

### AUDIENCE

New residents to a tornado prone area

### TOPIC

Tornado Preparedness

### TIME NEEDED

60 minutes

### LEARNING OBJECTIVES

1. At the completion of this lesson, at least 90% of participants will be able to list at least 2 steps to take during a tornado on a post-test assessment..
2. At the completion of this lesson, at least 75% of participants will be able to define a tornado watch and a tornado warning on the post-test assessment.

### MATERIALS NEEDED

- Wifi
- (1) Computer
- (1) Powerpoint presentation
- Email Access
- Zoom or other online meeting platform
- Appendix A (“Act Fast! Act Now!” Downloadable worksheet)
- Appendix B (Post Assessment)
- Guest speaker, who is local and can discuss resources available in the area
- Breakout rooms

### PREPARATION

Prior to the session, load the PowerPoint presentation on to the computer. Email the participants the link to the online Zoom session and include the group activity worksheet attachment and the Google form link to the post-test in this email. Have the poll question on Zoom set up for the opening discussion in the beginning of the presentation. Make sure the YouTube video is loaded and ready to play. Create breakout rooms of 4 people in each room for the group activity.

# Tornado Preparedness

Bixler & Felix

## Introduction (5 minutes)

### PowerPoint Slides 1, 2, & 3

- 1.) Introduce yourself to the audience and state that you will be going over emergency preparedness for tornadoes and how to prevent injury and damage.
- 2.) State the overall objectives for the lesson.
  - a.) Say *“By the end of the presentation, you will be able to list at least 2 steps to take during a tornado and you will be able to define a tornado watch and a tornado warning”*
- 3.) Start the Zoom poll and ask the audience to answer the question that pops up on their screen *“Has anyone here ever experienced a tornado before?”*.
  - a.) End the poll and present the responses to the poll which will be a percentage of “Yes” and “No” answers.
  - b.) Wrap up the poll by saying *“For those of you who have experienced a tornado, you may have some experience to add to our lesson today, but we hope this information will keep all of you safe moving forward”*.
4. Go over what this workshop will discuss:
  - a. *“This workshop will help you define important tornado related terminology and identify different strategies to prevent damage and injury from tornadoes.”*

### PowerPoint Slides 4, 5, 6, & 7

#### Activity 1: Important Definitions & Overview (5 minutes)

- 1.) Instruct students to raise their hand, unmute themselves and talk, or type in the chat their answer to the question “What do you know about tornadoes?”
  - a.) Allow a few students to participate, and read aloud any answers sent through the chat.
- 2.) Move on to slide 5 to start discussing the different tornado definitions.
  - a.) Tornado: A column of air that touches the ground and is usually found at the base of a thunderstorm. Tornadoes are considered the most violent storm. Some are clearly visible, and others may be hidden in rain and/or low hanging clouds. They develop rapidly, and often disappear just as quickly.
  - b.) Tornado Alley: An area in the southern plains of central United States that experiences a constant high frequency of tornadoes every year. The tornadoes that occur in this region typically occur in the late spring and early fall. The boundaries are debatable depending on criteria, but are considered to be from central Texas, north to northern Iowa, and from central Kansas and Nebraska on the east to Ohio on the western side (National Oceanic and Atmospheric Administration, n.d.).
- 3.) Talk about how living in Tornado Alley means they are at a higher risk of experiencing a

# Tornado Preparedness

Bixler & Felix

tornado.

- 4.) Next, move on to slide 6 to discuss the difference between a tornado watch and a tornado warning.
  - a.) A tornado watch is issued when weather conditions favor the formation of a tornado. This would occur during a thunderstorm for example.
  - b.) A tornado warning is issued when a tornado funnel is actually sighted or indicated by weather radar. This warning means you should seek shelter immediately.
  - c.) Discuss how it is important to know the difference between the two and that when a tornado warning is issued, shelter should be sought immediately.
- 5.) Next, move on to slide 7 and discuss the dangers of being in a tornado.
  - a.) The dangers of being in a tornado include hazards from high winds and the risk of being struck by flying or falling objects. The damage left behind after a tornado also poses additional risk of injury.
- 6.) This will wrap up the important definitions & overview.

## Powerpoint Slides 8, 9, 10, 11, 12, & 13

### Activity 2: Preventing Injury & Damage from a Tornado (20 minutes)

- 1.) Play this YouTube video for the class: Get Weather Ready: During a Tornado [https://www.youtube.com/watch?v=\\_\\_5TiTfuvotc](https://www.youtube.com/watch?v=__5TiTfuvotc) (2 minutes). The video will go over some of the ways to stay safe during a tornado and steps to take when a tornado hits.
- 2.) Directly after the video, place students in breakout rooms on Zoom in groups of 4. Each group should have the “Act Fast, Act Now” group activity worksheet that was sent via email. You should also send the file through the chat. Allow students 5-8 minutes to fill out the worksheet as a group.
- 3.) Give the students a 1 minute warning in their breakout rooms and then come back together in the main Zoom room to discuss the activity.
- 4.) For each scenario, ask 1-2 groups to share how they responded by unmuting and talking outloud or by typing their responses in the chat.
  - a.) If any correct answers were not shared by the students, make sure to read them from the activity answer key as well.
- 5.) Move on to slides 10 & 11 discussing the different ways to take shelter to prevent injury and damage at different locations.
  - a.) To prevent injury and damage from a tornado: At home: avoid windows, go to basement if possible, if not, go to a room on the lower floor with no windows
  - b.) In a mobile home: Do not stay in a mobile home during a tornado as they can easily turn over with strong winds. Try to plan ahead if you live in a mobile

