

## Unit Plan: Global Climate Resilience Projects\*

---

### Unit Overview and Goals:

This high school project-based learning unit spans 4-6 weeks, depending on logistical bandwidth for collaboration and/or coteaching between ELA and Social Studies. It builds to a final assessment in which groups of learners design and present a hypothetical climate resilience project addressing a localized problem related to climate change. The unit is primarily designed to promote the development of soft skills in the service of global competence. It also offers students a chance to build content-area skills in reading informational text as well as multidisciplinary writing and presentation skills. Lastly, the unit leans away from catastrophic thinking in order to foster a climate of global citizenship and informed optimism in the humanities classroom. (Selected aligned Common Core Standards: CC.1.2.9-10.A; CC.1.4.9-10.E; CC.1.4.9-10.U; CC.1.5.9-10D)

### Learning Targets:

- I/We can describe how climate change effects a community using reliable online research
- I/We can design a creative initiative/project to build climate resilience in this community
- I/We can persuade a broad readership of the value and sustainability of our idea

### Final Assessment Rubric: Climate Resilience Proposal Web Page

NB: This unit is designed for use in a standards-based assessment environment rather than a traditional grading system, but suggested points distribution is included below.

- Abstract (20): 3-5 sentence “pitch” of the product, service, or initiative and how it will build climate resilience in a specific community
- Background (20): research-backed description of the community selected, causes and effects of climate change in this area, and key stakeholders (teacher choice of citation style: MLA is appropriate to ELA work, but APA more appropriate to the content domain here). Option to format creatively as bullet points or interactive map.
- Proposal (25): 10-20 sentence detailed description of planned intervention and anticipated impact, including a plan for involving and including community stakeholders
- Sustainability (20): rationale for how this project will be financially, socially, and ecologically sustainable in the community selected
- Visual/interactive elements (15): minimum of 4 graphics, publicity mockups, photographs, maps, or A/V elements to help the audience better understand the proposed project

---

\* This unit is adapted from a long-term project run at Perry Traditional Academy in 2021 (Co-teacher Dr. Derek Long) and informed by my prior teaching work at the Rutgers University Honors College (“The Forum” 2018-2019). It was further inspired by Dr. Abi Fapohunda’s final assignment from her course “Health in the African Diaspora” at The University of Pittsburgh, which she generously shared with the Pitt Summer Institute for Global Educators (2022).

### **Proposed Weekly Breakdown:**

NB: to condense the unit to a 4-week scope, teachers might consider focusing all groups on a single geographical location (region, country, community) and/or a single climate-related problem of relevance to the year's curriculum (e.g. coastal flooding, food waste, storm resilience).

#### Week 1:

- Introduce project using mentor text that defines climate resilience and describe successful applications (e.g. "[Eight Ways Cities Are Building Climate Resilience](#)" from the International Institute for Sustainable Development; C2ES's "[Climate Resilience Portal](#)"; local coverage of a representative business working toward climate resilience – example [here](#))
- Determine small groups of 3-4 (if possible, according to geographical preferences or [SDG](#) focus to group common interests) discuss and formalize group norms using a collaborative contract
  - NB: students requiring special accommodations might prefer to work alone for this project – it should still be achievable on the unit timeline.
- Groups select a community and climate focus from a pre-set teacher-generated list. (Option: include an option to propose a unique focus to allow students to capitalize on past experience or on-the-ground knowledge that can enrich their learning.)
- Teacher or librarian demo overview of basic research strategies (search engine and/or database) and mini-lesson on selecting reliable sources
  - NB: in a group of mixed reading levels, NewsELA can be an excellent resource to help all students to access relevant information

#### Weeks 2-3:

- Open time for research, including – if possible – consulting or interviewing an expert or stakeholder based in the community of focus.
- Refinement of evidence using concept-mapping activity or graphic organizer (see below)
- Collaborative brainstorming to determine group idea for the project – a product, service, or other initiative – to be proposed. Teachers should supervise discussions and moderate as necessary.
- Incorporate assistive technology (screen-readers, voice-to-text) as necessary

