**Hurricane Tracking Lab**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_

Purpose: To plot the paths of 3 hurricanes; note how hurricanes change direction; make note of changes in strength and try to infer a “cause and effect”; examine North Carolina’s vulnerability to hurricanes

Materials: Crayons or coloring pencils

Procedure:

1. Plot the storm positions on the Atlantic map using the coordinates below. Plot and connect each hurricane’s coordinates individually with a regular pencil, using the correct symbol for each hurricane’s points. You may round to the nearest whole number.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Hurricane **Bertha**  (July 15-17, 1996) | | | | Hurricane **Floyd**  (September 7-19, 1999) | | | |
| **Date** | **Lat.** | **Long.** | **Strength** | **Date** | **Lat.** | **Long.** | **Strength** |
| 7/5 | 10 N | 34 W | Tr. Dep. | 9/7 | 14.6 N | 45.6 W | Tr. Dep. |
| 7/5 | 11 | 39 | Tr. Storm | 9/8 | 15.3 | 48.2 | Tr. Storm |
| 7/6 | 13 | 47 | Tr. Storm | 9/9 | 17.1 | 53.9 | Tr. Storm |
| 7/7 | 15.5 | 54.8 | Tr. Storm | 9/10 | 19.3 | 58.8 | Hurricane 1 |
| 7/7 | 16.5 | 58.4 | Hurricane 1 | 9/11 | 21 | 61 | Hurricane 2 |
| 7/8 | 18 | 63 | Hurricane 1 | 9/12 | 22.7 | 64 | Hurricane 3 |
| 7/9 | 21.4 | 69.4 | Hurricane 3 | 9/13 | 23.2 | 67.4 | Hurricane 4 |
| 7/10 | 24 | 72 | Hurricane 2 | 9/14 | 24.5 | 74 | Hurricane 4 |
| 7/11 | 28.3 | 76.8 | Hurricane 1 | 9/15 | 27.1 | 77.7 | Hurricane 4 |
| 7/12 | 30.7 | 78.3 | Hurricane 2 | 9/16 | 32.1 | 78.7 | Hurricane 2 |
| 7/13 | 35 | 77.6 | Hurricane 1 | 9/17 | 40.6 | 73.5 | Tr. Storm |
| 7/13 | 36.7 | 77 | Tr. Storm | 9/18 | 44.8 | 67.3 | Extr. Depr. |
| 7/14 | 42 | 71.9 | Tr. Storm | 9/19 | 49.5 | 48 | Extr. Depr. |
| 7/14 | 46 | 66 | Extr. Depr. |  |  |  |  |
| 7/15 | 51 | 47 | Extr. Depr. |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Hurricane **Fran**  (August 23, 1996-September 10, 1996) | | | | | | | |
| **Date** | **Lat.** | **Long.** | **Strength** | **Date** | **Lat.** | **Long.** | **Strength** |
| 8/23 | 14 | 21 | Tr. Dep. | 9/1 | 21.7 | 62.1 | Hurricane 1 |
| 8/24 | 14 | 29 | Tr. Dep. | 9/2 | 23.9 | 67.9 | Hurricane 1 |
| 8/25 | 14.5 | 35 | Tr. Dep. | 9/3 | 24.7 | 71.2 | Hurricane 1 |
| 8/26 | 15 | 41.5 | Tr. Dep. | 9/3 | 25.2 | 72.2 | Hurricane 2 |
| 8/27 | 14.6 | 45 | Tr. Storm | 9/4 | 26.4 | 73.9 | Hurricane 3 |
| 8/28 | 15 | 49 | Tr. Storm | 9/5 | 31 | 77.2 | Hurricane 3 |
| 8/29 | 16.4 | 53.7 | Hurricane 1 | 9/6 | 35.2 | 78.7 | Hurricane 1 |
| 8/30 | 19.4 | 59.4 | Hurricane 1 | 9/6 | 36.7 | 79 | Tr. Storm |
| 8/30 | 20 | 60.6 | Tr. Storm | 9/6 | 38 | 79.4 | Tr. Dep. |
| 8/31 | 21 | 61.4 | Hurricane 1 | 9/7 | 39.2 | 79.9 | Tr. Dep. |
| Continue the path with the coordinates to the right 🡪 | | | | 9/8 | 44 | 79 | Tr. Dep. |
| 9/9 | 44.9 | 75.9 | Extr. Depr. |
| 9/10 | 46.7 | 70 | Extr. Depr. |

2. A change in strength marks the beginning of that particular phase. Connect the points for each individual storm with crayons/coloring pencils, using color to indicate strength. Trace the connector from each coordinate to the next using the color for the storm strength of the 1st coordinate. Be sure to change colors when the storm changes strength!!!

|  |  |
| --- | --- |
| **Strength** | **Color** |
| Extratropical Depression | Gray |
| Tropical Depression | Blue |
| Tropical Storm | Green |
| Category 1 | Yellow |
| Category 2 | Orange |
| Category 3-5 | Red |

3. Write the name of each hurricane at the beginning of its path.

Questions:

1. At about what latitude do these storm systems begin? What might be the reason for this?

2. Compare coordinates for these systems. When does a system become extratropical (when the system moves above the tropical latitudes)?

3. Describe the general path of a hurricane from beginning to end.

4. North Carolina is a very vulnerable to hurricanes. What is it about our coast line that makes us more of a target than Georgia or Florida? Refer to your map and your answer to question 3.

5. How does strength change when a hurricane makes landfall? Why do you think that happens (consider the location and atmospheric conditions of hurricane formation)?

