Gradational Forces

- Exterior force
- Lowers elevation
- Parallel to tectonic forces

- Weathering
- Movement by erosional agents
- Deposition, aggradation

Weathering

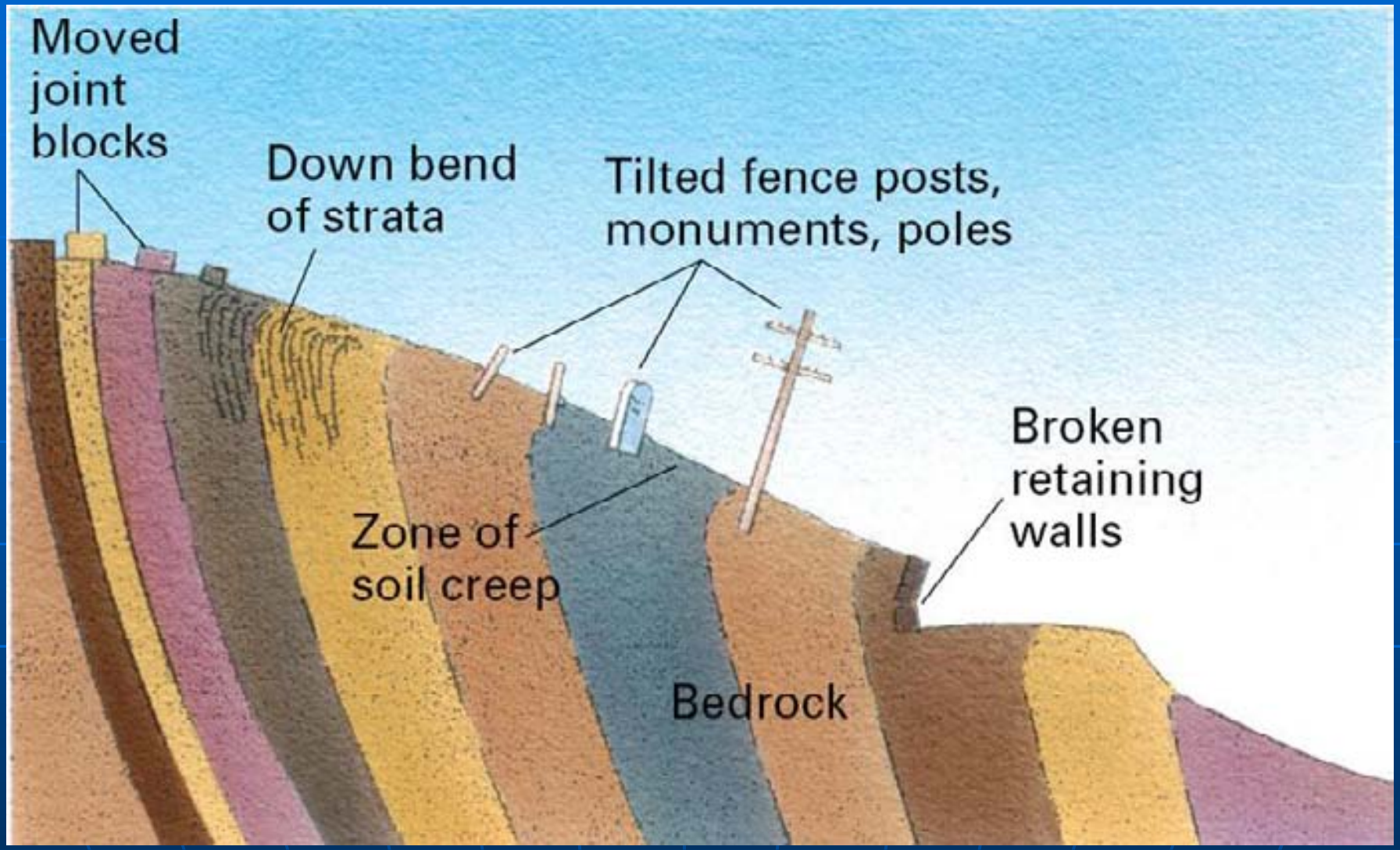
- Variable scales
- Chemical
- Mechanical

