

GO THERE—THE ISLANDS OF FRENCH POLYNESIA

9a. Use ***FLY TO*** and enter *Bora Bora* as the destination. Then ***ZOOM OUT*** to about 12 miles eye altitude. Print this view. Describe what you think the following colored areas represent and give your reasons:

- White puffs
- Green areas
- White lines
- Turquoise areas
- Blue-black areas

Bora Bora is famous for its spectacular scenery and shape. ***ZOOM IN*** to around 34,000 feet (about the cruising elevation of modern jetliners), and ***TILT*** your view. Describe the center of the island. What do you suppose the mountain at the center may be?

If you were a sailor, which colored areas would be most dangerous to the safety and integrity of your boat hull?

Describe the shape and zonation of the colored areas that make up the island, and sketch a profile across the island in the space below.

Between *Moto Mute* and *Tevairoa* on the northwest side of the island, and just east of *Amaire* and *Anau bays*, small white streaks seem to cut through the white and green zones on the outskirts of the island. What type of oceanic phenomenon that moves water towards and away from the land usually twice a day that may have carved these channels?

In which colored zone would you find beaches for sunbathing?

What could have formed the large deep blue depression in the island named *Baie de Povai*?

About 18 miles southeast of *Bora Bora*, two larger islands, *Tahaa* and *Raiatea*, prominently rise majestically from the tropical sea. In what ways are these islands similar to *Bora Bora*?

Based on your observations of the three islands, which one looks like it is the most “worn down”?

How does that comparison help you to understand the genesis of the islands?

Charles Darwin (1842) was one of the first scientists to come up with a good explanation of these types of island forms. Enter the following website address to discover what these kinds of islands are called and how they form: (<http://en.wikipedia.org/wiki/atoll>) Based on your reading, what do you now think the fringing white line and light turquoise band is that surrounds the mountainous part of the island.

Based on what you now know, is *Bora Bora* a more advanced or less advanced atoll than either *Tahaa* or *Raiatea*? Give reasons for your hypothesis.

ZOOM OUT to around 300 miles. Observe the neighboring French Polynesian islands and how they seem to form a northwest to southeast trending chain. **ZOOM IN** and observe these islands from around 10 miles **EYE ALTITUDE**. Are the islands west of *Bora Bora*, *Maupiti* and *Tupai*, more closely related in atoll development to *Bora Bora*, or to *Tahaa*? Give the observations that support your supposition.

Observe the island of *Tahiti*, about 170 miles southeast of *Bora Bora* and its close neighbors. Are they younger or older than *Bora Bora* in terms of Atoll development? What is the evidence for your theory?

Based on the sum of your observations of French Polynesia, in which direction, northwest or southeast might you go to find the most recent volcanic eruptions and lavas?

To see if there is any relationship between the chain of islands in French Polynesia with other islands in the Pacific ocean, enter these coordinates, 21 24 N, 160 37 W, into the **FLY TO** address bar, then **ZOOM OUT** to around 700 miles. Which part of the island chain pictured here is submerged, and which part of the chain has the most land above sea level?

The largest island in the chain is the largest volcano on Earth and the second largest shield volcano discovered in our universe, surpassed only by *Olympus Mons* on Mars. What is the name of the largest island in the chain?

Which volcanic island in the chain has produced the most lava? What does this imply about its age?

Why don't the Sandwich Islands, (another name for this real cool state in the middle of nowhere!) have the broad turquoise bands that surround the northwestern islands of French Polynesia?

NAME: _____

5

ATTACH PRINT VIEW HERE