# Tornado Preparedness

Bixler & Felix

- home so you have a building or a lie flat in the nearest ditch, ravine or culvert
- c.) On the road: one of the worst places to be during a tornado, but it is important not to try to outrun the tornado. If you see a tornado coming, stop your car, but do not go outside or go under the car.
  - d.) Outdoors: if you are stuck outside during a tornado, avoid areas with lots of trees and protect your head and neck with your hands.
  - e.) In public places: move away from windows, go to the innermost part of buildings, do not use elevators, and remember to protect your head.
- 6.) Tell the students it is important to take shelter no matter where they are.
- 7.) Move on to slides 12 & 13 further information about preparation and important steps to prevent injury and damage.
- a.) Stay informed on local storm watches and warnings.
  - b.) Develop a tornado emergency plan and make sure everyone involved knows how to exit, take shelter, and locate emergency supplies
  - c.) Store important documents safely, reduce household hazards, and assemble a first aid kit.
- 8.) This should wrap up “preventing injury and damage from a tornado”.

## Powerpoint Slides 14 15, 16, 17, & 18

### Activity 3: Post- Tornado Safety & Community Resource Guest Speaker (20 minutes)

- 1.) Go over slide 14 on what to avoid post-tornado.
  - a.) Stay away from damaged power lines and buildings.
  - b.) Avoid flooded areas.
  - c.) Do not use matches or lighters as you never know where a gas leak may be.  
You don't want to cause a fire.
- 2.) Move on to slide 15 and instruct the students to brainstorm individually.
  - a.) Ask: “What are some of the relief and recovery resources that are needed after a tornado hits a town”.
  - b.) Give them 2-3 minutes to brainstorm
  - c.) Ask 2-5 students to share what they think by raising their hand, unmute themselves and talking, or by typing in the chat.
- 3.) Move on to slide 16 and Introduce the guest speaker who will discuss tornado relief and recovery resources available in the area.
- 4.) Use slide 17 and 18 during the guest speaker portion.
  - a.) The guest speaker will describe the specific resources for local residents.

## Powerpoint Slide 19

### Activity 4: Post- Workshop Assessment (5 minutes)

- 1.) Tell the students they will be completing a post assessment to assess what they have learned from this workshop.
- 2.) Instruct students to open the link for “Tornado preparedness post assessment.” The link should have been sent in the invite emailed and should also be sent through the chat box on Zoom.
- 3.) Give students 5 minutes to complete the assessment.
- 4.) Ask students if they had any difficulties answering the questions.
- 5.) Go over the post assessment with the class and provide the correct answers.
- 6.) Ask the students if they have any further concerns about Tornado safety.

## Powerpoint Slide 20

### Conclusion (5 minutes)

- 1.) Restate the Importance of tornado safety and why they have learned what they learned and how important it is.
  - a.) “Today you have learned how to be prepared for a tornado as a new resident of Dallas, Texas.
- 2.) State the importance of following emergency procedures during tornadoes.
- 3.) Initiate Q&A session.
  - a.) Ask students if they have any questions for you.
- 4.) Conclude the presentation.

## Appendix A

# Act Fast, Act Now!

With your group, read the scenarios below. Respond below each scenario with how you think you should react in the situation. Be prepared to share your responses with the entire class.

It 9 o'clock on a Thursday evening, you are in your home with your family watching TV during a thunderstorm. All of a sudden, the TV program is interrupted by a tornado warning that reads "The national Weather Service has issued a **Tornado warning** for your county at 9:04 PM. The tornado warning is effective until 10:00 PM. Seek shelter immediately. Check local media." ACT FAST, ACT NOW! What do you do?

1. Respond Here:

You're a teacher at an elementary school in Dallas, Texas. It is a Friday afternoon and the students are gone early due to a half day. You're still at school for teacher in service time. You are sitting at your desk preparing lesson plans for the next week. All of a sudden the main office comes on the loud speaker and announces that there is a **tornado warning** in effect immediately and says to seek shelter and protection in the building. ACT FAST, ACT NOW! What should you do?

2. Respond Here:

You live in a **mobile home** right outside of downtown Dallas, Texas. You are home cleaning up around the house while listening to the radio. The radio broadcaster comes on and announces that there is a storm headed towards Dallas and a **tornado watch** is in effect and that residents of the area should prepare immediately. ACT FAST, ACT NOW! What should you do to prepare?

3. Respond Here:

## ANSWER KEY

# Act Fast, Act Now!

With your group, read the scenarios below. Respond below each scenario with how you think you should react in the situation. Be prepared to share your responses with the entire class.

