

# Old Unit 1: Weather and Climate (Science Template)

Content Area: **Science**  
Course(s): **Science 3**  
Time Period: **October**  
Length: **4 weeks**  
Status: **Published**

## Unit Summary

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In this unit of study, students organize and use data to describe typical weather conditions expected during a particular season. By applying their understanding of weather-related hazards, students are able to make a claim about the merit of a design solution that reduces the impacts of such hazards. The crosscutting concepts of Patterns; Cause and Effect; and the Influence of Engineering, Technology, and Science on Society and the Natural World are called out as organizing concepts for these disciplinary core ideas. Students demonstrate grade-appropriate proficiency in asking questions and defining problems, analyzing and interpreting data, engaging in argument from evidence, and obtaining, evaluating, and communicating information. Students are also expected to use these practices to demonstrate understanding of the core ideas.

## Standards

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LA.W.3.1	Write opinion pieces on topics or texts, supporting a point of view with reasons.
LA.W.3.7	Conduct short research projects that build knowledge about a topic.
LA.W.3.8	Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
LA.RI.3.1	Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
LA.RI.3.9	Compare, contrast and reflect on (e.g., practical knowledge, historical/cultural context, and background knowledge) the most important points and key details presented in two texts on the same topic.
LA.SL.3.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
MA.3.MD.A.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.
MA.3.MD.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.
SCI.3-ESS3-1	Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.
SCI.3-ESS2-1	Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
SCI.3-ESS2-2	Obtain and combine information to describe climates in different regions of the world.
CAEP.9.2.4.A.2	Identify various life roles and civic and work - related activities in the school, home, and community.
CAEP.9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

## Student Learning Objectives

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Students will learn to:

- Develop a model using an analogy, to describe how weather and climate are related.
- Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
- Obtain and combine information to describe climates in different regions of the world.
- Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.

## Essential Questions

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What is the typical weather near our home?

Can we predict the kind of weather that we will see in the spring, summer, autumn, or winter?

How can climates in different regions of the world be described?

How can we protect people from weather-related hazards?

## Disciplinary Core Ideas

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Part A: Can we predict the kind of weather that we will see in the spring, summer, autumn, or winter?

- Patterns of change can be used to make predictions.
- People record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next.

Part B: How can climates in different regions of the world be described?

- Patterns of change can be used to make predictions.
- Climate describes the range of an area's typical weather conditions and the extent to which those conditions vary over years.

Part C: How can we protect people from natural hazards such as flooding, fast wind, or lightening?

- Cause-and-effect relationships are routinely identified, tested, and used to explain change.
- Science affects everyday life.
- People's needs and wants change over time, as do their demands for new and improved technologies.
- A variety of natural hazards result from natural processes (e.g., flooding, fast wind, or lightening).
- Humans cannot eliminate natural hazards but can take steps to reduce their impacts.
- Engineers improve technologies or develop new ones to increase their benefits (e.g., better artificial limbs), decrease known risks (e.g., seatbelts in cars), and meet societal demands (e.g., cell phones).
- Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria).
- Different proposals for solutions can be compared on the basis of how well each one meets the criteria for success or how well each takes the constraints into account.

