Public Health Intern Guide Sheet

Learning Quest

Go to <u>http://ecomuve.gse.harvard.edu/Forest_LQ.html</u>

- a. Complete the Learning Quest called Lyme Disease in the Neighborhood
- b. Based on the Learning Quest, what animals are involved in transmission of Lyme disease to humans?
 - o How do humans get Lyme disease?
 - o What animals are the main carriers of the Lyme disease bacteria?

Data Collection

a. You are responsible for collecting data on **deer ticks and small mammals.** Collect the population data for <u>deer ticks</u> and <u>small mammals</u> for each of the dates from 1975 to 2020. (*Hint: Use the population tool and the Rotting Log to measure the population of deer ticks*).

Deer Ticks

	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020
Dover										
Willis										

Small Mammals

	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020
Dover										
Willis										

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b. You are also responsible for collecting Lyme Disease Risk data. Click on the signpost on each Island on each date to find out the Lyme disease. Fill in the table below by writing high, medium, or low in each box.

Lyme Disease Risk

	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020
Dover										
Willis										

Observations and Notes

a. What kinds of small mammals did you find? Read the field guide pages for the small mammal species.
What do they like to eat? What likes to eat them? Write down notes that might help you figure out reasons for changes in the small mammal population.

b. Use the data view graphs to look at the small mammal and deer tick population data you collected. Describe any changes over time. Do they seem to be related? Write down your ideas about why these populations might have changed.

c. Look at the table you filled out above, and describe how the Lyme disease risk is changing over time on the two islands. Write down your ideas about how it might be related to other things happening around the islands.

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Collaboration

a. Why is the small mammal population changing? Is their food source (like acorns changing)? Work with the **Botanist** on your team to answer this question. Write down your ideas.

b. Is the small mammal population changing because their predators (like hawks) are changing? Work with the **Bird Watcher** on your team to answer this question. Write down your ideas.