It 9 o'clock on a Thursday evening, you are in your home with your family watching TV during a thunderstorm. All of a sudden, the TV program is interrupted by a tornado warning that reads "The national Weather Service has issued a **Tornado warning** for your county at 9:04 PM. The tornado warning is effective until 10:00 PM. Seek shelter immediately. Check local media." ACT FAST, ACT NOW! What do you do?

### 1. Respond Here:

Possible answers: immediately seek shelter, avoid windows, go to a basement or lowest level in the home, stay informed, make sure first aid kit is available

You're a teacher at an elementary school in Dallas, Texas. It is a Friday afternoon and the students are gone early due to a half day. You're still at school for teacher in service time. You are sitting at your desk preparing lesson plans for the next week. All of a sudden the main office comes on the loud speaker and announces that there is a **tornado warning** in effect immediately and says to seek shelter and protection in the building. ACT FAST, ACT NOW! What should you do?

### 2. Respond Here:

Possible answers: immediately move away from windows, seek cover under a desk, go to the innermost part of the building, do not use elevators, protect your head and neck with your hands/ arms

You live in a **mobile home** right outside of downtown Dallas, Texas. You are home cleaning up around the house while listening to the radio. The radio broadcaster comes on and announces that there is a storm headed towards Dallas and a **tornado watch** is in effect and that residents of the area should prepare immediately. ACT FAST, ACT NOW! What should you do to prepare?

### 3. Respond Here:

Possible answers: Since it is a tornado WATCH there should be time to leave the mobile home and find a safe place to seek shelter. Do not stay in the mobile home as it will easily tip over. If it becomes a tornado warning, lie flat in the nearest ditch if there isn't enough time to get to alternative shelter

## Appendix B

*Note: This post assessment should be put into a Google Form for a virtual presentation, so the link can be shared with the students and results will be saved.*

### Post Assessment

Please complete this assessment when instructed to do so during the workshop. Answer the questions to the best of your knowledge.

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

Email: \_\_\_\_\_

1. List 2-5 steps to take during a tornado to prevent injury and damage:

---

---

2. What is a tornado watch?

---

---

3. What is a tornado warning?

---

---

4. List one relief and recovery resource in your area:

---

5. On a scale of 1-10 how would you rate this workshop ?

1      2      3      4      5      6      7      8      9      10

6. What was the most helpful information in this workshop?

---

---

## Appendix B (Answer Key)

*Note: This post assessment should be put into a Google Form for a virtual presentation, so the link can be shared with the students and results will be saved.*

### Post Assessment

Please complete this assessment when instructed to do so during the workshop. Answer the questions to the best of your knowledge.

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

Email: \_\_\_\_\_

1. List 2-5 steps to take during a tornado to prevent injury and damage:

At home: avoid windows, go to a basement if possible, if not, go to a room on the lower floor with no windows. In a mobile home: Do not stay in a mobile home during a tornado as they can easily turn over with strong winds. Try to plan ahead if you live in a mobile home so you have a building or lie flat in the nearest ditch, ravine or culvert. On the road: one of the worst places to be during a tornado, but it is important not to try to outrun the tornado. If you see a tornado coming, stop your car, but do not go outside or go under the car. Outdoors: if you are stuck outside during a tornado, avoid areas with lots of trees and protect your head and neck with your hands. In public places: move away from windows, go to the innermost part of buildings, do not use elevators, and remember to protect your head.

2. What is a tornado watch?

A tornado watch is issued when weather conditions favor the formation of a tornado. This would occur during a thunderstorm for example.

3. What is a tornado warning?

A tornado warning is issued when a tornado funnel is actually sighted or indicated by weather radar. This warning means you should seek shelter immediately.

4. List one relief and recovery resource in your area:

Answers vary

5. On a scale of 1-10 how would you rate this workshop ?

1    2    3    4    5    6    7    8    9    10

Answers vary

6. What was the most helpful information in this workshop?

Answers vary

## References

- Centers for Disease Control and Prevention. (n.d.). *Preparing for a tornado*. <https://www.cdc.gov/disasters/tornadoes/prepared.html>
- Johnston, G. (2019, May 31). *Texas leads the US in tornado count for 2019*. NBCDFW. <https://www.nbcdfw.com/news/local/texas-leads-us-in-tornado-count-for-tornadoes> National Oceanic and Atmospheric Administration. (n.d.). *Tornado alley*. National Centers for Environmental Information. <http://www.ncdc.noaa.gov/climate-information/extreme-events/us-tornado-climatology/tornado-alley>
- National Weather Service. (2014, February 18). *Get weather ready: During a tornado* [Video]. YouTube. [https://www.youtube.com/watch?v=\\_5TiTfuvotc](https://www.youtube.com/watch?v=_5TiTfuvotc)
- National Weather Service. (n.d.) *Tornado definition*. <https://www.weather.gov/phi/TornadoDefinition>
- United States Census Bureau. (2019). *Quick facts: Dallas city, Texas*. <https://www.census.gov/quickfacts/dallascitytexas>
- United Way Metropolitan Dallas. (n.d.) Dallas Tornado Relief. <https://unitedwaydallas.org/dallastornadorelief/>