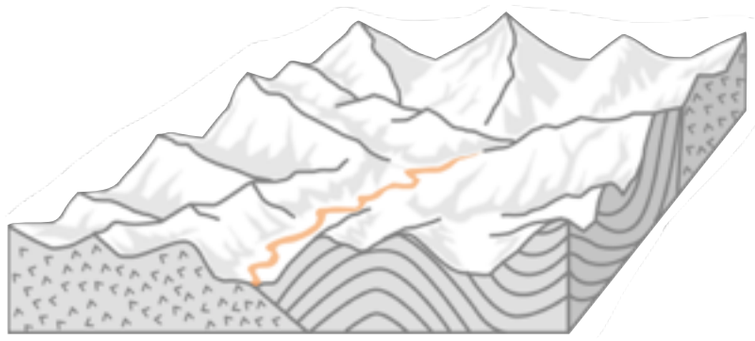
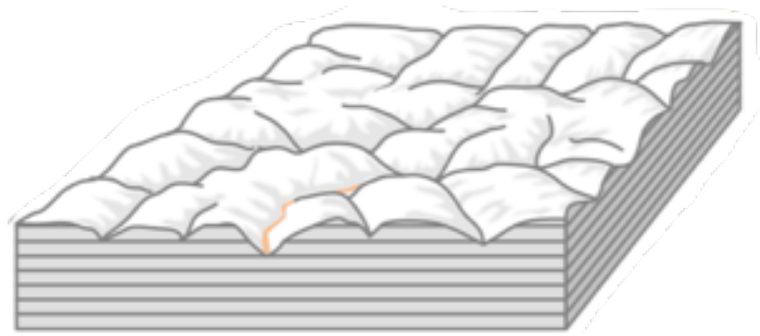
Landscapes and Drainage Patterns

BEGIN

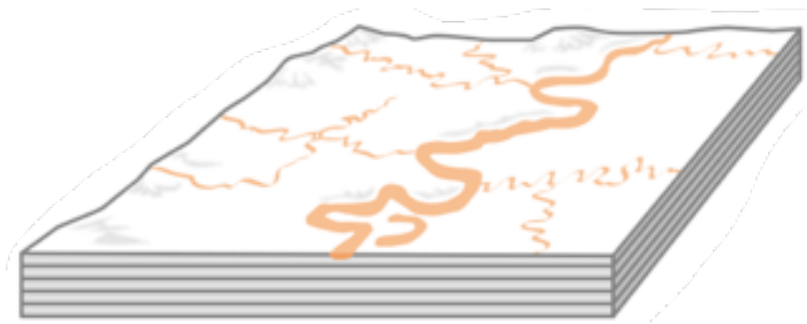
The land surfaces of the Earth are generally categorized in to one of three landscape types. Tap on each button to learn about that landscape.



MOUNTAINS



PLATEAUS



PLAINS

Once you have explored the three types of landscapes, click here to continue.

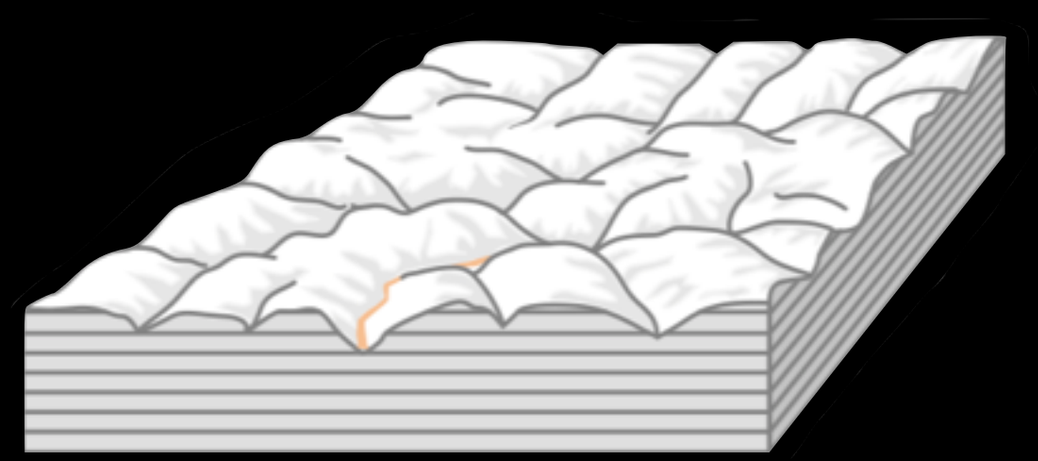


Mountain Landscapes

- High elevation
- Lots of relief (changes in altitude)
- Deformed bedrock (folded, faulted tilted)

NEXT

BACK TO “LANDSCAPES”



