



Science Virtual Learning

7th Grade Science

Severe Weather Preparedness

April 16, 2020



7th/Science

Lesson: April 16, 2020

Objective/Learning Target:

I can explain various methods used to prepare for severe weather events.

Warm Up

Write the answers to the questions below about Hurricanes.

1. Hurricanes are a (**tropical or polar**) cyclone that has winds of 119 km per hour or higher.
2. Hurricanes that strike the United States typically form in the (**Atlantic or Pacific**) ocean north of the equator.
3. A hurricane begins over warm ocean water as a (**low or high**) pressure area, or tropical disturbance.
4. Hurricanes usually last (**a day, a week, a month**).

Warm Up **How Did You Do?**

Write the answers to the questions below about Hurricanes.

1. Hurricanes are a (**tropical**) cyclone that has winds of 119 km per hour or higher.
2. Hurricanes that strike the United States typically form in the (**Atlantic**) ocean north of the equator.
3. A hurricane begins over warm ocean water as a (**low**) pressure area, or tropical disturbance.
4. Hurricanes usually last (**a week**).

Let's Get Started-Lesson

This week we have learned about thunderstorms, tornadoes and hurricanes. Our goal today is to learn an important life skill in being prepared for severe weather conditions.

That means to be able to predict and prepare ourselves from danger based on that prediction. To help us, we can rely on scientific resources that include current observations but also rely on past learning from previous weather occurrences.

LET'S PRACTICE USING OUR PAST EXPERIENCE AND PAST OBSERVATIONS

On a piece of paper, write a sentence for each question/statement.

What is the weather like in Independence in January, July and October?

When does Independence usually experience snowfall?

When does Independence experience little or no rain?

See the next page for what I wrote about the above questions.



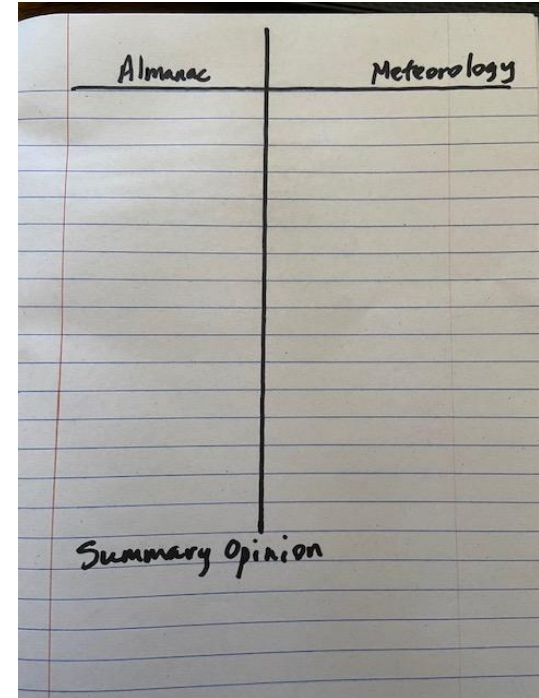
Let's Get Started-Lesson

Weather in Independence changes regularly and sometimes suddenly. In January it is often very cold and usually has some snow and ice. July in Independence is very hot and dry. It does not rain much but can be very humid. October is often very pleasant, with cooler temperatures, requiring a jacket or hoodie but sometimes very warm one week but colder the next. Independence usually has snow between November and February. Higher rainfall comes in March, April and May. Sometimes there is not much rain in July and August.

CONGRATULATIONS!! YOU HAVE JUST USED YOUR KNOWLEDGE OF PAST WEATHER PATTERNS TO KNOW AND BE ABLE TO PREDICT FUTURE WEATHER. WHAT ABOUT STORMS?

Lesson-2 Column Note Taking

On the next two slides you will be watching videos about The Farmer's Almanac and about Meteorology. Take notes about each of these methods of weather prediction. Use a lined piece of paper and divide it in half (hot dog style up/down). At the top write Farmer's Almanac on one side, and Meteorology on the other. At the bottom of the paper write your opinion about what you think is the best way to predict and prepare for weather conditions.



