

1145-J1-2856      **Brian Hollenbeck\*** (bhollenb@emporia.edu), Dept. of Mathematics and Economics, Emporia State University, Emporia, KS 66801. *The SIR Game: Modeling an Epidemic.*

The Susceptible-Infected-Recovered (SIR) model is a well-known approach for modeling the spread of a disease. It is often analyzed using data from past epidemics. The SIR game is an activity that allows students to track the spread of a “disease” within their own classroom. Initially students are assigned a color that corresponds to being either susceptible or infected. Then based on the rules of the game and the interactions of the students, the infection will spread. Eventually all students will be “recovered” and the game ends. The data from the game is collected and analyzed using the discrete version of the SIR model. The nature of the game allows the infection rate, recovery rate, and initial populations to be modified as desired. This activity is generally used to introduce the SIR model and motivate its formulas. (Received September 25, 2018)