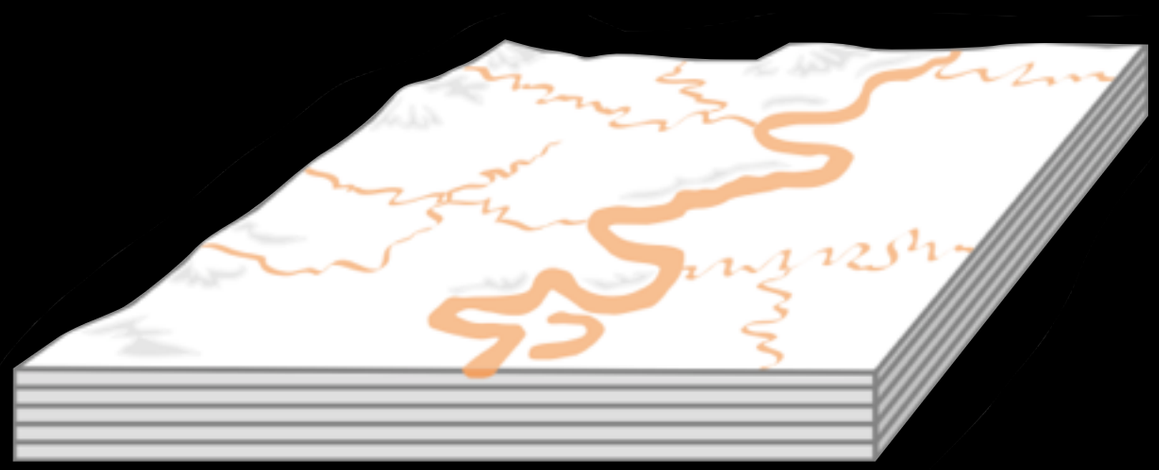
Plateau Landscapes

- High elevation
- Very little relief (fairly flat)
- Horizontal bedrock (flat layers)

NEXT



BACK TO “LANDSCAPES”



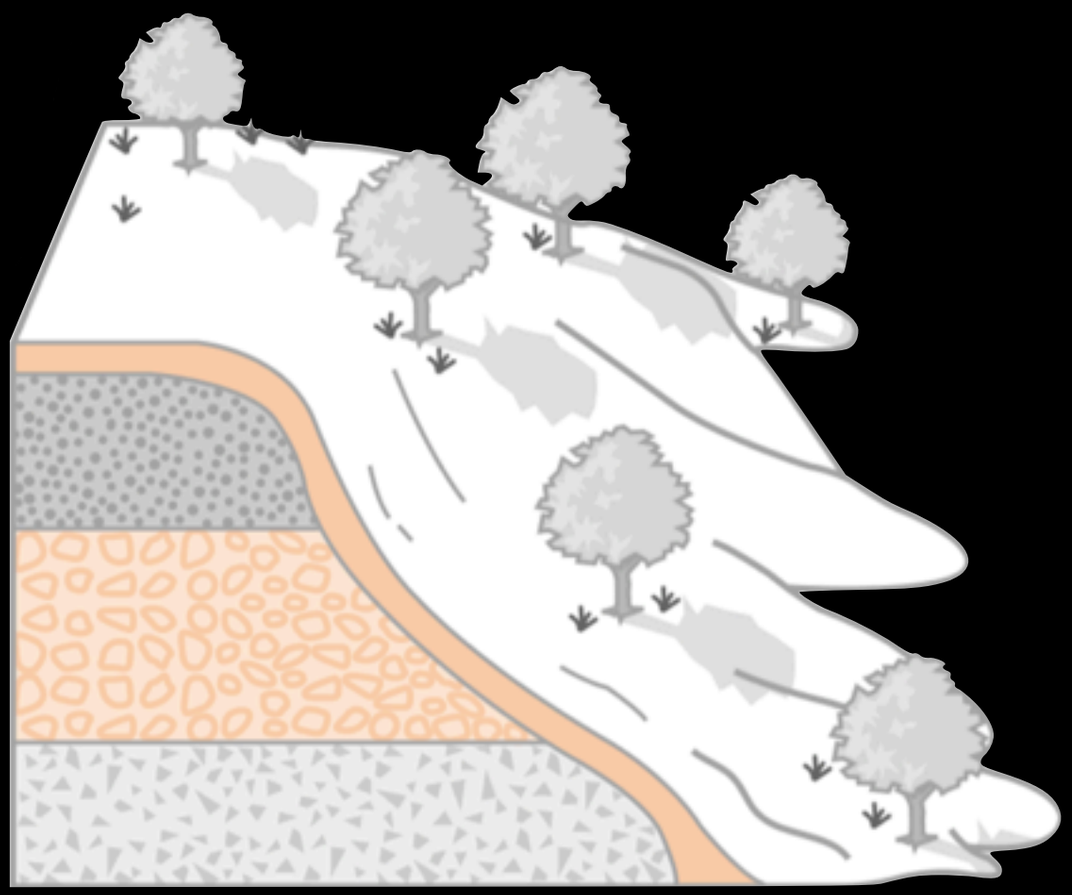
Plains Landscapes

- Low elevation
- Very little relief (very flat)
- Horizontal bedrock (flat layers)

