

## Vertical Alignment of Weather and Climate

TEKS in Focus highlights key concepts and student expectations to assist educators in implementing the science Texas Essential Knowledge and Skills (TEKS). The vertical progression of a concept within the science TEKS is provided along with a side-by-side view of the changes implemented in 2024.

### Elementary School

Level of Study	Prior Science TEKS	TEKS Implemented in 2024
Kindergarten	-----	-----
Grade 1	1.8.A record weather information, including <b>relative temperature such as hot or cold, clear or cloudy, calm or windy, and rainy or icy</b> ;  1.8.D <b>demonstrate that air is all around us and observe that wind is moving air.</b>	1.10.D <b>describe and record observable characteristics of weather, including hot or cold, clear or cloudy, calm or windy, and rainy or icy, and explain the impact of weather on daily choices.</b>
Grade 2	2.8.A measure, record, and graph weather information, including temperature, <b>wind conditions, precipitation, and cloud coverage, in order to identify patterns in the data</b> ; 2.8.B <b>identify the importance of weather and seasonal information to make choices in clothing, activities, and transportation; and</b>	2.10.B measure, record, and graph weather information, including temperature and precipitation; and  2.10.C <b>investigate different types of severe weather events such as a hurricane, tornado, or flood and explain that some events are more likely than others in a given region.</b>
Grade 3	3.8.A <b>observe, measure, record, and compare day-to-day weather changes in different locations at the same time that include air temperature, wind direction, and precipitation;</b>	3.10.A compare and <b>describe</b> day-to-day weather in different locations at the same time, including air temperature, wind direction, and precipitation;
Grade 4	-----	4.10.C <b>differentiate between weather and climate.</b>
Grade 5	5.8.A <b>differentiate between weather and climate.</b>	-----

### Key Changes in Weather and Climate: Elementary

- **Grade 1:** Students are expected to describe and record weather that they can observe using their senses. The concept of making daily choices based on weather moved from grade 2.
- **Grade 2:** Students no longer study wind conditions or cloud coverage. The impact of weather on daily choices moved to grade 1. New to grade 2 is the study of types of severe weather.
- **Grade 3:** Students are no longer required to measure weather changes. Students are expected to describe the comparisons they make between different locations.
- **Grade 4 and 5:** Differentiating between weather and climate moved to grade 4 from grade 5.

## Middle School

Level of Study	Prior Science TEKS	TEKS Implemented in 2024
Grade 6	-----	-----
Grade 7	-----	-----
Grade 8	<p>8.10.A recognize that the Sun provides the energy that drives convection within the atmosphere and oceans, producing winds;</p> <p>8.10.B identify how global patterns of atmospheric movement influence local weather using weather maps that show high and low pressures and fronts;</p> <p>8.10.C identify the role of the oceans in the formation of weather systems such as hurricanes.</p> <p>-----</p> <p>-----</p>	<p>8.10.A describe how energy from the Sun, hydrosphere, and atmosphere interact and influence weather and climate;</p> <p>8.10.B identify global patterns of atmospheric movement and how they influence local weather; and</p> <p>8.10.C describe the interactions between ocean currents and air masses that produce tropical cyclones, including typhoons and hurricanes.</p> <p>8.11.A use scientific evidence to describe how natural events, including volcanic eruptions, meteor impacts, abrupt changes in ocean currents, and the release and absorption of greenhouse gases influence climate;</p> <p>8.11.B use scientific evidence to describe how human activities, including the release of greenhouse gases, deforestation, and urbanization, can influence climate; and</p>

### Key Changes in Weather and Climate: Middle School

- Grade 8:** Students expand their study of the interaction between energy from the Sun, the hydrosphere, and the atmosphere to their influence on weather and climate. Students are no longer limited to weather maps when describing weather. Additional student expectations were added to describe various influences on climate.

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*TEKS in Focus* spotlights concepts or student expectations monthly to bolster TEKS alignment, rigor, and collective understanding. It does not suggest an order or timing but helps with comprehension of TEKS changes, serving as a guide when relevant to classroom instruction.