



Biscayne Bay Campus

SUMMER ASSIGNMENT FOR HONORS MARINE SCIENCE 1

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 *Retreat from a Rising Sea: Hard Choices in an Age of Climate Change*, by Orrin H. Pilkey, Linda Pilkey-Jarvis and Keith C. Pilkey.

Book Summary

Melting ice sheets and warming oceans are causing the seas to rise. By the end of this century, hundreds of millions of people living at low elevations along coasts will be forced to retreat to higher and safer ground. Because of sea-level rise, major storms will inundate areas farther inland and will lay waste to critical infrastructure, such as water-treatment and energy facilities, creating vast, irreversible pollution by decimating landfills and toxic-waste sites. This big-picture, policy-oriented book explains in gripping terms what rising oceans will do to coastal cities and the drastic actions we must take now to remove vulnerable populations.

The authors detail specific threats faced by Miami, New Orleans, New York, and Amsterdam. Aware of the overwhelming social, political, and economic challenges that would accompany

effective action, they consider the burden to the taxpayer and the logistics of moving landmarks and infrastructure, including toxic-waste sites. They also show readers the alternative: thousands of environmental refugees, with no legitimate means to regain what they have lost. The authors conclude with effective approaches for addressing climate-change denialism and powerful arguments for reforming U.S. federal coastal management policies.

Assignment

After reading the book do the following assignments:

1. Obtain a map of Florida and color the areas that are most vulnerable to sea level rise.
2. Recognizing the social, political and economic challenges identified by the authors, describe in no more than 300 words what you believe is the most significant challenge facing the residents of Florida.