

<p>What are the three main stages of growth for Hawaiian volcanoes?</p>	<p>pre-shield, shield, and post-shield</p>
<p>Shield stage volcanoes have voluminous eruptions of _____ basalt.</p>	<p>tholeiitic</p>
<p>In 2017, there are two active eruptions currently taking place on Kīlauea Volcano. The eruption along the East Rift Zone is called _____, and it began in 1983.</p>	<p>Pu'u 'Ō'ō</p>
<p>There are two active eruptions currently taking place on Kīlauea Volcano. The eruption at the summit caldera is from a crater called _____.</p>	<p>Halema'uma'u</p>
<p>The Hawaiian volcanoes form above the Hawaiian hotspot, which is the result of a relatively stationary _____ rising from deep in the Earth's interior, where melting of unusually hot mantle rock undergoes melting beneath the oceanic lithosphere of the Pacific Plate.</p>	<p>mantle plume</p>
<p>The shield volcanoes of the Big Island represent about the last _____ years of volcanic activity of the Hawaiian hotspot.</p>	<p>one to one and a half million</p>
<p>Historically, it was generally believed that most volcanic eruptions on Hawaiian shield volcanoes were _____ in nature, but recently scientists have recognized a much more significant role for explosive eruptions on shield volcanoes such as Kīlauea.</p>	<p>effusive</p>
<p>The Big Island is located at the eastern end of the approximately _____ km long Hawaiian Ridge, extending from the Main Hawaiian Islands to the Hawaiian Emperor Bend.</p>	<p>2700</p>

<p>The summits of the highest Hawaiian shield volcanoes on the Big Island reach approximately _____m in elevation.</p>	<p>4200</p>
<p>The Big Island is moving about _____ cm/yr to the _____ direction on top of the Pacific Plate.</p>	<p>10cm/yr ; NW</p>
<p>T/F After the Big Island moves off the Hawaiian hotspot to the Northwest, to where Maui and Oahu are today, volcanic eruptions will permanently cease on the Big Island.</p>	<p>FALSE</p>
<p>The newest Hawaiian shield volcano forming below sea level off the Big Island is called _____.</p>	<p>Lō'ihi</p>
<p>Of all the subaerial and submarine shield volcanoes located on the Big Island, which three shield volcanoes are closest to the center of the Hawaiian hotspot?</p>	<p>Mauna Loa, Kīlauea, Lō'ihi</p>
<p>There are _____ submarine volcanoes around the Big Island; their names are _____ and _____.</p>	<p>two; Mahukona and Lō'ihi</p>
<p>T/F Mauna Loa is the largest active volcano on Earth.</p>	<p>TRUE</p>
<p>In historical times, since about 1750, which four shield volcanoes on or around the Big Island have been volcanically active?</p>	<p>Hualālai, Mauna Loa, Kīlauea, Lō'ihi</p>

<p>The most recent eruption of Kīlauea Volcano, referred to as the Pu'u 'Ō'ō eruption, has gone on continuously since _____. (year)</p>	<p>1983</p>
<p>Of all shield volcanoes that form the Big Island (subaerial and submarine), the first was _____, which began forming ~1.5 million years ago.</p>	<p>Mahukona</p>
<p>Many eruptions on Hawaiian shield volcanoes occur along areas 1 - 4 km wide of near vertical cracks, called _____, that radiate out from the summit along a curved path and extend deep into the volcano.</p>	<p>rift zones</p>
<p>Since 1955, most eruptions on Kīlauea Volcano have occurred along the _____.</p>	<p>East Rift Zone</p>
<p>Shield stage eruptions of Kīlauea Volcano shift back and forth over periods of hundreds of years, from _____ to _____ types of eruptions.</p>	<p>effusive to explosive</p>
<p>Explosive eruptions on Kīlauea Volcano generally tend to be due to the interaction of magma and _____.</p>	<p>water</p>
<p>As magma rises up into Kīlauea Volcano into a shallow summit reservoir, it pressurizes and swells the volcano, deforming and tilting the volcano's surface. Scientists call this _____ of the volcano.</p>	<p>inflation</p>
<p>After an eruption, as magma leaves the summit reservoir on Kīlauea, the pressure is relieved and contraction causes changes in tilt and displacement of the volcano's upper surface. Scientists call this _____ of the volcano.</p>	<p>deflation</p>

