

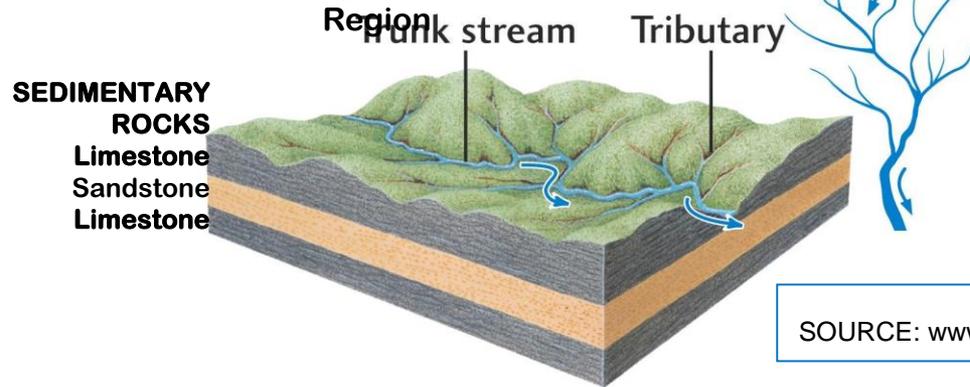
GEOLOGY & DRAINAGE PATTERNS

Shape of the stream systems draining a particular region

Dendritic: "Tree Trunk & Branches"

Most common drainage pattern resulting from flow of water over gently inclined flat-lying rock formations.

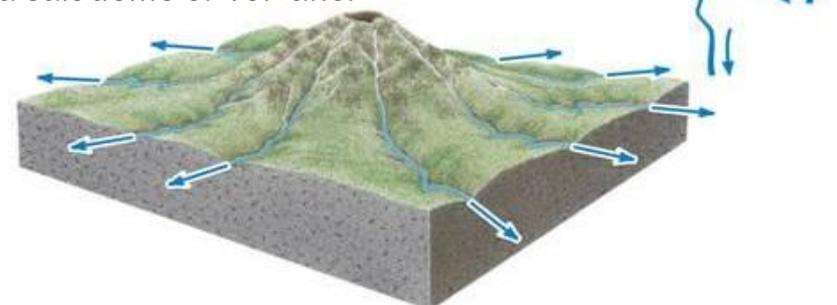
Example: Springfield Plateau Ozark Region



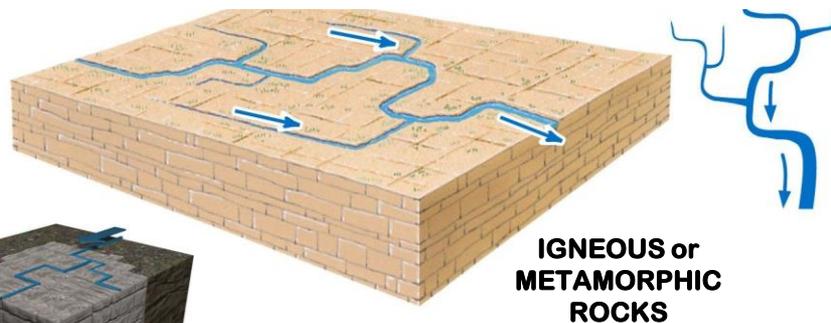
SOURCE: www.studyblue.com

Radial: "Wheel Spokes"

Develops on a large single peak, such as a salt dome or volcano.



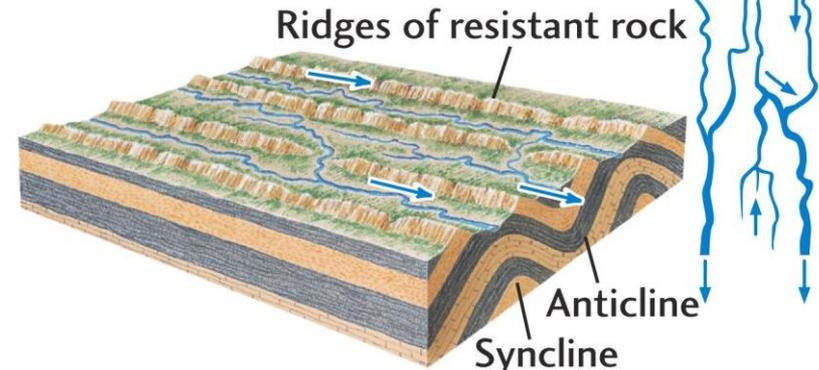
Example: Hawaiian Islands, Mt. Shasta/CA



SOURCE: www.onegeology.org

Rectangular: "Square-Corners"
Forms on rocks with well-developed joint system.

