

Equipped for the Future

Hurricane Preparedness & Lightning Safety

Project writer

Ana Dubra

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Project Based Lesson Plan IV - 32

Project Title: Hurricane Preparedness and Lightning Safety	ESOL Language Focus: <input checked="" type="checkbox"/> Reading <input checked="" type="checkbox"/> Writing <input checked="" type="checkbox"/> Speaking <input checked="" type="checkbox"/> Listening Level(s): 5(4)
Florida Adult ESOL Course Competencies: 66.09 Read and identify main idea: newspapers, magazines, text passages 83.14 Write a paragraph focusing on one topic 66.18 Write a set of directions 73.02 Identify and explain common problems and solutions 74.02 Demonstrate ability to give and request information clearly by telephone	EFF Standards and Roles: Read with understanding Convey ideas in writing Speak so others can understand Listen actively
Classroom Activities/Procedures (Project includes attachments) 1. Acknowledge background knowledge, asking <i>Have you ever been in a hurricane? Know of anyone struck by lightning?</i> 2. Explain task: to create a bilingual booklet to pass on to Hispanics to inform them about hurricanes & lightning 3. Have class count 1 through 4. Like numbers form a team. Each team elects a leader, recorder, reporter, & encourager 4. Assign subtasks to each team. A: Hurricane categories B: Hurricane preparedness C: Eye of the Hurricane/ Tide Surge D: How to protect ourselves from lightning 5. Once data is collected, highlight most important facts and write a report citing the sources 6. Once the English information is all written down, translate the information into Spanish, so that it is available for non-English speakers 7. Type information, photocopy, and distribute throughout the Hispanic community 8. The informational "Prepare for Hurricane Season" attachment can be translated into other languages as community needs.	Vocabulary: Hurricane Preparedness terms Lightning Safety terms on the phone Resources: The Internet Local Library
Out of Class Assignment(s): Call Safety Agencies Visit local library to research information Read for specific information Distribute booklet throughout Hispanic community	Materials Needed: Phone Book Computers Paper and Photocopy Machine

Summary

The purpose of this project-based lesson was to produce a bilingual booklet to inform the immigrant newcomers of environmental dangers, specifically hurricanes and lightning. In order to gather information the students used the internet, called local safety agencies, and visited the local library, engaging every time in real English tasks. The class was divided in teams, each one with a different subtask to accomplish (See Lesson Plan).

The project took about 15 hours of class time, but there was extra time at home, which was spent reading, making phone calls, and delivering information booklet in their neighborhoods and to their friends. It took about a couple of hours a week for eight weeks.

Since it is hard to maintain high attendance in adult education (parents that miss because they have no babysitters, students who lack transportation, students who add a second job in the evening during the high tourist season, etc), try to make sure that there are a couple of students that are in attendance every day in each group so that you maintain continuity. When the class is held at night, students have to make phone calls during the day, which might be trying, since they will have to make phone calls during their lunch time; therefore, if there is a housewife (or somebody who has a day off during the week) in the team, assign her to do the calling. Students truly enjoyed this task since they saw that they were not only learning English, but learning important life-saving skills while benefiting their community.

Prepare for Hurricane Season

As the school year ends, **hurricane season** in Florida starts. The **1st of June** is the official date when hurricane season begins, and it will continue until the **30th of November**. August and September are the months in which hurricanes hit with the most intensity.

Hurricanes can be the **most destructive force** in nature. The energy generated by a strong hurricane can be the equivalent to 500,000 atomic bombs, according to Dr. David Fisher, a chemistry professor in the University of Miami. Dr. Fisher wrote a book titled *The Scariest Place on Earth* where he recounts his experience surviving **hurricane Andrew in August 1992**. The weird thing about hurricane Andrew was that 99% of hurricanes curve to the north, but Andrew kept coming straight to the west. Once in **Miami**, winds reached 135 and 150 miles an hour, producing eighteen-foot waves. Dr. Fisher says that after hurricane Andrew was over, not one tree was standing in his neighborhood, and some had destroyed roofs and gone through windows. The city of Homestead had been totally devastated, while more than a quarter of a million people were left homeless.

Hurricane Andrew caused damages for more than 30 billion dollars, becoming the most expensive natural disaster in history. Although thousands of people were evacuated then, hurricane Andrew left 38 people dead. The Benitez family, who were lucky to survive that terrible hurricane, hid in a closet: *“The worst was when we came out of the closet and we saw that there was **nothing left**. The house only had three walls and the roof,”* says fourteen-year-old Michael Benítez. His sister, nine-year-old Kristen Benítez, said: *“The saddest thing was the destruction and **not being able to eat anything for 2 days.**”*

If you do not want your family to go through this same situation, it’s **imperative that you are prepared** in the case that we are threatened by a hurricane. This is **not to alarm you, but to make you aware** of possible damages caused by a hurricane. This season there will be hurricanes, just like any other season. Please **be alert** and make sure that a hurricane finds you prepared. So let’s see what we can do to prepare ourselves. Here are the **measures to take**.

