Unit 1: Weather and Climate (CTSD Template)

Content Area: **Science**
Course(s): **Science 3**
Time Period: **Quarter 1**
Length: **4 weeks**
Status: **Published**

Unit Summary

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

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.W.3.1	Write opinion pieces on topics or texts, supporting a point of view with reasons.
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.
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.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.
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

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

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?

Enduring Understandings

Students will understand that:

- weather can be monitored and tracked to identify patterns.
- there are predictable weather patterns in each season.
- the world has different climate zones, each with typical weather conditions.
- people design solutions to help protect from weather-related hazards.

Application

Students will be able to independently use their learning to:

- monitor and chart weather data.
- describe climate zones.
- create solutions to problems.

Skills

Students will be skilled at:

- recording weather data.
- using weather tools.

- identifying natural hazards.
- creating solutions to porblems.