

MAST @ FIU

Biscayne Bay Campus

SUMMER ASSIGNMENT FOR HONORS MARINE SCIENCE 2

Overview

Miami-Dade County Public Schools recognizes the importance of ensuring that students continue to strengthen scientific and problem solving skills and develop a passion for science beyond instructional requirements. Experience and current research support the idea that students who are actively engaged in scientific inquiry throughout the summer demonstrate improved academic performance during the following school year. Cultivating scientific inquiry helps build problem solving skills and enriches students' knowledge base. In addition, increased independent scientific inquiry helps prepare students to be successful in meeting more rigorous academic standards as schools transition to Science Florida Standards.

Summer scientific inquiry provides students with an opportunity for personal exploration and continued intellectual growth. It serves as an essential component of the instructional process in schools. As stated above, research has shown that students who engage in scientific activities throughout the summer improve academically during the following school year. However, school summer science activities are not intended to be excessive or curtail students' participation in recreational and/or family activities.

Required Reading

Obtain and read *The Water Will Come: Rising Seas, Sinking Cities, and the Remaking of the Civilized World*, by Jeff Goodell

Book Summary

"An immersive, mildly gonzo and depressingly well-timed book about the drenching effects of global warming, and a powerful reminder that we can bury our heads in the sand about climate change for only so long before the sand itself disappears." (Jennifer Senior, New York Times)

What if Atlantis wasn't a myth, but an early precursor to a new age of great flooding? Across the globe, scientists and civilians alike are noticing rapidly rising sea levels, and higher and higher tides pushing more water directly into the places we live, from our most vibrant, historic cities to our last remaining traditional coastal villages. With each crack in the great ice sheets of the Arctic and Antarctica, and each tick upwards of Earth's thermometer, we are moving closer to the brink of broad disaster.

By century's end, hundreds of millions of people will be retreating from the world's shores as our coasts become inundated and our landscapes transformed. From island nations to the world's major cities, coastal regions will disappear. Engineering projects to hold back the water are bold and may buy some time. Yet despite international efforts and tireless research, there is no permanent solution-no barriers to erect or walls to build-that will protect us in the end from the drowning of the world as we know it.

The Water Will Come is the definitive account of the coming water, why and how this will happen, and what it will all mean. As he travels across twelve countries and reports from the front lines, acclaimed journalist Jeff Goodell employs fact, science, and first-person, on-the-ground journalism to show vivid scenes from what already is becoming a water world.

Assignment

After reading the book do the following assignments:

1. Obtain a map of the world and color the areas or countries that are most vulnerable to sea level rise.
2. South Florida is one of the areas that will be among the first to experience the effects of sea level rise. Using information from the book or other resources, describe two solutions that Miami and Miami Beach may employ to counter the flooding that is predicted to happen as sea level rise.