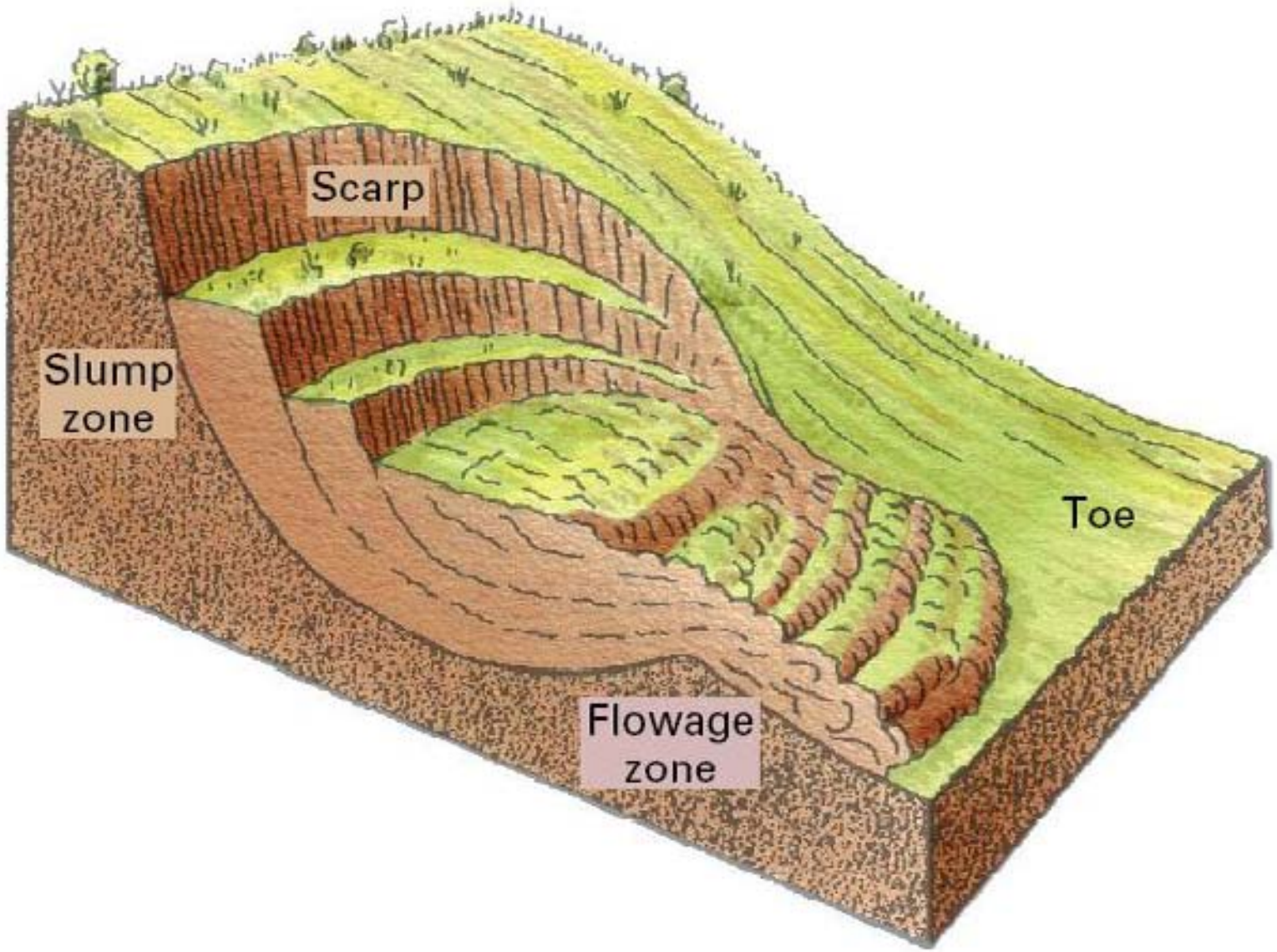
Agents of Erosion

- Gravity or mass movement
- Ground water
- Surface water
- Wind
- Ice
- Waves

Gravity or Mass Movement

- Most important
- Fast or slow
- Wet or dry
- Slope, water, vegetation controls
- Creep, solifluction, rockslide, landslide, slump

