

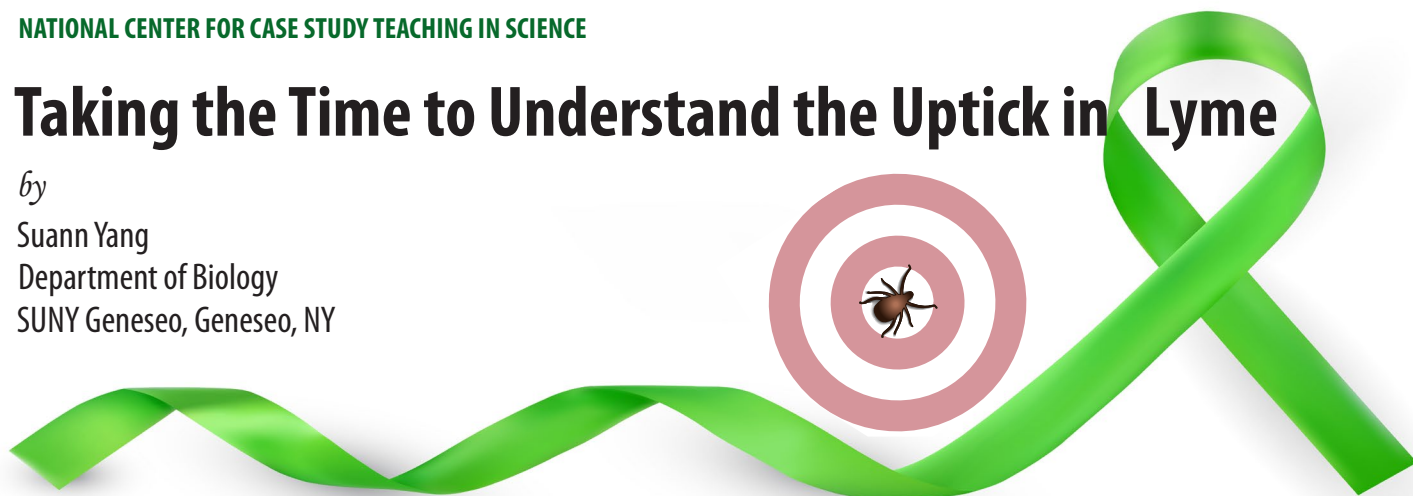
# Taking the Time to Understand the Uptick in Lyme

by

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When Ella Buss was a third grader, she suffered from mysterious severe headaches and joint pain. Her parents took her to the doctor where she was diagnosed with juvenile arthritis. Later, a blood test revealed that it was actually Lyme disease. Treatment and care of Lyme disease is relatively straightforward in the early stages, but by the time Ella's condition was correctly diagnosed, the ability to prevent neurological damage had passed.

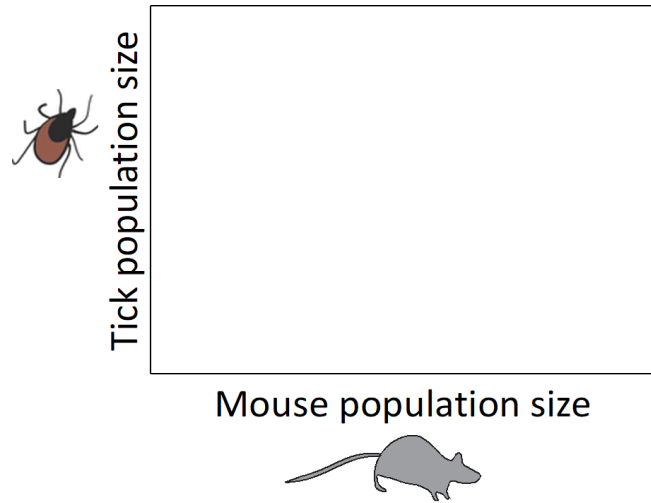
Pain is a constant for Ella, and can flare to unbearable levels. Pain interrupts her life in unexpected ways. She sometimes has to be picked up in the middle of sleepovers. Over the course of the last two years, Ella missed a considerable number of school days. Other symptoms include tiredness and sensitivity to noise. For example, if the lunch room is too noisy, she eats lunch alone.

The diagnosis was a surprise for the family, who lives in Webster, New York, a busy suburb of Rochester. Ella's mother, Jamie Buss, says that Lyme disease education in Western New York is lacking. People like the Buss family, who like to spend time outside camping and hiking, know about prevention (tick checks), but not about long term therapy. This lack of public knowledge is a concern because the number of cases of Lyme disease has been on the rise in suburban areas such as Webster.

## References

- Buss, J. 2017, May 17. A cautionary tale about Lyme disease. *Democrat and Chronicle*. <<https://www.democratandchronicle.com/story/lifestyle/2017/05/17/webster-girls-lyme-disease-started-headaches-and-things-got-worse/101788856/>>.
- Wu, A. 2018, April 16. Young girl supported by Lyme disease advocate, her mom. *Poughkeepsie Journal*. <<https://www.poughkeepsiejournal.com/story/tech/science/environment/2018/04/16/lyme-disease-mothers-journey-accidental-advocate/502103002/>>.

Work with a neighbor to sketch a graph predicting how population sizes of interacting species are related to one another.



Work with a neighbor to complete the graph templates below. Begin by dividing the work; one of you should work on the top template, and the other should choose the bottom. Spend a few minutes making a prediction and then sketch a graph on your template. Then spend about five minutes sharing your graph with your neighbor. Compare/contrast your predictions, explain the reasoning for your predictions, and make changes if necessary and be ready to report your ideas to the rest of the class.

