

Hurricane Frequency: Identifying Regions with Similar Numbers of Hurricanes

The first step in assessing the hurricane hazard in a particular place is to see where hurricanes have occurred in the past. Making a map of hurricane regions for several time periods can help us decide if the hazard is increasing, staying the same, or decreasing.

The maps on pages 2 and 3 show the tracks of hurricanes that occurred during two different time periods. Page 2 shows the location of hurricane tracks from 1980-1982. Page 3 shows the location of hurricane tracks from 2003-2005. Your job is to classify each rectangular sector (e.g., A1) into one of six categories: land, shoreline with frequent hurricanes, ocean with frequent hurricanes, shoreline with few hurricanes, ocean with few hurricanes, and areas with no hurricanes.

Use the maps on pages 2 and 3 to complete the following activities.

1) Make sure you know how to read and use the maps accurately.

How many hurricanes went through sector F5 between 1980-1982? 3

How many hurricanes went through sector H4 between 1980-1982? 1

2) It is necessary to decide how many hurricanes should pass through a sector to classify the hazard as “frequent” in that location. One possibility is to classify the hazard in a sector as frequent if at least 5 hurricanes passed through the sector on the map. In determining a rule to use, study both maps. Selecting a number that is too low will result in most sectors being classified as “frequent” hazard sectors. Selecting a number that is too high will result in few sectors being classified as “frequent” hazard sectors. Write the number you plan to use to classify the “frequent” hazard sectors. _____

Note: The answer key maps provided are based on the suggested criterion of 5. Choosing a different number will change the number of sectors of each color on the student maps.

3) To analyze the data, a blank grid for each map is provided on page 4. Color each sector on the blank grid using the legend below. Please refer back to the rule above to classify the data as to whether it will be in the “frequent” or “few” hazard categories. *See attached maps.*

Dark blue = Ocean sectors with frequent hurricanes

Light blue = Ocean sectors with few hurricanes

Red = Shoreline sectors with frequent hurricanes

Orange = Shoreline sectors with few hurricanes

Yellow = Land sectors without ocean shoreline

White = Ocean or shoreline sectors with no hurricanes

Compare your two colored grids to answer the following questions.

4) Do you think hurricane hazards increased or decreased between 1980-82 and 2003-05?

Increased

5) Put a zero on each sector of the 2003-05 map that did not change color from the 1980-82 map.

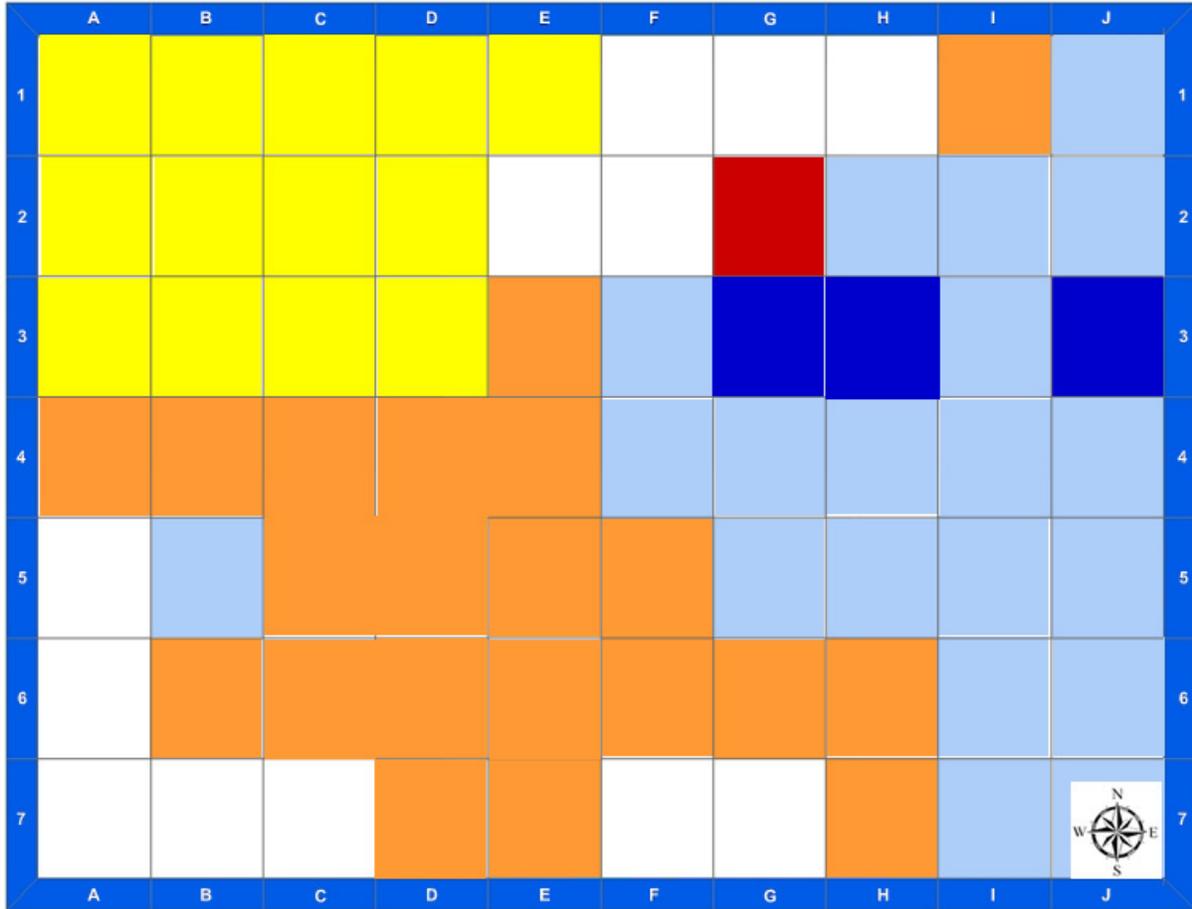
How many zeroes did you put on orange sectors? 5

How many zeroes did you put on light blue sectors? 3

6) Describe the pattern of the orange and light blue sectors with zeroes. For example, are they spread across the map or clustered together in one particular region of the map?

Most of these sectors are located in the southeast corner of the map

Atlantic Hurricanes 1980 - 1982



Atlantic Hurricanes 2003 - 2005