<p>Except for 1924, most eruptions since 1800 on Kīlauea Volcano have been _____ styles of eruptions.</p>	<p>effusive</p>
<p>The instability of the southern flank of Kīlauea Volcano, which periodically results in the seaward displacement of the volcano, can lead to three major hazards. Name these three hazards.</p>	<p>earthquakes, tsunami, and landslides</p>
<p>When lava flows in to the ocean, the hot lava becomes fragmented when it comes into contact with seawater and is reworked by wave action, commonly forming a _____ that extends across the coastline.</p>	<p>delta or lava delta</p>
<p>A _____ forms when large volumes of molten lava are contained within a volcanic crater or vent that may circulate with an upper crust and partially fill or completely solidify within the crater.</p>	<p>lava lake</p>
<p>To ancient Hawaiians, the deity _____ personified lava erupted from Hawaiian volcanoes.</p>	<p>Pele</p>
<p>Each of the Hawaiian shield volcanoes has two or more curvilinear _____ radiating out from the summit which are areas of frequent eruptions and concentrated areas of fractures.</p>	<p>rift zones</p>
<p>During the last 250 years, has the dominant eruptive activity of Kīlauea been explosive or effusive?</p>	<p>effusive</p>
<p>Three ways of diverting or delaying lava flows that have been attempted in Hawai'i, are by use of _____, _____, and _____.</p>	<p>explosives, water, and physical barriers</p>

<p>The four primary geologic/hydrologic hazards that impact property and threaten lives in Hawai'i include:</p>	<p>volcanic eruptions, earthquakes, tsunami, landslides</p>
<p>T/F In the last one hundred years, the Southwest Rift Zone of Kīlauea has been more volcanically active than the East Rift Zone.</p>	<p>FALSE</p>
<p>Many eruptions on the East Rift Zone begin with a period of lava _____, followed by more effusive lava flows.</p>	<p>fountaining</p>
<p>In the legends of ancient Hawai'i, Pele, the goddess of the volcano, is believed to have made her residence at _____ crater.</p>	<p>Halema'uma'u</p>
<p>The two most populous areas of the Big Island, Hilo and Kailua-Kona, are at the greatest risk from lava flows from which Hawaiian shield volcano?</p>	<p>Mauna Loa</p>
<p>Lava flows from Mauna Loa would likely travel faster from the summit to which city: Kailua-Kona or Hilo?</p>	<p>Kona</p>
<p>Interviews of residents from the village of Kapoho, after their town was destroyed by the eruption on the lower East Rift Zone in 1960, revealed that residents favored the construction of barriers to divert lava flows, but did not support the _____ of lava flows.</p>	<p>bombing</p>
<p>T/F The potential flow paths of lava flows can be estimated once the source of the eruption has been identified. This helps to inform residents of the likelihood their property may be inundated.</p>	<p>TRUE</p>

