

Hawaiian Hot Spots Undersea Volcanic Studies

| Visuals | Audio |
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| <p>Footage of Hawaiian volcanoes, Hawaiian senics</p> <p>Animation of continental drift (for example, see http://en.wikipedia.org/wiki/Continental_d_rift)</p> <p>Diagram of Earth detailing core, mantle, and crust</p> <p>Illustration/map of tectonic plate boundaries (e.g. http://en.wikipedia.org/wiki/Image:Plate_tectonics_map.gif). Illustration/animation of the three types of plate boundaries.</p> <p>Animation of earthquake at transform fault, volcano at convergent boundary.</p> <p>Animation of volcano formation over hot-spot.</p> | <p>Have you ever wondered what causes lava to erupt from volcanoes? It turns out that volcanoes are linked to the theory of plate tectonics.</p> <p>Plate tectonics is a the theory that explains how vast continents have moved over time.</p> <p>By studying the sea floor, geologists have discovered that large segments of earth's crust have been moving throughout our planets 4.6 billion year history .</p> <p>These floating segments come together at plate boundaries.</p> <p>Most volcanoes occur in these tectonic areas.</p> <p>On the west coast of North America, one such area is called a transform boundary.</p> <p>Some volcanoes however, are formed over hot spots in the middle of a plate, areas where a plume of hot mantle material comes to the surface and forms chains of volcanoes over millions of years.</p> <p>The Hawaiian Islands were probably formed from at one of these 'hot spots'. As the tectonic plate moved away, the volcano stopped erupting and a new one was created in its place.</p> <p>Over time, the volcanoes keep moving westward and become older. As they age, the crust upon which they sat cooled and shrank.</p> |

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| <p>Hawaii footage, volcanoes, birds, reef fish, turtles. etc.</p> <p>Underwater footage of Hawaiian reefs</p> | <p>The Big Island of Hawaii is the youngest Hawaiian island with active volcanoes today. The islands to the northwest of Hawaii are older and typically smaller, due to thousands of years of erosion.</p> <p>Look beneath the surface of these island waters and you will find young reefs teeming with life - fish, turtles, whales and countless other species, flourish in this geologically active place.</p> |
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