Grade 4	Lesson: 1-5 Weather Watchers	Reference to English
Standard(s): 1.OA.1	**Domain:**	

Content Objective(s):	Language Objective(s):

Essential Understanding:	Academic Vocabulary for Word Wall: Listen: Read: Write: Speak:
Materials: • "My Weather Book" (1 per student) • Thermometer • Weather Vane • Anemometer • Rain Gauge • Ruler • Barometer	Additional Lesson Vocabulary: Sentence Frames:
Lesson: Weather Watchers	**Instructional Time:**

Opening: (10 minutes)
Introduction:
T: What is a meteorologist? (a person who studies the Earth's atmosphere to identify patterns in climate and weather)
T: The meteorologists we watch on television go to school and study about weather, so they can report the current weather conditions and forecast weather for the future. They have many tools including computers to help them create their forecast, but are they always correct? (No)
T: We can be meteorologists too! We've been studying about weather, and we've made our own weather tools.
T: Let's watch the weather, collect data about current conditions, and predict the weather. We'll compare our results to those of the professional meteorologists.

Introduction to New Material (Direct Instruction): (7 minutes)
Weather Review:
• Briefly review with students what they have learned about weather, so they can use this knowledge to make more accurate forecasts.
• Go through the pages of their "My Weather Book" and review what has been learned about clouds, temperature, wind, precipitation, and air pressure.

Clouds:
T: Stratus Clouds: low, flat, gray clouds that look like sheets covering the sky; can produce rain, drizzle, snow, or mist
T: Cumulus Clouds: puffy and white-like cotton balls; flat on the bottom and fluffy on top; usually indicate fair weather; sometimes they grow very large and become thunderheads
T: Cirrus Clouds: thin, curly, wispy clouds; often indicate an incoming storm or weather change

Temperature:
T: Water freezes at 32°F and 0°C. Rain will change to snow.

Wind Speed and Direction:
T: Winter storms usually blow in from the north.
T: Summer storms usually blow in from the south.

Air Pressure:
T: Barometer 30 or higher usually indicates good weather.
T: Barometer below 30, there will be a change in weather.

Guided Practice: (10 minutes)
Weather Watcher Data:
• Each day use your weather tools to collect data including:
  Temperature (thermometer)
  Wind Direction (weather vane)
  Wind Speed (anemometer)
  Precipitation (rain gauge – ruler for snow)
  Air Pressure (barometer)
  Cloud Type and Cover (cloud chart and/or visual observations)
• Record the data collected and observed on the Weather Watchers Data Table in their "My Weather Book."
• Graph the temperature, air pressure, precipitation, and wind speed and direction on their respective graphs.
• Make a prediction for tomorrow's weather. Have the students record the reason for their prediction.
• Examples:
  – It is hot today, so it will probably be hot tomorrow.
  – I see stratus clouds (gray sheet), so I think it will rain.
  – The temperature is below freezing, so I think it will snow.
  – The barometer is above 30, so I think it will be nice weather.

Meteorologist Data:
• Use a website, newspaper, or recorded television news program to collect similar data from professional meteorologists.
• Record their weather data on the Meteorologists Data Table in their "My Weather Book."
• Record the meteorologist's forecast for tomorrow and reason if possible.

Independent Practice: (6 minutes)
Weather Watcher Evaluation:

Assessment: