



Communicating During Disasters

Teacher Summary

RESOURCE: In-gallery lesson plan and post-visit project

LOCATION: *Living with Hurricanes: Katrina and Beyond*
Exhibition on the first floor of the Presbytère, four rooms

AUDIENCE: 6th-8th Grade Students

SUMMARY:

- **Part 1: OVERVIEW – Communications before and during Katrina** (5-10 minutes)
Teachers will refer to videos, timelines, and text panels to describe the importance of communication systems during natural disasters and explain how these systems failed during Hurricane Katrina.
- **Part 2: FIND THE ARTIFACTS – Sending messages during a disaster** (10-15 minutes)
Students will find artifacts that show how residents and first responders were forced to develop creative methods of emergency communications during Hurricane Katrina.
- **Part 3: DISCUSSION – What do the artifacts teach us?** (10-15 minutes)
In small groups or as a whole class, use the worksheet prompt to reflect on the artifacts and the lessons they teach about communication during a disaster.
- **Part 4: GROUP PROJECT – Design better emergency communications plans** (post-visit class activity or assignment)
In groups of 4 or 5, brainstorm ways to improve emergency communications during and after a disaster. Groups will conduct research, develop solutions, and present to the class while connecting their ideas to lessons learned in the exhibition.

LEARNING GOALS:

Goal	Impact Area
1. Students will learn the significance of effective communications systems during emergencies.	Knowledge and Awareness
2. Students will appreciate the importance of emergency preparedness.	Attitude
3. Students will practice integrating information, holding collaborative discussions, and basic research.	Skills

RELEVANT GRADE LEVEL EXPECTATIONS

This lesson plan addresses the following GLEs in the Louisiana Student Standards for English Language Arts (ELA).¹

6th Grade

- **Integration of knowledge and ideas** (ELA)
 - Integrate information presented in different media or formats as well as in words to develop a coherent understanding of a topic or issue
- **Research to build and present knowledge** (ELA)
 - Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate
- **Comprehension and collaboration** (ELA)
 - Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts, and issues, building on others' ideas and expressing their own clearly

7th Grade

- **Research to Build and Present Knowledge** (ELA)
 - Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation
- **Comprehension and collaboration** (ELA)
 - See description above for 6th Grade
- **Presentation of knowledge and ideas** (ELA)
 - Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples.

8th Grade

- **Research to Build and Present Knowledge** (ELA)
 - Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration
- **Comprehension and collaboration** (ELA)
 - See description above for 6th Grade
- **Presentation of knowledge and ideas**
 - Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details.

¹ <https://www.louisianabelieves.com/docs/default-source/teacher-toolbox-resources/k-12-ela-standards.pdf?sfvrsn=36>

Teacher Key:



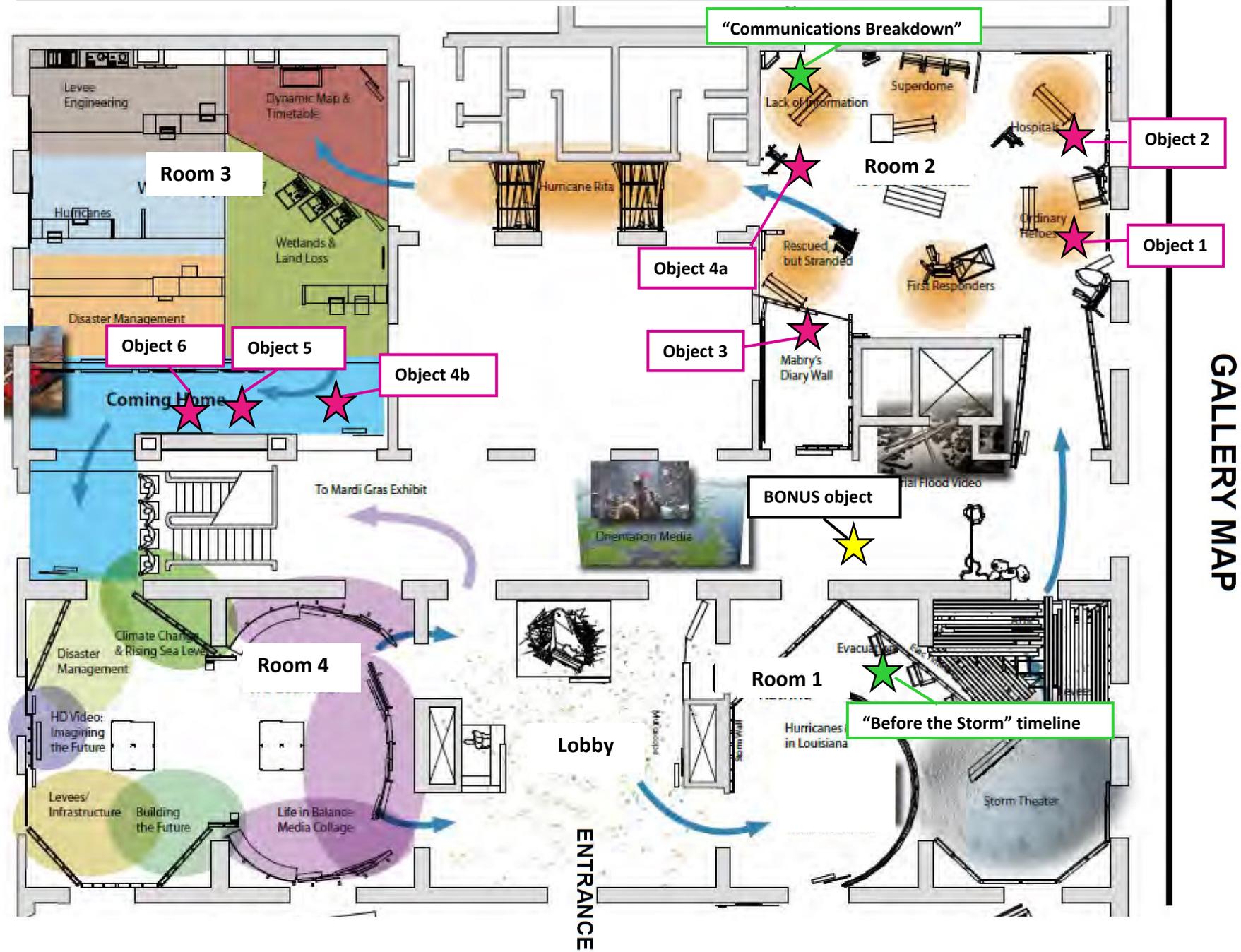
- Part 1 "Overview" discussion stops



- Part 2 "Find the Objects" stops



- Bonus object



GALLERY MAP

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Communicating During Disasters

THE PRESBYTÈRE

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PART 1: OVERVIEW – Emergency Communications (5-10 minutes)

Room 1

- **WATCH** – Video news montage located on screens above the timeline, Room 1.
- **READ** – Show students key moments on the “**Before the Storm**” timeline, Room 1. Ask them to find the following points on the timeline and have a student read each event out loud:
 - **Thursday, August 25**
 - **4:00 PM** – Tropical Storm Katrina becomes a Category 1 Hurricane
 - **Friday, August 26**
 - **4:00 AM** – New Orleans enters the three-day cone of uncertainty
 - **4:30 PM** – Louisiana Governor Kathleen Blanco declares a state of emergency
 - **Saturday, August 27**
 - **4:00 AM** – Katrina becomes a Category 3 hurricane with 115 mph winds and the forecast take the storm directly over New Orleans
 - **1:00 PM** – New Orleans Mayor C. Ray Nagin declares a state of emergency and announces that the Superdome will serve as a special-needs shelter
 - **Sunday, August 28**
 - **7:00 AM** - Katrina is upgraded to a Category 5, with 160 mph winds
 - **9:30 AM** – Mayor Nagin issues the first-ever mandatory evacuation for New Orleans and announces the Superdome will serve as a shelter of last resort
 - **10:11 AM** – The national Weather Service New Orleans Forecast Office issues a dire warning.... (Read warning)
- **ASK** – Ask your students the following questions to get them thinking about the importance of emergency communications before a storm.
 - How can early hurricane forecasts be helpful to residents?
 - How do you think people learned about the evacuation orders? Through what media?
 - Think about the language used in the message from the National Weather Service. Do you think this dire warning made an impact on people?
 - What could have happened if the evacuation order was never issued?
 - Do you or does your family track storms during hurricane season? Where do you find your information?

