March Climate Change

Content Area: **Social Studies**
Course(s):
Time Period: **March**
Length: **3 Weeks**
Status: **Published**

Unit Overview

Climate Change- Changes to Earth's Surface

Enduring Understandings

Edit to fit the grade level

Big Idea: Climate change causes extremes in weather, long term change in earth systems and affects populations of many multitudes of species.

Enduring Understandings: Students will be able to:

- What is weather?
- Have you experienced very hot/cold/windy/snowy/rainy weather?
- How does this type of weather affect people, animals, and plants?
- What do we need to live?
- Why is sunlight important?
- What is climate change?

Essential Questions

What is climate change and why is it important to us?

Instructional Strategies and Learning Activities

Lesson	Objective	Procedure
Insert lessons: Science Unit 5 Changes to Earth's Surface		

		Ask: What is weather?
	SWBAT:	Have you experienced very hot/cold/windy/snowy/rainy weather? How are people and animals affected by extreme weather?
Introduction to climate change:	-Identify what is climate change and how people and animals are impacted	Read aloud: <u>If Polar Bears Disappeared</u> Discuss how the polar bears are being affected.
	SWBAT:	Age appropriate explanation: Our world is protected by a layer surrounding the earth, like a blanket that keeps it just the right temperature. With global warming, there are more blankets being put around the earth. We are figuring out how to change back to the right number of Sw read fact booklet about climate change.
What is climate change?	-Identify what is climate change and how people and animals are impacted	Optional: SW draw and write a sentence about climate change in New Jersey (raised temperatures, increased flooding, ect.) or sw draw and write about 2 climate changes discussed.
	-Identify how other areas of the world are affected SWBAT:	*Create a bulletin board to create awareness.
	-Explain how leaders have an important role in our community	Read other secondary sources about climate change (library).
What can be done about climate change?	-Explain how communities come together for a common goal	Ask students for ideas.
	-Determine what makes a good rule or law	Share the ideas from the back of the book, How You can Help: <u>If Polar Bears Disappeared</u>.
	-SW make recommendations for change	

Integration of Career Readiness, Life Literacies and Key Skills

P.1	Act as a responsible and contributing community members and employee.
P.3	Consider the environmental, social and economic impacts of decisions.
9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
9.1.2.CR.1	Recognize ways to volunteer in the classroom, school and community.
9.1.2.CAP.1	Make a list of different types of jobs and describe the skills associated with each job.
P.4	Demonstrate creativity and innovation.
9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
P.5	Utilize critical thinking to make sense of problems and persevere in solving them.
9.4.2.CT.1	Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem (e.g., K-2-ETS1-1, 6.3.2.GeoGI.2).
P.7	Plan education and career paths aligned to personal goals.
9.4.2.CT.2	Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).
9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
P.9	Work productively in teams while using cultural/global competence.
9.4.2.DC.7	Describe actions peers can take to positively impact climate change (e.g., 6.3.2.CivicsPD.1).
9.4.2.IML.3	Use a variety of sources including multimedia sources to find information about topics such as climate change, with guidance and support from adults (e.g., 6.3.2.GeoGI.2, 6.1.2.HistorySE.3, W.2.6, 1-LSI-2).

Technology and Design Integration

	Individuals use computing devices to perform a variety of tasks accurately and quickly. Computing devices interpret and follow the instructions they are given literally.
8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
8.1.2.NI.2	Describe how the Internet enables individuals to connect with others worldwide.
8.1.2.NI.3	Create a password that secures access to a device. Explain why it is important to create unique passwords that are not shared with others.
8.1.2.NI.4	Explain why access to devices need to be secured.
8.1.2.IC.1	Compare how individuals live and work before and after the implementation of new computing technology.
	Individuals collect, use, and display data about individuals and the world around them.
8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.
8.1.2.DA.2	Store, copy, search, retrieve, modify, and delete data using a computing device.
	Data can be used to make predictions about the world.
8.1.2.DA.3	Identify and describe patterns in data visualizations.
8.1.2.DA.4	Make predictions based on data using charts or graphs.

