Weather Concept Storyline

Unifying Concept
The physical world is made of materials that can be identified by their unique properties and is organized into interconnected systems.

Unit Concept
Weather changes from day to day and season to season. Weather can be described by measurable features, such as temperature and rainfall.

Grade-Level Concept
The sun, air, and water cycle work together to give us weather. Measurements and records help us predict weather and make decisions about our daily lives.

Subconcept 1
Weather is characterized by features such as temperature, wind speed and direction, and precipitation.

Lesson 1: Pre-Unit Assessment: Sharing What We Know about Weather
Students discuss what they know and would like to know about weather.

Lesson 2: Observing the Weather
Students use their senses to observe the weather.

Subconcept 2
Weather may be quantified using tools such as thermometers, rain gauges, and wind speed and direction indicators.

Lesson 3: Recording the Weather
Students collect data on cloud cover and precipitation.

Lesson 4: Estimating Wind Speed
Students observe, describe, and record wind speed.

Lesson 5: Reading a Thermometer
Students observe and discuss thermometers as tools that measure temperature.

Lesson 6: Making a Model Thermometer
Students read and record temperature on a thermometer and relate temperatures to appropriate clothing and activities.

Lesson 7: Comparing Inside and Outside Temperatures
Students record indoor and outdoor temperatures and compile a class graph.

Lesson 8: Measuring Water Temperature
Students measure and record temperatures of hot and cold water.

Lesson 9: Experimenting with Color and Temperature
Students investigate the relationship between color and the absorption of heat.

Lesson 10: Making a Rain Gauge
Students measure the amount of rainfall using simple rain gauges.

Subconcept 3
Water exists in solid, liquid, and vapor states. Clouds and fog are made up of droplets of water.

Lesson 11: Exploring Puddles
Students learn about evaporation as they observe and record changes in a pie-tin puddle.

Lesson 13: Observing Clouds
Students observe, draw, and discuss cloud formations.

Lesson 14: Classifying Clouds
Students sort cloud pictures using their own systems and according to three defined cloud types—stratus, cumulus, and cirrus.

Subconcept 4
Understanding the elements of weather helps us plan our daily lives.

Lesson 12: Testing Rainy Day Fabrics
Students conduct experiments with fabrics to determine which materials are suitable for wearing in wet weather.

Subconcept 5
Humans can use their observations and records to understand and forecast the weather. Scientists who do this are called meteorologists.

Lesson 15: Comparing Forecasts to Today's Weather
Students make forecasts for the next day's weather and compare their predictions with what actually occurs.

Lesson 16: Summarizing Our Weather Observations
Students tally their weather data and summarize the weather characteristics over a long period of time.

Lesson 17: Post-Unit Assessment: Sharing What We Know about Weather
Students reflect on and discuss what they have learned.