

# NATURAL DISASTERS



GRADE **4-6**

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# Classroom Procedure:

1. Ask students: What does the word *natural* mean to you?
2. Allow for responses and discussion. Ask: What does the word *disaster* mean to you?
3. Allow for responses and discussion. Ask students to give examples of natural disasters in the world, and to explain the difference between a natural disaster and other types of disasters.
4. Allow for further responses and discussion. Introduce *Natural Disasters*.
5. Distribute *Natural Disasters* content pages. Read and review the information with the students. Save the final question for the lesson closing. Use the additional resources to enhance understanding.
6. Distribute Activity page. Read and review the instructions and the point system for assessing student's diaries or stories. Encourage creativity, but the facts must be included for each disaster. (Optional: Students may include one of the other disaster from the list of 17.) Allow time for completion and it may be assigned for homework.
7. Once completed, students share a rough draft with another student or the teacher may approve the start of the final copy. The final copies will be read to a partner. The teacher will use the rubric to assess each student's work.
8. Distribute Practice page. Check and review the students' responses.
9. Distribute the Homework page. The next day, check and review the students' responses. Ask students to correct false statements.
10. In closing, ask students: *Describe a time when you experienced a natural disaster where you lived, or knew someone who told you about a natural disaster. What was it like?*
11. Allow for responses and discussion.

Approximate Grade Level: 4 – 6

**Objectives:** The students will be able to define natural disaster, identify the different types, describe each disaster and list their effects.

**Common Core State Standards:**

LB.ELA-Literacy.SL.4.1, 1.c, 5

LB.ELA-Literacy.SL.5.1 , 1.c, 5

LB.ELA-Literacy.RST.6.4. 7, 10

**Class Sessions (45 minutes):**

At least 2 class sessions.

**Teaching Materials/Worksheets:**

*Natural Disasters* content pages (3), Activity pages, Practice page, Homework page

**Student Supplies:**

Writing paper, word processing access (optional) handouts

**Prepare Ahead of Time:**

Writing paper, Internet access for activity.

Copy handouts.

**Options for Lesson:** Students may work in pairs or in groups for the activity. Create a booklet of the stories or diaries. Assign a single natural disaster to each student to describe in a story or diary, expanding on the experience, causes, and effects. Student read aloud their stories/diaries to the class. Create 10 groups of students, each group is responsible for creating a skit related to each natural disaster, discussing it, and preparing, using the Internet if necessary. Invite parents who have experienced a natural disaster to speak to the class. Invite a meteorologist to speak with the class about natural disasters.

\*Lessons are aligned to meet the education objectives and goals of most states. For more information on your state objectives, contact your local Board of Education or Department of Education in your state.



## Teacher Notes

The lesson introduces students to the different types of natural disasters that occur throughout the world. Students are familiar with the term, *natural disaster*, but may not be familiar with the various types since many of them are rare in the United States. The lesson reviews the type, causes of, and their effects. Teachers may need to be sensitive to the feelings of students who may have been affected by a natural disaster or have lost a loved one due to its effect. In addition, stress to students that natural disasters will occur throughout the world, but with preparation, they need not live in fear. The preparation for each disaster is not included, but may be added as a supplement to the information.

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# Natural Disasters

There are two words you are quite familiar with—natural and disaster. When something is **natural**, it comes from nature and it is not manmade. A **disaster** is something that usually causes major problems. It would be a disaster if a bridge suddenly fell because it was not built properly. Sometimes you believe it is a disaster when you receive a poor grade on your test. Disasters are negative, but can be manmade.

However, when speaking about **natural disasters** you can combine the two terms and define them as catastrophes that occur in nature or by natural processes. They are not manmade. A natural disaster takes place in populated areas of the world when lives may be lost, property is severely damaged, and the economy is negatively affected.

Natural disasters include an asteroid collision with Earth, avalanche, landslide, blizzard, thunderstorm, earthquake, flood, gamma-ray burst (from space), volcano, heat wave, hurricane, solar flare, drought, tornado, tsunami, hail, and wildfire.



It is not a natural disaster if it occurs in an unpopulated area and there is no loss of life or property damage. For example, if a tsunami took place on an uninhabited island, it would not be a disaster. Disasters cause a loss. There are many things that can happen during a natural disaster. Sometimes, more than one disaster occurs at the same time. Landslides may occur during severe flooding and thunderstorms.

Natural disasters occur throughout the world, and often people know when they are coming and can prepare for them and be safe. Other disasters may occur without warning. Most people die during a natural disaster when there is no time to prepare for it. Though natural disasters cause many problems, injuries, and sometimes death, they are not to be feared, but being aware of them and properly preparing for them is extremely important.

In addition, there are natural disasters that can occur more often in one part of the world or country than in other regions. For example, a person living in the middle of the United States would not need to be concerned with a tsunami, but someone living along the coast would be affected. In the middle of the country, a tornado might occur, but often there are fewer of them along the coast.

In all, there are 17 natural disasters listed above, but there are about 10 that most likely occur throughout the world, and some of them are quite rare in the United States.

# Types of Natural Disasters

Whether you are affected by a natural disaster or not, it is important to understand them. It may not be a disaster for you, but a person who experiences one is often, if not physically harmed, affected emotionally. Sometimes kids who have survived a natural disaster have bad dreams about it later, reliving the nightmare in their sleep.[Image: a natural disaster]

It is important to think about those who have been affected, and if possible, offer help. Even in some towns, one neighborhood may experience a tornado, but a nearby neighborhood is unaffected. Almost everyone experiences, or watches on the news, one or more types of natural disasters.

## Description and Effects of 10 Natural Disasters

	Description of...	Effects of...
Blizzard	An extended snowstorm with winds at 35 mph, 3+ hours. Includes varying amounts of snow. Caused by cold air colliding with warm air.	Zero visibility, dangerous travel and movement, disruption of traffic, people freeze to death if caught outdoors, especially if trapped in cars
Drought	One of the worst, caused by lack of rain over a long period of time. Decrease in water supply; human activity can lead to droughts, such as deforestation.	Water shortage, dust bowls and storms, lack of crops, famines, hunger, dehydration, malnutrition, starvation, wildfires, and more
Earthquake	A sudden violent movement of the earth's crust. The <b>magnitude</b> , strength of, may be minor w/ tremors, or major, toppling buildings, bridges, and more.	Death of humans and animals, property destruction and damage, tsunamis, fires, landslides, avalanches, floods, economic losses, and more
Flood	Land covered in water usually where there is no water. Caused by heavy rains, melting ice and snow, overflowing rivers and other bodies of water.	Besides loss of life, tremendous property damage, loss of homes, cars, businesses; contamination of water supply, loss of farmland
Heat Wave	Higher than normal temperatures in a region, high pressure in the atmosphere builds up, holding in hot air on the earth's surface, less chance of rain.	Health of people affected, people drink less water resulting in dehydration, heat exhaustion, and other illnesses; strain on electricity, roads buckle, plant loss
Hurricane	A giant swirling storm, accompanied by severe thunderstorms, winds up to 160 mph, also known as <b>typhoon</b> ; occur specific times of the year.	Damage to coastlines, loss of life, flooding, heavy thunderstorms, high winds cause damage like a tornado, property loss and damage of all kind

	Description of...	Effects of...
Thunderstorm	Includes lightning, powerful storms, higher winds, usually heavy rain but not always, may include hail, sleet, and snow; surge of moist and warm air	Danger from lightning strikes, large hail stones or high winds can cause property damage, some may turn into tornadoes
Tornado	Destructive column of air that rotates, many shapes and sizes, wind speeds 100 to 300 mph, occurs over land or sea, appear as a funnel.	Large amount of property damage, some loss of life if no time to take cover, flying debris causes further damage, traumatic and very loud
Tsunami	Giant water waves that cause a surge onto land reaching heights of up to 100 feet, usually oceans, but can occur with lakes, caused by underwater quakes.	Loss of life and devastating property damage, includes ship wrecks, animals washed onto shore, damage to farmland, economic decline in region
Wildfire	Forest, bush, or brush fires; dangerous and unpredictable; most started by man; dry weather, fuel and heat source needed; strong winds cause spreading.	Loss of forests, habitats for wildlife, destruction of homes, some deaths of firefighters and those not leaving their homes; short-term pollution

All natural disasters cause damage and destruction, and often one or more people die due to the effects of the natural disaster. Many of the disasters can be predicted ahead of time with some warnings given for people to prepare and move to safety.

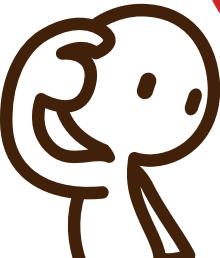
For example, meteorologists can often predict the formation of a tornado and send out warnings to people to either head to an underground room or to take cover in another safe place. Those that are most unpredictable include earthquakes, and there have been many instances of flash flooding when heavy downpours of rain occur in a short period of time trapping people in their homes or cars.

Other natural disasters include **landslides** and **avalanches**, which can be caused by earthquakes, heavy rain or snow, or other disasters. Snow or mud can be released from the side of a mountain or hillside burying the area below. Finally, there are active **volcanoes**, which are eruptions of a mountaintop, sending out ash clouds, lava, and more, causing damage to property and the loss of human life.

The most common types of natural disasters in the world are floods and storms.



**Describe a time when you experienced a natural disaster where you lived, or knew someone who told you about a natural disaster. What was it like?**





Name \_\_\_\_\_

Date \_\_\_\_\_

## Instructions

1. Writing Activity: You are traveling through a country, it could be real or imaginary. As you travel, you experience each of the **10 natural disasters** from the content pages.
2. The information may be presented using one of the following methods:
  - a. In diary form, which will include the location, day, date and time specifically given with your experiences.
  - b. Written as a story, using your imagination, but the facts of the disasters must be true
3. As a person reads this diary or story, they should be able to experience in their minds and learn about each of the natural disasters.
4. Be creative. You may be alone or with another person. The details must include the following for each natural disaster:
  - a. The type
  - b. What the likely causes may be
  - c. Your experiences during the disaster
  - d. The effects of the disaster, including during and after
  - e. In addition, you may include how you are traveling from place to place, in a car, airplane, boat, etc.
  - f. Include a creative title for the story or diary
12. If necessary, you may access the Internet or other sources for more information about the natural disasters.
13. Before beginning a final copy of the story or diary, create a rough draft to share with another student or the teacher. Check for spelling, grammar, sentence structure, etc.

### Your grade will be based on the following point system:

- | <u>Item</u>   | <u>Point Value</u> | <u>Your Points</u> |
|---|--------------------|--------------------|
| All instructions followed for the writing assignment, title included      | 5                  |                    |
| Each natural disaster type is experienced in the story or diary           | 10                 |                    |
| The causes of every natural disaster can be clearly identified            | 20                 |                    |
| Character in the story or diary explains the experiences he/she is having | 15                 |                    |
| Effects of each natural disaster is clearly identified                    | 20                 |                    |
| Proper use of grammar, punctuation, and sentence structure                | 15                 |                    |
| The diary or story is written creatively and is interesting to read       | 15                 |                    |

**Total Points****100**



# Practice

Name \_\_\_\_\_ Date \_\_\_\_\_

Tell the natural disaster each statement describes on the line provided.

- 1 Giant water waves that cause a surge onto land, up to 100 feet.  
\_\_\_\_\_
- 2 Destructive column of air that rotates, occurs over land or sea.  
\_\_\_\_\_
- 3 Loss of homes, cars, businesses; contamination of water supply.  
\_\_\_\_\_
- 4 Higher than normal temps, high pressure in atmosphere build up.  
\_\_\_\_\_
- 5 An extended snowstorm with winds at 35 mph, 3+ hours.  
\_\_\_\_\_
- 6 Caused by heavy rains, melting ice and snow, overflowing rivers.  
\_\_\_\_\_
- 7 A sudden violent movement of the earth's crust.  
\_\_\_\_\_
- 8 Forest, bush, or brush; dangerous, unpredictable, dry weather.  
\_\_\_\_\_
- 9 Damage to coastlines, loss of life, flooding, heavy thunderstorms.  
\_\_\_\_\_
- 10 Loss of life if no time to take cover, flying debris causes damage.  
\_\_\_\_\_
- 11 Lightning, powerful storms, higher winds, usually heavy rain.  
\_\_\_\_\_
- 12 Loss of forests, habitats for wildlife, destruction of homes.  
\_\_\_\_\_
- 13 One of the worst, caused by lack of rain over a long period of time.  
\_\_\_\_\_
- 14 Danger from lightning strikes, large hail stones or high winds.  
\_\_\_\_\_
- 15 Resulting in dehydration, heat exhaustion, and other illnesses.  
\_\_\_\_\_
- 16 Ship wrecks, animals washed onto shore, damage to farmland.  
\_\_\_\_\_
- 17 Zero visibility, dangerous travel and movement, disruption of traffic.  
\_\_\_\_\_
- 18 Property destruction and damage, tsunamis, fires, landslides.  
\_\_\_\_\_
- 19 A giant swirling storm, accompanied by severe thunderstorms.  
\_\_\_\_\_
- 20 Water shortage, dust bowls and storms, lack of crops, famines.  
\_\_\_\_\_



# Homework

Name \_\_\_\_\_ Date \_\_\_\_\_

**Answer each question.**

1. What is the difference between a manmade disaster and a natural disaster? Explain using an example:

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2. When is one of the 10 events listed as a disaster, not a disaster? Explain. \_\_\_\_\_

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3. Besides physical damage and loss of life, what is another effect of a disaster on a human? Explain.

