

**Volcano
Review Table**

	Flood Basalt	Shield	Mid-Ocean Ridge	Cinder Cone	Stratovolcano	Lava Dome	Caldera
Landform	<i>extensive plateaus</i>	<i>low, broad mountain with slopes <5°, up to 9,000-m high</i>	<i>rift valley</i>	<i>small mountain, 20-30° slopes, up to 400-m high</i>	<i>large, steep-sided mountain, up to 3,000-m high</i>	<i>small, steep-sided mountain, up to ~500-m high</i>	<i>large depressions 10's of km wide</i>
Eruption Products	<i>huge volumes of lava (10⁵ to 10⁶ km³)</i>	<i>lava >> tephra</i>	<i>pillow lava</i>	<i>tephra >> lava</i>	<i>tephra + lava</i>	<i>lava > tephra</i>	<i>tephra >> lava</i>
Magma Composition	<i>mafic</i>	<i>mafic</i>	<i>mafic</i>	<i>mafic</i>	<i>intermediate</i>	<i>felsic</i>	<i>felsic</i>
Magma Viscosity	<i>low</i>	<i>low</i>	<i>low</i>	<i>low</i>	<i>moderate</i>	<i>high</i>	<i>high</i>
% Gas in Magma	<i>low</i>	<i>low</i>	<i>low</i>	<i>moderate</i>	<i>low to high</i>	<i>low to high</i>	<i>low to high</i>
Eruption Style	<i>high discharge rate from multiple fissures</i>	<i>point source & fissure "fire" fountains (Hawaiian)</i>	<i>submarine flows</i>	<i>small eruption column, fire fountain (Strombolian)</i>	<i>large eruption column, pyroclastic flows (Plinian)</i>	<i>dome collapse, pyroclastic flows (Pelean)</i>	<i>multiple fissure-fed pyroclastic flows (ultra-Plinian)</i>
Explosivity	<i>low</i>	<i>low</i>	<i>low</i>	<i>low-moderate</i>	<i>very high</i>	<i>high</i>	<i>ultra-high</i>
Magma Origin	<i>mantle partial melting</i>	<i>mantle partial melting</i>	<i>mantle partial melting</i>	<i>mantle partial melting</i>	<i>hydrous (wet) crust/mantle melting</i>	<i>crustal melting</i>	<i>crustal melting</i>
Plate Tectonic Setting	<i>"hot spot" (mantle plume)</i>	<i>numerous</i>	<i>Oceanic divergent margin</i>	<i>numerous</i>	<i>Convergent margin (subduction zone)</i>	<i>numerous</i>	<i>numerous</i>
Examples	<i>Columbia River, Deccan Traps, Siberian Traps</i>	<i>Mauna Loa, Kilauea, Joes Hill</i>	<i>Mid-Atlantic Ridge, East Pacific Rise, Mid-Indian Ridge</i>	<i>Paricutin, Cerro Negro, Sunset Crater</i>	<i>Mt. St. Helens, Popocatepetl, San Francisco Peaks</i>	<i>Mt. Unzen, Mont Pelee, Sugarloaf Mtn</i>	<i>Valles, Long Valley, Yellowstone, Superstition Mtns</i>
Hazards	<i>lava flows</i>	<i>lava flows</i>	<i>no significant hazards</i>	<i>blast, ash fall, lava flows</i>	<i>blast, ash fall, pyroclastic flows, mud flows, landslides</i>	<i>blast, pyroclastic flows</i>	<i>blast, ash fall, pyroclastic flows, tsunami</i>
Comments	<i>eruptions never observed; role in mass extinctions(?)</i>	<i>some of the largest single mountains on Earth</i>	<i>>70,000 km of mid-ocean ridges (MORs) on Earth</i>	<i>usually monogenetic (erupt once and done)</i>	<i>form volcanic arcs around the "Ring of Fire"</i>	<i>commonly associated with stratovolcanoes and calderas</i>	<i>eruptions rarely observed</i>