Example: Canadian Shield



Trellis: "Trained Vine"

Streams flowing on "folded" SEDIMENTARY rock units follow valleys bounded by ridges of erosion resistant rock.

Example: Appalachian Mountains Virginia & Pennsylvania

CLIMATE:

THE AVERAGE WEATHER (INCLUDING RAINFALL, TEMPERATURE, WIND) OVER A LONG TIME PERIOD THAT IS CHARACTERISTIC OF A REGION

DESERTS: Rainfall Negligible

Arid: <0-10 centimeters = <0-4 inches per year

Semi-Arid: <10-30 centimeters = <4-12 inches



Source:
www.weaselinthebarley.com/scenic_wallpapers/desert.htm



Source:
www.airphotona.com/image.asp?im_ageid=1742

GRASSLANDS: Rainfall Minimal

Temperate: <25-75 centimeters = <10-30 inches per year

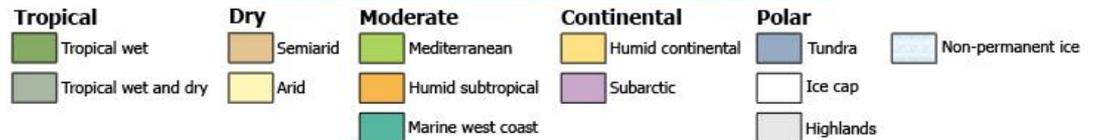
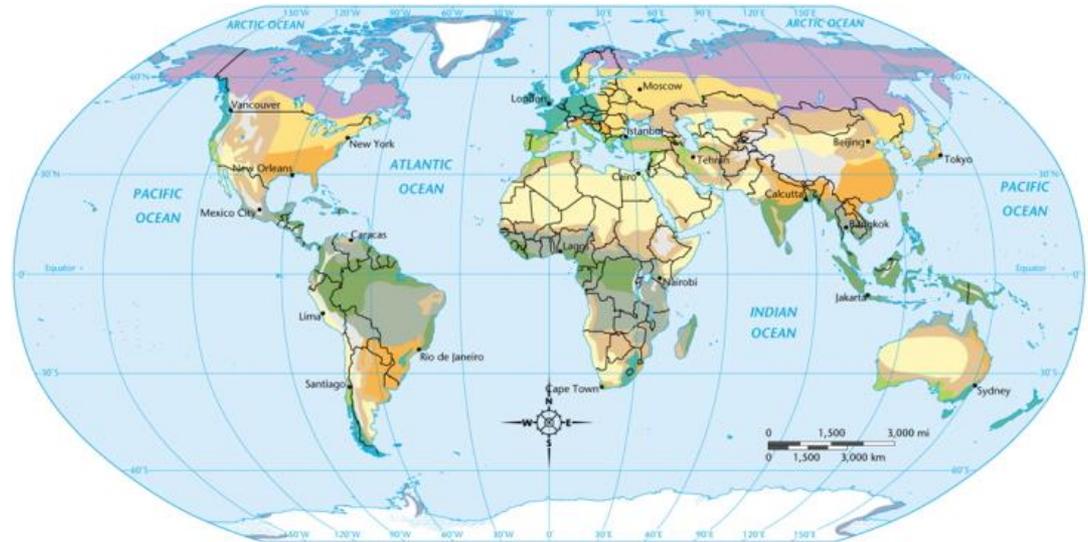
Tropical: <64-150 centimeters = <25-60 inches per year



