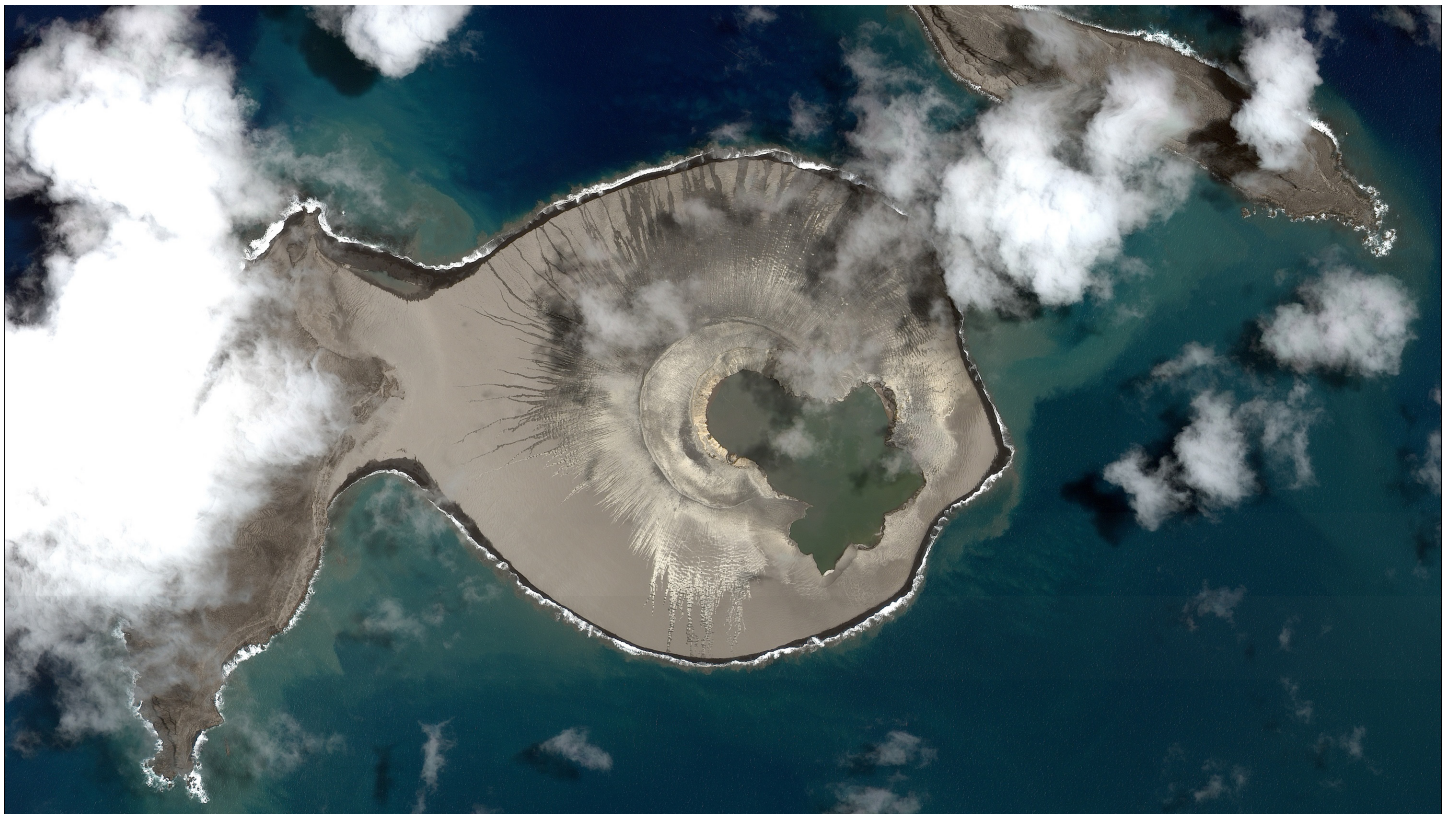
My NASA Data - Mini Lesson/Activity

An Island Transforms through Erosion and Deposition



Student Directions

Background

We often think of changes in land formation as events that occur over very long time scales. This is a real-life example of the formation and changes to an island over a very short geologic timescale.

Steps

Introduction to the Volcanic Phenomenon

Video: The Birth of a New Island

Video

The Birth of a New Island | https://www.youtube.com/watch?v=Hds1OBxVg4s | Source: NASA Goddard

1. Watch the The Birth of a New Island video about the formation of the island Hunga Tonga-Hunga Ha'apai and why NASA is interested in studying the island. Check with your instructor on how to submit answers.
2. After the video, answer the following questions.

    1. How did the island form?
    2. Why is NASA interested in studying this island?
    3. What sort of changes did you notice in the island?
    4. How did the geosphere and hydrosphere interact in the changes of the island?
    5. Do you think the timescale involved in these videos is faster or slower than many other areas on Earth?

Sources:

1. Visualizations: NASA's Scientific Visualization Studio, NASA Goddard Space Flight Center
2. Satellite image of the Tongan Island courtesy of Pleiades-1A ©2015 CNES Distribution Airbus DS
3. Photo of the tephra cliffs on the island is courtesy of NASA/Damien Grouille/Cecile Sabau

Teachers, these mini lessons/student activities are perfect "warm up" tasks that can be used as a hook, bell ringer, exit slip, etc. They take less than a class period to complete. Learn more on the "My NASA Data What are Mini Lessons?" page.

Teachers who are interested in receiving the answer key, please complete the Teacher Key Request and Verification Form. We verify that requestors are teachers prior to sending access to the answer keys as we've had many students try to pass as teachers to gain access.

My NASA Data Visualization Tool

- Earth System Data Explorer