NEXT

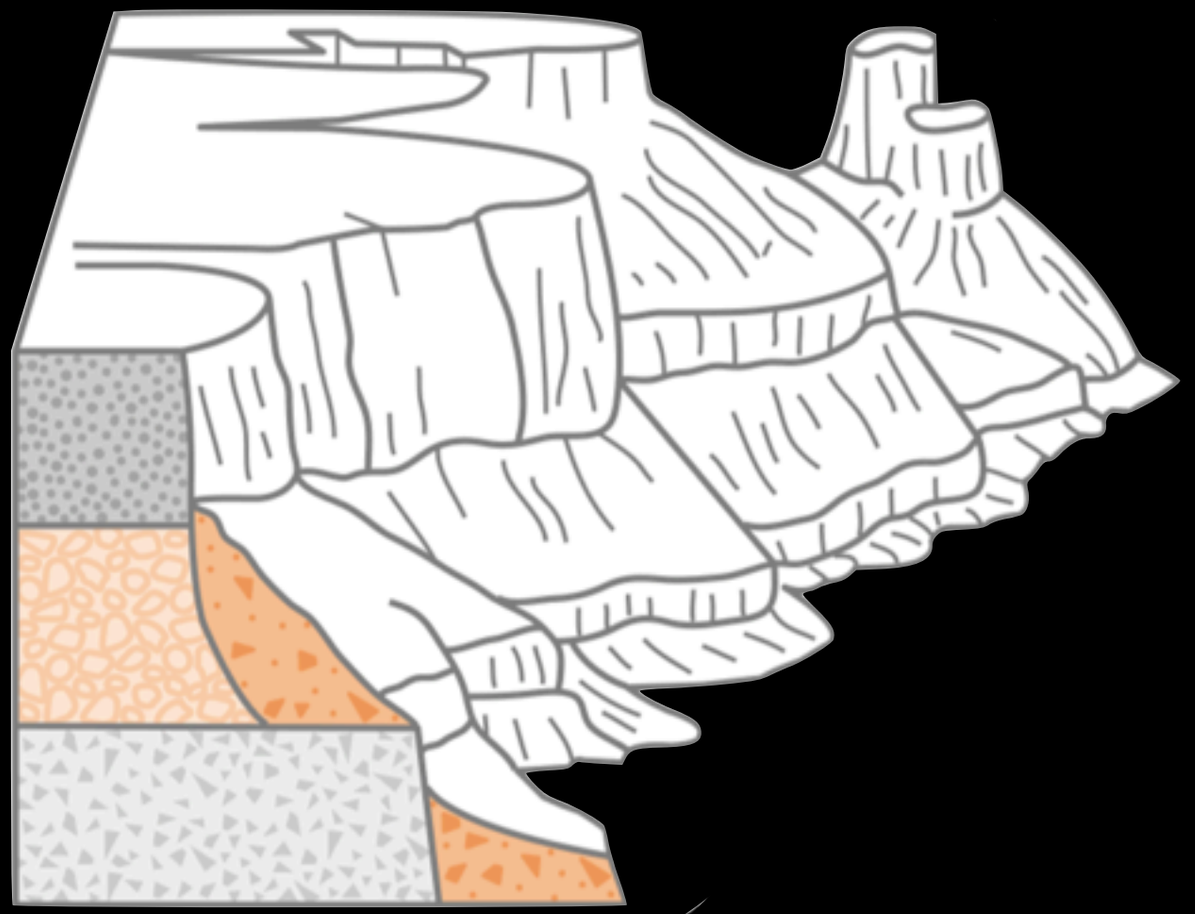
BACK TO “LANDSCAPES”

All Landscapes are shaped by the local climate.



Humid Climates

- Precipitation feeds streams which rounds the land surface
- Well developed soils
- Significant vegetation



