



## Education and Research: Testing Hypotheses

### **Lesson Plan—\*\*\*\***

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#### **Summary**

In this lesson, students will be defining key terms related to the study of climate change adaptation and analyzing various written and spoken media in connection with their representation of the experiences of profiled climate refugees. The topic of climate change adaptation will serve as a vehicle for a more thorough understanding of compare and contrast techniques and nonfiction narrative, and the students will ultimately synthesize their understanding of the technique and content in the production of a two-voice (double-perspective) poem.

This lesson is meant for middle or high school levels and can be adapted accordingly. It is meant to be a part of a larger interdisciplinary unit, and ideally would be accompanied by similarly-themed lessons in other departments (i.e. ocean acidification in science, resource competition and economics in civics, historical displacement of ethnic groups in history, and so on). Within a language arts course, the lesson could be situated within a larger unit about either first-person narrative or analysis of nonfiction texts. It could also be a part of a larger unit that deals with theme and emphasizes the intersection of heritage, land, and identity.

Prior knowledge and experience in various areas is assumed, including elements of narrative text (character, setting, voice, etc.), writing in first-person perspective, and Venn diagrams, as well as a basic understanding of climate change and associated terms (in particular refugee).

Lastly, it is important to emphasize in this lesson that the final activity is an exercise in empathy and walking a mile in another's shoes, not mind-reading. Students should be encouraged to listen more than they talk to those that are in danger of losing their lands, and be open to new ideas beyond their own lived experience.

*TAGS: Language Arts, interdisciplinary, poetry, narrative, climate change adaptation, resilience*

#### **Key Concepts**

- Climate change adaptation, climate refugee, literary concepts (narrative elements, perspective/voice, comparing and contrasting)
- Align with the NGSS Disciplinary Core Ideas (Orange foundation box):

**HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.**

#### **Objectives**

- SWBAT **define** terms related to climate change adaptation.
- SWBAT **compare and contrast** multiple settings and narrative voices.
- SWBAT **identify** narrative elements in a nonfiction text.
- SWBAT **communicate** two distinctive perspectives in one text.

## Materials

- Posterboard and markers
- Computer lab or laptops if possible
- Attached materials

## Procedure

### Part 1

<b>Do Now</b>	<p>For 5 minutes, please write down your answers to the following questions:</p> <ul style="list-style-type: none"> <li>- What could force you and your family to have to leave your home?</li> <li>- How would you feel if you were forced to leave?</li> <li>- What would you and your family need to successfully adapt to your new circumstances?</li> </ul> <p>After 5 minutes, separate the board into three columns and do a quick verbal summary of people’s answers from raised hands.</p>
<b>Follow-up of Do Now</b>	<p>Show the video from Kathy Jetnil-Kijiner</p> <ul style="list-style-type: none"> <li>- <a href="https://www.youtube.com/watch?v=DJuRjy9k7GA">https://www.youtube.com/watch?v=DJuRjy9k7GA</a></li> <li>- Explain prior to viewing that Kathy is from the Marshall Islands (ask a volunteer to identify it on a map) and that she wrote this poem to her daughter.</li> </ul> <p>Think-pair-share</p> <ul style="list-style-type: none"> <li>- On the same sheet on which they did their Do Now, students will answer similar questions but from Kathy’s perspective, as inferred by the poem (What might force Kathy to leave her home? How does she feel about it? How do you know? What is a climate refugee?). After a minute or two, have them share their answers with their partner. Then, have some partners share their answers with the class and record it on the board.</li> </ul> <p>Depending on the level of the students and the time remaining, pull up a map on the board and ask them to provide examples of other times people have become refugees from their native lands because of forces beyond their control (e.g., Trail of Tears, Hurricane Katrina – but doesn’t have to be climate).</p>
<b>Model/Coach</b>	<p>Select a story from the New York Times series Carbon’s Casualties, which explores how climate change is displacing people around the world, and model the following activity all together. Have them prepare and fill out a big chart on project paper (remind them of the elements of a narrative and the question words to prepare the graphic organizer model together). Direct the conversation but it should come up with essentially the following questions (prompt them towards it if necessary, or provide them depending on the level/time):</p> <ul style="list-style-type: none"> <li>• Who is in your story and where are they from?</li> <li>• What changes have they seen to their environment? To their community?</li> </ul>

