·Engaging Context Data Integration

Data Title: US Department of Commerce, National Weather Service North Atlantic Hurricane Tracking Sheet.

Source:https://www.nhc.noaa.gov/data/tcr/index.php?season=2017&basin=atl

Lesson Enhancement: This data enhances my topic, lesson, and unit by providing my students with real world data, pulling out the main idea of the data, and analyzing the overall story of the data. The new objectives that I can address with this data are observing models and analyzing data to learn how the interplay between atmospheric variables such as temperature, air pressure, and moisture leads to the typical and sometimes extreme weather events that humans experience. Analyzing weather data to make predictions is a key part of this unit and students' understanding of how weather patterns can help us predict future weather events. I can address atmosphere and weather variables, air masses, fronts, and global winds. The data change the teaching and learning by providing students with real time data.

Using Data: My opinion about using data in the classroom, either collected by student-observation or from another source provides ideas that can enhance student thinking. The student is able to figure the region we live in, weather station models, the difference between temperature, pressure, and density, global wind patterns, and dramatic changes in weather.

Rationale: My rationale for the use of the data source is students are able to visualize different hurricanes and explain the concepts on atmospheric variables. This data can be used to integrate across STEM content areas by analyzing the differences between weather and climate which are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns.

Interdisciplinary STEM: An example of the source used in an activity can be found in this link. The data can be integrated across stem content by analyze data using tools, technologies, and/or models (e.g.,computational, mathematical) in order to make valid and reliable scientific claims or determine an optimal design solution.