

Disaster: Preparing and Helping

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Introduction

Oberle Elementary School is a Title I Public Elementary School in Christina School District, located in Bear, Delaware. There are 657 students enrolled, at Oberle, representing a diverse community. The school represents a diverse mixture of ethnicity's, including 55% Hispanic and 28% African American population. At Oberle, 56% of the students qualify for Free or Reduced Lunch Program. The students at Oberle have access to all the academic's required for an Elementary school in Delaware. I am a Kindergarten Teacher at Oberle. I have developed this unit to cover Reading, Science and Social Studies standards for Kindergarteners.

In addition, Oberle is a Leader in Me school. The school follows Stephen Covey's seven habits for healthy kids which is a variation of his Seven Habits for Highly Effective People. The habits are designed to inspire students to become effective students and leaders.

As a fully-inclusive school, students of different ability levels are in my classroom, so I must ensure that all my lessons can be easily differentiated. The students are given different opportunities to apply their skills based on their abilities. This unit will provide the students with different learning strategies including hands-on demonstrations and team building activities.

This unit incorporates Common Core Standards, Next Generation Science Standards (NGSS) and Delaware State Standards for Social Studies. This unit will allow me to cover multiple standards and applying the skills into real world applications. This unit will enhance and serve as a supplement to the current curriculum required in Christina School District.

Rationale

This Disasters and Safety unit is designed to integrate science and social studies concepts with the reading standards that are required for all teachers to use in their classroom. By using these standards, it creates a cross-curricular unit plan. With little to no specific instruction around our social studies and science, this will create a true cross-curricular unit for Kindergarten. This unit will create curriculum that has never been available for

the students. The unit will incorporate activities for the students as well as assessments that will benefit the students in kindergarten.

The goal for this unit is to create an engaging experience for the students that not only incorporates basic writing and reading skills but also the scientific method. This unit will include scaffolding as the students' progress which allows the students to learn on their level.

This unit will be taught over several weeks. Using the Weather Science units, students will learn about the different types of emergencies that can occur through weather. Using the student's knowledge of the community helper's curriculum, students will learn how different members of society contribute to solutions in disasters. Using Cause and Effect, students will be able to demonstrate what causes disasters and the effect of the different disasters. Through the study of disasters, including disasters in the student's eyes (i.e. fires, losing electricity and water, car braking down), the students will help to create emergency plans for small disasters. As the students become more knowledgeable about disasters, they will begin to help create emergency plans for larger disasters. The students will meet members of the community that are helpers. They will also become community helpers in a mock disaster setup which will allow the students to feel more connected to the unit.

When the curriculum unit is completed, students will be able to explain the importance of disaster preparedness and how a community must work together. They will also be able to assist others in creating emergency plans and go bags. Students will be able to be an active member in their community.

Content Objectives

With the completion of this unit, students will be able to:

- Create a safety plan for themselves and their families.
- Create a safety plan for the classroom or larger groups of people.
- Creating an emergency bag for different uses.
- Explain the importance of having safety plans in place
- Explain why an emergency bag is essential for different types of emergency
- Demonstrate how to enact an emergency plan

Background

Student Prior Knowledge

This may be very limited when it comes to the student's prior knowledge because the students are only five years old. However, we live in an area that experiences some

natural disasters which means many of the students will have basic knowledge of such disasters. The students may know terms like hurricane, winter storm, and tornados. Using the student's basic knowledge to begin the discussions around disasters.

Prior to starting this unit, the students learned about community helpers and how they help during different times. The students discussed firefighters, police and emergency response teams. In addition, students related their parents, teachers and other community friends are also part of community helpers. Students can tell me what their role is in any disaster in their home, the classroom and the community. With this prior knowledge, students will be able to expand their definition of a community helper. As we continue to learn about people within our community, we will learn find that every member of the community is a helper.

The students have worked with several different texts that discuss similarities and differences of different types of natural disasters. The students have read and will continue to read nonfiction books about several different natural disasters. We have read about Tornados, Thunderstorms and will continue to read about Hurricanes, Earthquakes. Using different books, the students have a better understanding of natural disasters. I also chose to read to the students Zane and the Hurricane by W. R. Philbrick. Another book that I may read to the students is The Flood that Came to Grandma's House by Linda Stallone as it involves examples of self-help, community help, heading warnings and recovery after the disaster.

