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Data Sources: “U.S. Climate Resilience Toolkit” <https://toolkit.climate.gov/#tools>
“Climate Central”
<http://www.climatecentral.org/news/the-human-fingerprints-on-coastal-floods-20050>

Students will use data from Hurricane Sandy to investigate the effects of flooding and other evident information on Hurricanes in the North East. Most students lived through Hurricane Sandy and are able to recall the events of that week. This ties in a personal experience for students and they are more motivated to do research on this topic. Many people had damage to their home from flooding, wind, and power outages. The data source enhances a topic that I currently teach, hurricanes, because it allows students to use real time data to investigate an issue. Students get to apply the content knowledge that they have learned to their own real-life experiences.

I believe that using data is an excellent tool to prepare students for college and career readiness. When students are in college they are expected to use data tools and to interpret that data. Students that get a chance to experience this have a better chance of succeeding because they have been exposed to this type of learning. Being able to use the data is a skill that many people do not have so being able to teach my students this is an honor. When students click on the first link they are taken to the toolkit page of the NOAA website. This toolkit allows them to explore different options. Students can click on case studies, tools, and relevant reports. When students click on the second link they are taken to a page on coastal floods.

The data can be used to create interdisciplinary lessons because it can be applied to many other subjects. Student will be asked to make an invention to a house or building to prevent it from flooding. Students will be challenged to use the engineering design process to come up with a solution to the problem. Students will follow these engineering design process steps: empathize, define, ideate, prototype, test, and share. This will allow students to feel like scientists and engineers. They will use math to scale out their model and use it for the data integration showing flood levels. They will use engineering to build their prototype. They will define the problem, come up with ideas and test them out. This involves many skills and incorporates different disciplines for students to get the most benefit out of this project.