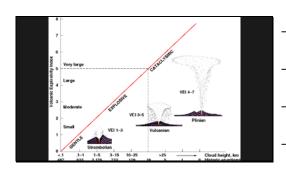
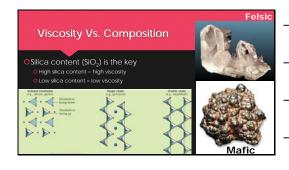
Volcanoes University of Northern Iowa - Department of Earth and Environmental Science Lava Chemistry

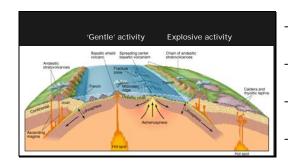
Viscosity & Explosions OLow viscosity = Small explosive eruptions O High viscosity = Highly explosive eruptions



Viscosity Vs. Temperature

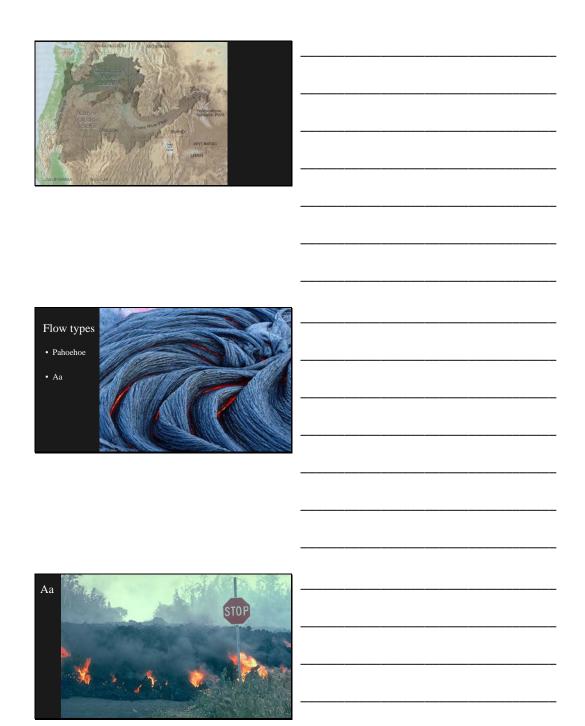
- High temperature magma = Low viscosity
 Hot spots, Mid-ocean ridges,
- Low temperature magma = High viscosity
 Beneath continents

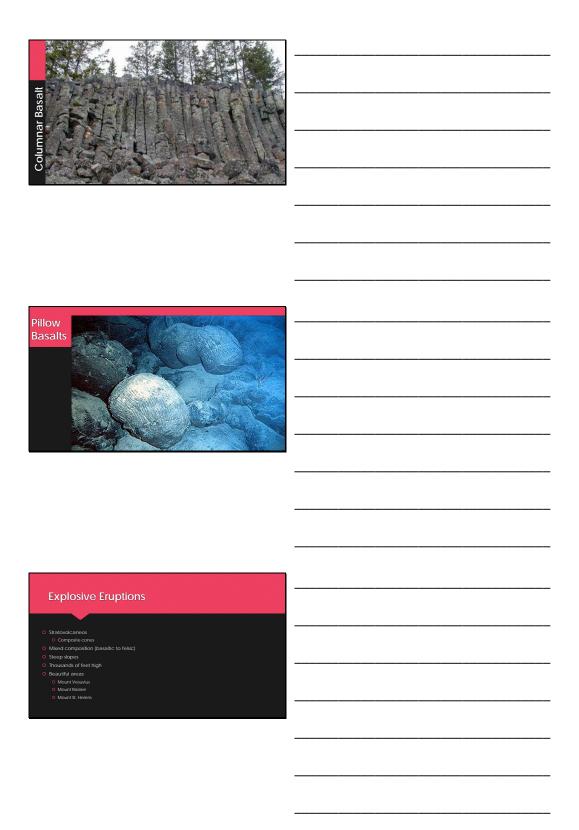


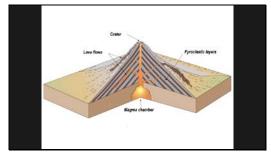


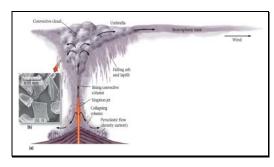
Volcano cone (Types) OGentle Eruptions OShield OFlood Basalt Violent Eruptions OStratovolcanoes Lava Domes Ocinder Cones

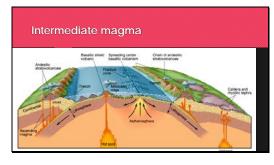
OLarge OBasaltic OGentle slopes OCommon in ocean settings (b) Shield volcano OFlat-lying layers of Basalt Erode to form stepped plateaus Columbia River Plateau











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OLava mass surrounding a vent Small domes within larger VolcanoesMount St. Helens Cinder Cones OPyroclastic material **O**Lapilli

Pyroclasic Flows ONuee ardente "Glowing Cloud" OPyroclastic material OBombs OLapilli OAsh OBoiling and rolling down slope ONuee ardente travel rapidly **○**50 to 100 mph!!!!!!! OTotal Devastation Benefits Thermus aquaticusDNA polymerase • \$300 million industry