Teacher Prior Knowledge

Disasters

A disaster is sometimes defined as a sudden event, caused by hazards that could be natural to the environment (i.e. tornados, hurricanes, and earthquakes), or by human factors (i.e. arson fires, terrorism, or chemical accidents). But disasters can also occur over a longer period, like a famine. Often what becomes a disaster is a result of human decision making or how a society is structured. The same size of earthquake might cause little damage in an area with strong building codes and enforcement, for example, but cause a great deal of damage and disruption in an area with poorly built buildings and little attention to making sure builder follow codes and good practice.

Disasters have been sensationalized through Hollywood. Hollywood shows major disasters leading to widespread panic, riots or looting. The truth of the matter is that the average person is able to maintain their composure. Everyday citizens don't suddenly become criminals and it can be difficult to get people to break their routines and take a disaster threat seriously. In *Panic: Myth or Reality?* Lee Clarke notes that after several decades of researching disasters one of the strongest findings is that people rarely lose control.¹

Warning and Evacuation

Evacuating is a term used to describe the withdrawal actions of persons from a specific area because of a real or anticipated threat or hazard². Evacuation time periods vary according to the trajectory of the disaster as well as the predicted outcome of the disaster. Some disasters do not lead to evacuation but encourage people to stay in place and take protective shelter inside structures, either moving to a higher level in the building or area (vertical evacuation during a tsunami), or a lower level (such as a basement during a tornado), another protected location (dropping under a nearby strong table during an earthquake).

Disaster warnings are dependent on the type of disaster. For example, I learned that during a hurricane or slow-onset flood, people in the affected area are often provided with the information early and often. It is broadcasted throughout the local and national news. In addition, typically there are already evacuation plans that were created in advance. Other events, such as tornado, earthquakes, and flash-floods have a short span between detection and impact require rapid warnings. Given the difficulty of knowing exactly where one might be when the warning is issued, the evacuation plan might not be predetermined.

People who are asked to evacuate go through many different thought processes prior to the actual evacuation. People in the path of a hazard assess the necessity for evacuation and use their previous knowledge of the hazard, the knowledge of others or information provided via media services. They also may decide to evacuate based on their socio-economic status. People that have more expendable income may choose to evacuate earlier than people that are struggling financially. If someone cannot afford transportation or a place to stay, it may not really be a choice they are able to make.

Commemoration & Memorialization

Following any disaster, survivors and victims' look for ways to preserve the memory of those that were affected. Commemorations and Memorialization are designed to allow future generations to remember the event and keep the memory of the victims of the events alive. Commemoration of disasters may occur immediately or over time. Living in a society where we receive news almost immediately, it is a natural for people to gravitate towards the events to express their shock and collective grief. They begin creating focal points for these events using items like flowers, candles, toys and other mementos.³

In addition to commemoration, society likes to memorialize disaster and events. Often the memorialization leads to the building of permanent location which allows for items from the event and survivors stories to be shared for generations. It allows people that were

part of the disaster to visit and recall their memories as well as a way for generations that were not alive during the event to see what happened and how society came together in a dark time.

Disaster Preparedness

While reading about disasters, I found that disaster preparedness is very important part of the disaster lessons. I discovered that preparedness means having a plan. The plan should include where to meet if there is an emergency. The location should be a non-moving location. In addition to a location, there should be a go-bag ready inside the house, car or any other place that can be grabbed in case of emergency. Inside of that bag you need to make sure that you have water, blankets or extra clothing, batteries, flash lights, and in today's society a back up battery for cell phones could prove to be useful. Some people may pack important documents in their go- bags. Go bags will vary greatly between families as some families may need to have medications, diapers, pet carriers and pet food. I have found that going to websites such as <https://www.ready.gov/youth-preparedness> and <https://www.ready.gov/build-a-kit> helped me find the items that the students may truly need.

Materiel and Personal Convergence

During any major disaster, there comes a time and a place for people to donate goods or volunteer hours to assist with the recovery efforts of the disaster. Often, we see collection drives of all types of materials for a disaster ridden area. What people sometimes don't understand is that often these items become a secondary disaster because there are no plans set up for the storage and distribution of items or the storage/distribution system might be impacted by the disaster. The items donated may also not be the items that are needed for the disaster and the donation will be wasted. Used clothing is rarely useful, random food donations get damaged or the labels fall off, and items often don't consider the climate or the culture.