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4. Define natural disaster: \_\_\_\_\_

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5. Name 5 other natural disasters besides one of the ten given in the content: \_\_\_\_\_

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# Homework

Name \_\_\_\_\_ Date \_\_\_\_\_

Tell whether each statement is True (T) or False (F).

- 6      Natural disasters only take place in large populated areas.

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- 7      A natural disaster caused by man is technically not a natural disaster.

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- 8      The definition of disaster may vary depending on how it effects the person experiencing it.

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- 9      Natural disasters take place throughout the world.

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- 10     The most common types of natural disasters in the world are tsunamis and earthquakes.

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- 11     Most people have never experienced or heard of a natural disaster.

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- 12     Landslides and avalanches may be caused by earthquakes.

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- 13     Preparing for a natural disaster is important to remaining safe if it occurs.

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- 14     A volcano or wildfire usually does not cause loss of human life.

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- 15     Natural disasters can never be predicted ahead of time.

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Tell the natural disaster each statement describes on the line provided.

- |   |              |
|---|--------------|
| 1 Giant water waves that cause a surge onto land, up to 100 feet.         | tsunami      |
| 2 Destructive column of air that rotates, occurs over land or sea.        | tornado      |
| 3 Loss of homes, cars, businesses; contamination of water supply.         | flood        |
| 4 Higher than normal temps, high pressure in atmosphere build up.         | heat wave    |
| 5 An extended snowstorm with winds at 35 mph, 3+ hours.                   | blizzard     |
| 6 Caused by heavy rains, melting ice and snow, overflowing rivers.        | flood        |
| 7 A sudden violent movement of the earth's crust.                         | earthquake   |
| 8 Forest, bush, or brush; dangerous, unpredictable, dry weather.          | wildfire     |
| 9 Damage to coastlines, loss of life, flooding, heavy thunderstorms.      | hurricane    |
| 10 Loss of life if no time to take cover, flying debris causes damage.    | tornado      |
| 11 Lightning, powerful storms, higher winds, usually heavy rain.          | thunderstorm |
| 12 Loss of forests, habitats for wildlife, destruction of homes.          | wildfire     |
| 13 One of the worst, caused by lack of rain over a long period of time.   | drought      |
| 14 Danger from lightning strikes, large hail stones or high winds.        | thunderstorm |
| 15 Resulting in dehydration, heat exhaustion, and other illnesses.        | heat wave    |
| 16 Ship wrecks, animals washed onto shore, damage to farmland.            | tsunami      |
| 17 Zero visibility, dangerous travel and movement, disruption of traffic. | blizzard     |
| 18 Property destruction and damage, tsunamis, fires, landslides.          | earthquake   |
| 19 A giant swirling storm, accompanied by severe thunderstorms.           | hurricane    |
| 20 Water shortage, dust bowls and storms, lack of crops, famines.         | drought      |



# Homework

Name \_\_\_\_\_

## Answer Key

Date \_\_\_\_\_

**Learn**  
BRIGHT

### Answer each question. (will vary)

1. What is the difference between a manmade disaster and a natural disaster? Explain using an example:

A manmade disaster may be one which causes property damage and other problems just like a natural disaster, but it is caused by man, such as deforestation, leading to flooding in an area. A natural disaster occurs naturally whether man exists or not.

2. When is one of the 10 events listed as a disaster, not a disaster? Explain. It is not a natural disaster when one of the events occurs and no one is injured or killed and there is not property damage.

3. Besides physical damage and loss of life, what is another effect of a disaster on a human? Explain.

Due to the trauma of a disaster, some people experience psychological issues, have bad dreams, may become scared during regular storms or during windy conditions, etc.

4. Define natural disaster: Catastrophes that occur in nature or by natural processes, takes place in populated areas of the world when lives may be lost, property is severely damaged, and the economy is negatively affected.

5. Name 5 other natural disasters besides one of the ten given in the content: avalanche, landslide, gamma-ray burst, volcano, solar flare, hail

### Tell whether each statement is True (T) or False (F).

6 F Natural disasters only take place in large populated areas.

7 T A natural disaster caused by man is technically not a natural disaster.

8 T The definition of disaster may vary depending on how it effects the person experiencing it.

9 T Natural disasters take place throughout the world.

10 F The most common types of natural disasters in the world are tsunamis and earthquakes.

11 F Most people have never experienced or heard of a natural disaster.

12 T Landslides and avalanches may be caused by earthquakes.

13 T Preparing for a natural disaster is important to remaining safe if it occurs.

14 F A volcano or wildfire usually does not cause loss of human life.

15 F Natural disasters can never be predicted ahead of time.