

# NOAA Online: Bathymetry Activity

<http://oceanexplorer.noaa.gov/edu/learning/player/lesson04.html>

## Directions

- View Lesson 4 -Subduction Zones
- To the right of the page you will see 2 activities “Bathymetric Maps” and “Bathymetry of Subduction”. Click these buttons to access the activities.
- Read through the introduction and instructions in each activity. Observe and interpret the graphics to complete the activity and questions below.

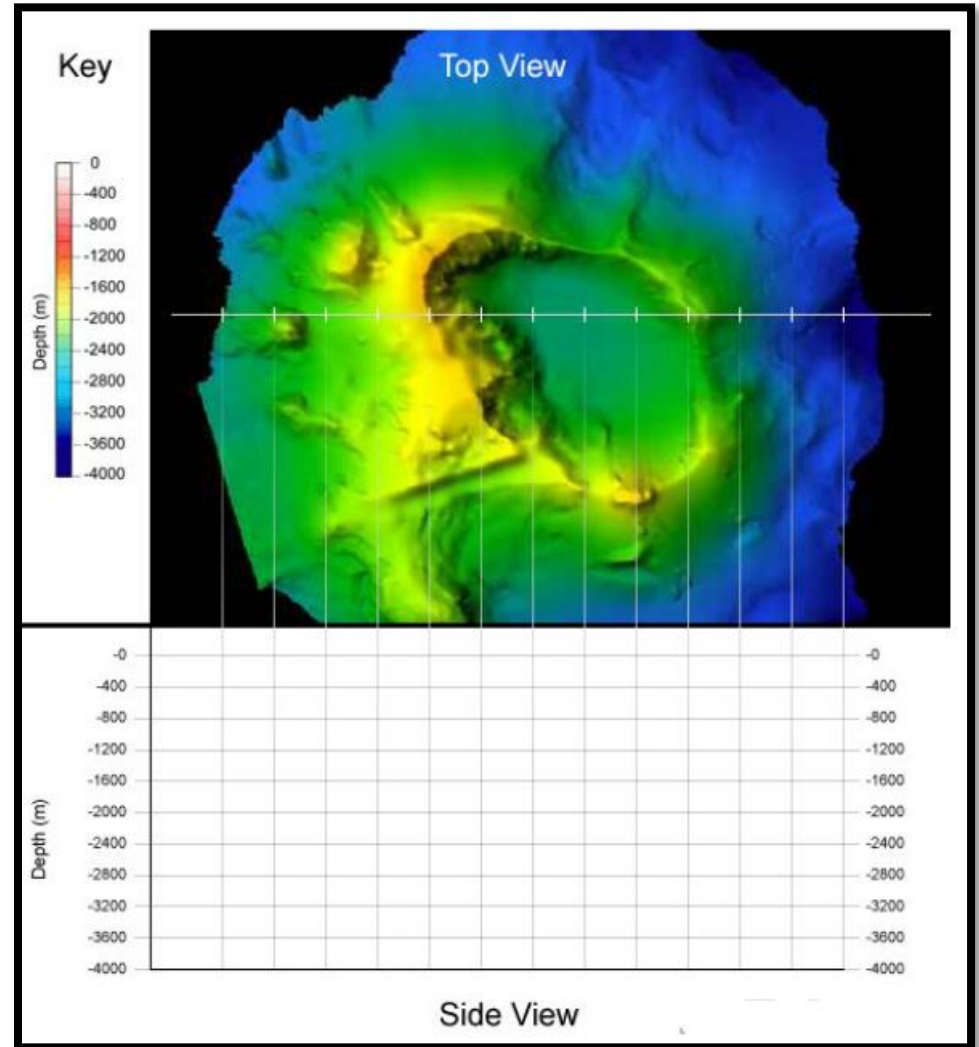
## Part 1 : Bathymetric Map Instructions

The bathymetric image, to the right, shows part of the Mariana Arc and Trench area, looking down on the seafloor from directly above. As you study the image, try to visualize what the landscape actually looks like in three dimensions.