The convergence of people and goods after the World Trade Center Attack in 2001 is a great example of how it affects the recovery efforts. The events of September 11th created a type of convergence that we have not seen in the United states because of the enormity of the event and how most Americans saw this event as the most tragic event of their lifetime.⁴ The volunteers came from not only the neighboring areas and states but from all over the country and even the world. The protracted nature of the event meant that the response (fire suppression, search and recovery) was still ongoing as people were converging to grieve.

According to Fritz and Matthewson, there are three different type of convergence: personal, informational, and materiel.⁵ There are five kinds of personal convergence⁶. One kind of personal convergence is returnees.⁷ The returnees to the World Trade Center Attack included residents, employees and business owners⁸. The number of returnees

continued to grow as the area that was restricted became smaller. Many returnees first return to get information, to recover personal items from their homes/work, and to return to their home and places of business.

Another kind of personal convergence is the anxious. These include people looking for loved ones. There was considerable anxious convergence after the World Trade Center attack because of the location of the disaster. The disaster happened at a location that was home businesses employing people from around the world, and many people were missing (some remains were not recovered to this day). Those that converged on the sight of the attacks came from all over the world looking for their missing family or friends.

Helpers comprise the third kind of personal convergence. People converged on Manhattan to help assist both the victims and responders in any way they could. Helpers came from all over the world and provided many different types of support. Be it police officers from Florida working checkpoints, wildfire firefighters from out west providing logistical support, massage therapists helping alleviate pain discomfort for Ground Zero workers, counselors providing support to family members, or boat operators evacuating people after the attacks, it can be quite challenging to coordinate and communicate with so many people, even those providing essential assistance.

The two remaining kinds of personal convergence include the curious and the exploiters. The curious include regular bystanders, but it also includes media reporting on the events, and government leaders wanting to see the damage for themselves. Some people went into Manhattan for nefarious reasons after the attack. Unfortunately, this happens after every major disaster and survivors and victims' must be hypervigilant to ensure that they are not exposed to theft or taken advantage of.

Social Vulnerabilities

In my school, the students struggle on the poverty line and often wonder where the next meal is coming from. Since many of my students worry about whether they have food on the table or running water, I have focused my lessons to help them have an emergency plan and go bag that focuses on the smaller disasters of their lives. The beauty of focusing on these small disasters allows the students to create an emergency plan and go bag that will work for other disasters that are likely to affect them in their home.

Teaching Strategies

This unit is designed to incorporate both the science curriculum for the entire year of kindergarten, the social studies curriculum regarding community helpers and ELA curriculum regarding the connection between people, events or pieces of information. The science curriculum included a weather unit that students will be able to explore the

natural patterns prior to any disasters. In addition, the social studies curriculum allows the students to focus on community helpers. Community helpers play such an important role not only in every day occurrences but also in disasters.

This unit will use many different teaching strategies. First, I think that it is important to use think-pair-share or stand up-hand up-pair up. As I introduce several different concepts with regards to disaster the students must work with their classmates to discuss the topic. The students will be asked to think about several concepts that they may have very limited knowledge of, and these strategies will allow the students to share the knowledge that they do have. It will also allow them to share with each what question that they may have regarding the subject or share their concerns for studying the subject.

The students will work in cooperative groups to create escape plans for inside the school. They work in cooperative groups to play a version of Candy Land that shows the students how preparedness can help them survive a disaster.

The students will also work in different role plays to demonstrate how the community helpers come together to assist in the recovery of a disaster. They will get an opportunity to role play as police, firefighters, nurses, EMS, community members, DEMA (Delaware Emergency Management Agency) and additional roles that students may believe are necessary for our activity. By allowing the students to contribute, they become part of the lesson planning.

Another strategy I will be using for this unit is learning stations that will rotate through the classroom. The learning stations will allow the students to learn about the disasters and disaster recovery in different ways. There will be two stations that will be direct teaching from myself or my paraprofessional. The other four stations will be hands on activities that allow the students to have a stronger understanding of disasters.