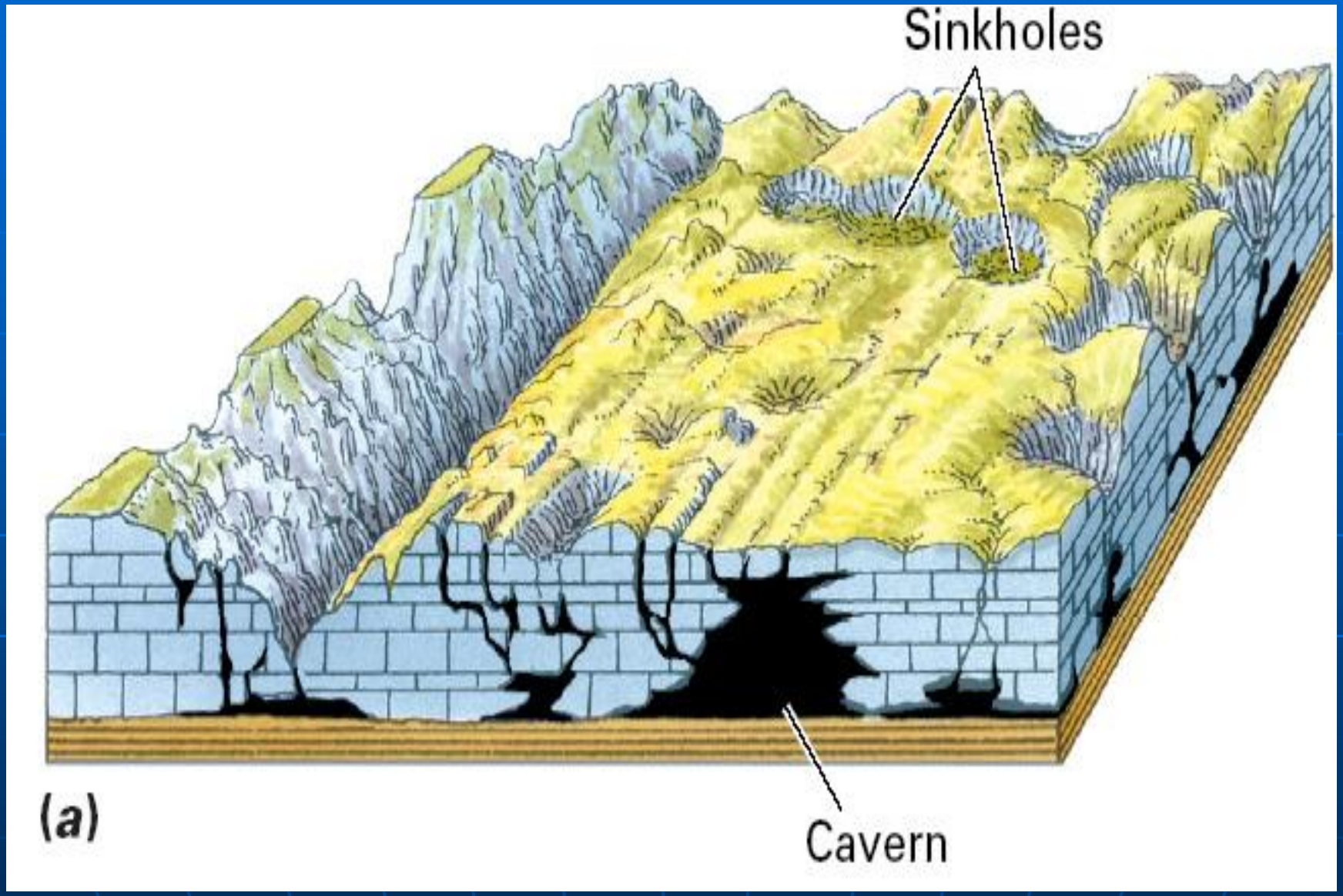

Moved joint blocks
Down bend of strata
Tilted fence posts, monuments, poles
Broken retaining walls
Zone of soil creep
Bedrock


Scarp
Slump zone
Toe
Flowage zone

LEAVING
GRAND TETON
NATIONAL PARK

Ground Water

- Limestone
- Karst
- Lack of surface streams, caves, sinkholes
- Florida, Yucatan, Kentucky, Yugoslavia


