

Lesson 7: Wild Weather (2 Days)

☐ Getting Started

Colliding fronts often trigger storms. Thunder and lightning accompany many rainstorms, and stormy weather can start tornadoes and other wild weather as well. Some of the wildest weather on Earth happens during hurricanes, avalanches, mudslides, wildfires, dust storms, and floods. Fortunately, these weather-related conditions don't happen very often!

Watch the first 15 minutes of this video to see some of the devastating effects extreme weather can have on the environment.



How Does Weather Actually Work?

www.beyondthepage.com/link/13239/

Stuff You Need

- "Weather Words" booklet (kit)
- *Weather and Climate* by Kathleen M. Reilly

Ideas to Think About

- How can weather lead to a dangerous environment?
- How do dangerous weather systems impact environment?

Things to Know

- See the "Weather Words" booklet for definitions of the following words: thunderstorm, blizzard, tornado, hurricane.

☐ Reading and Questions

Read pages 62-68 in the book *Weather and Climate*. As you read, fill in the definitions for the "Lesson 7" section of your "Weather Words" booklet ("tornado" is in the glossary). Then answer the questions.

1. What causes thunderstorms?

2. What causes lightning?

3. Where do most tornadoes in the world occur?

4. Why do you hear thunder?

5. What causes a hurricane?

Activities

☐ Activity 1: Wild Weather Search

For this activity, you will explore wild weather a little more by researching a specific type of wild weather that interests you.

Choose one type of wild weather covered in today's reading, or any other extreme weather you're curious about, and learn more about it. As you research, look for answers to the questions on the "Wild Weather Search" page. Challenge yourself to find them all!

You can use books, the Internet, YouTube videos, or any other resource you have access to. National Geographic's 101 videos (for example, "Tornadoes 101" or "Hurricanes 101") are helpful. The following websites may also be useful:



Hurricanes 101 | National Geographic
www.beyondthepage.com/link/13240/



Tornadoes 101 | National Geographic
www.beyondthepage.com/link/13241/



Storms and Other Weather Events
www.beyondthepage.com/link/13242/



Famous Wild Weather
www.beyondthepage.com/link/13243/
Learn about famous storms and extreme weather events that have happened in the United States and around the world.

☐ Activity 2: Wind and Tornadoes

Watch the next 42 minutes of this video to see some of the devastating effects extreme weather can have on the environment.



How Does Weather Actually Work?
www.beyondthepage.com/link/13244/
Stop watching at the 57 minute mark.

Day 2☐ **Activity 3: Disaster Master Game**

This interactive graphic novel has facts and survival tips for wildfires, tornadoes, winter storms, earthquakes and other extreme situations. Can you survive the entire game?

**Disaster Master Game**

www.beyondthepage.com/link/13245/

Can you make it to the end? At the end of each level, write the password down. The password allows you to play the next level.

Wrapping Up

You now know how different extreme weather events, like thunderstorms, tornadoes, and hurricanes, form and how they can impact the environment. The next time you see a storm rolling in, you'll understand what's happening in the sky! Remember, even though wild weather can be dangerous, knowing how it works and how to stay safe is the best way to be prepared. Keep exploring and observing the weather around you—it's always changing!

Weather Journal: Fill out your weather journal for today. Go outside with your back to the wind and determine what the clouds are doing, just like what you saw in the video. Based on how the clouds are moving, what do you think the weather will be tonight or tomorrow?

Wild Weather Search

Directions: Research one type of wild weather. How many of these questions can you answer?

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THE SCENE

Name one area of the United States or one place in the world where this weather occurs.

THE CAUSE

What causes it or how does it form?

RESULTS

What kind of damage can it cause?

TIPS

What are two survival tips for this weather?

HISTORY

Name one famous occurrence of this weather:

date and location

MISC.

What is the most interesting thing you learned about the wild weather you researched?

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Getting Started

? Ideas to Think About

- How can weather lead to a dangerous environment?
- How do dangerous weather systems impact environment?



Things to Know

- See the "Weather Words" booklet for definitions of the following words: thunderstorm, blizzard, tornado, hurricane.

⦿ Skills

- Identify the role of the oceans in the formation of weather systems such as hurricanes. (S)
- Catastrophic events of weather systems such as hurricanes, floods, and tornadoes can shape and restructure the environment through the force and motion evident in them. (S)

Introducing the Lesson

In this lesson, your child will explore the power of wild weather, learning how storms, tornadoes, hurricanes, and other extreme weather events form. Through reading, video exploration, and hands-on activities, he will gain a deeper understanding of the forces behind these natural phenomena and how they can reshape the environment. He will also learn important safety strategies to stay prepared in case of severe weather. By the end of this lesson, he will be able to identify different types of wild weather and explain how they develop.

As your child does today's reading, he will fill in the definitions for the "Lesson 7" section in his "Weather Words" booklet. His definitions should be similar to the following:

- Thunderstorm- a storm with thunder and lighting that produces heavy precipitation.
- Blizzard- a severe snowstorm with high winds, low temperatures, and heavy snow.
- Tormando- a violent twisting column of air (found in the glossary, not in the chapter)
- Hurricanes- massive tropical storms that form over warm ocean water

Reading and Questions

1. What causes thunderstorms?

A cold air mass collides with a warm air mass and a large difference between the two temperatures causes a thunderstorm.

2. What causes lightning?

Some of the water droplets in a cloud turn to ice and start bumping into each other and rub against each other causing an electrical charge.

3. Where do most tornadoes in the world occur?

In tornado alley in the United States.

4. Why do you hear thunder?

You hear thunder because the air near the lightning heats up quickly and expands, generating a large booming sound wave.

5. What causes a hurricane?

Warm, moist air rises upward and air from the surrounding area swirls into the space and is warmed by the ocean, leading to powerful, spiraling windstorms.

Activities**Activity 1: Wild Weather Search**

Your child will research one type of wild weather. Provide guidance and help him find resources as needed. This activity is an excellent chance for him to develop his research skills. Encourage him to answer as many questions as he can independently.

Activity 2: Wind and Tornadoes

By watching the Wind section of this video, your child will learn about the science behind weather and the forces that shape it. Through Richard Hammond's experiments and visual storytelling, he will gain a better understanding of how different elements interact to create the weather we experience every day. This will help spark curiosity about the natural world and encourage him to think critically about the science behind weather patterns.

Day 2**Activity 3: Disaster Master Game**

This game introduces your child to a number of extreme weather situations and provides tips for staying safe. Encourage him to play through the entire game. This is the only activity for the day.

Wrapping Up**Questions to Discuss**

- What are some ways you can stay safe during wild weather? (Answers will vary.)
- What types of wild weather have you experienced? (Answers will vary.)
- Was there ever a time when you were scared by the weather? Explain what happened. (Answers will vary.)

Things to Review

Review that thunderstorms are caused when cold air and warm air collide, and the difference in temperature causes the storm. Discuss how lightning is caused when water droplets in a cloud start bumping against each other, causing an electric charge. Discuss some safety plans your child would recommend for your family based on the types of weather that occur in your region.