Classroom Activities

Read Aloud

One activity that I try to continue throughout the entire year is reading a chapter book to my students. This unit allows for me to read stories that tell of fictional characters surviving through disasters. A good example for this subject is Zane and the Hurricane by Rodman Philbrick. I would provide additional choices such as any of the I Survived books about major disasters. Some other options would be The Magic Treehouse Series books which I have included in my reference section. This activity could happen every day or on select days that would work in the classroom. I have chosen to read every day to the students and throughout the year on these subjects because it links to our social studies units as well as our science units. We also may read Two Bobbies by Kirby Larson, Mary Nethery, and Jean Cassels. This book talks about the lives of two animals

that were left behind during Hurricane Katrina. I've found that reading stories to my students at the end of the day allows students to refocus themselves prior to leaving school.

Brainstorming

This lesson will take between three to five days. To begin this lesson, I will read "The Night before Summer Vacation" by Natasha Wing and Julie Durrell. I chose this book because it is written at the students' level and has many pictures for the students to look at. If this book is not available to you, feel free to use a book that helps the students relate to going on a vacation. After reading the story, I ask students to brainstorm about what items that they take on vacation. I list the items on chart paper or SmartBoard as suggestions are made. The next day, I discuss with my student's what kind of items we would need to pack in case of an emergency versus vacation. We discuss the difference between items for vacation and items in case of emergency. I ask the students to help determine why we wouldn't pack a swimsuit in case of emergency. Through the use of questions, the students will help to analyze the items and help create a final list of emergency items. The students use the next day to write a short comparative sentence between packing for vacation and emergency situations. The students will use the list we created to help create their go bags.

Emergency Plans

This lesson will take about a week. The first thing the students will be asked to do is draw a picture of their house. This can be done during the school day or at home depending on the need for parental involvement and participation from the parents. The picture needs to be as detailed as possible. I will provide a basic outline of a house to help the students get started. The students will then draw in the number of rooms and location of other details. The involvement of the parents is paramount to ensure the students have a better understanding of the home they reside in. I will discuss the importance of choosing a spot outside of the home in a location that cannot move. The students know that the location could not be a person or animal as they move all the time. The students will also be asked to speak to their families about where the best place to meet in the event of an emergency.

The students will use the information that they received from the firefighter and other visitors that spoke about emergency plans. It is important that the students can create an emergency plan that will help to protect their family from disasters that are out of their control. By bringing in other visitors to help the students have a better understanding of emergency plans and they aren't focused on me giving the information.

Go Packs

This lesson begins where the last lesson ended. The students will pull out their final lists for emergencies and they will work on creating a go bag. The students will review with each other the items they have included on their list and finalize any other items they have not included on the list. Once the lists are finalized, the students will be given a backpack that has been donated by a local company or brought from home and items that will be laid out around the room to create their go bag. After they have packed their go bag, the students will have a form to fill out to explain why they have chosen each item.

Games

Another activity that will be included during this unit is a day of game playing using games that the students may be familiar with such as Guess Who, Chutes and Ladders or Candy Land. Each of these games can be modified to demonstrate disaster preparedness or evacuation. It is important that the students have an understanding for why each character gets a set amount of money. I use this as an opportunity to discuss economics with the students. I've included the rules for Candy Land because most students have played this game before and have a basic understanding for the game.

Here is an example of the rules to Disaster Land (AKA Candy Land). There are four characters, King, Princess, Fairy and man. Before you start the game, let the players know the following information and ensure that each player has their set amount of coins. The King starts with a new car in good condition and 15 coins. The Princess has an ok car and 10 coins. The Fairy has a broken-down car and five coins. The Man has no car and only two coins.

Here is how you start the game. First, the King and Princess take their turns respectfully then when it is the Fairy's turn that player must fix her car before leaving, therefore missing their first turn. On Man's turn, he must wait three turns for public transportation out of the area.

Here are the changes you can make to the cards. You could choose to add more than one of the same types of card or put the picture card somewhere in the original pile after it is selected.

