**How can we understand and predict patterns of population change in cities around the world, using visual models such as scatterplots, spreadsheets, and linear or exponential functions?**

**How do these mathematical models help us to understand history and culture?**

**How can we use these kinds of models for making short and long-term predictions?**

**Students worked to develop their understanding of these questions, and to make arguments, which tried to address them.**

**Each Grade 10 student was assigned one American city on which to focus. They studied their city’s history and created mathematical models of the city’s population over time. They used these models along with the context of their historical research to make predictions about future population shifts!**

**Students used spreadsheets to organize their data, calculated linear and exponential equations, and created graphs to help them to visualize population trends over time. Moving between algebraic representations, tables, graphs, and verbal descriptions helps build flexibility and is a great way to examine a problem from many angles!**

**…Stay tuned!**