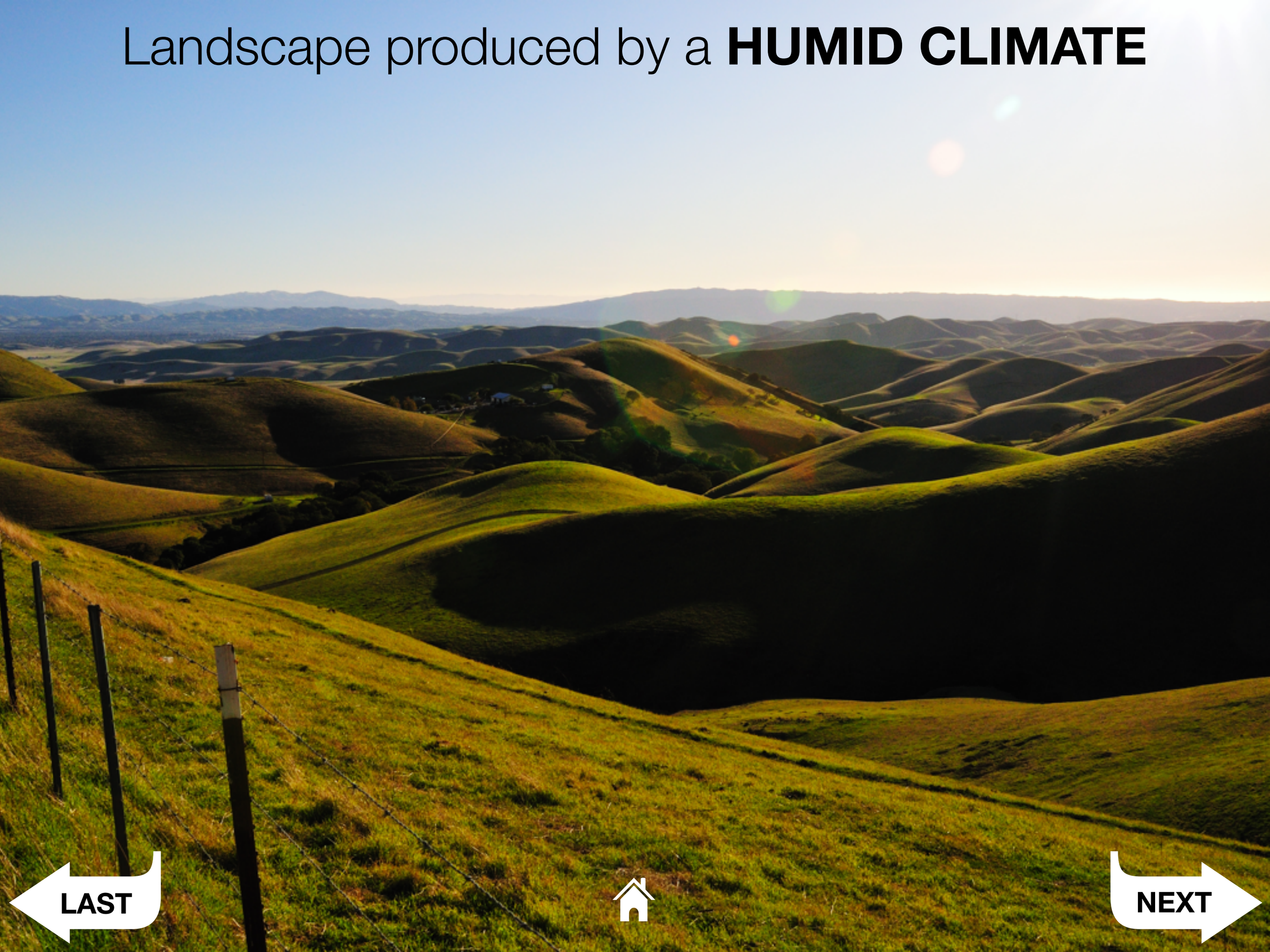
Arid Climates

- Rocks are affected by abrasion, leaving steep, jagged cliffs
- Small amounts of sandy, dry soils