<p>The dominant wind trajectories for Hawai'i would cause most of the heavy ash falls from explosive eruptions from Kīlauea's summit to fall _____ of the summit.</p>	<p>southwest</p>
<p>Volcanic eruptions from Hawaiian shield volcanoes are often accompanied by other natural hazards, like _____.</p>	<p>earthquakes</p>
<p>Besides historical eruptive activity of Kīlauea and Mauna Loa, the only other subaerial Hawaiian shield volcano on the Big Island to erupt in historical time was _____.</p>	<p>Hualālai</p>
<p>Which shield volcano forms about half of the surface area of the Big Island?</p>	<p>Mauna Loa</p>
<p>What is the most important factor in determining how fast lava flows travel on Hawaiian shield volcanoes?</p>	<p>slope of the land</p>
<p>When new eruptions first start on the East Rift Zone of Kīlauea, the ground surface opens up by forming large cracks, or a _____, where magma erupts in curtains of fire.</p>	<p>fissure</p>
<p>The origin of sea cliffs and steep-walled valleys of Pololū and Waipi'o on the northeast flank of Kohala Volcano are connected to a giant _____ that occurred roughly 250,000 years ago.</p>	<p>landslide</p>
<p>The active submarine volcano roughly 40 km off the southeast coast of the Big Island is currently ~1000 m (3000 ft.) below the surface of the ocean. If _____ Volcano continues to grow at its current rate, it may emerge as an island above the surface in approximately _____ years.</p>	<p>Lō'ihi; 50,000 to 100,000</p>

<p>The Hawaiian name for the volcanic feature that extends along the East Rift Zone of Kīlauea Volcano, 75 km offshore from the eastern tip of the Big Island, is ____ Ridge.</p>	<p>Puna</p>
<p>List the seven shield volcanoes that make up the island of Hawai'i and its submarine base in order of their age of growth.</p>	<p>Mahukona, Kohala, Mauna Kea, Hualālai, Mauna Loa, Kīlauea, Lō'ihi</p>
<p>Which three shield volcanoes on the Big Island have completed their shield-building stage?</p>	<p>Kohala, Mauna Kea, Hualālai</p>
<p>Offshore of the northern half of the Big Island, within 20 km of the coast, there is a sharp change in slope, from shallow to steep, in the submarine bathymetry. This change in slope was the _____ at the end of shield building and has undergone _____ since then.</p>	<p>shoreline or coastline; subsidence</p>
<p>T/F The slopes of the submarine parts of the Big Island are much steeper (~13 degree slope) than the subaerial parts, which are mostly <4 degree slope up to 1000 m elevation.</p>	<p>TRUE</p>
<p>The west flank of Mauna Loa has been impacted by a series of fast and slow-moving landslides, referred to in the Hawaiian Islands as ____ and ____, which have left landslide deposits surrounding the islands.</p>	<p>slumps, debris avalanches</p>
<p>Does the position of Lō'ihi seamount place it on the Kea or Loa chain of parallel shield volcanoes present on the Big Island?</p>	<p>Loa</p>
<p>Hawaiian shield volcanoes are usually partially buried by lava flows from _____ after the end of shield building.</p>	<p>adjacent volcanoes</p>

<p>"Pele's underground roads" may refer to _____, where magma travels just below the surface.</p>	<p>lava tubes</p>
<p>T/F In the last century, eruptions of Mauna Loa have lasted longer and have been greater in volume than those from Kīlauea.</p>	<p>FALSE</p>
<p>The southeast rift zone of Kohala Volcano appears to have been buried by younger lava flows from which shield volcano?</p>	<p>Mauna Kea</p>
<p>The longest subaerial rift zone on the Big Island appears to be the _____ rift zone of _____ volcano.</p>	<p>Southwest Rift Zone of Mauna Loa</p>
<p>Large rapid flank displacements of Mauna Loa and Kīlauea may be rapid enough to generate a _____ and associated _____ that present significant hazards for residents of the Big Island.</p>	<p>earthquake; tsunami</p>
<p>Hilo is built on lava flows from _____ volcano erupted about 1,350 years ago, but several hundred meters deep are lava flows erupted from _____ volcano.</p>	<p>Mauna Loa, Mauna Kea</p>
<p>The Hawaiian Volcano Observatory manages an extensive seismic network over most of the Big Island to detect _____ from magma movement, deformation, and slippage along faults.</p>	<p>earthquakes</p>
<p>The difference between 'a'ā and pāhoehoe in the same lava flow is usually the difference between flow velocity; the 'a'ā is the _____ part of the flow, and pāhoehoe the _____ part of the flow</p>	<p>fast, slow</p>

