

CLIMATE CHANGE LESSON

Course Name: Regents Earth/Grade 8 Science
Unit/Theme: Climate

Time Frame: 90 minutes
Grade Level: 8

CONTENT AND SKILLS
Learning Objectives: <ul style="list-style-type: none"> Students will access many technological sources including a Government Data Base (new source of technology) to answer the question is Climate Change real?
Essential Questions (optional): <ul style="list-style-type: none"> Can we analyze the question climate change as two questions to simplify the process: Is the Earth's global mean temperature increasing? What is causing the increase?
Students I can statements . . . <ul style="list-style-type: none"> I can access many technological resources to investigate the topic of Global Warming. (7-8.DL.5) I can recognize the ethical concerns and how sometimes the data can be presented in a biased way to obscure or support the writer's intent. (7-8.IC.3, 7-8.IC.5)
How will you meet the needs of SWD and ELL/MLL students? How will you make sure this lesson is culturally responsive? <ul style="list-style-type: none"> Provide personal computers to each student, so all have equal access. Provide adequate classroom support for those who need help utilizing the technologies. Providing reading and writing supports on the computer for all students.
Content Standards List all standards and how learners will meet the standard
<ul style="list-style-type: none"> Regents Earth: Standard 2: Key Ideas 1, 2, 3 and Standard 4: Key Ideas 2.1a, b and 2.1r. Grade 8 Science – MS-ESS3-5 and MS-ESS3.D and CC Concepts of Cause and Effect and Stability and Change.
NYS Computer Science and Digital Fluency Standards List all standards and how learners will meet the standard
<ul style="list-style-type: none"> 7-8.DL.5 – Students will access raw climatological data using the US Navy website, a new technology for them formatted similar to a spreadsheet, so they can use skills they have learned. 7-8.IC.3 - Students will use the current topic of Global Warming to identify & discuss the ethical issues surrounding the topic. 7-8.IC.5 – Students will analyze the potential sources of bias introduced by various organizations to support their position on the topic of Global Warming and how this

impacts what people believe.

CASEL COMPETENCIES and/or NYS SEL BENCHMARKS

- 2C.3a Establish positive relationships.
- 2C.3b Demonstrate skills to promote group effectiveness.

INSTRUCTIONAL PLAN

List the steps of the lesson, including instructions for the students.

Background: Students will have completed units in Energy Transfer and Weather.

- 1) Introduce this research lesson on Global Warming by watching a Greta Clip.
https://youtu.be/4yTWbhES_Ic
- 2) Discuss the following: What role does emotion play in how people feel about Climate Change? (7-8.IC.3) (7-8.IC.5)
What role does trust play?
Why do different politicians feel differently?
Do lobbyist for Oil and Gas companies play a role in our Government's decisions?
With so much conflicting information out there, how can you develop an opinion?
Where will you start in your search for answers?
What role does personal bias play? Due to religion, political affiliation?
Profession? Schooling? Where you live?
- 3) After discussing: explain one of the reasons this topic creates so much controversy is:
It requires real change for each of us
It is complex and relies on many variables (7-8.IC.5)
The impacts of it affect our world unequally
- 4) Students complete the research document while they explore accounts of what is occurring and consider the biases of the source (7-8.IC.5)

ASSESSMENT(S) / PROJECTS / PRODUCTS

- Individually you will complete the research document. Here you will explore bias and unbiased accounts in different informational forms and write a paragraph following each section about what you think and why.
 - As a group, you will develop a rating system that addresses both quality of data and presentation of findings. This will be an alphanumeric rating on a clearly documented continuum/s of your choice.
- 4) Worksheet for research:
<https://docs.google.com/document/d/1w-DoMXgJE6uOj7hFNFCYk96xUlpu-0KmN44tBNyqOS8/edit?usp=sharing>

- Model of Group Scale and Paragraph Construction – link below
https://pittsfordcsd-my.sharepoint.com/:w:/g/personal/susan_lochner_pittsford_monroe_edu/EUer1M-1X4FGtS3NIDW1_xMBACcOWWLEPPGjAgXsKmxXZA

INSTRUCTIONAL TECHNOLOGY INTEGRATION

- Individually students will assess various sources of data to make a determination on credibility for the issue of Global Warming. In paragraph form, they will discuss the ethical issues **(7-8.IC.3)** and potential sources of bias **(7-8.IC.5)** when digesting and interpreting scientific information.
- Individually allow students an opportunity to use existing spreadsheet skills to investigate a new technology on the US Navy Climatological Data Site **(7-8.DL.6)**.
- As a group, they will design a rating system **(7-8.CT.2)** to assess the quality of data and the presentation of findings. They will then rate each source provided.

MATERIALS / RESOURCES

- Computers, Links to resources, Model of Paragraph and Scale.

ADAPTATIONS FROM PEER FEEDBACK

- None Available to date.