Sinkholes
(a)
Cavern

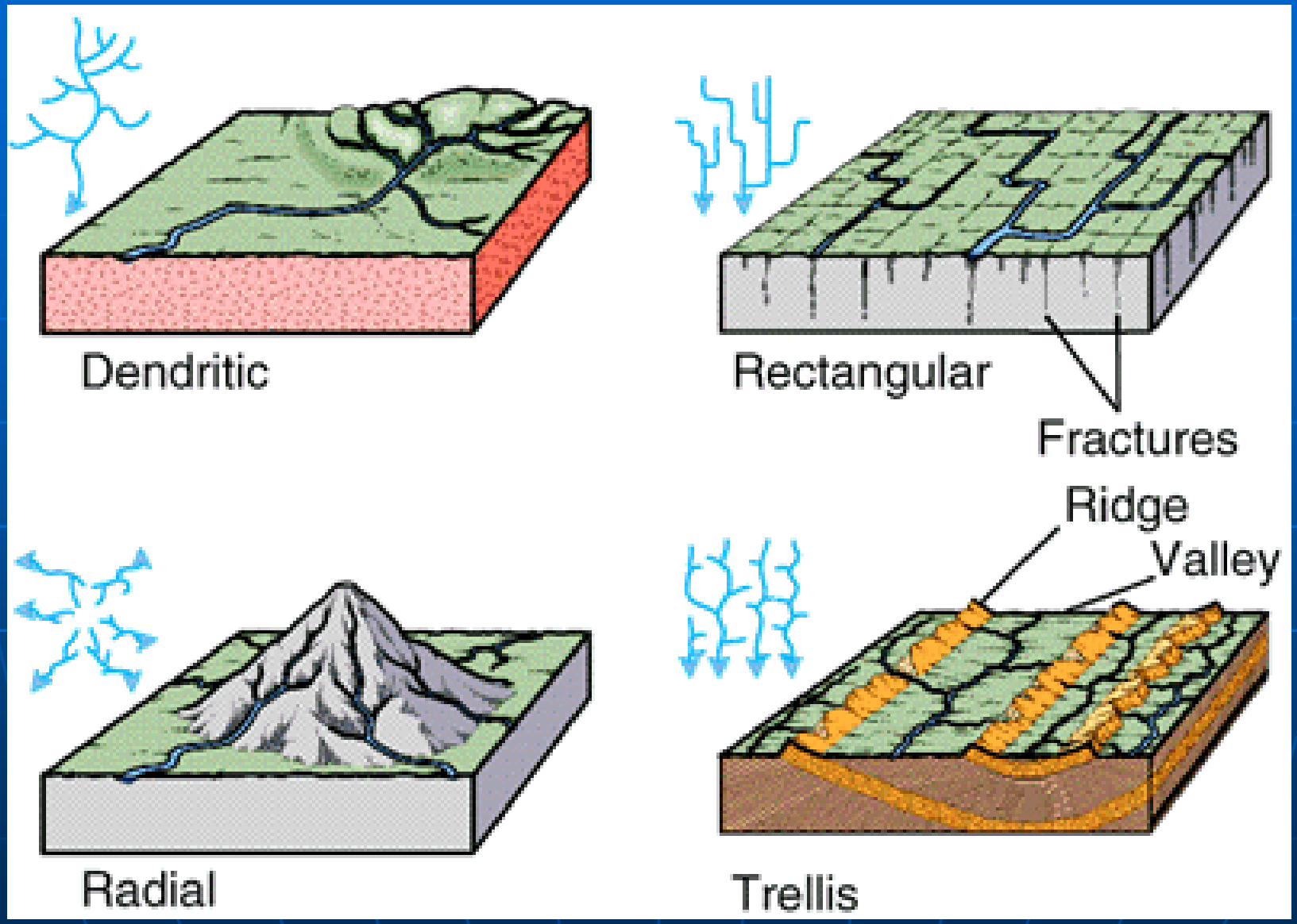
KY
2

Surface Water

- Precipitation impact
- Overland flow, sheet erosion
- Channelization

Stream Patterns

- Dendritic
- Trellis
- Radial
- Indefinite
- None


Dendritic
Rectangular
Fractures
Ridge
Valley
Radial
Trellis