Interdisciplinary Connections

	Patterns in the natural and human designed world can be observed.
LA.RI.2.1	Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
LA.RI.2.2	Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
LA.RI.2.3	Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
LA.RI.2.4	Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
LA.RI.2.5	Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
LA.RI.2.6	Identify the main purpose of a text, including what the author wants to answer, explain, or describe.
LA.RI.2.7	Explain how specific illustrations and images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
LA.RI.2.8	Describe and identify the logical connections of how reasons support specific points the author makes in a text.
LA.RI.2.9	Compare and contrast the most important points presented by two texts on the same topic.
2-PS1-4	Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.
	Examples of reversible changes could include materials such as water and butter at different temperatures. Examples of irreversible changes could include cooking an egg, freezing a plant leaf, and heating paper.
	Engaging in argument from evidence in K–2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s).
	Construct an argument with evidence to support a claim.
	Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not.
	Events have causes that generate observable patterns.
	Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.
ETS1.C	Optimizing the Design Solution
	Because there is always more than one possible solution to a problem, it is useful to compare and test designs.
	Stability and Change
	Things may change slowly or rapidly.
	Patterns
	Patterns in the natural world can be observed.
	Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.
ESS2.C	The Roles of Water in Earth's Surface Processes
	Patterns

Differentiation

- Understand that gifted students, just like all students, come to school to learn and be challenged.
- Pre-assess your students. Find out their areas of strength as well as those areas you may need to address before students move on.
- Consider grouping gifted students together for at least part of the school day.
- Plan for differentiation. Consider pre-assessments, extension activities, and compacting the curriculum.
- Use phrases like "You've shown you don't need more practice" or "You need more practice" instead of words like "qualify" or "eligible" when referring to extension work.
- Encourage high-ability students to take on challenges. Because they're often used to getting good grades, gifted students may be risk averse.

- **Definitions of Differentiation Components**:

    - Content – the specific information that is to be taught in the lesson/unit/course of instruction.
    - Process – how the student will acquire the content information.
    - Product – how the student will demonstrate understanding of the content.
    - Learning Environment – the environment where learning is taking place including physical location and/or student grouping

Modifications & Accommodations

Refer to QSAC EXCEL SMALL SPED ACCOMMOCATIONS spreadsheet in this discipline.

Benchmark Assessments

Benchmark Assessments are given periodically (e.g., at the end of every quarter or as frequently as once per month) throughout a school year to establish baseline achievement data and measure progress toward a standard or set of academic standards and goals.

Schoolwide Benchmark assessments:

Aimsweb benchmarks 3X a year

Linkit Benchmarks 3X a year

DRA

Formative Assessments

Assessment allows both instructor and student to monitor progress towards achieving learning objectives, and can be approached in a variety of ways. **Formative assessment** refers to tools that identify misconceptions, struggles, and learning gaps along the way and assess how to close those gaps. It includes effective tools for helping to shape learning, and can even bolster students' abilities to take ownership of their learning when they understand that the goal is to improve learning, not apply final marks (Trumbull and Lash, 2013). It can include students assessing themselves, peers, or even the instructor, through writing, quizzes, conversation, and more. In short, formative assessment occurs throughout a class or course, and seeks to improve student achievement of learning objectives through approaches that can support specific student needs (Theal and Franklin, 2010, p. 151).

Formative Assessments used in this unit:

Discussion

Teacher questions

projects

worksheets

Summative Assessments

summative assessments evaluate student learning, knowledge, proficiency, or success at the conclusion of an instructional period, like a unit, course, or program. Summative assessments are almost always formally graded and often heavily weighted (though they do not need to be). Summative assessment can be used to great effect in conjunction and alignment with formative assessment, and instructors can consider a variety of ways to combine these approaches.

Summative assessments for this unit:

Project based

Teacher checklist

Instructional Materials

Reading materials listed above

Internet videos

Library materials (differentiated)

Standards

6.1.2.CivicsPI.4	Explain how all people, not just official leaders, play important roles in a community.
6.1.2.CivicsPI.5	Describe how communities work to accomplish common tasks, establish responsibilities, and fulfill roles of authority.
6.1.2.CivicsPR.1	Determine what makes a good rule or law.
6.3.2.CivicsPD.1	With adult guidance and support, bring awareness of a local issue to school and/or community members and make recommendations for change.
6.3.2.GeoGI.1	Investigate a global issue such as climate change, its significance, and share information about how it impacts different regions around the world.
6.3.2.GeoGI.2	Collect data and consider sources from multiple perspectives to become informed about an environmental issue and identify possible solutions.