#### Week 4:

- Abstract-writing workshop: students will draft a 3-5 sentence abstract of their Climate Resilience Project, use their drafts to generate a collaboratively written abstract, and participate in a teacher-facilitated peer review
- Introduction to [Story Maps](#) software that students will use to present their proposals
  - NB: Story Maps requires a subscription. [OpenFuego](#) is an alternative website builder that is open-source, but requires significantly more training time to implement. In schools where student technology is less readily available or tech literacy is a concern, the final proposal could easily be submitted as a paper report, oral presentation, and/or poster or slide deck.
- Teacher-guided upload of revised abstract to Story Maps (either whole-class or by group)

Week 5:

- Collaborative writing and revision of the background, proposal, and sustainability rationale. Writing tasks might be chunked using structured partner work or teacher-designated delegations as opposed to open-ended group writing.
  - NB: The use of templates and/or sentence starters may be appropriate for differentiating instruction.
- Upload of final copy to Story Maps software

Week 6:

- Final design and incorporation of audiovisual elements (interview clips or audio explainers, images, student-sourced or student-designed graphics) to Story Maps page
- Student-led website walk-through to present final projects
  - Option to include administrators, parents, or local sustainability experts in the audience for these walk-throughs, or to share links to the websites with that broader audience in an email newsletter

Sample Activity: Group Selection (Week 1)

**Instructions:** read the geographical/climate focus groupings below and rank your top *three* choices. Your preferences will be used to determine your groups for our Climate Resilience Project.

Areas of Focus		
1. Pittsburgh, PA (or any local metro area): disproportionate summer heat in low-income areas with aging infrastructure		
2. Mumbai, India: coastal flooding		
3. New York, US: food waste		
4. Mexico City, Mexico: air pollution		
5. San Juan, Puerto Rico: tropical storm intensification		
6. Eastern Australia: intensifying bushfires/wildfires		
7. Senegal: deforestation and/or desertification		
8. Propose your own area of focus: _____		
<u>Your Top 3</u>		

*Note:* teachers might introduce each possible focus using a short slideshow to pique student interest in the menu of options and provide context as necessary. Group selection should be at the teacher's discretion and done out of classroom time to maximize teaching time and minimize social anxiety about long-term collaboration.

Sample Activity: Brainstorming Chart (Weeks 2-3)

Instructions: Using your group's research, answer the following questions.

WHY	WHO & WHERE
<p data-bbox="203 422 703 457"><i>Why does your problem occur? What causes it?</i></p> <ul data-bbox="251 573 267 913" style="list-style-type: none"><li data-bbox="251 573 267 594">•</li><li data-bbox="251 678 267 699">•</li><li data-bbox="251 783 267 804">•</li><li data-bbox="251 888 267 909">•</li></ul>	<p data-bbox="781 422 1312 491"><i>What populations and/or neighborhoods does this problem affect the most?</i></p> <ul data-bbox="829 573 846 913" style="list-style-type: none"><li data-bbox="829 573 846 594">•</li><li data-bbox="829 678 846 699">•</li><li data-bbox="829 783 846 804">•</li><li data-bbox="829 888 846 909">•</li></ul>
WHAT	HOW
<p data-bbox="203 1144 743 1249"><i>Describe what you think would need to change in order for the community to be <b>resilient</b> in response to this problem</i></p> <ul data-bbox="251 1333 267 1673" style="list-style-type: none"><li data-bbox="251 1333 267 1354">•</li><li data-bbox="251 1438 267 1459">•</li><li data-bbox="251 1543 267 1564">•</li><li data-bbox="251 1648 267 1669">•</li></ul>	<p data-bbox="781 1144 1328 1249"><i>Explain how it might be possible to make these changes happen – products, services, or other actions that might build <b>resilience</b>.</i></p> <ul data-bbox="829 1333 846 1673" style="list-style-type: none"><li data-bbox="829 1333 846 1354">•</li><li data-bbox="829 1438 846 1459">•</li><li data-bbox="829 1543 846 1564">•</li><li data-bbox="829 1648 846 1669">•</li></ul>