<http://www.americansouthwest.net/wyoming/yellowstone/pelican-grasslands.html>



<http://www.kidcyber.com.au/topics/biomegrass.htm>



Source: <http://commons.wikimedia.org/wiki/File:ClimateMapWorld.png>

WOODLANDS: Rainfall Moderate

<75-150 centimeters = <30-60 inches per year



Source:
<http://www.kansasforests.org/newindex.shtml>



Source:
<http://www.geograph.org.uk/photo/2427529>

RAINFORESTS: Rainfall Maximum

<175-200 centimeters = <69-79 inches per year



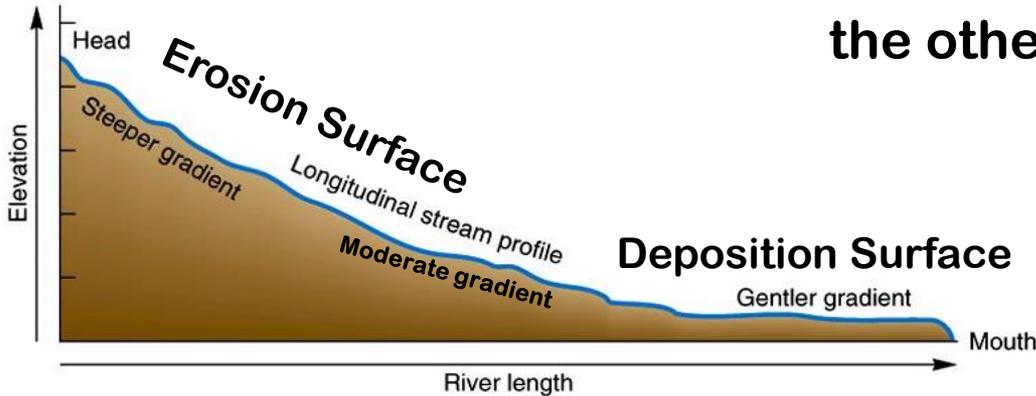
Source:
<http://burns1.wikispaces.com/Southeast+Asian+Rainforest>



Source:
http://photos.igougo.com/pictures-photos-p211084-rain_forest.html

SLOPE

An inclined surface of which one end or side is at a higher level than the other



Source: www.sci.uidaho.edu/scripiter/geog100/lect/11-rivers/11-rivers.htm

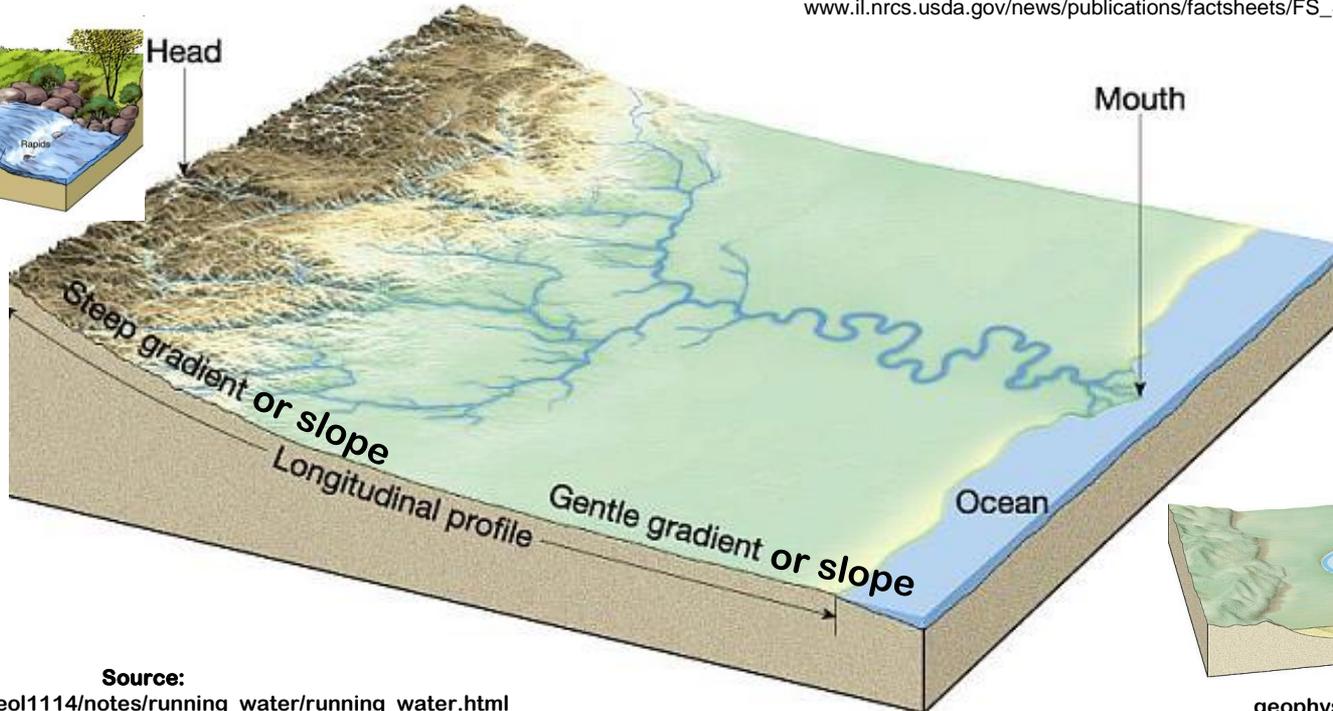
Over many years, streams develop their patterns and characteristics of transporting water and sediment from upland areas, through floodplains, and on to larger streams and rivers, and eventually, oceans.

