CBGS 2019-20 Summer Reading and Assignment

CBGS Students: The summer reading this year is a schoolwide book, *Field Notes from a Catastrophe: Man, Nature, and Climate Change* by Elizabeth Kolbert. Your first task is to read this book over the summer. All year, content in your courses and interdisciplinary activities will hearken back to the critical ideas in this book. While we want students to have time off over the summer, it is also a good idea to keep your brain humming. **Read this book in its entirety.**

The second task is to do some writing. Please see the question below for your assignment. Your Marine and Environmental Science teacher will have you turn this in on the first day of school.

Summer Question: Write a response essay, 1-2 pages in length, to the following prompt:

Chapter 2 "A Warmer Sky" (pp. 35-44)

One of the most important tenets of the Nature of Science is: **Scientific ideas are durable, yet subject to change.** "Scientific knowledge is simultaneously reliable and tentative. Having confidence in scientific knowledge is reasonable while realizing that such knowledge may be abandoned or modified in light of new evidence or reconceptualization of prior evidence and knowledge." (https://www.nsta.org/about/positions/natureofscience.aspx)

At the end of the 19th Century, during the early Industrial Revolution, Svante Arrhenius watched black clouds of gases billowing from coal burning factories around Europe. His observations prompted him to make the initial calculations on the effect of CO_2 emissions on atmospheric temperatures. In Chapter 2 "A Warmer Sky", we learn how Arrhenius' work built on that of Tyndall earlier in the 1850's. Charles David Keeling in the modern era has picked up this research and created the most famous symbol of changing CO_2 in the atmosphere, the Keeling Curve. The study of greenhouse gas global warming is well over 150 years old, but many 21st century Americans still do not accept these basic scientific facts.

Manmade CO_2 emissions affect Earth's atmospheric temperature and are continuing to rise, check for yourself at Keeling Curve-historical and check the CO_2 value for today (your writing day). Considering the Nature of Science tenet that scientific knowledge is reliable, but also subject to re-examination and modification, why do you think people still have such a hard time accepting this fundamental scientific knowledge? Has the knowledge stood the test of time, evolved and been verified enough? What evidence could be more compelling than what we already know about the relationship between humans, CO_2 and climate?

*** Feel free to incorporate research from other sources in your response in APA format, but please give them credit in "Work Cited" at the end. More information on APA can be found at:*
https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html