Although the destructive force of a hurricane can be superior to that of an earthquake, the good news is that hurricanes can be predicted a couple of days ahead, which gives us time to evacuate. Therefore, the first thing to do is to **keep informed**. Have your **radio** or your **television on**. If you have a computer, you can find information on the web page of the Emergency Operations Center www.leecounty.com. Also, stop by your local library and pick up a brochure called *All Hazards Guide*, which is published by the Lee County Emergency Management.

It’s important to differentiate between a “**Hurricane Watch**”, which means that a hurricane is approaching so that we keep alert (the authorities issue one 36 or 24 hours in

advance), and a “**Hurricane Warning**”, which means that a hurricane with winds over 74 miles is approaching our area.

There are **5 categories of hurricanes** depending on the speed of the wind. We have to be careful of **category 3** hurricanes (winds from 111 to 130 miles an hour, 9 to 12 foot waves, and which cause extensive damage), **category 4** hurricanes (winds from 131 to 155 miles an hour, 12 to 18 foot waves, and which cause extreme damage), and very especially be wary of **category 5** hurricanes (winds over 155 miles an hour, waves over 18 feet, and which cause catastrophic damage).

Secondly, you need to **develop a family plan. Depending on the category of the hurricane**, we have **several options. Option A** is to **stay home**. In this case, we must make sure that our house can withstand strong winds (**trailers are not a safe place**), that our **house is not situated on the coast** and that we have the necessary provisions for three days. Here is a **list of the provisions** we need:

- **One gallon** of potable **water per person per day**.
- **Canned food** that does not need to be cooked.
- **A can opener**.
- **A battery-operated radio** (the electricity might go off).
- **Flashlights** (do not use candles because they can be dangerous).
- **An extra supply of batteries**.
- **A first-aid kit**.
- **Medicines** if you need them.
- If you have babies, **baby food** and diapers.
- **Fill your car with gas** (you will need it **in case you have to evacuate**).
- **Cash** (automatic tellers might not work).

As the storm approaches, **place your family in a room with no windows or a closet (glass can break and fly with heavy force towards one of you, causing injury or death)**.

Plan B will be to arrange ahead of time to **stay in the house of some friends or relatives** who live in an area **where the hurricane won't land**. Carry your own provisions, blankets, sleeping bags and pillows.

Plan C is to **take your family on a trip** to a place **where the hurricane won't hit**. You need to **be tuned to the news at all times** to make sure that the hurricane has not changed direction. In this case it's necessary to be very prudent: **if you are going to travel, you must do so with enough time**, because it is very **dangerous to be stuck on the road**. You and your family **could risk dying** in case of a strong hurricane.

Plan D will be to **find a public shelter**. **Many public schools** become shelters in case of a hurricane. Some of the schools that are turned into shelters in Lee County are the following elementary schools: Alba, Colonial, Heights, Tice, and Three Oaks; the following high schools: Estero, Mariner, Riverdale, and Lehigh, as well as Teco Arena. **Find out today** which one is the **closest shelter to your home**.

Based on what we have read, there are a couple of important things you should know. First, in the center of the hurricane, there is **the eye of the hurricane**, when the sun will shine and the wind will stop, making us believe that all is fine again. Don't be fooled, **stay home** or in your shelter, because **the rest of the hurricane is still to come**. Second, after a hurricane is over and you venture outside, make sure you **do not step in puddles** because you could be **electrocuted by an electric cable** brought down by the wind, which is what happened to a mother and her two children in Miami after hurricane Andrew. Third, **do not drive in flooded areas**, because you never know how **deep** they are, and you can **lose control** of your car.

Please **take care of yourselves, your lives are very valuable.**

This report has been prepared by Hispanic students in a level 5 English class, part of the Adult Education Program of the Lee County School District at the Bonita Springs site (the students preferred their names to remain anonymous), under the supervision of the teacher Ana Dubra, who is also the editor of this text.

Preparativos para la temporada de los huracanes

Coincidiendo con la finalización del curso escolar, comienza **la temporada de los huracanes en la Florida**. El **1 de junio** es la fecha oficial en la que empieza la temporada de los huracanes, que continuará hasta el **30 de noviembre**. Agosto y septiembre son los meses en los cuales los huracanes pueden azotar con mayor intensidad.

