

# Extreme Weather

Levels



Grades K-4

## Overview:

Extreme weather is weather that occurs less than 5 percent of the time in a particular climate. During this activity, students will learn about several types of extreme weather and how to prepare for them.

## Objectives:

The student will:

- understand the meaning of extreme weather;
- know what to do in a storm or flood; and
- create a disaster preparation poster.

## GLEs Addressed:

*Science*

- [3-4] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.
- [4] SD2.2 The student demonstrates an understanding of the forces that shape Earth by identifying causes (i.e., earthquakes, tsunamis, volcanoes, landslides, and avalanches) of rapid changes on the surface.

## Materials:

- STUDENT WORKSHEET, Level I: “Weather Warning”
- STUDENT WORKSHEET, Level II: “Weather Warning”
- OVERHEAD: “Extreme Weather”

*(Download from the Classroom Lessons page of <http://www.ArcticClimateModeling.org>)*

## Activity Procedure:

1. Ask students what the word “weather” means. Allow them to brainstorm different aspects of weather—rain, snow, cold, hot, clouds, clear sky, winds, humidity, etc. Explain extreme weather is weather that does not happen very often. For example, if the local temperature reached 60 degrees in January, Alaskans would be experiencing extreme weather.
2. Explain extreme weather can cause damage to people and their communities. Different parts of the world often experience different extreme weather. It is important to learn about extreme weather that may occur in the local area, and how to prepare for these occurrences to avoid danger.
3. Show OVERHEAD: “Extreme Weather.” Describe the extreme weather and how to prepare for it.
4. Floods occur when heavy rain fills up rivers and they overflow, or when water from the ocean comes onto shore during a storm. Flooding can be a little bit of water, or it may cover a house. If one hears that a flood is occurring, tell an adult and go to high ground. Ask students where there is a high place in the village.
5. Thunderstorms usually occur in spring and summer. Thunder itself can’t hurt, but lightning can, and lightning usually comes with a thunderstorm. If one hears thunder they should go inside. Unplug electric appliances, like the television or radio. If caught outside in a thunderstorm, find a clearing away from trees or water. Lightning usually strikes high objects like buildings or tall trees that rise above the surrounding area. Thunderstorms produce rain and wind, although not as much as a hurricane. They can cause floods and large waves.

6. During a blizzard, snow and high winds occur. When there is a blizzard it can be very hard to see. If one hears there is a blizzard, they should stay inside and tell an adult. If outside when a blizzard begins, get inside as soon as possible. If one must go outside during a blizzard, they should make sure they can see their way to a safe destination. Bundle up, cover the mouth and nose and walk carefully. Remember most injuries that occur during blizzards result from getting lost in blinding snow.
7. Extreme cold is when the temperature drops below normal. For example, if the temperature dropped to  $-50^{\circ}\text{F}$ , this would be an extreme cold event. As temperatures drop and wind speed increases, heat can leave the body more rapidly. This type of weather can cause health problems. It is important to stay warm and have supplies in the house and car just in case.
8. Extreme heat occurs when temperatures are much warmer than normal. Extreme heat is most dangerous when it occurs many days in a row. This is called a heat wave. Extreme heat can cause health problems. When a heat wave occurs stay inside, stay cool, and drink lots of water. Also, avoid intense exercise.
9. Explain during extreme weather people can get stuck in their homes. Sometimes those people need help but cannot get it. Ask students if they know anyone who might get stuck in their home alone and might need help. Explain in an extreme weather event, students should tell their parents if they know someone who might be stuck alone. Calling that person on the phone to see if there is anything they need and to keep them company during a storm can be helpful.
10. Hand out the STUDENT WORKSHEET for Levels I and II: "Weather Warning." Ask students to pick an extreme weather condition to illustrate, and draw it on their worksheet. Then, ask Level I students to draw and Level II students to write one thing to remember if that extreme weather condition occurs.

## Language Links:

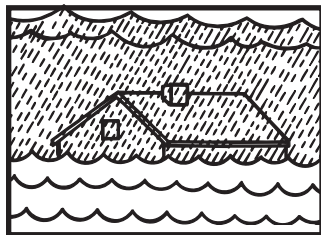
Alaska Native people have always been careful observers of the weather. Their languages are rich in words describing weather. Ask a local Native language speaker to provide the words in the local dialect for the weather phenomenon listed in the chart below. The local dialect for these words may differ from the examples provided. Share the words with students to build fluency in local terms related to weather. Include local words in songs, stories and games when possible.

English	Yupik	Inupiaq	Local Dialect
thunder	kalluk	kalluk	
lightning	kenerpallak	ignibuuqpatittuaq	
blizzards	pirtuk	agniq	

## Answers:

Answers will vary, except:

Level I: 3) c



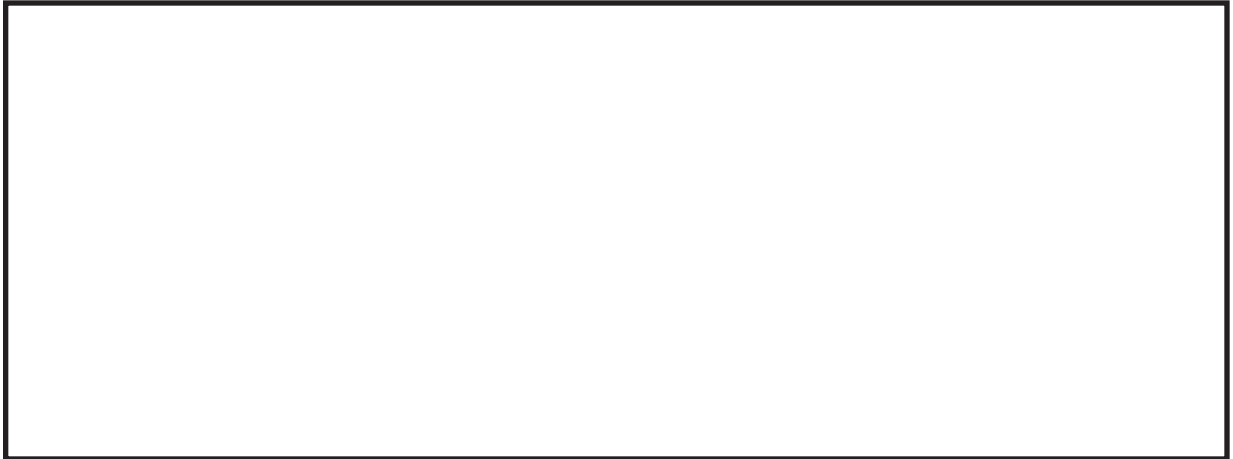
Level II: 3) d. blizzard

Name: \_\_\_\_\_

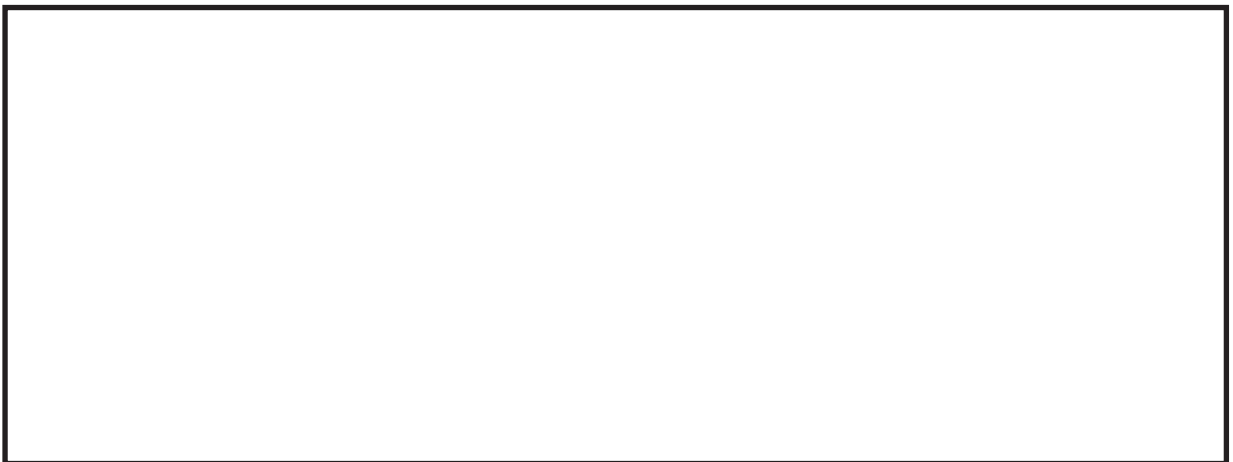
# Weather Warning Student Worksheet



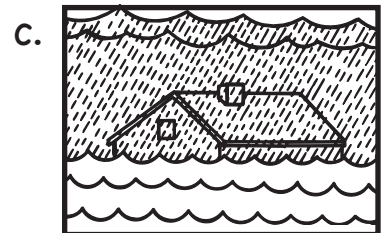
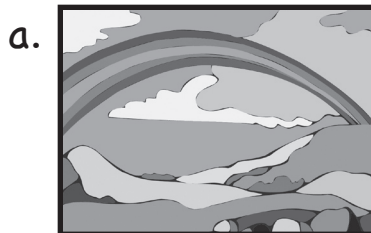
1. In the box below, draw a picture of one type of extreme weather.



2. In the box below, draw a picture of one thing you should do if that type of extreme weather occurs.



3. Circle the picture of extreme weather.



Name: \_\_\_\_\_

Level

# Weather Warning Student Worksheet



1. In the box below, draw a picture of one type of extreme weather. Label the picture.

2. What is one thing you should do if extreme weather occurs?

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3. Which of the following is a type of extreme weather?
  - a. rain
  - b. light wind
  - c. snow
  - d. blizzard

# Extreme Weather Overhead



**Floods** occur when heavy rain fills up rivers and they overflow, or when ocean water comes onto shore during a storm. Flooding can be a little bit of water, or it may cover up a house. If you hear that a flood is occurring, tell an adult and get to high ground.



**Thunderstorms** usually occur in the spring and summer. Thunder itself can't hurt, but lightning can, and lightning usually comes with a thunderstorm. If you hear thunder, go inside. Unplug electrical appliances like your television or radio. If you are caught

outside in a thunderstorm, find a clearing away from trees or water. Lightning usually strikes high objects like buildings or tall trees. Thunderstorms produce rain and wind. They can cause floods and large waves.

During a **blizzard**, snow and high winds occur. This can make it very hard to see. To be safe during a blizzard, stay inside. If you are outside when a blizzard begins, go inside as soon as possible. If you must go outside, make sure you can see your way to a safe destination. Dress in warm, winter clothes, keep your mouth and nose covered and walk carefully. Most injuries that occur during blizzards happen because people get lost in the blinding snow.



**Extreme cold** describes the weather when the temperature is colder than usual. As it gets colder and wind speed increases, your body cools more rapidly. This can cause health problems. Stay warm and keep supplies on hand just in case.



**Extreme heat** describes the weather when the temperature is much warmer than normal. Extreme heat is most dangerous when it occurs many days in a row. This is called a heat wave. Extreme heat can cause health problems. During a heat wave, try to stay inside, stay cool, drink lots of water, and avoid intense exercise.