

In this activity, you will use iSENSE to view hurricane track data from the National Oceanic and Atmospheric Administration.

### Getting Started

1. Navigate to the iSENSE web site (isenseproject.org).
2. Select **Projects** from the main menu and enter “hurricanes” in the search area.
3. Select the project called **Data from Major Hurricanes**.
4. In the Data Sets area, click **Visualize**. You should see the map shown below.



**The markers show the tracks of six major hurricanes affecting the United States.**

### Challenge #1: Map

1. Which of the six hurricanes tracked farthest to the west? (HINT: Group by **Name** and deselect **Cluster Markers**.)

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2. What was Hurricane Katrina’s wind speed when it made landfall? (HINT: Zoom in and click the marker closest to New Orleans.)

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### Challenge #2: Timeline

1. On what date did Hurricane Sandy’s maximum wind speed occur? (HINT: Put **Wind Speed** on the Y Axis and zoom in to examine Sandy’s timeline.)

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2. What was Hurricane Sandy’s wind speed on October 27, 2012 at 0900 GMT? (HINT: Set Display Mode to **Symbols Only**.)

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### Challenge #3: Bar Chart

1. Which hurricane had the highest maximum wind speed? (HINT: Put **Wind Speed** on the Y Axis, and choose **Max** as the Analysis Type.)

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2. Which hurricane had the lowest minimum barometric pressure? (HINT: Put **Pressure** on the Y Axis, and choose **Min** as the Analysis Type.)

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### Challenge #4: Scatter Chart

1. What is the relationship between wind speed and barometric pressure? (HINT: Put **Wind Speed** on the X Axis and **Pressure** on the Y Axis.)

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2. What is the minimum wind speed (in knots) required for a Hurricane-5 designation? (HINT: Group By: **Status**.)

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3. Which storm was tracked by NOAA for the longest duration? (HINT: Group By: **Name**. Click **Generate Elapsed Time**. Put **Elapsed Time** on the X Axis and **Wind Speed** on the Y Axis. Then Click **Reset Zoom**.)

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### Challenge #5: Histogram

1. Within 10 pascals, what was the most common pressure value recorded during the six storms? (HINT: Put **Pressure** on the Y Axis and set the Bin Size to **10**.)

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2. How many total times did the most common pressure value occur during all of the storms? (HINT: This is the value on the Y Axis.)

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