Land on Orange – fill up gas \$1 except Man (he doesn't have a car)

Ginger bread spot or card – purchase supplies for journey \$2

Candy cane spot or card – Car breaks down. Pay \$2 or miss your turn

Gum drop spot or card – purchase supplies on the road \$2 or miss your turn

Lollipop spot or card – cellphone breaks and you need it for coordinating lodging, getting information, filing FEMA forms, etc. Pay \$2 or miss your turn

Ice Cream spot or card – Hotel Charges. Pay \$2 or miss your turn.

Liquorish spot or card – Someone gets sick and you need medical addition and medicine \$2 or miss your turn

Peanut spot – pay day for each player respectively \$8, \$6, \$3, \$2

Peanut card – loan from friends for each player respectively \$4, \$3, \$2, \$1

Bridge – King, princess or fairy: your friend lends you some money \$5, \$3, \$1,
Man: Your friends can't afford to lend you money. Pay \$1 or you can't take the bridge.

The students will be able to play this as individuals or as teams. I like to have the students work in teams so that they can learn to work together to be successful.

The objective is for students to understand the impact having resources has on being able to evacuate. The players who start out with fewer coins could, feasibly, reach safety first – if they are lucky. However, it is much easier for the players who start out with more to absorb the costs associated with evacuating. This provides an opportunity for us to talk about how not getting to safety wasn't really the fault of the players how started with fewer coins, or the fault of those who had the bad luck of – say a car breaking down. We can remind each other that helping others in a disaster is important so everyone gets out safely.

Visitors

As an addition to the three activities that I have already included, I will offer several opportunities for community helpers to come into my classroom to share their knowledge and allow the students to ask questions. One of the community helpers that I have invited into my classroom is a Delaware State Trooper. The State Trooper will discuss safety in the student's homes, cars and bus. Another community helper I have will have visit our classroom is members from the Delaware Emergency Management Agency (DEMA). DEMA will talk to the students about warning and notifications regarding the different disasters both natural and manmade. A firefighter will visit to discuss the importance of an emergency plan in the home. Each of the visitor will come during different times of throughout the activities. The students will listen to the presentations. After the presentation, the students ask each visitor questions about the emergency plans, emergency preparedness, and other question they might have regarding emergencies and safety. Another group that has been invited into my classroom is the Delaware Humane Association (DHA). They come in to talk about emergency plans that include the student's animals. Since we are a Leader in Me School, each grade level is asked to do a service project. The kindergarten team holds an annual drive to get donations for the DHA that begins on our 101st day celebration.

Role Playing

The last activity I like to do with this unit is to create a scenario where each student will be a different role in the event of a disaster. The use of a tornado or hurricane situation is the best choice for my students because these are disasters that can occur where we live and would allow the students to see what the response should look like with community helpers. The students will represent many different types of helpers: survivors of the event, firefighter, police, EMT, DEMA workers, teachers, parents, Department of Transportation, and American Red Cross. The students will use all of the information they have learned throughout the course of this unit to apply their skills to help their community recover from the disaster. The students will create a plan together and follow the steps of the plan. This activity may take several days but should be completed prior to ending the unit. I will set up for this activity by creating an event in my classroom. There will be a mess throughout the room which shows the devastation of the disaster. The activity will combine all that the students have learned into an incredible activity that allows the students to work together to rebuild their community in the classroom.

Resources

Student Resources

<https://www.ready.gov/youth-preparedness>

This website will be used to help provide students with examples of ways they can prepare for any emergency that may occur in their life.

<https://www.ready.gov/build-a-kit>

This website will be used to help provide students with examples of what they will need in their go-bags for any emergency that may occur in their life.

Larson, Kirby, Mary Nethery, and Jean Cassels. 2008. *Two Bobbies: a true story of Hurricane Katrina, friendship, and survival*. New York: Walker.

This book would be used as a read aloud. This allows the students to get a better understanding for what happens to pets during disasters.

Osborne, Mary Pope. *Earthquake in the Early Morning*. New York: Random House Children's Books, a division of Penguin Random House, 2001.

This book could be used as a read aloud. This book would allow students to learn more about earthquakes.

Osborne, Mary Pope. *High Tide in Hawaii*. New York: Random House Children's Books, a division of Penguin Random House, 2003.

This book could be used as a read aloud. This book would allow students to learn more about Tsunamis.

Osborne, Mary Pope. *Hurricane Heroes in Texas*. New York: Random House Children's Books, a division of Penguin Random House, 2018.

