The Atmosphere

Grade 8
Science
Unit 5: Cycles of the Earth
Louisiana Comprehensive Curriculum

Unit Description

This unit focuses on the Earth's atmosphere, the processes of the water cycle, and the factors that affect the rate of water movement through the cycle. The use of data to predict future weather conditions is emphasized.

Student Understandings

Students understand the structure and dynamics of Earth's atmosphere and the various cycles on which Earth's climatic conditions depend and use data to make predictions about future weather conditions.

Guiding Questions
1. Can the students identify the Sun as a primary source of energy for the water cycle?
2. Can students illustrate the water cycle and describe the processes that occur?
3. Can students explain the interactions of the processes in the water cycle?
4. Can students explain how weather instruments are used to make observations?

Unit 5 Grade-Level Expectations (GLEs)

Earth and Space Science	
23.	Explain the processes of evaporation, condensation, precipitation, infiltration, transpiration, and sublimation as they relate to the water cycle (ESS-M-A10)
24.	Investigate and explain how given factors affect the rate of water movement in the water cycle (e.g., climate, type of rock, ground cover) (ESS-M-A10)
25.	Explain and give examples of how climatic conditions on Earth are affected by the proximity of water (ESS-M-A11)
26.	Describe and illustrate the layers of Earth's atmosphere (ESS-M-A11)
27.	Identify different air masses, jet streams, global wind patterns, and other atmospheric phenomena and describe how they relate to weather events, such as El Niño and La Niña (ESS-M-A12)
28.	Use historical data to plot the movement of hurricanes and explain events or conditions that affected their paths (ESS-M-A12)
29.	Make predictions about future weather conditions based on collected weather data (ESS-M-A12)
44.	Describe how unequal heating of Earth's surface affects movement of air masses and water in the atmosphere and hydrosphere (ESS-M-C6)