

**How the Earth Was Made: The Deepest Place on Earth Video Questions**

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

1. How did the *HMS Challenger* originally measure the depth of the ocean at 4,475 fathoms near the Marianas Trench? If there are 6 feet to every fathom, then how deep is this in feet? (3:20)
2. What technology was necessary to map the sea floor? How does the system work? (4:50)
3. What is the lowest known point on the planet? How deep is it? (7:20)
4. What is the pressure at the Challenger Deep compared to the pressure at sea level? What did it do to the dummy head in the video? (8:00)
5. The submersible *Trieste* was the first to venture to the bottom of the Marianas Trench in 1960 at a recorded depth of 35,800 feet. What hazards were the occupants subject to at this great depth? (16:00)
6. What is a deep ocean trench? (18:00)
7. How does a spreading center ridge like the East Pacific Rise explain the existence of the Marianas Trench? (22:00)
8. What happens to the magnetic minerals in magma when the material cools and solidifies? How does the allow us to know the direction and speed at which the plates move? (24:00)

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9. Why doesn't the Pacific Ocean Basin get bigger if new material is constantly being created at the East Pacific Rise spreading center? (27:50)
  10. Why do chains of volcanoes form at subduction zones? (29:40)
  11. Why hasn't the Marianas Trench delivered a major earthquake in modern times? (32:00)
  12. What created the Marianas Trench? (34:00)
  13. Why is the Marianas Trench the deepest trench in the World? (36:00)
  14. Why is the Challenger Deep deeper than the Marianas Trench? (39:00)
  15. Why is the idea that magma welling up at mid ocean ridges causing the plates to separate now considered to be wrong? (40:00)
  16. Why do plates like the Pacific Plate with subduction boundaries move faster than other tectonic plates? (42:00)
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