- Minimal vegetation

LAST

NEXT

Landscape produced by a **HUMID CLIMATE**



LAST

NEXT

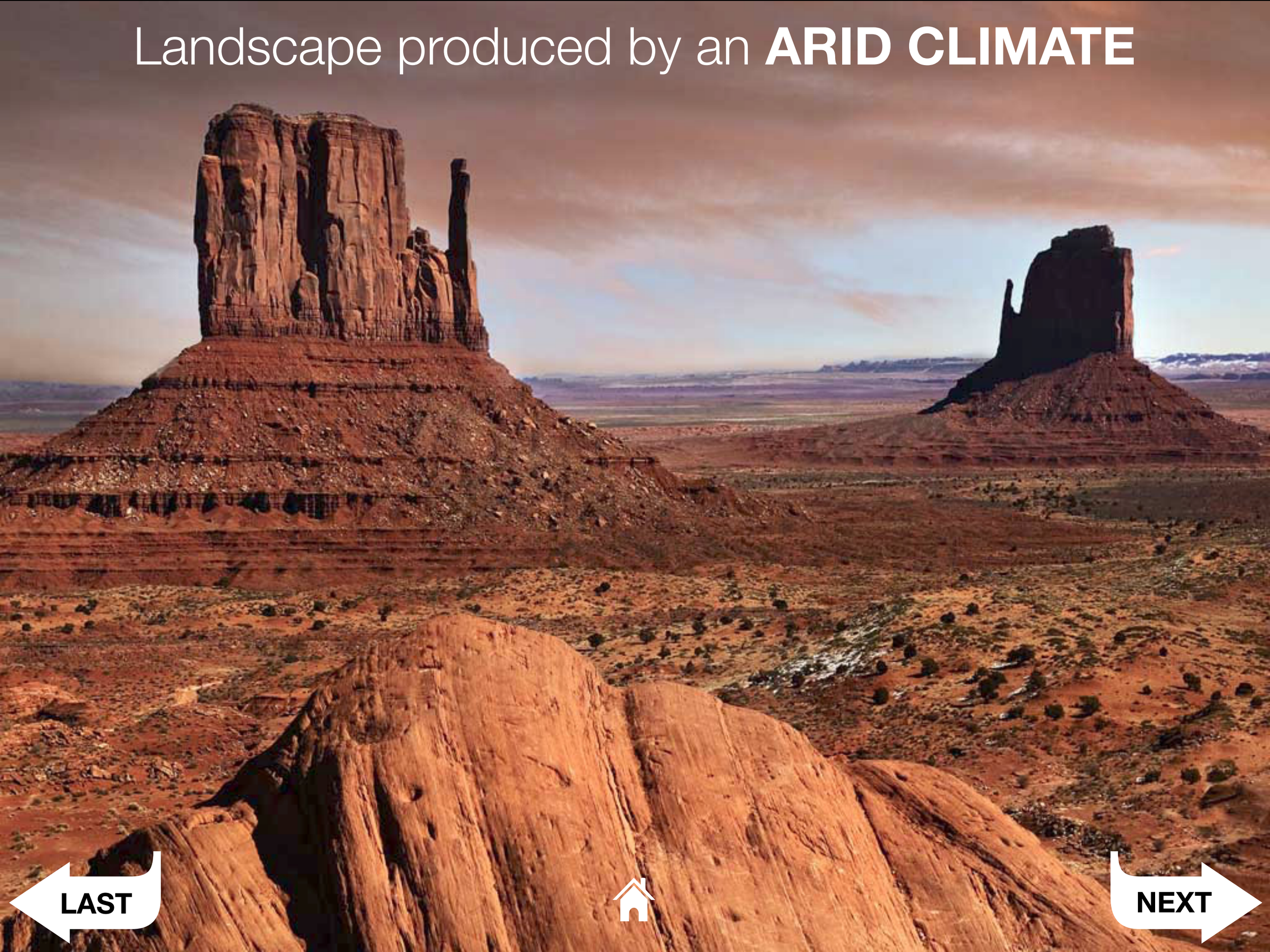
Landscape produced by a **HUMID CLIMATE**



