Biology 110 Week 10 Lab

Infectious Disease and the Immune System

## Zombie Apocalypse

Listen to the interviews on the website and use the chart below to evaluate the activities of anyone who later turned out to be infected.

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|  | Haunted House | Rides | Corn Dog | Petting Zoo | Pony Rides | Games | Exotic Bird Show | Pig Races | Stunt Show | Mosquito Bites |
| Henry |  |  |  |  |  |  |  |  |  |  |
| Ben |  |  |  |  |  |  |  |  |  |  |
| Tyler’s kids |  |  |  |  |  |  |  |  |  |  |
| Emily’s sister |  |  |  |  |  |  |  |  |  |  |
| Corine |  |  |  |  |  |  |  |  |  |  |
| Michael |  |  |  |  |  |  |  |  |  |  |
| Andrew’s family |  |  |  |  |  |  |  |  |  |  |
| Jamie’s friends |  |  |  |  |  |  |  |  |  |  |
| Whitney’s parents |  |  |  |  |  |  |  |  |  |  |
| Nathan |  |  |  |  |  |  |  |  |  |  |

1. Based on the interviews, what have you identified as the source of the outbreak?

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#### Follow-up questions:

2. Think about modes of transmission. How would the spread of a disease differ if the pathogen is airborne, foodborne, waterborne, requires physical contact like a handshake, or intimate contact like sex, or a kiss? Which types of diseases would probably spread more quickly? More slowly? Be transmitted between strangers, or between people who know one another?

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3. Which would be the most deadly mode of transmission if a terrorist was trying to

intentionally create an epidemic? Why?

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4. Why does international air travel increase the risk of a rapidly spreading pandemic?

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5. Why are schools, restaurants, movie theaters, and shopping malls likely locations for a disease to spread?

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5. Many diseases, such as the common cold, don't have visible symptoms during their most infectious stage. How does this affect their transmission?

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5. Describe a situation where certain people (the old, the young, the immune

compromised) are more "at risk" than others to a disease. Why isn't everybody equally susceptible?

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6. Why does getting vaccinated protect people who are too young or otherwise unable to get vaccinated?

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## Vaccines

Watch “The Side Effects of Vaccines” and answer the following questions:

1. What are the basic principles of vaccine use?

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1. How many cases of measles were recorded in each year of the 1950s?

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1. True or false: It has been scientifically proven that vaccines cause autism.

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1. How many people died from the measles in 2017?

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