Room 2

- **READ** – Find the area titled “Communication Breakdown,” Room 2. Point out the following details on the text panels:
 - The storm “destroyed communications systems.”
 - Journalists reported on conditions and pressed officials on their disorganized response. CNN’s Soledad O’Brien pointedly asked FEMA Director Michael Brown, “How is it possible that we’re getting better ‘intel’ than you’re getting?”
 - The Times Picayune managed to publish online during the storm.
 - The Times Picayune put out a print issue 4 days after the storm.
- **ASK** -
 - What communication systems might have been destroyed? What types of problems could that cause?
 - What might have happened if communications systems failed *before* residents received the evacuation orders?
 - Why was the print issue of the Times Picayune particularly valuable to residents who remained in the city throughout the storm?
 - If communication systems were down, how could that affect accurate reporting? How could that affect emergency response?

Part 2: FIND THE OBJECTS – Messages during and after a disaster (15-20 minutes) Rooms 2 & 3

The destruction of communications systems in New Orleans caused many problems. Residents could not reach emergency responders to request help. First responders did not know how many people needed to be rescued or what supplies were needed in each neighborhood. People who evacuated could not reach their family members in the city.

Residents and first responders had to find creative ways to send important messages to one another.

Working individually or in groups, use the worksheet “Find the Objects: Communicating During a Disaster,” to find objects and text panels in rooms 2 and 3 that show how people communicated during and after Hurricane Katrina.

Communicating During a Disaster - Find the Objects Worksheet

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- Use the clues to find the objects in the exhibition
- Look at each object closely and read its description on the wall
- Sketch or describe the object
- Think about why this message was created

1. Find a hand-written message on clothing.

Draw or describe the object.

What was the purpose of this message and why was it written on clothing?

2. Find a giant banner that was made at a hospital.

Draw or describe the object.

What was the purpose of this message and why was it so large?

3. Find an unusual diary.

Draw or describe the object.

What was the purpose of these messages and why were they written on a wall?

4. "X marks the spot"

- a. Find a text panel that describes how first responders used the symbol "X."
- b. Find part of a house with the "X" symbol.

Draw or describe the object.

What was the purpose of these messages and why were they drawn on houses?

5. Find a photograph showing hand-made signs.

Draw or describe the object.

What was the purpose of these messages and why do you think they were hand-made?

6. Find tee shirts that share a message.

Draw or describe the object.

What was the purpose of these messages and who might wear these shirts?

BONUS: Find a photograph with a message written on the roof. Write the message here:

What do you think this means?

Part 3: DISCUSSION – What do the objects teach us? (10-15 minutes)

In small groups or as a whole class, use the following exercise and discussion prompts to reflect on the objects and the lessons they teach about communication during a disaster.

MESSAGES – These objects helped share or document information when communications technologies failed during and after Hurricane Katrina. Match the object with its message:

Object	Message
___ Blue Jeans	A. Documented the experience of the storm and its aftermath
___ Charity Hospital Banner	B. Aided search and rescue efforts at houses
___ Tommie Elton Mabry's Diary	C. People were present who needed help
___ "X" Marks the House	D. Personal identification in case of emergency
___ Hand-made signs	E. Spread messages of unity after the storm
___ T-shirts	F. Showed residents what services were available during the recovery

- What other types of messages might someone need to send during a disaster?

MATERIALS – Think about the materials used to convey each message: clothing, bedsheets, spray paint, markers, etc.

- Why do you think these materials were used?
- Can you think of better ways to communicate during an emergency?

COMMUNICATION DURING FUTURE STORMS – Residents and first responders thought of creative ways to send messages during and after Hurricane Katrina when communications systems failed. However, these efforts may not have been the most effective ways to share information.

