

# 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.*