<p>The Island of Hawai'i is composed of how many subaerial volcanoes?</p>	<p>5</p>
<p>Rank the shield volcanoes of the Big Island in order of age of formation from oldest to youngest?</p>	<p>Kohala, Mauna Kea, Hualālai, Mauna Loa, Kīlauea</p>
<p>The northeast coast of the Big Island is known as the _____ Coast.</p>	<p>Hāmākua</p>
<p>The west facing coast of the Big Island is known as the _____ Coast.</p>	<p>Kona</p>
<p>The two main types of lava flows in Hawai'i, that form smooth and jagged crusts, are called?</p>	<p>pāhoehoe and 'a'ā</p>
<p>Which side of Kīlauea volcano is currently undergoing gravitational slumping?</p>	<p>southeast</p>
<p>Kīlauea's present summit caldera is well defined oval depression 120 meters deep and roughly ____ km long by ____ km wide?</p>	<p>5 km long, 3 km long</p>
<p>Halema'uma'u has been the main site of volcanic activity of _____ Volcano for the last 150 years.</p>	<p>Kīlauea</p>

<p>Try to rank the five subaerial volcanoes on the Big Island in order from largest to smallest by visually estimating their volumes.</p>	<p>Mauna Loa, Mauna Kea, Hualālai, Kohala, Kīlauea</p>
<p>What 2 shield volcanoes on the Big Island have not erupted in recorded historical time?</p>	<p>Mauna Kea and Kohala</p>
<p>Which volcano appears to have gone extinct before the other volcanoes on the Big Island? (i.e. out of the shield stage, but not into the rejuvenated stage)</p>	<p>Kohala</p>
<p>Which shield volcano on the Big Island is least likely to erupt in the future?</p>	<p>Kohala</p>
<p>Most eruptions on Mauna Loa begin with a series of local _____ that indicate magma is moving within the volcano.</p>	<p>earthquakes</p>
<p>What is the Hawaiian name for the lava type formed from effusive eruptions on Hawaiian volcanoes, which has sharp, jagged, lava crust surfaces?</p>	<p>'a'ā</p>
<p>What is the Hawaiian name for the lava type formed from effusive flows on Hawaiian volcanoes, which solidify into smooth or ropy glassy surfaces?</p>	<p>pāhoehoe</p>
<p>T/F During the 1935 eruption of Mauna Loa, 500lbs bombs were used in an attempt to redirect or stop lava flows.</p>	<p>TRUE</p>

<p>Which shield volcano was last active in 1800-1801?</p>	<p>Hualālai</p>
<p>A rock formation that hangs from the ceiling of lava tubes is called a lava ____?</p>	<p>stalactites</p>
<p>Much of Kohala's south slope is buried under lava from which shield volcano?</p>	<p>Mauna Kea</p>
<p>The active summit crater on Kīlauea is known as _____</p>	<p>Halema'uma'u</p>
<p>A ____ cone is formed around a volcanic vent by fragments of lava ejected into the atmosphere during eruptions.</p>	<p>cinder</p>
<p>When a large amount of lava rises into a pit crater in the floor of the caldera, it commonly results in the formation of a circulating _____?</p>	<p>lava lake</p>
<p>Rank the five volcanoes in order from highest to lowest according to elevation.</p>	<p>Mauna Kea, Mauna Loa, Hualālai, Kohala, Kīlauea</p>
<p>The Hāmākua Coast was formed from which volcano during the Pleistocene?</p>	<p>Mauna Kea</p>

Cape Kumukahi was formed from which rift zone?	Kīlauea East Rift Zone
Upolu Point was formed from which rift zone?	Kohala Rift Zone
Hawai'i's largest volcano by volume is _____?	Mauna Loa
Hawai'i's tallest volcano is _____?	Mauna Kea
Ka Lae (South Point) was formed from which volcanic rift zone?	Mauna Loa Southwest Rift Zone
The Hawaiian Volcano Observatory overlooks which volcanic crater?	Halema'uma'u
Hawai'i's youngest subaerial volcano is _____.	Kīlauea
Which subaerial volcano on the Big Island has the youngest surface lava flows?	Kīlauea

