical line going up from that Number of Patches intersects with the horizontal line going to that Total Perimeter. When you've drawn all of your data points on the graph, connect the dots to create a line graph.



9. You can now analyze how the number of patches in this scenario relates to perimeter! Circle the correct word to complete the following sentence:

Even if the total area stays the same, the perimeter's length will increase/decrease as the number of patches increases.

10. Use your graph to estimate how much perimeter (edge) you would see in a forest with the same area that is broken up into 3 equal-sized patches. Label your answers with the correct units. Mark your graph with an X that shows how you came up with your estimate and record the approximate value here: _____.

11. Pretend you are a herpetologist (a biologist who studies reptiles and amphibians). If a species that you want to catch prefers to hunt along the perimeter of forest, which our three sites would you go to first? Why?
