<u>Science Fair Initial Summary</u>

For this year's science fair, I am planning to research the spread of epidemics using various phylogenetic tree software. Though the exact details have not been finalized, the viruses in study will most likely be HIV, influenza, or SARS/MERS. The project will go through the steps to construct a phylogenetic tree by first downloading all the necessary programs and data. After processing the data and making the phylogenetic tree, I will analyze the results and their impact, if any. This project, to be done to its full potential, will need lots of reading and understanding of the various mathematics and biology behind the programs (e.g. MCMC, genomes). As a result, reading will be a big part of the project as well, and much time will be put into studying various documents and resources.

In summary, phylogenetic trees will be the focus of this project, and much preparation will be done in order to produce an exceptional project.