Los huracanes pueden ser **la fuerza más destructiva de la naturaleza**. La energía generada por un huracán fuerte puede ser el equivalente a 500,000 bombas atómicas, de acuerdo al Dr. David Fisher, profesor de química de la Universidad de Miami. El Dr. Fisher escribió un libro titulado *El lugar más temible de la Tierra*, donde cuenta la experiencia vivida por él y por los residentes de Miami en **agosto de 1992** cuando azotó la región **el huracán Andrew**. Lo extraño del huracán Andrew fue que mientras que un 99% de los huracanes hacen una curva hacia el norte, Andrew continuó dirigiéndose derecho al oeste. Una vez aterrizó en **Miami**, los vientos llegaron a alcanzar velocidades de 135 y 150 millas la hora, produciendo olas de 18 pies (más de cinco metros). El Dr. Fisher relata que después de que se alejara el huracán Andrew, no había quedado ni un árbol en pie en su vecindario y algunos habían destruido tejados y atravesado ventanas. La ciudad de Homestead había sido totalmente devastada, mientras que más de un cuarto de millón de personas se habían quedado sin hogar.

Cuando el huracán Andrew azotó Miami en 1992 causó daños por valor de 30 billones de dólares, convirtiéndose en la catástrofe natural más cara de la historia. Aunque fueron evacuadas miles de personas, el huracán Andrew se cobró 38 vidas. Los miembros de la familia Benítez, sin embargo, tuvieron la suerte de sobrevivir este terrible huracán escondidos en un armario: *“Lo peor fue cuando salimos del armario y vimos que **no quedaba nada**. La casa era sólo tres paredes y el tejado”*, dice Michael Benítez de 14 años. Su hermana Kristen Benítez de nueve años dijo: *“La cosa más triste fue la destrucción y el **no haber podido comer nada en dos días**”*.

Si usted no quiere que su familia pase por esta misma situación, **es preciso que estén preparados** en el caso de que nos amenace un huracán. Nuestro propósito **no es alarmarles, sino hacerles conscientes** de los posibles daños causados por un huracán. Esta temporada habrá huracanes, como en cualquier otra temporada. **Manténganse alerta** y asegúrense de que estén preparados en caso de que un huracán azote nuestra zona. Así que vamos a ver qué podemos hacer nosotros para prepararnos. A continuación les explicamos las **medidas que pueden tomar**.

Aunque la fuerza destructiva de un huracán puede ser superior a la de un terremoto, lo bueno es que un huracán se puede predecir con un par de días de antelación, lo que nos da suficiente tiempo para evacuar el área. Por lo tanto, la primera medida a tomar es **mantenerse informado**. Mantengan la **radio** o la **televisión** encendida. Si tienen computadora, también pueden encontrar información en la página web del Centro de Operaciones de Emergencia en www.leecounty.com. Además, pase por la biblioteca más

cercana a su casa y recoja un manual llamado *All Hazards Guide (La guía de todos los desastres)*, que publica la Administración de Emergencias del Condado de Lee.

Es importante diferenciar entre una **advertencia de huracán** (*hurricane watch* en inglés), que indica que se está acercando un huracán y que debemos de mantenernos alerta (las autoridades nos informan de esto con 36 ó 24 horas de antelación), y un **aviso de huracán** (*hurricane warning* en inglés), lo que significa que se acerca un huracán con vientos por encima de las 74 millas por hora, y que ustedes deben pensar en un plan de acción para prepararse ante el posible aterrizaje del huracán.

Dependiendo de la velocidad del viento, hay **5 categorías de huracanes**. Debemos cuidarnos de los huracanes de **categoría 3** (vientos entre 111 y 130 millas la hora, olas de 9 a 12 pies, y que pueden causar daños extensos, derribando árboles que podrían caer sobre las casas, dañando la estructura de los tejados y las casas pequeñas); los huracanes de **categoría 4** (vientos entre 131 y 155 millas la hora, olas de 12 a 18 pies, y que causan daños extremos en los tejados, paredes, ventanas y puertas), y cuídense con extremada precaución de los huracanes de **categoría 5** (vientos superiores a 155 millas la hora, olas de más de 18 pies, y que causan daños catastróficos).

En segundo lugar, ustedes deben **desarrollar un plan familiar**. **Dependiendo de la categoría del huracán**, tenemos **varias opciones**. La **Opción A** es **quedarse en casa**. En este caso, debemos asegurarnos que nuestra casa puede aguantar vientos fuertes (**las casas móviles o trailers no son un lugar seguro**), que nuestra **casa no** esté situada **en la costa** y que tenemos las provisiones necesarias para tres días. La siguiente es una **lista de las provisiones** que necesitamos:

- **Un galón de agua potable por persona por día.**
- **Comida enlatada** que no necesite cocinarse (no habrá electricidad).
- **Un abrelatas.**
- Una **radio a pilas** (lo más probable es que se vaya la electricidad).
- **Flashlights** (no use velas porque pueden ser peligrosas).
- **Pilas extras.**
- **Un botiquín de primeros auxilios.**
- **Medicinas** si las necesitan.
- Si tienen bebés, **comida de bebés** y pañales.
- **Llenen su automóvil de gasolina** (lo necesitarán **en caso** de que tengan que **evacuar**).
- **Dinero en efectivo** (puede que no funcionen los cajeros automáticos).

