



LESSON PLAN

TRACKING HURRICANE IRMA

Series: Forecasting Disasters

Objective

To help students practice listening for and writing down key details from a short video about the tools and techniques that scientists used to track the path of Hurricane Irma.

Supplies

- One or more books in the Forecasting Disasters series
- “Tools for Hurricane Forecasting” video from PBS: <https://tpt.pbslearningmedia.org/resource/nvrs-sci-hurricaneforecasting/tools-for-hurricane-forecasting-rise-of-the-superstorms/>
- Tracking Hurricane Irma worksheet (attached)
- Pencils

Before the Activity

Print a Tracking Hurricane Irma worksheet for each student. Pull up the PBS video and prepare to play it for students.

Activity

The Forecasting Disasters series describes how scientists study and predict natural disasters. Scientists also try to warn people before these disasters hit. The “Tools for Hurricane Forecasting” video from PBS explains how scientists gathered and used data to track Hurricane Irma in 2017.

Pass out the Tracking Hurricane Irma worksheet to students. Ask students to write answers to the questions on this worksheet as the video plays.

Evaluation

Collect the worksheets at the end of class. Use the attached answer key to give students 1 point for each correct answer, for a total of 8 points. Note that some questions have several possible correct answers.



TRACKING HURRICANE IRMA

1. Name two places where measurements of temperature, pressure, humidity, and wind speed come from.
2. What is the eyewall of a hurricane?
3. What are dropsondes?
4. Where are hurricane measurements sent?
5. How many observations does Ventus, the UK supercomputer, process every hour?
6. How many grid points have scientists created on Earth?
7. What do the equations at each grid point solve for?
8. The National Hurricane Center in Miami analyzes computer models to do what?



TRACKING HURRICANE IRMA **ANSWER KEY**

1. Name two places where measurements of temperature, pressure, humidity, and wind speed come from.

Sample answers (students can list any two): satellites, buoys, ships, ground-based weather stations, and aircraft that fly into the storm

2. What is the eyewall of a hurricane?

The most intense part of a hurricane, where the winds are the strongest and there is the most turbulence

3. What are dropsondes?

Tools/packages that fall through the hurricane on parachutes and take measurements, sending that information back as they fall

4. Where are hurricane measurements sent?

To supercomputer centers in the US and UK (where the information flows into models that generate forecasts)

5. How many observations does Ventus, the UK supercomputer, process every hour?

100 million

6. How many grid points have scientists created on Earth?

500 million

7. What do the equations at each grid point solve for?

The wind, temperature, and humidity at that point

8. The National Hurricane Center in Miami analyzes computer models to do what?

Issue official storm warnings