### **Background**

In the 60's, scientists studied the behavioral changes in mice with population increase in a controlled space. They found that the behavior of mice degraded with over population. We wanted to see what modern data said about this idea regarding humans, population density, and their happiness scores.

# Hypothesis

If the population in a country is in a high population density area, then the corresponding happiness score will be low.

#### **Data Sources**

Our data sources will be CSV files from Kaggle "World Happiness Report 2019" and "World Population Density Data 2019". These files have measures for happiness and population density per country, as well as measures of freedom, trust, social-support, life-expectancy, and GDP.

## Methods/Tools

We expect to use Python and the Pandas library to read in the csv files and create/merge/manipulate data frames. We will also use the Matplotlib library to display the relationships in our data.

## **Expectations**

We expect several of the variables to have a positive correlation with the Happiness Score; as senses of freedom, trust, life-expectancy and social-support increase, the happiness score should increase as well. However, as population density increases, we expect the happiness score to decrease.