<p>Below Earth's cool and rigid outer crust, known as the lithosphere, lies a layer of hot, partially melted, and slowly flowing upper mantle. This layer is known as the _____.</p>	<p>asthenosphere</p>
<p>(T/F) The volcanic hotspot that formed the Hawaiian-Emperor chain originated from the subduction of the Pacific Plate under the Hawaiian Plate.</p>	<p>FALSE</p>
<p>A common style of eruptive activity in Hawai'i involves lava shooting out of a vent in what is known as a lava _____, where the foamy lava is torn apart into tatters.</p>	<p>fountain</p>
<p>Of the two most common lava types found in Hawai'i, _____ typically forms when lava erupts at a high volumetric discharge rate, and flows away from the vent as one or several powerful lava channels.</p>	<p>'a'ā</p>
<p>Of the two common lava types found in Hawai'i, _____ typically forms when lava erupts at a low volumetric flow rate and the discharge is dispersed into a multitude of small and mostly slow-flowing lobes of lava.</p>	<p>pāhoehoe</p>
<p>The spherical or elongate flow unit that forms when basaltic lava erupts under water, or flows from land into water, is called _____ basalt. A) submarine pāhoehoe, B) aqualite, C) hydroflow, D) pillow</p>	<p>D) pillow</p>
<p>(T/F) Mauna Kea and Mauna Loa are the only two stratovolcanoes on the Big Island, because Kīlauea, Hualālai and Kohala are all shield volcanoes.</p>	<p>FALSE</p>
<p>One consequence of catastrophic volcano collapse is the generation of massive _____ that can radiate outward and dramatically impact neighboring islands and other coastal regions in the Pacific.</p>	<p>tsunamis</p>

<p>(T/F) Volcano collapse is not always a catastrophic event, it can occur incrementally and slowly.</p>	<p>TRUE</p>
<p>Magma that solidifies underground forms intrusions. The most abundant type of intrusion in Hawaiian volcanoes is a _____, a wall-like body of rock formed where magma fills a fracture. A) dike, B) sill, C) batholith, D) pluton, E) laccolith</p>	<p>A) dike</p>
<p>Which subaerial volcano on the Big Island is the largest volcano on Earth, having a volume estimated to exceed 40,000 km³?</p>	<p>Mauna Loa</p>
<p>The _____ stage of volcano growth is the most productive volcanically; each Hawaiian volcano erupts an estimated _____% of its volume in tholeiitic lavas during this stage.</p>	<p>shield; 80-95%</p>
<p>Once formed, Hawaiian volcanoes are subjected to multiple forms of degradation. The three primary forms of degradation observed on the Big Island are _____, _____, and _____.</p>	<p>subaerial erosion, landslides, and subsidence</p>
<p>Giant landslides in the Hawaiian Islands have the potential to generate extremely powerful and devastating local tsunamis, referred to as megatsunamis. (T/F) Geologic evidence indicates that landslides from the Big Island have historically generated megatsunamis of 155 m that impacted neighboring islands.</p>	<p>TRUE</p>
<p>(T/F) Most volcanism on Earth is focused along the global network of tectonic plate boundaries, but Hawai'i is unique because it was formed over at a midocean ridge spreading axes.</p>	<p>FALSE</p>
<p>(T/F) The Hawaiian Ridge is a stationary mass of rigid lithosphere and the hotspot is slowly moving southeastward beneath it, generating new islands as it progresses.</p>	<p>FALSE</p>