To help you convert color to topography, plot a topographic profile across the image. Use the color key to determine the depth of the seafloor at each grid mark on the top view, and then use your cursor to chart that depth directly below the grid mark on the side view. When you have plotted all the points, you will see a cross-sectional view of the seabed along the horizontal line.

## Questions


- What are the deepest and shallowest points shown on the image?
- Briefly describe the structure shown on the image.
- Based on its topography and location in the Mariana area, what do you think the structure is?

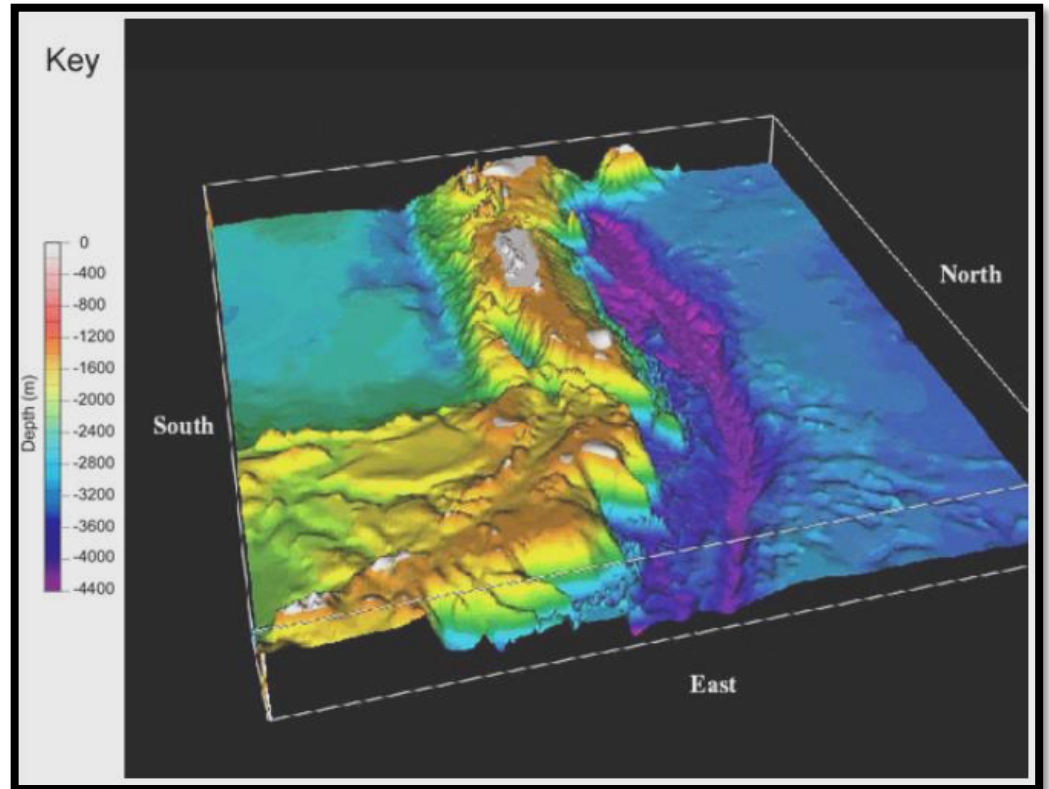


## Part 2: Bathymetry of Subduction Instructions

This bathymetric image shows a portion of the seafloor. Study it until you are confident you understand the topography, then answer the questions below.

### Questions

- The topography of the seafloor indicates the presence of a convergent plate boundary. **Draw a line where you think the plate boundary is located on the bathymetric profile to the right.** 
- Which plate is being subducted? What kind of crust is it, and how can you tell?
- How did the island chain form?



- In the space below, draw what you think the profile (side view) of the seafloor would look like if you took a cross section going South to North:

South

North