LAST

NEXT

Landscape produced by an **ARID CLIMATE**



LAST

NEXT

Landscape produced by an **ARID CLIMATE**



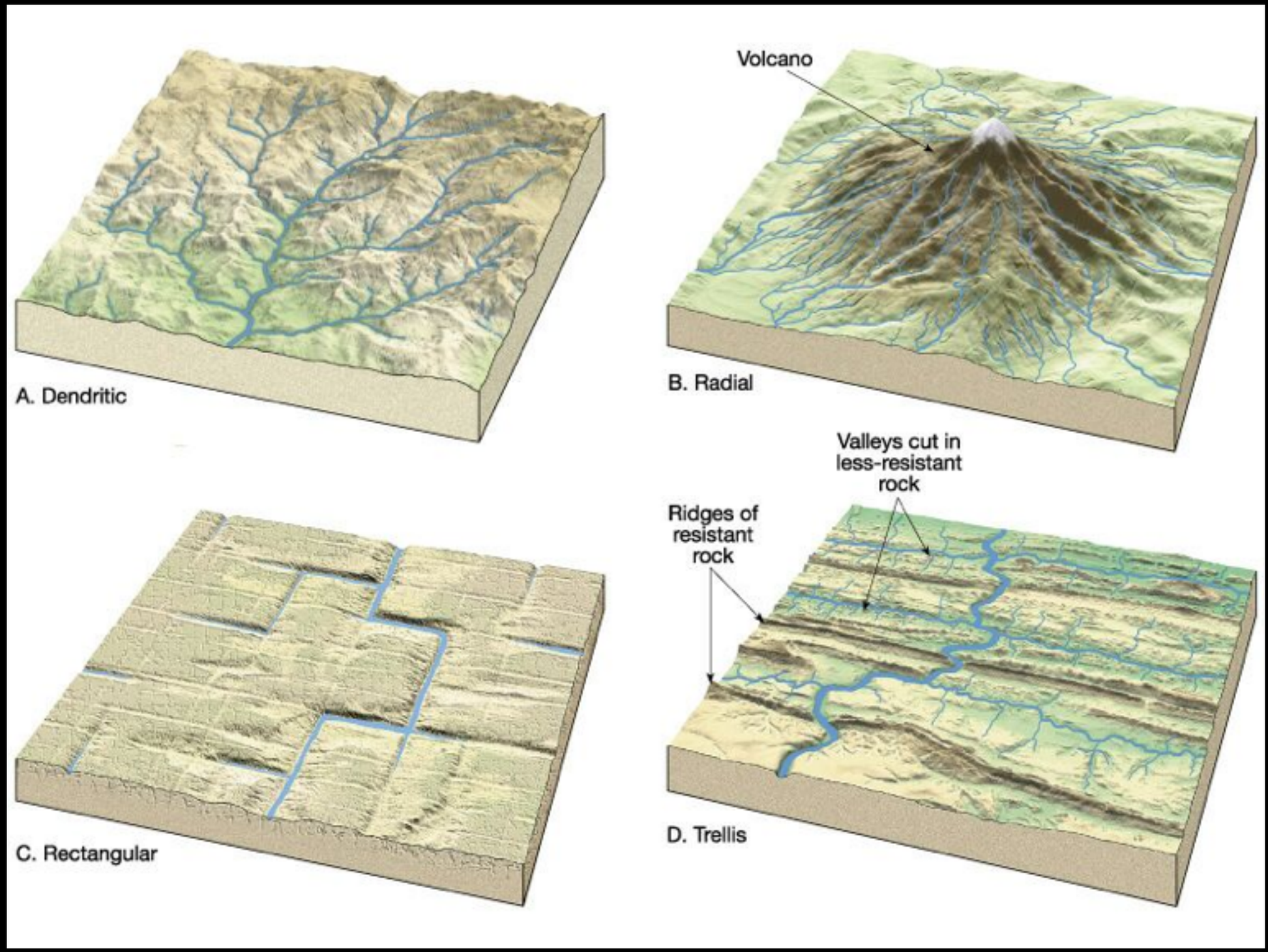
LAST

NEXT

The shape of a landscape determines the way in which streams and rivers will flow over the surface.

The patterns of rivers are called ***drainage patterns***.

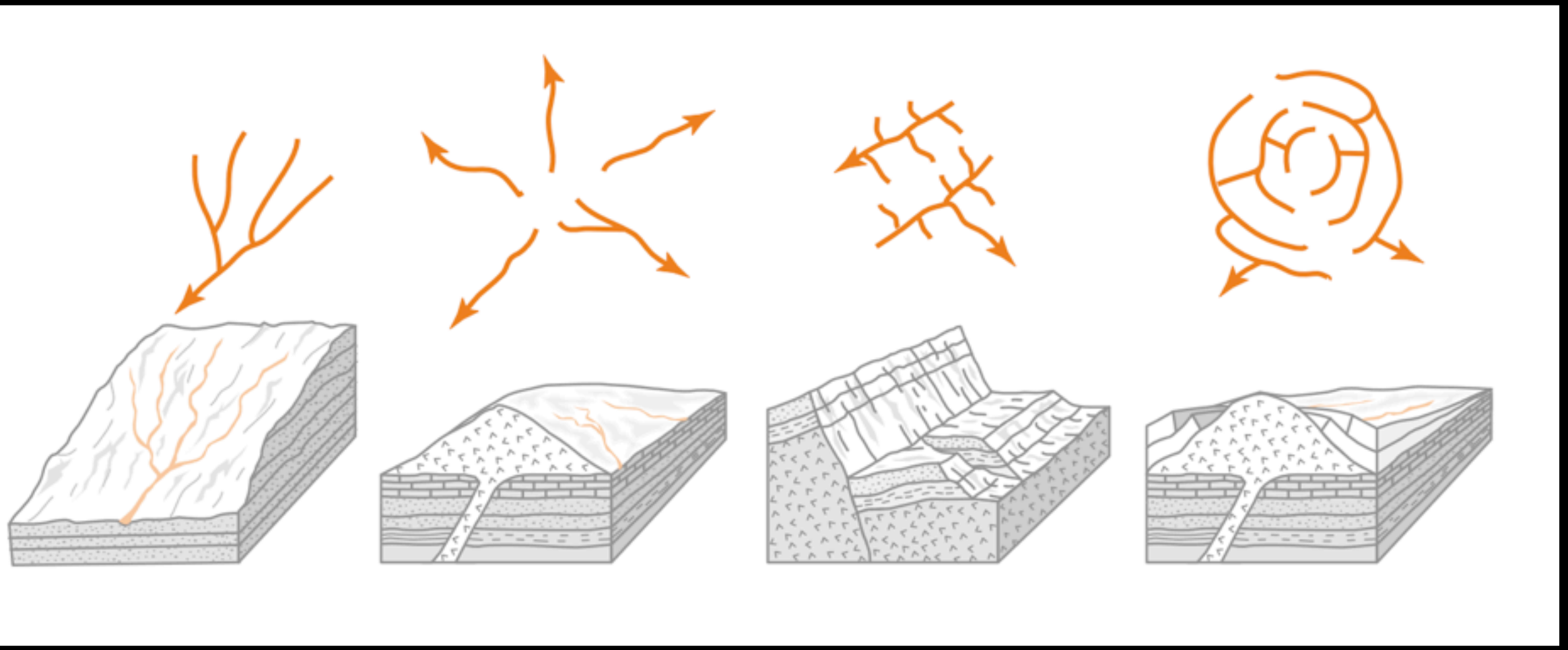
Common Drainage Patterns



LAST

NEXT

To determine the drainage pattern for a region, simply match up the streams with the shape of the landscape. Keep in mind, streams flow downhill in the lowest areas possible.