<p>The Island of Hawai'i consists of the tops of five subaerial volcanoes. Select all the volcanoes that are currently in the shield stage of growth?</p> <p><input type="checkbox"/>Mauna Loa <input type="checkbox"/>Mauna Kea <input type="checkbox"/>Hualālai <input type="checkbox"/>Kīlauea <input type="checkbox"/>Kohala</p>	<p>Mauna Loa, Kīlauea</p>
<p>The Island of Hawai'i consists of the tops of five subaerial volcanoes. Select all the volcanoes that are currently in the postshield stage?</p> <p><input type="checkbox"/>Mauna Loa <input type="checkbox"/>Mauna Kea <input type="checkbox"/>Hualālai <input type="checkbox"/>Kīlauea <input type="checkbox"/>Kohala</p>	<p>Mauna Kea, Hualālai, Kohala</p>
<p>The Hawaiian hotspot has led to the formation of a broad area ~1 - 1.5 km higher than the surrounding seafloor and ~1000 km across the axis of the Main Hawaiian Islands, called the Hawaiian _____.</p>	<p>swell</p>
<p>Before and after the shield stage of Hawaiian volcanism, where 80-95% of the volcano forms, lavas erupt with lower silica and higher potassium and sodium, called ____ basalt.</p>	<p>alkalic</p>
<p>The entire subaerial surface of Kīlauea Volcano is resurfaced with new lava flows about every _____ years.</p>	<p>1000</p>
<p>Studies of pyroclastic deposits composed of extensive and deeply weathered ash deposits around Kīlauea Volcano are evidence from _____ eruptions of Kīlauea Volcano in the past.</p>	<p>explosive</p>
<p>Recent studies of Kīlauea's long-term volcanic behavior over the last 2,500 years suggests centuries of _____ eruptions alternating with centuries of mostly _____ types of eruptions.</p>	<p>explosive; effusive</p>
<p>The cause of explosive eruptions of Kīlauea Volcano is interpreted to be the interaction of _____ with Kīlauea's shallow magma reservoir.</p>	<p>groundwater</p>

<p>The Hawaiian Volcano Observatory is operated by the _____ to monitor active Hawaiian volcanoes, and perform research and public outreach to educate Hawai'i residents.</p>	<p>U.S. Geological Survey</p>
<p>Where lava flows have travelled through forests, they often leave behind hollow impressions of pillars of lava where trees were encased by the flow called _____</p>	<p>lava tree molds or tree molds</p>
<p>Holes in the top of lava tubes that emit steam and gas are appropriately called _____.</p>	<p>skylights</p>
<p>Persistent release of volcanic gases, containing primarily water vapor, CO₂ and sulfue dioxide, and small amounts of hydrogen sulfide, carbon monoxide, and HCL and HF, are emitted in large volumes from Kīlauea. The sulfur dioxide reacts with moisture, oxygen and sunlight to form what is called _____ in Hawai'i , which is an irritant to lungs and eyes, and creates _____ which damages crops and plants.</p>	<p>vog (or volcanic smog); acid rain</p>
<p>In 2014 and 2015, a long-lived lava flow travelled 20 km down the East Rift Zone, posing a threat to the properties and structures in the town of _____, before coming to a halt with minimal destruction.</p>	<p>Pāhoa</p>
<p>During the 2014-2015 Pāhoa lava flow crisis at Kīlauea Volcano, the public was informed and educated about the lava flows progress and hazards primarily by staff and officials of the _____, and Hawaii County _____.</p>	<p>Hawaiian Volcano Observatory; Civil Defense</p>
<p>Since 1900, there have been _____ eruptions of Mauna Loa.</p>	<p>12</p>
<p>The primary way to reduce the risk from active lava flows to properties and buildings is through _____.</p>	<p>diversion</p>

