



The Rock Cycle

The Rock Cycle (KS3)

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Effusive & Explosive Eruptions

Effusive Eruptions

Effusive eruptions occur when hot, (1200°C) runny basalt magmas reach the surface. Dissolved gases escape easily as the magma erupts, forming lava that flows downhill quite easily.

Effusive eruptions build up gently-sloping Shield Volcanoes like Hawaii.



S. Johnson, Berkeley University

Dr Sharon Johnson, Geomages; <http://geoimages.berkeley.edu>



R. Gould

Shield volcano cutaway diagram

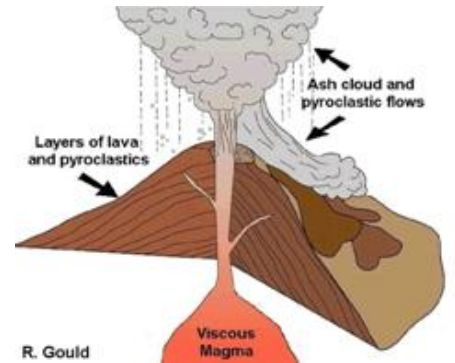
Explosive Eruptions

Explosive eruptions occur where cooler, more viscous magmas (such as andesite) reach the surface. Dissolved gases cannot escape as easily, so pressure may build up until gas explosions blast rock and lava fragments into the air!

Lava flows are much more thick and sticky so do not flow downhill as easily. These eruptions build up more steeply-sloping Composite volcanoes like this one in Chile.



Composite volcano, Andes, Chile



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Composite cone diagram