

CLIMATE CHANGE PBL-HMS

Climate and climate change has been taught at various grade levels at Haddonfield Middle School. A few years ago, it was the responsibility of 7th grade social studies to clearly teach both subject areas. Currently, it has shifted to the science department. But the indicators, effects, and outcomes of climate change are all present in various subjects.

In order for our students to fully comprehend the magnitude of this issue in an effort to prepare them for it in the future, we have an obligation to empower our students to take on the role of problem solvers. This can come to fruition through the project-based learning initiative and has the ability to be cross curricular.

At the New Jersey Department of Education, climate change is addressed in Standard 6.3. The PBL project I am proposing specifically focuses on 6.3.8. It is a civic strand that tasks students researching and finding data to propose or defend a public policy involving climate change.

This is an exciting project for a number of reasons:

1. It adequately addresses the mandate from the state.
2. It aligns with the district's initiative on PBL.
3. It can be specifically assigned and worked on in social studies, science, and art classes.
4. It is relevant, timely, and meaningful to maximize student engagement.
5. It is designed to empower and promote student choice and ownership of the world and communities they live in.

Social Studies	Art	Science
<i>6.3.8.CivicsPR.4: Use evidence and quantitative data to propose or defend a public policy related to climate change.</i> -https://climate.nasa.gov/evidence/ -https://royalsociety.org/topics-policy/projects/climate-change-evidencecauses/basics-of-climate-change/ -https://www.nationalgeographic.com/science/2020/01/weather-showevidence-of-climate-change-every-single-day-since-2012/ -https://climate.nasa.gov/faq/34/what-kinds-of-data-do-scientists-use-to-study-climate/ https://climate.nasa.gov/reso	<i>1.1.8.Cn10b: Employ a variety of research methods to inform the development of original dances about global issues, including climate change. Articulate ways the research deepened understanding of the topic and how big ideas are expressed metaphorically through dance.</i> <i>1.2.8.Re7b: Compare, contrast and analyze how various forms, methods and styles in media artworks affect and manage audience experience and create intention when addressing global issues including</i>	LS4.D: Biodiversity and Humans: <i>-Biodiversity is increased by the formation of new species (speciation) and decreased by the loss of species (extinction).</i> <i>-Humans depend on the living world for the resources and other benefits provided by biodiversity. But human activity is also having adverse impacts on biodiversity through overpopulation, overexploitation, habitat destruction, pollution, introduction of invasive species, and climate</i>

urces/global-warming-vs-climate-change/ -https://ourworldindata.org/search?q=climate	climate change. <i>Anchor Standard 8:</i> <i>1.4.8.Cn11a: Research the story elements of a staged drama/theatre work about global issues, including climate change, and discuss how a playwright might have intended a theatrical work to be produced.</i> <i>1.5.8.Cn11b: Analyze and contrast how art forms are used to reflect global issues, including climate change.</i>	change. <i>Thus sustaining biodiversity so that ecosystem functioning and productivity are maintained is essential to supporting and enhancing life on Earth. Sustaining biodiversity also aids humanity by preserving landscapes of recreational or inspirational value.</i>
---	---	---

Students can gather contemporary and rich research that is appropriate for middle school readers using the links above. Additionally, students should be encouraged to seek out community members, local merchants, and elected officials for interviewing purposes. The goal is for the proposed policy change or defense to be as specific and community-oriented as possible.

The research can be conducted in both social studies and science classes. The end product can be designed and prepared for in art, technology, or STEM classes. The final proposal or defense can be completed in a number of ways. The idea is empowering students to make their own choices by identifying their strengths and learning styles.

- Slideshow.
- Website.
- Infographic.
- Podcast.
- Demonstration.
- Modelling and prototype design.

*Pre-teaching is a prerequisite for the project. Students should have an understanding of what weather is and how it works.

It could be beneficial to provide an overview of climate change, although the sources above could substitute for this. If any background information is provided, it is recommended that teachers facilitate students in identifying a climate change indicator (ex. rising sea levels), an effect of climate change (ex. overflowing and the destruction of communities), and an example of what a nation/state/town is doing to combat this. These examples can contextualize a difficult subject for middle school students.