This book could be used as a read aloud. This would allow students to learn more about Hurricanes.

Osborne, Mary Pope and Bryce, Natalie Pope. *Tsunamis and Other Natural Disasters*. New York: Random House Children's Books, a division of Penguin Random House, 2007.

This book could be used as a read aloud. It can be used in combination with *High Tide in Hawaii*.

Osborne, Mary Pope. *Twister on Tuesday*. New York: Random House Children's Books, a division of Penguin Random House, 2007.

This book could be used as a read aloud. This would allow students to learn more about twisters.

Osborne, Mary Pope and Osborne, Will. *Twisters and other Terrible Storms*. New York: Random House Children's Books, a division of Penguin Random House, 2003.

This book could be used as a read aloud. It can be used in combination with *Twister on Tuesday*.

Philbrick, W. R. *Zane and the Hurricane: A Story of Katrina*. New York: The Blue Sky Press, an imprint of Scholastic Inc., 2014.

This book is a good example of survival during a hurricane. This is a great book to use as a read aloud in any classroom.

Stallone, Lindsay. *The Flood that Came to Grandma's House*. Dallas, PA: Upshur Press, 1992.

This book is a good read aloud for the students to learn about floods.

Bibliography

Fritz, Charles E., and J. H. Mathewson. 1957. *Convergence behavior in disasters; a problem in social control*. Washington: National Research Council.

This book is a good resource to use when looking for additional background knowledge while teaching this unit. It is not necessary to read from front cover to back cover.

Kendra, James M., and Tricia Wachtendorf. 2016. *American Dunkirk: the waterborne evacuation of Manhattan on 9/11*.

This book allows you to see what an evacuation using atypical sources looks like. It also helps with the background knowledge needed to teach this unit.

Kendra, James & Wachtendorf, Tricia. *Rebel Food...Renegade Supplies: Convergence after the World Trade Center Attack*, Preliminary Paper 316, Disaster Research Center. University of Delaware, Newark, DE. 2002.

This book is a good resource to use when looking for additional background knowledge while teaching this unit. It is not necessary to read from first page to last.

Sorensen, John H. & Sorensen, Barbara Vogt. "Community Processes: Warning and Evacuation." In *Handbook of Disaster Research*, edited by Havidan Rodriguez, Enrico Quarantelli, Russell Dynes, 183-199. New York: Springer Science+Business Media, 2007.

This book is a good resource to use when looking for additional background knowledge while teaching this unit.

Appendix 1

Common Core Standards

CCSS.ELA-LITERACY.SL.K.1

Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

CCSS.ELA-LITERACY.RI.K.3

With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.

CCSS.ELA-LITERACY.RI.K.9

With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).

CCSS.ELA-LITERACY.W.K.2

Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

CCSS.ELA-LITERACY.W.K.8

With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

CCSS.ELA-LITERACY.SL.K.1

Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups

CCSS.ELA-LITERACY.SL.K.3

Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

Notes

¹ Clarke, Lee. "Panic: Myth or Reality?" *Contexts* 1, no. 3 (August 2002): 21–26. doi:10.1525/ctx.2002.1.3.21.

² Sorensen, John H. & Sorensen, Barbara Vogt. "Community Processes: Warning and Evacuation." In *Handbook of Disaster Research*, edited by Havidan Rodriguez, Enrico Quarantelli, Russell Dynes, 183-199. New York: Springer Science+Business Media, 2007.)

³ Eyre, Anne. "Remembering: Community Commemoration After a Disaster." In *Handbook of Disaster Research*, edited by Havidan Rodriguez, Enrico Quarantelli, Russell Dynes, 441-455. New York: Springer Science+Business Media, 2007.)

⁴ Kendra, James & Wachtendorf, Tricia. *Rebel Food...Renegade Supplies: Convergence after the World Trade Center Attack*, Preliminary Paper 316, Disaster Research Center. University of Delaware, Newark, DE. 2002.: 3.

⁵ Fritz, Charles E., and John H Mathewson. *Convergence Behavior In Disasters: A Problem In Social Control*. Washington: National Academy of Sciences-National Research Council, 1957: 4.

⁶ Fritz & Mathewson, 29.

⁷ Ibid.

⁸ Kendra & Wachtendorf, 5.