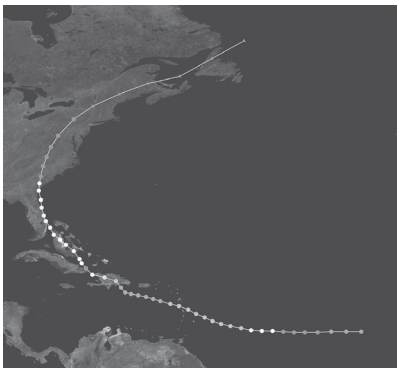
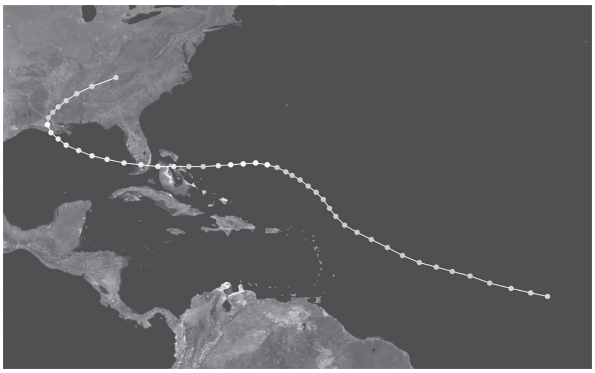
Checkout Questions

Lab 20. Predicting Hurricane Strength: How Can Someone Predict Changes in Hurricane Wind Speed Over Time?

1. The maps below show the path of two different hurricanes. David was classified as a category 2 hurricane when it reached Florida. Andrew, in contrast, was classified as a category 4 hurricane when it passed over Florida 13 years later. Both hurricanes began as a tropical depression near Africa.



Path of Hurricane David (1979)



Path of Hurricane Andrew (1992)

   a. What are two factors that can affect the wind speed of a hurricane?

   b. Why was the sustained wind speed of Hurricane David less than then sustained wind speed of Hurricane Andrew when these two hurricanes made landfall in Florida?

2. Scientists create pictures of things to teach people about them. These pictures are models.

   a. I agree with this statement.
   b. I disagree with this statement.

   Explain your answer, using an example from your investigation about hurricanes.

3. All questions can be answered by science.

   a. I agree with this statement.
   b. I disagree with this statement.

   Explain your answer, using an example from your investigation about hurricanes.

4. Natural phenomena have causes, and uncovering causal relationships is a major activity of science. Explain why identifying cause-and-effect relationships is important, using an example from your investigation about hurricanes.

5. Tracking energy as it moves into, out of, and within systems is an important activity in science. Give an example for energy moving into, within, or out of a system from your investigation about hurricanes.