	<ul style="list-style-type: none"> <li>• What conflicts (internal and external) have arisen?</li> <li>• What is or will be the resolution?</li> <li>• What topics and/or refrains come up throughout the report?</li> </ul> <p>Also fill out the map provided to show the journey of the people being profiled. Lastly, ask for one similarity and one difference to Kathy's story.</p> <p><a href="https://www.nytimes.com/interactive/2016/multimedia/carbons-casualties.html">https://www.nytimes.com/interactive/2016/multimedia/carbons-casualties.html</a></p>
<b>Major Activity</b>	<p>Jigsaw Activity</p> <ul style="list-style-type: none"> <li>- Students will be broken into groups and each assigned a group role (Project Manager, Cartographer, Reporter)</li> <li>- Each group will be given a different profile from the New York Times series Carbon's Casualties, which explores how climate change is displacing people around the world.</li> <li>- The group will prepare the modeled poster with details from their report, and the cartographer will display the person's journey on the map.</li> </ul> <p><a href="https://www.nytimes.com/interactive/2016/multimedia/carbons-casualties.html">https://www.nytimes.com/interactive/2016/multimedia/carbons-casualties.html</a></p>
<b>Group Assessment</b>	<p>Display the posters for peer review – keep them up until the next day. Allow at least 5 minutes for students to review them. As they review, they can begin to fill out their exit card (details below)</p>
<b>Individual Assessment</b>	<p>Exit card – put 3 similarities and 3 differences between the situation that is facing Kathy and they situation that is facing one of the people from their report. Turn the card in as they exit.</p>

## Part 2

<b>Do Now</b>	<p>Take 5 minutes to define the following terms to the best of your ability, without looking them up. If you don't know, make your best guess:</p> <ul style="list-style-type: none"> <li>- Vulnerability</li> <li>- Climate</li> <li>- Refugee</li> <li>- Migrant</li> <li>- Displacement</li> <li>- Resilience</li> </ul> <p>Write your definitions on a separate piece of loose leaf paper. Crumple the paper and on the count of three, have a snowball fight (throw your paper across the room 😊).</p> <p>Have the students pick up another person's paper and select several students to read, asking if anyone has anything to add. Record notes on the board about each word.</p>
<b>Follow up to the Do Now</b>	<p>Create a Venn diagram: migrant versus refuge</p> <p>With a partner, have a quick discussion about the reports from yesterday, and answer the following questions:</p> <ul style="list-style-type: none"> <li>- How are the people from the region you read about yesterday vulnerable?</li> <li>- In what ways are they resilient?</li> <li>- Are they migrants or refugees? Why? How would their stories be different?</li> </ul>
<b>Model/Coach</b>	<p>Introduce the concept of a two-voice poem by showing examples</p> <ul style="list-style-type: none"> <li>- Attached sheet</li> <li>- <a href="https://www.youtube.com/watch?v=DaCYcDboI9o">https://www.youtube.com/watch?v=DaCYcDboI9o</a> (great one because it has the joint lines as well)</li> </ul>

	<ul style="list-style-type: none"> <li>- My example of what I wrote as a teacher</li> </ul> <p>Write one together!</p> <ul style="list-style-type: none"> <li>- One idea to make this more kinesthetic is to have people write their ideas on post-its and then come up and stick their notes on the Venn diagram on the board.</li> <li>- Choose two narrators, ideally two people from each of the settings we learned about yesterday that are experiencing adverse effects from climate change.</li> <li>- Create a Venn diagram with the class, keeping in mind and modeling the following questions: What is similar in their settings? What is similar about their community's journeys as described? What similar themes came out? In what ways are their situations different? What are some similar and some contrasting feelings they might have?</li> </ul>
Individual Assessment	<p>Two voice poem</p> <ul style="list-style-type: none"> <li>- Can compare and contrast two people from the news articles we read yesterday, pick a voice from other areas they know are affected by climate change, or substitute themselves for one voice (especially if they have experienced change). They could even do one column as a migrant, and one as a refugee!</li> <li>- Provide Venn diagram and sheet with two columns for brainstorming.</li> <li>- For some students, the concept of a poem will seem really scary. You can make it a bit easier by suggesting that they look at it as two columns of dialogue – you can even suggest that they just write the perspectives as answers to questions (that you can suggest)</li> <li>- They can take their time and move about the room looking at the materials from the day before for inspiration.</li> <li>- Remind students of the concepts we've talked about, especially vulnerability and resiliency, as well as the concept of identity and choice.</li> </ul>

## Additional Resources

[http://www.livelearn.org/sites/default/files/docs/Climate%20change%20Teaching%20Manual\\_Eng\\_final\\_05032013.pdf](http://www.livelearn.org/sites/default/files/docs/Climate%20change%20Teaching%20Manual_Eng_final_05032013.pdf)

This resource has excellent examples of stories of communities vulnerable to climate change and ways in which they show resiliency.

[http://www.scienceeducationreview.com/open\\_access/frazier-poetry.pdf](http://www.scienceeducationreview.com/open_access/frazier-poetry.pdf)

Great pdf that takes a scientific approach to writing two-voice poetry.

## Extensions or adaptations

The provided materials and the students' ability to work through them quickly will depend greatly on their ability level. If the referenced articles are too difficult, the teacher can find other examples of climate refugees' stories or can cut them down. On the other hand, if you fly

through, I would recommend using the prediction tool for sea levels to emphasize the idea of vulnerability (by giving students zip codes and having them search):  
<http://sealevel.climatecentral.org/>

Help me come up with a title!