Lesson

The Farmers Almanac is an annual publication that provides long-range weather predictions for the U.S. and Canada. Published since 1818, the periodical provides calendars, and articles on topics such as: Full moon dates and lore, natural remedies, and the best days to do various outdoor activities. Many are simply weather sayings based on long-term observations. Sailors, farmers and others who work outdoors are usually careful observers of clouds, winds, and other signs of changes in the weather. Watch the videos below about the FARMERS ALMANAC.

[How Useful Is the Farmer's Almanac](#)
[The Old Farmer's Almanac](#)



Lesson

Weather forecasting today has become very advanced. Data is collected either from simple observations or through the use of instruments. People who know cloud formation are able to predict thunderstorms, or the arrival of a warm front. Meteorologists are scientists who study the causes of weather and try to predict it.

Click on the link below and learn what a Meteorologist Day is like

[Day in the Life of a Meteorologist](#)
[Why the World Needs Meteorologists](#)

Lesson

**Research the following types of technology used in weather forecasting and prediction.
Write down each type of technology and explain how each instrument assists with
preparing for severe weather.**

Weather Satellites
Weather Stations
Computer Forecasts
Weather Balloons
Weather Maps



Lesson-Practice Answers

Research the following types of technology used in weather forecasting and prediction. Write down each type of technology and explain how each instrument assists with preparing for severe weather.

Weather Satellites-Collect data on temperature, humidity, wind speed and provides picture of clouds and storm systems.

Weather Stations-Collects data on the ground such as wind speed temperature, rainfall.

Computer Forecasts-Uses calculations from weather stations to produce model forecasts.

Weather Balloons-Carry instruments to the up to stratosphere to measure temperature, air pressure and humidity.

Weather Maps-use symbols to explain current and developing weather conditions using data collected from weather station(s).

Lesson

Often people are surprised by changes in the weather and are frightened by the sudden possibility of a thunderstorm, flash flood or tornado. It is helpful for your family to have a plan in the event of severe weather conditions. It is a smart practice to have a guide or document to explain what to do during severe weather and can also be a used during a family “talk time” so that everyone knows what to do and can be safe.

Create a 1 page SEVERE WEATHER PREPAREDNESS poster. Select (1)one from the following:

1. thunder/lightning storm
2. severe rainfall/flash flooding
3. tornado/high winds.

Try to **include 3 do's and 3 don'ts.** Be creative and neat. Use pictures. **Share with your family.**

There are examples on the resources page at the end of this lesson, or use the internet for research.

DON'T FORGET: Include where to go, what to have with you

THUNDERSTORM SAFETY



Thunderstorm Watch - A thunderstorm is possible in the area you live in. Be prepared to move indoors.

Thunderstorm Warning - A thunderstorm is happening in the area you live in. You should be indoors at this time and away from windows.



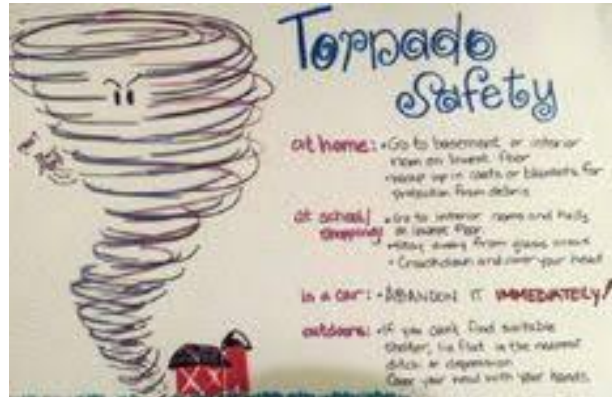
During a Thunderstorm -

- If you hear thunder or see lightning move indoors immediately. Do NOT wait for the rain to begin.
- If you can not get inside a building, stay in your car. (Make sure all windows and doors are closed.)
- If you do not have a car, crouch down in an open area. Keep your feet together and cover your ears from thunder.
- Stay as far away from trees as you can.
- Stay out of ALL water. (It can conduct electricity.)
- Do NOT touch anything metal.
- Do NOT use a telephone with a cord. (Lightning could hit a phone line.)
- Do NOT use electrical equipment like appliances or computers.
- Wait at least 30 minutes after you last saw lightning or heard thunder before returning outside.



www.cloudsandpelicans.com

Lesson-Additional Resources



Flash Flood Safety

8 Do's and Don'ts of Tornado Safety Do's and Don'ts of Lightning Safety

