Show me what you know (Proof of learning):

Complete your work and e-mail pictures (or videos) to your teachers.

Self-Assessment:

Did I complete all of the tasks?
Did I try my best?

Extra Learning Opportunities: Design your own experiment to identify whether dirt or water changes in temperature more quickly to verify the information in the reading. Find and watch some science videos about weather and climate – if you find a good one, share with your friends and/or e-mail your teacher to share with classmates.

Key Content/Modeling:

- What is a
  - Tornado
  - Cyclone
  - Hurricane
  - Blizzard
  - Heat Wave/Drought

- What causes the aforementioned events?

You Try:

- Read and Answer Questions: Pages 134-150
- Continue observations in your Weather Log!
- Lab: Make a model tornado in a bottle

Priority Standard(s):

6-ESS2-6 Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.

6-ESS3-5 Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.

What am I learning?

Describe natural hazards with regards to catastrophic weather events.

What causes catastrophic weather events to occur?

How do I know I learned?

Learning Evidence in 1-3 Descriptors

After reading I was able to apply my newly acquired knowledge to answer review questions at the end of each section.

I was able to successfully log the weather creating at least two data points for no fewer than 5 days.
April 28, 2020

**Essential Question:** What do you know about Weather and Climate on earth?

**Learning Targets:**
- I will Learn what factors make up weather.
- I will describe different types of precipitation.
- I will create a condition that produces rain.

This week you’ll get to continue investigating our final science unit for 6th grade: Weather and Climate. This week read the recommended five articles, listed below, and answer the review questions associated with each of them:

1.9 Tornado  
1.10 Cyclones  
1.11 Hurricanes  
1.12 Blizzards  
1.13 Heat Waves and Droughts

**Link to Reading packet**

In addition to reading these sections for understanding, there are a pair of hands-on science tasks that you can partake in this week to immerse yourself further in your learning.

Your first hands-on science task is to continue your weather log, sampling the actual weather around you twice a day, at least 4 times this week.

Your second hands-on science task is to create a tornado in a bottle - instructions below.
Review Questions

Answer the following questions after you have completed the readings.

1.9 Tornadoes

1. What causes the tornadoes of Tornado Alley?

2. Draw a diagram showing why tornadoes strike the middle of the U.S.

3. What circumstances led to all the tornadoes in April 2011?

1.10 Cyclones

1. What is a cyclone?

2. What are the motions of air in a mid-latitude cyclone?

3. What is a nor’easter?

1.11 Hurricanes

1. What is a hurricane? What is the eye of a hurricane?

2. How does a hurricane form?

3. Where does the storm get its energy?

4. What is storm surge?

5. Under what circumstances does a hurricane die?

6. Why was Hurricane Katrina so damaging?
1.12 Blizzards

1. What is the difference between a snowstorm and a blizzard?
2. Under what circumstances does a blizzard form?
3. What two conditions cause the largest blizzards?
4. What causes lake-effect snow?

1.13 Heat Waves and Droughts

1. How is a heat wave defined?
2. How is a drought defined?
3. How does the position of the jet stream cause a heat wave?
LAB Activity: My Own Tornado

Here's a link to a step-by-step tutorial ➔ https://www.wikihow.com/Make-a-Tornado-in-a-Bottle

Materials:

1. Empty 2 liter bottle (label removed)
2. Water
3. Dish Soap
4. Glitter or Food coloring

Instructions:

1. Fill a plastic bottle with water. Leave two inches of air at the top of the bottle. The size of the bottle doesn't matter – but the bigger the bottle, the bigger the tornado. The bigger the tornado, the easier it will be to observe the effects on the water.
2. Add dish soap. Two squirts from a bottle of concentrated soap will do.
3. Add a pinch of glitter. This step is optional, but it may make it easier to see the tornado in action. If you don't have glitter you can add food coloring.
4. Seal the bottle. If you are making a one-bottle tornado, you just need to twist the cap and seal it shut.

Make sure the bottle is sealed and airtight before you start the next step.

5. Spin the bottle. Hold it by the top or the bottom and use your wrist to shake the water in a loose circular vortex. After a few seconds of spinning, you should see the water begin to swirl in the center. This is your "tornado."
6. Ask questions:
   - Is the tornado spinning clockwise or counterclockwise?
   - How does the glitter/food color interact with the tornado?
   - Why is it spinning?