



Science Virtual Learning

8th Grade Science

Severe Weather

May 14, 2020



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Lesson: May 14, 2020

Objective/Learning Target:

I can know and understand 3 major types of severe weather;
Tornadoes, Earthquakes and Hurricanes.



Bellwork

1. When you hear the words, “Severe Weather” what do you think of?
2. Think of a few examples that would be classified as “severe weather”

Today we are going to learn about 3 main types of severe weather; Tornadoes, Earthquakes and Hurricanes.



Today- Tornadoes

1. Watch [this video](#) to learn some basics info about tornadoes.
2. Watch [this video](#) to learn from a stormchaser about how tornadoes form.
3. Use the video, the next page, and online research to answer the following on a sheet of paper: (**Answers** at the end of the lesson)
 1. What are the steps for a tornado to form?
 2. What action steps should you take during a tornado watch?
 3. What action steps should you take during a tornado warning?
 4. Which is more serious - a tornado watch or warning?

How do tornadoes form? (Read these takeaways from the video)

1. A large thunderstorm occurs in a cumulonimbus cloud
2. A change in wind direction and wind speed at high altitudes causes the air to swirl horizontally
3. Rising air from the ground pushes up on the swirling air and tips it over
4. The funnel of swirling air begins to suck up more warm air from the ground
5. The funnel grows longer and stretches toward the ground
6. When the funnel touches the ground it becomes a tornado

Use [this Quizziz](#) to test yourself

Today- Earthquakes

1. Watch this video about Earthquakes
2. Read [this Earthquake article](#) and answers the questions at the end of it. (check your answers on the very last slide)
3. Play this [Quizizz](#) twice!
4. [Play this game!](#) Pack what you need to prepare for an Earthquake!





Today- Hurricane

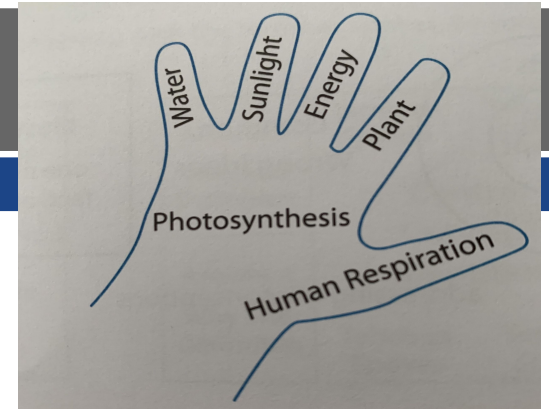
What is a hurricane?

- A hurricane is a large rotating storm with high speed winds that forms over warm waters in tropical areas.
- Hurricanes have sustained winds of at least 74 miles per hour and an area of low air pressure in the center called the eye.

How they are formed

- Hurricanes form over the warm ocean water of the tropics.
- When warm moist air over the water rises, it is replaced by cooler air.
- The cooler air will then warm and start to rise. This cycle causes huge storm clouds to form.
- These storm clouds will begin to rotate with the spin of the Earth forming an organized system.
- If there is enough warm water, the cycle will continue and the storm clouds and wind speeds will grow causing a hurricane to form.

Today- Hurricane



Grasping a concept

- Trace your non-writing hand
- In the palm area write the word “Hurricane” this is our general concept and draw a small picture to represent that
- On each of your fingers write a term or vocabulary word that goes with the concept “hurricane” use this [website](#) for terms if you get stuck
- At the end of each finger draw a picture of the term you wrote on the finger
- On the thumb you are write a term that opposes or is different then “Hurricane” so “tornado” could work. At the end of the thumb draw a picture of that term
- After you have your hand done write 3-5 sentences that explain how the information on the fingers relate and how the thumb information (tornado) is related but the opposite of your palm (hurricane)



Review

1. Click on [this link](#) to use the Extreme Weather Simulator



Practice Answers - Tornadoes

1. Answers on page 5

2. What action steps should you take during a tornado watch?

- Have a radio or TV nearby so you can receive further updates in a timely manner.
- Grab your mobile devices and a portable backup battery charger.
- Take notice of the weather conditions around you. Clouds swirling in the sky or creating shallow funnels are signs that a tornado may form. Be aware that even if a tornado does not form, severe thunderstorms pose a safety risk.
- Locate all members of your family and your pets.
- Review your plans for emergencies and natural disasters.
- Make sure your emergency supplies are accessible.

3. What action steps should you take during a tornado warning?

- Seek shelter in your pre-designated safe zone immediately. If you are not home or cannot get to your safe zone, protect yourself from flying debris under heavy furniture, such as a sturdy table, and stay clear of windows.
- (if driving) Park your car and go outside. If shelter is unavailable, lie on a low, flat area of ground with your arms over your head.
- Keep your radio, or TV tuned to a local station for updates. It is imperative to have an alternative energy source, such as batteries, in case the power goes out.
- Stay alert for sirens, but do not leave your safe zone or shelter until you receive a signal that the warning is lifted.

4. Which is more serious - a tornado watch or warning?

- A tornado warning

1. Earthquakes Article Answers
 - a. Two different events that would cause an earthquake?
 - i. **Volcanic Eruption, Big Underground Explosion.**
 - b. 3 ways tectonic plates interact with each other?
 - i. **Normal, Reverse and Slip Faults.**
 - c. What're seismic waves?
 - i. **Like waves of water, but through the Earth. It is vibrations.**