

## Unifying Theme: Air & Weather

Essential Standards and Clarifying Objectives	
<b>2.E.1 Understand patterns of weather and factors that affect weather.</b>	
2.E.1.1 Summarize how energy from the sun serves as a source of light that warms the land, air, and water.	
2.E.1.2 Summarize weather conditions using qualitative and quantitative measures to describe: <ul style="list-style-type: none"><li>• Temperature</li><li>• Wind direction</li><li>• Wind speed</li><li>• Precipitation</li></ul>	
2.E.1.3 Compare weather patterns that occur over time and relate observable patterns to time of day and time of year.	
2.E.1.4 Recognize the tools scientists use for observing, recording, and predicting weather changes from day to day and during the seasons.	
<b>3.P.2 Understand the structure and properties of matter before and after they undergo a change.</b>	
3.P.2.1 Recognize that air is a substance that surrounds us, takes up space and has mass.	
3.P.2.2 Compare solids, liquids, and gases based on their basic properties.	
<b>1.E.1 Recognize the features and patterns of the earth/moon/sun system as observed from Earth.</b>	
1.E.1.1 Recognize differences in the features of the day and night sky and apparent movement of objects across the sky as observed from Earth.	
1.E.1.2 Recognize patterns of observable changes in the Moon's appearance from day to day.	
Unpacking	
What does this clarifying objective mean a child will know, understand and be able to do?	
2.E.1.1 Students know that light travels from the sun to the earth. Some of this light is reflected back into space, some is absorbed by the land, water and air.	
2.E.1.2 Students know that numbers are used to describe air temperature, wind speed, and the amount of precipitation that occurs. Students know that wind direction is described using cardinal directions (North, South, East, West) and numbers. Students know how to measure air temperature with a thermometer, wind direction with a wind vane or wind sock, wind speed with an anemometer, and precipitation with a rain gauge.	
2.E.1.3 Students know that over time there are patterns that can be observed in the weather and that these patterns are influenced by the time of day (cooler morning, warmer afternoon) and the time of year (seasonal changes).	

**2.E.1.4** Students are familiar with manual and electronic weather instruments, sensors, and computers as well as how they can produce a 'running record' of weather changes that occur over time by collecting and recording data. This collection of data can be analyzed as a basis for predicting weather trends.

**3.P.2.1** Students know that air surrounds us, takes up space and has mass.

**3.P.2.2** Students know that all matter exhibits properties. Students know that matter can be differentiated based on properties. Students know that solids, liquids, and gases are all made up of particles, but the behavior of these particles differ in the three states (solid, liquid, gas). Students know that solids, liquids, and gases each display unique properties characteristic of that particular state of matter. Students also know that the characteristics of particular states influence the functional applications of a given material.

**1.E.1.1** Students know that objects in the sky have patterns of movement. Students know the sun is a star that can only be seen in the daytime, but the moon can be seen sometimes at night and sometimes during the day. Students know there are more stars in the sky than anyone can count, but they are not scattered evenly, and they are not all the same in brightness or color. Students know the sun, moon and stars all appear to move slowly across the sky.

**1.E.1.2** Students know the moon looks a little different everyday but looks the same again about every four weeks. They know that the moon's observable changes follow a pattern.