Según se aproxima la tormenta, **meta a su familia en un cuarto que no tenga ventanas o en un armario (los cristales pueden romperse y volar con gran fuerza contra uno de ustedes, causándoles heridas o la muerte)**.

El **Plan B** consiste en hacer arreglos con antelación para **quedarse en la casa de algunos amigos o parientes** que vivan en un área por **donde no vaya a pasar el huracán**. Lleven consigo sus propias provisiones, mantas, sacos de dormir y almohadas.

El **Plan C** es **llevar a su familia de viaje** a un lugar por **donde no vaya a pasar el huracán**. Necesitan **escuchar las noticias todo el tiempo** para asegurarse de que el huracán no va a cambiar de dirección. En este caso, ustedes deben ser prudentes: **si van a viajar, deben hacerlo con suficiente antelación**, porque es **muy peligroso quedarse atascado en la carretera**, ya que usted y su familia **se arriesgarían a perder la vida** en caso de que hubiera un huracán fuerte.

El **Plan D** consiste en **resguardarse en un refugio público**. **Muchas escuelas públicas** se convierten en refugios en caso de que se desate un huracán. Algunas de las escuelas de educación primaria que hacen las veces de refugio en el Condado de Lee son Alba, Colonial, Heights, Tice y Three Oaks; además de las siguientes escuelas de secundaria: Estero, Mariner, Riverdale y Lehigh, junto con Teco Arena. **Averigüe hoy mismo** cuál es el **refugio** que queda **más cerca de su casa**.

Basado en lo que hemos leído, hay un par de cosas importantes que ustedes deben saber. Primero, en el centro del huracán se encuentra **el ojo del huracán**, en el que brilla el sol y para el viento, haciéndonos creer que todo vuelve a la normalidad. No se dejen engañar, **permanezcan en sus casas o dentro del refugio**, porque **todavía falta por pasar la otra mitad del huracán**. Segundo, después de que pasa el huracán y ustedes salen a la calle, asegúrense de que **no se meten en charcos de agua** porque podrían ser **electrocutados por algún cable de la electricidad** derribado por el viento, que es lo que les ocurrió a una madre y a sus dos hijos en Miami después del huracán Andrew. Tercero, **no conduzcan en áreas inundadas**, porque nunca se sabe lo **profundas** que son, y ustedes pueden **perder el control** de su automóvil.

Por favor **cuídense, sus vidas son muy importantes**.

Este informe ha sido preparado por alumnos hispanos de inglés del nivel 5 de Educación de Adultos del Distrito Escolar del Condado de Lee en la escuela de Bonita Springs (los alumnos prefirieron que sus nombres permanecieran anónimos), y bajo la supervisión de la profesora Ana Dubra, que es también la editora de este texto.

Final Teacher Report

EFF Project-Based Classroom Project

Name: Ana Dubra
Institution: Lee County Adult Education
Topic: Hurricane Preparedness & Lightning Safety

1. Explain how the project improved your students' English language acquisition? Which activities were most helpful?

Students had to read authentic texts for a purpose, which improves acquisition tremendously. They also had to engage in phone conversations to gather information, which is one of the most difficult tasks to do in a second language, since you are only relying on verbal cues and some sounds get muffled in the phone. They had to look up information in the internet as well, which made them more confident in being able to function in a highly computerized world.

2. How was student attendance impacted by the project? Explain.

Student attendance improved as the project started to get off the ground. Students were excited about getting the right information in order to help other Hispanics who were new to the area, did not speak English, and were unaware of the dangers of hurricane and lightning. The fact that there was a tomato field worker killed by lightning in our community at the end of summer made the task more meaningful and real to them.

3. Describe how the students organized to accomplish team goals.

Students were divided in teams, and each team elected their leader, recorder, reporter, and encourager, choosing the person with the best writing skills as recorder and the one with the best oral skills as the reporter. Teams decided on the best way to accomplish the task, and each one was assigned a different subtask.

4. Would you initiate another project-based activity in your class? Why or Why not?

Yes, because students engaged in all English skills as a native speaker would, and were very enthusiastic about helping their community.

5. Additional comments on the project and its impact on students.

Although it takes more planning, it is worthwhile because the students read a much larger body of texts than they would on a regular curriculum, which means their English acquisition is going to be expanded. They read with a purpose, making the reading more meaningful.