- What types of technologies or systems do you think could have helped residents communicate with each other and first responders more quickly and safely?
- How do you think we can prevent communication systems from failing in the future?
- Without using electronic technologies, can you think of other ways for residents to communicate during an emergency?
- How can you prepare for a situation in which cell phones and internet service stop working?

WHAT'S NEXT? Use this discussion to inspire a research project in the classroom.

Part 4: GROUP PROJECT – Design a better emergency communications plan

During Hurricane Katrina, widespread destruction and power failures made communication difficult. According to the Associated Press, it took 23 days for local utilities to restore power to 75% of customers—and then Hurricane Rita caused additional outages.² New Orleans needs to be better prepared for communications problems during and after major storms.

Individually or in groups, answer the questions below and complete the project. Be prepared to share your project with the class.

Questions:

Reflect on your experience at the exhibition *Living with Hurricanes: Katrina and Beyond* and do additional research to answer the following questions:

1. What messages need to be communicated before, during, and after a disaster?
2. How were communication systems damaged during Hurricane Katrina and what problems did that cause?
3. How can New Orleans be better prepared to handle communications issues during a disaster?

Project:

Think about the objects you saw in the exhibition and the communication problems they represented: signaling for help, sharing information about available services, aiding search and rescue efforts, etc. Research ways to improve communications during and after disasters.

Based on your research, **design one possible solution to improve communications during and after a disaster and explain how your solution would help the people affected.** Present your solution to the class.

² Associated Press, “Length of outage after Sandy not unusual,” *SFGate* (San Francisco, CA), November 16, 2012, <https://www.sfgate.com/nation/article/Length-of-outage-after-Sandy-not-unusual-4045567.php>

RESEARCH RESOURCES

Organizations and Government Initiatives

- **Amateur Radio Emergency Services (ARES)** – ARES consists of licensed amateurs who volunteer their radio skills and equipment to serve the public when disaster strikes.
 - o National ARES: <http://www.arrl.org/ares>
 - o Louisiana ARES: <http://www.laarl.org/ss/la-ares/>
- **Emergency Communications Division** – Established by the Department of Homeland Security in 2007 in response to communication challenges during Hurricane Katrina, this division supports emergency communications.
 - o <https://www.cisa.gov/emergency-communications-division>
- **Evacuteer** – Evacuteer is a nonprofit created in 2009 which coordinates volunteers to help with City-Assisted Evacuation before natural disasters.
 - o <https://evacuteer.org/about>
- **Federal Emergency Management Agency (FEMA) Emergency Communications Tips** – FEMA explains how to communicate during an emergency and how to prepare for a power outage.
 - o <https://www.fcc.gov/emergency>
- **Louisiana Wireless Information Network (LWIN)** – LWIN is the largest statewide radio system in the country and strives to provide seamless communication among all responders during emergencies
 - o <http://gohsep.la.gov/ABOUT/UNIFIED-COMMAND-GROUP/Interoperability-Subcommittee/LWIN>
- **Louisiana First Responder Network Authority (FirstNet)** – FirstNet builds and manages a nationwide, high-speed, broadband network dedicated to public safety.
 - o <http://firstnet.louisiana.gov/about/about-louisiana-firstnet.html#>

Articles

- **“The impact of Hurricane Katrina on communications infrastructure”** – scholarly article by Louise K. Comfort and Thomas W. Haase
 - o https://www.researchgate.net/publication/242196608_The_Impact_of_Hurricane_Katrina_on_Communications_Infrastructure
 - o Comfort, Louise K. and Thomas W. Haase. “Communication, coherence, and collective action: The impact of Hurricane Katrina on communications infrastructure.” *Public Works Management & Policy* 10, No. 1 (2006): 1-16. Accessed January 28, 2020. DOI: 10.1177/1087724X06289052
- **“Cell phone service must be restored quicker after hurricanes”** – article by Thomas Frank
 - o <https://www.scientificamerican.com/article/cell-phone-service-must-be-restored-quicker-after-hurricanes/>
 - o Frank, Thomas. “Cell phone service must be restored quicker after hurricanes.” *Scientific American*, October 8, 2019. <https://www.scientificamerican.com/article/cell-phone-service-must-be-restored-quicker-after-hurricanes/>.