

Case Details

Case Title:

Watch out Caribbean here we come

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Grade Level(s):

Middle School

Subject(s):

Earth Science

Summary:

Did the 8th grade class cruise weather the storm? Tune in to the National Weather channel and track Aquilla. The National Oceanic and Atmospheric Administration (NOAA) will have updates hourly. The captain has asked for help in plotting his new course to avoid Aquilla.

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http://www.cse.emory.edu/cases/casedisplay.cfm?case_id=684

Learning Objectives:

1. Explain how hurricanes are formed.
2. Show where hurricanes are formed, and explain why they are formed in these areas.
3. Name and describe the cloud types associated with hurricanes.
4. Name and describe the instruments used in measuring hurricane data.
5. Identify storms and storm movement using national weather data.
6. Compare hurricane climatology and the intensities of different hurricanes,
7. Read The Saffir-Simpson scale and Beaufort wind scale,
8. Explain how hurricanes are named.
9. Explain how tropical depression and hurricanes are formally classified.
10. Relate global warming to the increasing number of hurricanes in the Atlantic Basin.
11. Explain how air pressure changes during changing weather systems.
12. Define the terms: storm surge, waves, wind shear, solar radiation, spf, hurricane preparedness, water cycle, evaporation & condensation.

National/State Standards:

Georgia Performance Standards

SCSh1. Students will evaluate the importance of curiosity, honesty, openness, and skepticism in science. (NSES Content Standard A)

S8CS1. Students will explore the importance of curiosity, honesty, openness, and skepticism in science. (NSES Content Standard A)

S8CS2. Students will use standard safety practices for all classroom laboratory and field investigations. (NSES Content Standard F)

S8CS3. Students will use computation and estimation skills necessary for analyzing data and following scientific explanations. (NSES Content Standard A)

S8CS4. Students will use tools and instruments for observing, measuring, and manipulating equipment and materials in scientific activities. (NSES Content Standard A)

S8CS5. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters. (NSES Content Standards A, F, & G)

S8CS6. Students will communicate scientific ideas and activities clearly. (NSES Content Standards A & E)

S8CS9. Students will understand the features of the process of scientific inquiry. (NSES Content Standard A)

SCS10. Students will enhance reading in all curriculum areas (NSES Content Standards A, D, F, & G): a. reading in all curriculum areas (e.g. technical texts in science) c. building vocabulary knowledge d. establishing context

S6E3. Students will recognize the significant role of water in earth processes. (NSES Content Standard D)

S6E4. Students will understand how the distribution of land and oceans affects climate and weather. (NSES Content Standard D)