LAST

NEXT

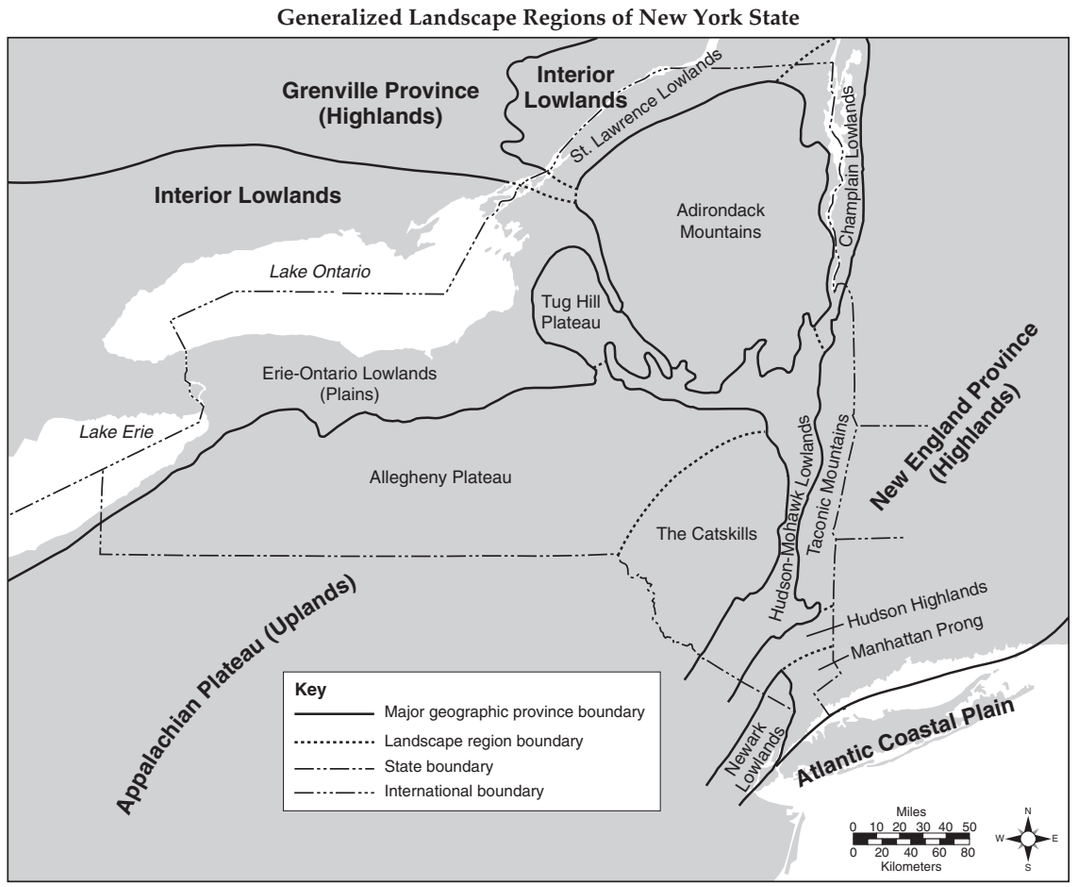
New York State has all three types of landscapes; ***Plains, Plateaus, and Mountains.***

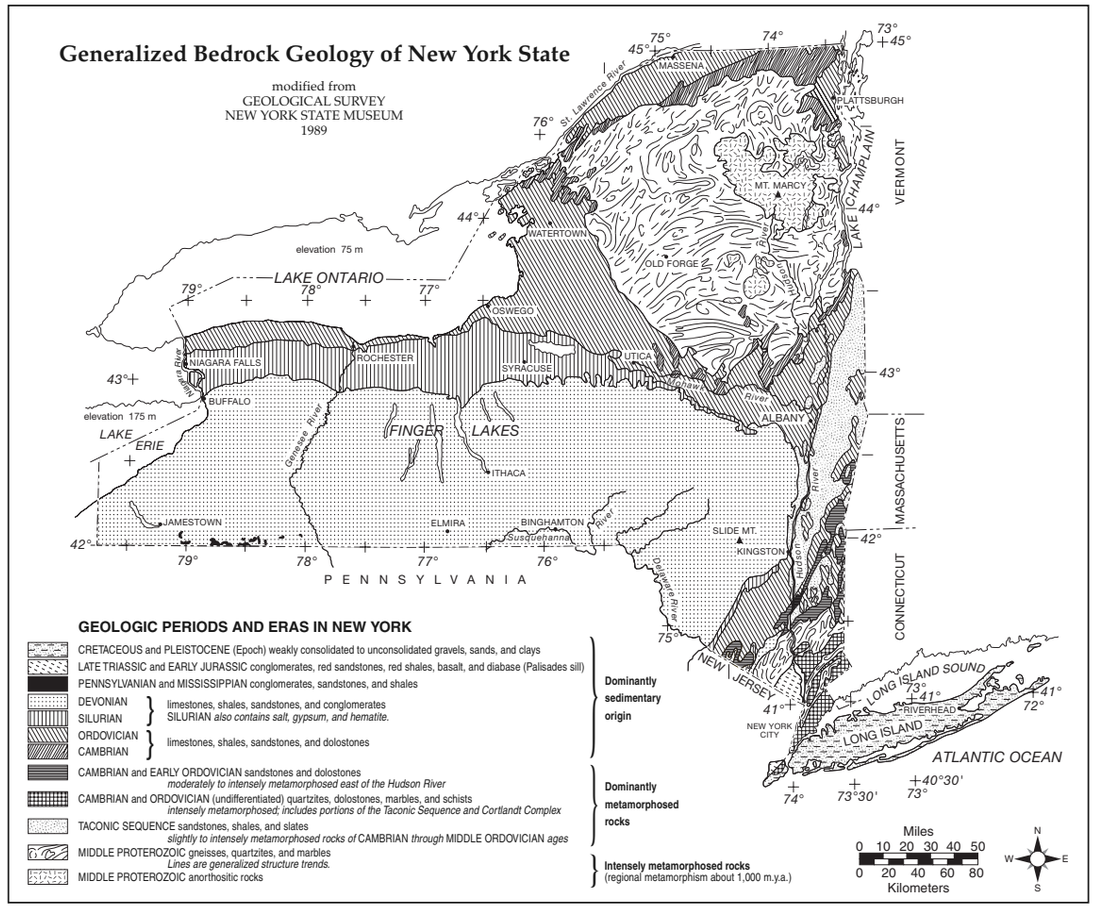
These can be seen on your ESRT, page 2.

