
TRACKING HURRICANE INIKI

FOR THE TEACHER

Discipline

Earth Science

Theme

Energy

Key Concept

The tremendous energy of a hurricane can move rapidly across the ocean and can cause sudden, dramatic changes on a coral reef.

Synopsis

Students use real data from The Central Pacific Hurricane Center to map the movement of Hurricane Iniki across the Pacific to Hawaii.

Science Process Skills

relating, inferring

INTRODUCTION

The sudden force of Hurricane Iniki struck the Hawaiian Islands during September of 1992, causing great devastation to the human settlements and to the coastline of Kauai. Hurricanes take a heavy toll on coral reefs and this one was no exception. Several large expanses of reefs were smashed in just a matter of a few hours. The Central Pacific Hurricane Center tracked the path of the hurricane in an attempt to predict its course.

INTO THE ACTIVITIES

1. Have students work together in pairs. Give each pair one blank chart of the Pacific and one copy of the data describing the location of Hurricane Iniki between September 6–13, 1992.

2. Have students find the Hawaiian Islands on a map or globe. Then have them look at the island chain on the chart you have passed out. Tell them to pretend that they are living on the island of Kauai, and they are receiving radio reports about the location of the approaching hurricane. They must plot the course of the hurricane on their chart in order to make a prediction about whether or not it will hit their home. Have students label the first plot D, for Tropical Depression (indicating a circular wind pattern). Have them place a Tropical Storm symbol near the first plot where winds exceed 39 mph, and a Hurricane Symbol at the first plot where winds exceed 74 mph

3. As students plot the hurricane's track, if they think it is getting too close, they must decide to evacuate. If they decide to evacuate, they must record the date they leave, continue plotting the hurricane, and decide on what date it is safe to return to Kauai.

4. When all the data is plotted have students look at their graphs and answer the following questions:

- On what day did the hurricane reach maximum velocity? Where was it located on that day?
- How long did they think they had to be off Kauai in order to maintain their safety?
- On what side of the island did Iniki come ashore?
- How far did the hurricane travel from 9/6/92 - 9/13/92? (use a string to measure its path, and use the latitude scale to see how many miles the string represents--1 degree equals 60 nautical miles.)
- Have students research newspaper stories on Iniki at the library and report their findings to the class. Alternatively, conduct your own research and read daily accounts to heighten excitement as students plot data.
- How does your hurricane track compare to the one generated by scientists at the Pacific Hurricane Center. (Don't show students the completed map until they've finished plotting their data.)

**The following is a key for reading the
DATA FROM HURRICANE INIKI:**

Release = each time data is released from the Hurricane Center

HST = Hawaiian Standard Time

DAY = day of the week data was collected

DATE = date data was collected

TYPE:

TD = Tropical Depression

TS = Tropical Storm

HUR = Hurricane

LAT N/S = Latitude north or south

LONG E/W = Longitude east or west'

WS/MPH = Wind Speed in miles per hour

WC/MPH = Wind Speed at the Center of the Hurricane in miles per hour