

Appendix 1: Implementing Teaching Standards

North Carolina Essential Standards

Essential Standard: Earth Systems and Processes

In Kindergarten students observe the weather throughout the entire year to develop an understanding of patterns in their natural world. The particular standard is K.E.1 Understand change and observable patterns of weather that occur from day to day and throughout the year. Daily opportunities are made for students to observe and record the weather and the changes that have occurred from one day to the next. Once a sufficient amount of data has been collected to reinforce weather concepts students can make comparisons throughout the year, including seasonal details.

Second grade provides the introduction to the causes of these weather patterns that were first observed in Kindergarten. The specific objective from the Essential Standards states 2.E.1 Understand patterns of weather and factors that affect weather. Students have opportunities to discover the impact the sun's energy has on the land, air and water. Weather conditions are collected and summarized including temperatures, wind direction, wind speed and precipitation.

Students' final year in elementary school combines all of their past investigations of weather with their understanding of science concepts across the disciplines. The essential standard states in 5.E.1 Understand weather patterns and phenomena, making connections to the weather in a particular place and time. Students use their discoveries about energy and matter to improve their understanding of weather conditions. These understandings include global patterns of wind and water affecting temperature, wind direction and speed, and precipitation.