<p>In an attempt to divert or stop a lava flow from threatening the water supply above Hilo, the upper channels of lava flow were bombed by Army aviators for the first time in the year _____.</p>	<p>1935</p>
<p>The use of _____ to delay or stop lava flows by cooling and solidifying the flow front, has not been very successful in Hawai'i, but has been successful in Iceland on a much larger scale.</p>	<p>water</p>
<p>Hawaiian cultural influences and beliefs, as well as legal considerations, have traditionally been reasons why the _____ and _____ of lava flows to protect properties have not been used.</p>	<p>diversion and bombing</p>
<p>Volcanic gas emissions of primarily _____, pose one of the greatest risks to people on Hawaiian shield volcanoes.</p>	<p>sulfur dioxide</p>
<p>The interference of the natural flow path of lava by people may result in other properties being damaged or destroyed, which may not have occurred if diversion techniques were not used. Therefore, because of _____ considerations, diversion barriers have not been frequently used in Hawai'i.</p>	<p>legal</p>
<p>In 1990 when lava flows threatened properties in Kalapana, some homeowners decided to _____ the entire structure, to try to save their homes.</p>	<p>move or relocate</p>
<p>Kohala Volcano last erupted approximately _____ years ago.</p>	<p>60,000</p>
<p>Mauna Kea Volcano last erupted approximately _____ years ago.</p>	<p>4,000 [3,500 to 4,500 acceptable]</p>

<p>Volcanic activity on the Big Island is usually preceded and accompanied by two detectable geophysical phenomena: _____ and _____</p>	<p>earthquakes, ground deformation</p>
<p>Abundant ash layers discovered below the surface of all the volcanoes on the Big Island attest to the _____ history of Hawaiian shield volcanoes.</p>	<p>explosive</p>
<p>The founder of the Hawaiian Volcano Observatory, Thomas Jaggar, studied eruptions, earthquakes, and tsunami in Hawai'i to help minimize the deaths and destruction from these events. Jaggar suggested that the key to minimizing damage from earthquakes was to improve _____.</p>	<p>construction of buildings</p>
<p>A large part of the south flank of Kīlauea Volcano has been undergoing incremental collapse in the southward direction, and has formed a giant submarine slump called the _____ slump.</p>	<p>Hilina</p>
<p>The lava delta that forms at the ocean entry on the south coast of Kīlauea periodically undergoes _____ of large volumes of rock.</p>	<p>collapse or slumping</p>
<p>Magma that ascends into Kīlauea beneath the summit and that makes its way out to the site of most eruptive activity since 1983 at Pu'u 'Ō'ō, is transported in fractures or conduits within the _____ between the summit and Pu'u 'Ō'ō.</p>	<p>rift zone</p>
<p>Evidence of the _____ of Hawaiian shield volcanoes is clear from bathymetric maps of the seafloor surrounding the Big Island and other Hawaiian Islands.</p>	<p>landsliding, collapse, flank failure</p>
<p>The most important way of transporting magma from summit reservoir to where it erupts on the volcano is through the emplacement or intrusion of _____ in concentrated areas of the rift zones.</p>	<p>dikes</p>

<p>The only recorded eruption of Hualālai was in ____?</p>	<p>1801</p>
<p>A type of volcanic eruption that results from the interaction between magma and water is known as a ____ eruption.</p>	<p>phreatomagmatic</p>
<p>Magma finds its way to the surface through ____ several feet wide during the rapid building of the volcano.</p>	<p>dikes</p>
<p>Which subaerial volcanoes were not active during the Holocene?</p>	<p>Kohala</p>
<p>Which rift zone runs through the Ka'u Desert?</p>	<p>Kīlauea's Southwest Rift Zone</p>
<p>According to the Geologic Map of the Big Island, the Ka'u Desert is mostly covered by lava flows from _____ years ago. A.) 200-400 B.) 400-750 C.) 5000-10000 D.) 750-1500</p>	<p>B</p>
<p>Lō'ihi is a submarine seamount 28 km south of the Island of Hawaii. It is the youngest volcano of the Hawaiian hotspot. At the current rate of growth, Lō'ihi is expected to grow above sea-level in about ____ years. A) 10 B) 100 C) 1,000 D) 10,000 E) 100,000</p>	<p>E) 100,000</p>