

Hot Water and Hurricanes

Part A: Earth's Ocean: A Storage Unit for Heat

1. Consider that the tropical ocean is exposed to direct sunlight for many hours every day. If the top 1 cm of a 100km² area of water warms from 25 to 27 degrees, how much heat energy has the water absorbed?

Part C: Heat Energy for Katrina

2. Use your own words to describe how heat in the ocean provides power for tropical storms.

3. On the Sea Height Anomaly image, what are the dimensions (length and width) of the area that is over 25 cm above mean sea level during the time Katrina passed over that part of the ocean?

4. Describe any patterns you see between the storm's track or its intensity and what's happening in the ocean water it's passing through.

5. Looking at Katrina's path, describe how the Tropical Cyclone Heat Potential data supports the idea that heat energy in the upper ocean is available to power tropical storms.

6. Skim through the NASA news article at https://www.nasa.gov/vision/earth/lookingatearth/katrina_seaheight.html to see how the information you've explored in this lab was presented to the public. Write a brief summary to describe why this heat energy research is important to people.