Level 3 Module 1: Weather and Climate

CONTENT OVERVIEW

ANCHOR PHENOMENON: 1900 Galveston Hurricane

Essential Question: **How can we prevent a storm from becoming a disaster?**

Exploring firsthand accounts and photos of the devastating 1900 Galveston, Texas, hurricane brings to life the importance of studying weather and reducing the damage caused by weather disasters.

CONCEPT 1: Weather Conditions

Focus Question: **How do we describe weather?**

Recording and graphing weather data helps us recognize weather patterns as well as how weather changes over time.

CONCEPT 2: Climate

Focus Question: **How do people know what weather to expect?**

Analyzing weather data from different places shows us how weather typically follows a pattern called climate. Understanding climate helps us make reasonable weather predictions.

CONCEPT 3: Weather Hazards

Focus Question: **How can we plan for severe weather?**

Predicting and preparing for severe weather helps us reduce damage caused by hazardous weather events.

APPLICATION OF CONCEPTS: Designing a Seawall

Using the engineering design process, we will design solutions to reduce the impact of coastal storm flooding.

SUPPORTING OUR CLASSROOM

If you have any of the items listed, please consider donating them to our class to use in our science investigations.

- Paper cups (3-ounce)
- Empty plastic bottles with lids (16.9-ounce and 0.5-liter)

SUPPORTING YOUR YOUNG SCIENTIST AT HOME

ONGOING CONVERSATIONS

Support science learning at home by having conversations about weather and climate topics. Here are some suggestions to get you started:

- Talk about how weather affects daily life and plans for the year.
- Explore the weather and climate in other locations of interest including where relatives live, previous places you have lived, and places you visit.
- Talk about how weather patterns have changed in your area over the last 5–10 years, such as whether it is drier, wetter, hotter, or colder.
- Discuss family plans for or find out about community resources related to severe weather events.

ACTIVITIES

These activities support and extend the learning going on in the classroom:

- Help your student keep a weather journal at home by recording local weather conditions or the weather conditions of a favorite place.
- With your student, research weather records for your area such as high and low temperatures or rainfall amounts. Students will enjoy searching for outlier information like the record for the warmest day in January!
- Look for signs of the season on walks or drives. For an extra challenge, work with your student to incorporate these signs into a poem.

BOOKS

Local libraries are a great resource for fiction and nonfiction books related to weather and climate. Browse the library catalog or start with these suggestions:

- *Hurricanes* by Seymour Simon
- *Tornadoes!* by Gail Gibbons
- *Red Sky at Night* by Elly MacKay

WEBSITES

Keep the learning going about weather and climate by exploring these internet resources:

- Visit the NASA Climate Kids website at https://climatekids.nasa.gov/ to see how weather impacts different aspects of life, including food and food production.
- Visit the National Weather Service website https://www.weather.gov/owlie/, and click on the Weird Weather link to learn all about interesting weather events.