

Appendix 1: Implementing Teaching Standards

This unit incorporates the North Carolina Essential Standards for seventh grade science. It covers three standards within the weather unit. All three of these standards will be incorporated simultaneously throughout the unit, relying on each other for the successful completion of each day of the unit.

7.E.1.3 Explain the relationship between the movement of air masses, high and low pressure systems, frontal boundaries to storms (including thunderstorms, hurricanes, and tornadoes) and other weather conditions that may result.

Although students will have been formally taught this content prior to this unit taking place, it will be reviewed within their study of two famous hurricanes on day 2 of the unit. Students will be analyzing informational text within an I-chart.

7.E.1.4 Predict weather conditions and patterns based on information obtained from:

- Weather data collected from direct observations and measurement (wind speed and direction, air temperature, humidity, and air pressure)
- Weather maps, satellites, and radar
- Cloud shapes and types and associated elevations

This is the standard in which this unit centers the most closely around.

Students will be looking at myth and folk based weather predictions (cloud shapes, wind speed, sky colors) on day one. On day three students will be analyzing modern weather technologies such as satellites and radar. Students should be able to demonstrate that they understand how we came from the more basic means of weather prediction to the more advanced means of weather prediction, and that both can be valid means of predicting.

7.E.1.6 Conclude that the good health of humans requires: monitoring the atmosphere, maintaining air quality, and stewardship

Day two begins to address this standard when students can conclude that monitoring of the atmosphere and weather is a critical piece of human survival. Once students are familiar with the background knowledge of storms and meteorological forecasting, they move into covering this standard in more depth on day four. During their final project students should be able to demonstrate that we rely on weather forecasting (monitoring of the atmosphere) to do everything from plant our crops and the proper time to building our cities resistant to the winds and rains of hurricanes.