Source: www.il.nrcs.usda.gov/news/publications/factsheets/FS_StreamDynamics.html



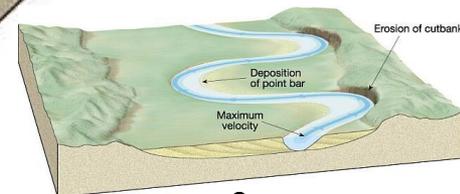
Headwater stream on steep slope
Source:

www.sci.uidaho.edu/scripiter/geog100/lect/11-rivers/11-rivers.htm

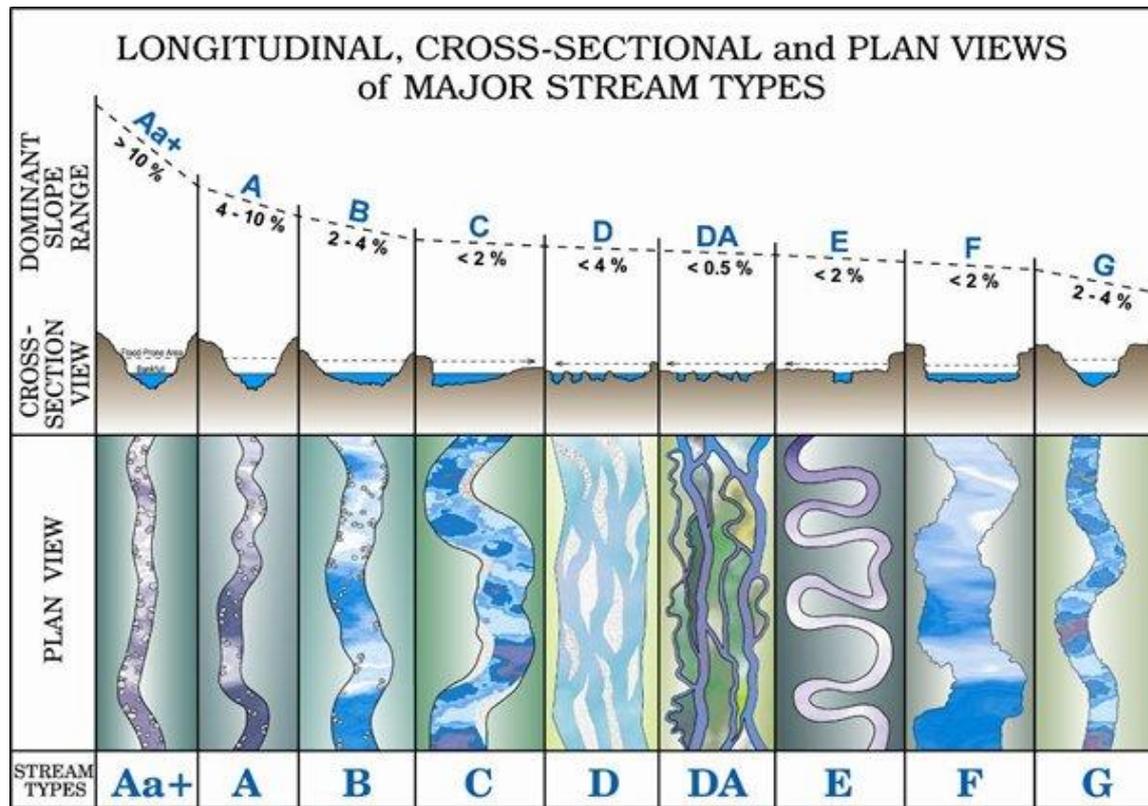


Source: geophysics.ou.edu/geol1114/notes/running_water/running_water.html

Meandering stream on nearly level or flat surface



Source: geophysics.ou.edu/geol1114/notes/running_water/running_water.html



(Rosgen, 1996, reprinted with permission from Wildland Hydrology)

- Aa Very steep, deeply entrenched, low width/depth ratio and laterally contained
- A Steep, entrenched, cascading with step/pool streams
- B Moderately entrenched, moderate gradient, riffle-dominated channel
- C Low gradient, meandering, point-bar, riffle/pool with broad floodplains
- D Braided channel with longitudinal and *transverse bars* – very wide with eroding banks
- DA Multiple channels, narrow and deep, with extensive well-vegetated floodplains and *wetlands*
- E Low gradient, meandering riffle/pool stream with low width/depth ratio, high meander width ratio
- F Entrenched meandering riffle/pool channel on low gradients with high width/depth ratio
- G Entrenched 'gully' step/pool and low width/depth ratio on moderate gradients