

Drainage system essay



**ASSIGN
BUSTER**

1-Drainage system- A drainage system is the pattern formed by the streams, rivers, and lakes in a particular drainage basin. They are governed by the topography of the land, whether a particular region is dominated by hard or soft rocks, and the gradient of the land.

2-Drainage basin-A drainage basin is an extent or an area of land where surface water from rain and melting snow or ice converges to a single point, usually the exit of the basin, where the waters join another waterbody, such as a river, lake, reservoir, estuary, wetland, sea, or ocean.

3-Water divide- Water divide or Drainage Divide: The boundary between two adjacent drainage basins. Drainage divides are ridge crests (or less obvious locations where slope of the landscape changes direction). Runoff produced on one side of the ridge flows into stream ' A' and runoff on the other side of the ridge flows into stream ' B'.

Dendritic drainage pattern Dendritic drainage systems (from Greek δεινδρίτης, dendrites, " of or pertaining to a tree") are the most common form of drainage system. In a dendritic system, there are many contributing streams (analogous to the twigs of a tree), which are then joined together into the tributaries of the main river (the branches and the trunk of the tree, respectively). They develop where the river channel follows the slope of the terrain. Dendritic systems form in V-shaped valleys; as a result, the rock types must be impervious and non-porous.[3

Parallel drainage pattern A parallel drainage system is a pattern of rivers caused by steep slopes with some relief. Because of the steep slopes, the streams are swift and straight, with very few tributaries, and all flow in the

same direction. This system forms on uniformly sloping surfaces, for example, rivers flowing southeast from the Aberdare Mountains in Kenya.

Trellis drainage pattern The geometry of a trellis drainage system is similar to that of a common garden trellis used to grow vines. As the river flows along a strike valley, smaller tributaries feed into it from the steep slopes on the sides of mountains. These tributaries enter the main river at approximately 90 degree angles, causing a trellis-like appearance of the drainage system. Trellis drainage is characteristic of folded mountains, such as the Appalachian Mountains in North America.

Rectangular drainage pattern Rectangular drainage develops on rocks that are of approximately uniform resistance to erosion, but which have two directions of jointing at approximately right angles. The joints are usually less resistant to erosion than the bulk rock so erosion tends to preferentially open the joints and streams eventually develop along the joints. The result is a stream system in which streams consist mainly of straight line segments with right angle bends and tributaries join larger streams at right angles.[2]

Radial drainage pattern In a radial drainage system, the streams radiate outwards from a central high point. Volcanos usually display excellent radial drainage. Other geological features on which radial drainage commonly develops are domes and laccoliths. On these features the drainage may exhibit a combination of radial and annular patterns.[2]

Centripetal drainage pattern Centripetal drainage systems are similar to radial drainage systems except the rivers flow in the opposite direction. They drain from the sides of hills to a central depression[2] where a lake is

formed.[4] This is common in western and south-western US, where centripetal drainage systems form intermittent lakes. These lakes leave behind salt flats when they evaporate during dry seasons.[2]

Deranged drainage pattern A deranged drainage system is a drainage system in drainage basins where there is no coherent pattern to the rivers and lakes. It happens in areas where there has been much geological disruption. The classic example is the Canadian Shield. During the last ice age, the topsoil was scraped off, leaving mostly bare rock. The melting of the glaciers left land with many irregularities of elevation, and a great deal of water to collect in the low points, explaining the large number of lakes which are found in Canada. The watersheds are young and are still sorting themselves out. Eventually the system will stabilize.[1]

Annular drainage pattern In an annular drainage pattern streams follow a roughly circular or concentric path along a belt of weak rock, resembling in plan a ringlike pattern. It is best displayed by streams draining a maturely dissected structural dome or basin where erosion has exposed rimming sedimentary strata of greatly varying degrees of hardness, as in the Red Valley, which nearly encircles the domal structure of the Black Hills of South Dakota.

An oxbow lake is a U-shaped body of water formed when a wide meander from the main stem of a river is cut off to create a lake. This landform is called an oxbow lake for the distinctive curved shape, named after part of a yoke for oxen. In Australia, an oxbow lake is called a billabong, derived from Wiradjuri, an indigenous language. The word "oxbow" can also refer to a U-

shaped bend in a river or stream, whether or not it is cut off from the main stream.