

How hot does it get in your homes during heatwaves?

Nearly 150 people die every year in New York City due to heat related ailments. And most of the deaths are related to lack of indoor ventilation. Buildings act as a black box absorbing heat from the sun and are unable to dissipate it back in to the hot environment during summer months. This adversely increases the indoor temperature where many of the heat related fatalities occur. This summer we want to measure how high indoor temperatures get compared to ambient conditions. We will install indoor sensors that will monitor indoor temperature and humidity at multiple households in New York City. The observed data will be used to compute a heat index. This indoor values will then be compared with out door conditions. The students will be actively engaged in data collection. They will install temperature and humidity sensors both indoors and outdoors. In addition they will also use thermal imaging sensor to capture the wall temperature of the buildings. The students will use a suitable programming language to calculate the heat index. They will also conduct comparative analysis between indoor and outdoor heat indices.