Name:_____

Lab Partner:_____

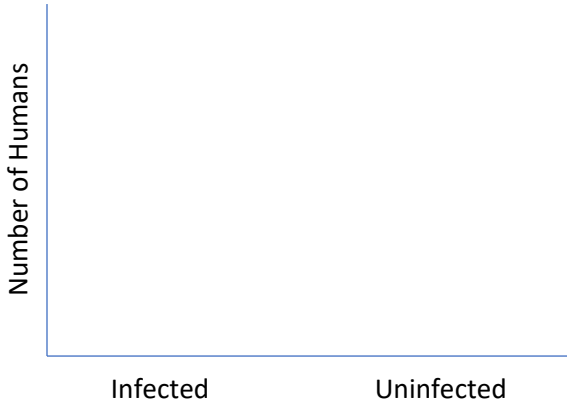
Date:_____

Going Viral STEM Kit Science Notebook

The NSEOC highly recommends students keep a science notebook for ALL science classes, but if this is not possible, all of the Science Notebook prompts from the Going Viral STEM Kit booklet are included with space for students to write, draw or sketch as needed. The page numbers reference the page in the booklet the original prompt can be found.

Part 1: Germs

Page 7 – Once al the groups have put up their data, copy the data onto the graph below. Calculate the percentage of people who became infected using the equation from the booklet.



Total Tested = _____

Part 2: How Invisible are Microbes?

Page 9 – The hair is 50 micrometers (μm) in width. Find the width of a single blood cell by using the equation in the booklet.

Part 3: Effects of Microbes

Page 13 – Identify a beneficial microbe in each category.

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Page 14 – Draw and label a diagram of both normal and damaged cells.

Part 4: Immune Response

Page 16 – What initially triggered the immune response? Explain what the difference is between T cells and memory cells. How does the immune response change when a person gains memory cells?

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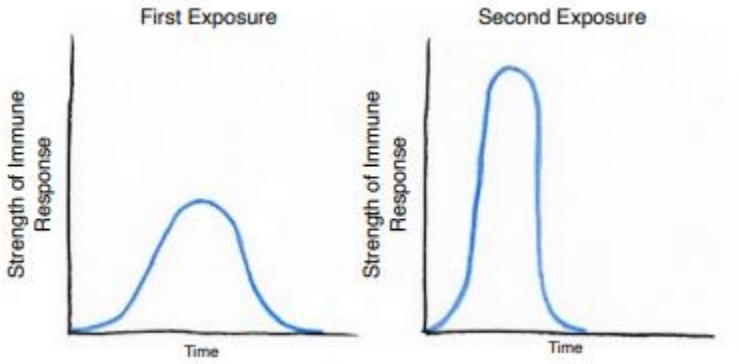
Page 17 – Using the graphs below, how does the strength of the immune response change when someone is exposed to a pathogen for a second time? How does the shortened response time with memory cells help prevent the spread of the disease?



Page 18 – Draw two new graphs showing how you expect the immune response to look when the body is exposed to a pathogen with and without receiving a vaccine.

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Part 5 – Herd Immunity

Page 19 – Predict what you think will happen now that the majority of the population has received a vaccine. How will this change the pathogen's ability to spread?

Page 20 – Calculate the percentage of people infected (as you did in part 1). How did the percentage of infected people change between the first and second simulation? Did the vaccine help?

Page 21 – From our simulation, why did the vaccine not eliminate all infections?