**Section 8.1 Homework Exercises**

1. Describe two ways that the game could be changed to incorporate the idea of quarantine.
2. Describe two ways that the game could be changed to incorporate the idea of vaccination.
3. In its current form, the game assumes students come into contact with one another in school each day.
   1. How would the game change if you took weekends into account? Is this realistic? Why or why not?
   2. Some schools will close for a day to prevent further spread of a prevalent illness. Do you think this is a useful strategy? Explain.
4. In its current form, the BITS game assumes that the incubation period and the symptomatic period each last one day. Go to <https://www.everydayhealth.com/flu/guide/how-long-does-the-flu-last/#stagesoftheflu> , scroll past the information about the commone cold and read about stages of the flu.
   1. How long do each of the stages last? *(Note: you will need these answers for #2 on the next homework assignment.)*
   2. How might the BITS game be changed to better simulate an outbreak of the flu?
5. Some illnesses, such as Influenza A, are known to be highly contagious. If we consider Influenza A to be more contagious than BITS, how might we change the simulation game to accommodate this ?

1. A norovirus (which has flu-like symptoms, but is different from the flu), is also known to be highly contagious. Unlike some illnesses, because there are so many different kinds of noroviruses, being infected once does not prevent you from becoming infected again.
   1. How could the BITS game be changed to simulate the spread of noroviruses?
   2. What impact do you think this will have on the game?