**Extrusive and Intrusive volcanic features**

**Extrusive volcanic features** are formed by lava and ash at the surface of the Earth. These include different types of volcanic cones and basalt plateaux.

Volcanic cones: shield cones, viscous lava domes, ash cones, composite cones and calderas. See text)

Basalt plateau: these are formed when basic lava flows to the surface over a wide area, often emerging from a vent or fissure. This produces a wide flat plateau e.g. the Deccan plateau in India

**Intrusive volcanic features** are formed by magma cooling and solidifying beneath the surface. Sometimes they are eventually exposed when the rocks above are removed by erosion.



A **sill** is formed by magma flowing horizontally between two rock layers and roughly parallel to the surface.

A **dyke (dike**) is a vertical sheet of igneous rock formed by magma moving directly upwards towards the surface.

A **neck or** **plug** is a vertical pipe of rock, formed when the molten material in the vent of a volcano cools and hardens.

A **batholith** is a much larger intrusive feature, formed when a large underground reservoir of molten rock cools and hardens below the surface.

**Laccoliths** are much smaller ponds of magma that solidifies beneath eth earth’s surface.



**Volcanic features change over time:** (Examples- St. Vincent, Grenada and St. Lucia)

* Hills remain where extinct volcanoes once were active
* The small rivers and streams flow down the sides of volcanic cones have steep, narrow valleys
* Dykes form ridges of high ground
* Calderas leave large domes in the landscape
* Some calderas are now the site of lakes such a Gran Etang in Grenada,
* Old pyroclastic flows have built up layers over time to form plateaux.



**Rewrite this note and draw the accompanying diagrams in your notebook!**