Lesson 3

Weather Hazards

I can...

Demonstrate how to stay safe in severe weather.

3-ESS3-1

Literacy Skill

Main Idea and Details

Vocabulary

storm
flood
hurricane
tornado
drought

Academic Vocabulary

impact

VIDEO

Watch a video about hazardous weather.

STEM Connection

Flash! Boom! A severe thunderstorm has hit your area. Communications systems might stop working. Roads and buildings might be damaged or destroyed. Hazardous weather conditions that cause major damage are sometimes called disasters. When a disaster occurs, the government steps in to help. The Federal Emergency Management Agency, or FEMA, serves people affected by disasters. FEMA might put up shelters, bring in food and water, help people find family members, provide access to medical help, or even more. It is important to have a lot of help in a disaster. The effects of a disaster are bigger than a person alone can fix.

Identify Who are some people in your community that might help during a major weather disaster?



LIVEWORKSHEETS



Storms

Look at clouds and you might notice they do not stay in one place very long. The atmosphere is constantly in motion. Energy from the sun and differences in air pressure cause air to move. With a lot of energy in the atmosphere and big differences in air pressure, winds can blow very fast. Sometimes, a storm can occur. A **storm** is a disturbance in the atmosphere with a lot of wind. Storms usually carry a large amount of precipitation as well. Heavy rains can cause **floods**. This means that water in certain places is too high and may be causing damage. Major storms can have a big **impact**, or effect, on an area. People design different solutions to reduce impacts.

One of the strongest and largest types of storms is a **hurricane**. Hurricanes form over warm ocean water and have very strong winds. It is important to be prepared if a hurricane comes close to your home.

Reading Check **Main Idea and Details**
Underline two details that tell why a storm can have a big impact.

Quest Connection

What are some ways that a roof can keep you safe in a storm?

_____

_____

LIVEWORKSHEETS

INTERACTIVITY

Complete an activity about severe weather.

Thunderstorms and Tornadoes

Thunderstorms are extreme storms that happen in many parts of the world. These storms have thunder and lightning. Have you have ever gotten a shock when you touched metal after walking over a carpet? If so, you have experienced the same process that causes lightning. But lightning is much stronger! Lightning happens when the electricity moves from a cloud. As the electricity moves toward the ground, it causes light and heat. The heat from lightning causes air particles to move apart very fast. That is when you hear the BOOM of thunder. Thunderstorms often come with heavy rains. They can also cause large pieces of ice, called hailstones, to fall as precipitation.

Another hazardous storm that can happen with a thunderstorm is a **tornado**—a large mass of swirling wind such as the one in the photo. Tornadoes form over land when large amounts of warm and cold air mix. Tornadoes can have the fastest winds on Earth. They swirl in a funnel that reaches from the clouds to the ground.

Explain Why are tornadoes and thunderstorms dangerous?



LIVEWORKSHEETS

Drought

The storm in the photo is not carrying rain. It is blowing a huge cloud of dust! Sandstorms and dust storms occur in very dry environments. Violent winds lift large amounts of sand or dust into the atmosphere. The storm can happen if a **drought**, or a long period with little to no rain, occurs.



A huge dust storm occurred in the United States on April 14, 1935. The storm turned daylight into a sky dark as night. In some places, the darkness was so black that people could not see their own hands! The storm traveled hundreds of miles. That day in history is now known as Black Sunday.

Write About It How can you stay safe in a storm? In your science notebook, make a plan for how you can be ready if a major storm hits your area.

Lesson 3 Check

1. **Describe** What are two ways to stay safe during hazardous weather?

2. **Identify** How can people reduce the impact of a flood?

LIVEWORKSHEETS