

**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. Weather patterns, historical trends, and the use of data to predict future weather conditions are 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 students illustrate the water cycle and describe the processes that occur?
2. Can students explain the interactions of the processes in the water cycle?
3. Can students describe the general climate conditions of Louisiana and what affects those conditions?
4. Can students use weather maps to observe patterns and trends and be able to make weather predictions based on that knowledge?

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)
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)
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)