**Volcanoes of Mars**

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| Morphology | Shape of an object |
| "Intermediate" Composition | Refers to the composition of an igneous/volcanic rock with wt% $SiO_2$ somewhere between that of basalt (~50%) and rhyolite (~70%) |
| Shield Volcano | Volcano with a broad, gently sloping morphology commonly formed predominately by lava flows. Example is Mauna Loa, Hawaii. |
| Stratovolcano | Also known as "Composite Volcano". Morphology is much less laterally extensive and has much steeper flanks than shield volcanoes. Formed by both lava flows and pyroclastic deposits (see below). Example is Mt. Saint Helens |
| Cinder Cone | A small volcanic edifice with flanks at the angle of repose and a proportionally large crater. Often represents a single eruption phase and is composed of mostly loose basaltic rubble (cinders). |
| Angle of Repose | The angle at which a substance will be stable when piled up. Example would be the angle at which sand would pile up if you let it run from your hand to the ground. |
| Caldera | A volcano formed by the collapse of it's summit into the volcanic edifice by removal of magma from chamber. Example is Crater Lake |
| Tuya | A volcano morphology formed during interaction with a thick ice sheet. Characterized by steep (near vertical) flanks and flat top. Also known as a volcanic table mountain. |
| Hot Spot | A location of anomalous thermal mantle upwelling that often results in production of magma. |
| Orogen | A fancy geology term for the formation of a mountain belt by plate tectonic forces |
| Lava Tube | A straw like conduit in a lava flow that is composed of hardened lava (the straw) with liquid lava flowing in the interior. The |

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| | cooled crust of a lava flow that acts as an insulator for subsequent flows. This allows for lava to flow much further and faster than it normally would on the surface. |
| Pyroclastic | Term for hot, fragmented rock created during an explosive volcanic eruption. |
| Flood Basalts | Lava flows that cover a large area without much of (if any) volcanic edifice. Commonly erupts from fissures and may travel through tubes or along the surface as sheets. |
| Fissure | A continuous linear volcanic edifice (as opposed to a single pipe). When erupting some call it a 'curtain of fire' |
| Komatiite | Volcanic rock composed of almost all olivine and pyroxene. Extrusive (lava flow). No modern terrestrial examples. |
| Andesite | An intermediate volcanic rock. |
| Rhyolite | A $SiO_2$ rich volcanic rock. Extrusive equivalent of granite. |
| Carbonatite | A unique volcanic rock that is more $CO_2$ based than $SiO_2$. |
| Pahoehoe – Aa – Blocky | Different characteristic flow morphologies for lava flows. Pahoehoe tends to be more lobate and laterally extensive (ropy). Aa tends to be more linear. Blocky is much thicker. |
| Newtonian Fluid | Viscosity controlled fluid |
| Bingham Fluid | Yield strength controlled fluid |
| Tuff Cones | Another type of volcano morphology that has a wide crater relative to the height of the crater walls. Generally formed by continuous explosive eruptions and is dominated by pyroclastic deposits. |