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April 6, 2017
Workshop: *Climate Disruption: Choosing Resiliency*
Professor Michael Matthews, InterAmerican Campus
EAP 1500: Speech, Level 5

LESSON PLAN
Topic: The Effect of Global Warming on Icebergs and the Consequences of Such Warming
Time: 75 minutes

I. **Goal: To identify icebergs as floating pieces of ice and to point out the role climate change has in their formation.**
II. **Materials Needed:**
    a. **A current world map**
III. **Lesson Objectives:**
    a. **By the end of this lesson, students will**
        i. **Understand that oceans cover 71% of the Earth's surface and so absorb a significant amount of solar energy.**
        ii. **Realize that icebergs form when pieces of ice break free from melting land ice.**
        iii. **Learn that global warming causes both land and sea ice to melt.**
        iv. **See that global warming hastens the formation of icebergs due to calving of land ice into the sea, raising sea levels.**
        v. **Observe that rising sea levels cause flooding and erosion in low-lying, coastal areas.**
IV. **Distribute Handout with the Following Information:**
    a. **Science has proven that Antarctic ice is melting as a direct result of global warming and is "calving" huge icebergs into the water**
    b. **The Arctic sea ice is melting more rapidly than the rest of the world. Snow-covered sea ice reflects more sunlight than open water where ice has melted, so in the absence of sea ice more heat is absorbed into the ocean causing greater environmental impact.**
    c. **Scientists have proven that Greenland's Ice is quickly diminishing too. In 2012 an iceberg the size of Manhattan was released and later landed in Labrador.**

V. **Student Activities:**
    a. **Students will watch portions of "Our Rising Oceans," "Climate Change: Glaciers," and "The Antarctica Challenge: a Global Warning" on You Tube and observe glaciers melting and icebergs forming and floating on the oceans.**
    b. **Students will write 5 sentences about the videos, do brainstorming sessions, and exchange information/comments.**
    c. **Ask students to point out Antarctic/Arctic and Greenland on the map.**
VI. **Assessment:**
    a. **Questions:**
        i. **Does it really matter whether ice caps melt or not? Contrast land ice**

and sea ice.

ii. Is global warming just a problem in the Antarctic, Arctic, and Greenland? How does it affect you?

iii. Should all governments be concerned about the melting of ice caps?

VII. Homework:

a. Ask students to come prepared to hypothesize about the effects of rising sea levels on areas close to where they live.

b. Request that students write a short paper taking a position on global warming and support this with reasons, facts, and examples gathered during lesson activities.

c. Have students read w.w.w. education.seattlepi.com/effect-global-warming-icebergs and bring comments to class.