LAST

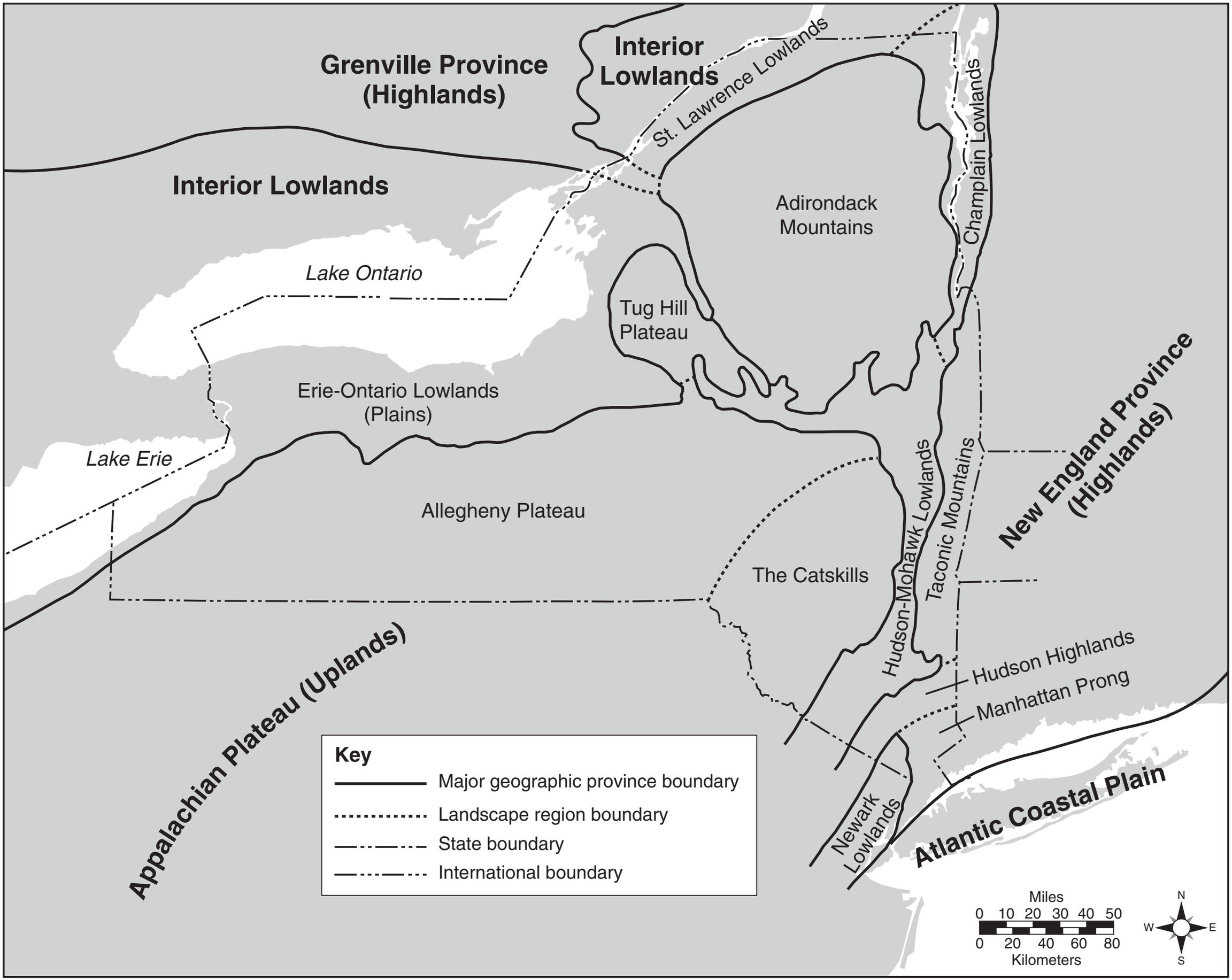
NEXT

Often times, we will use both NY state maps together. Click on the images below to see the full size maps. Use them to fill in the table in your lab.





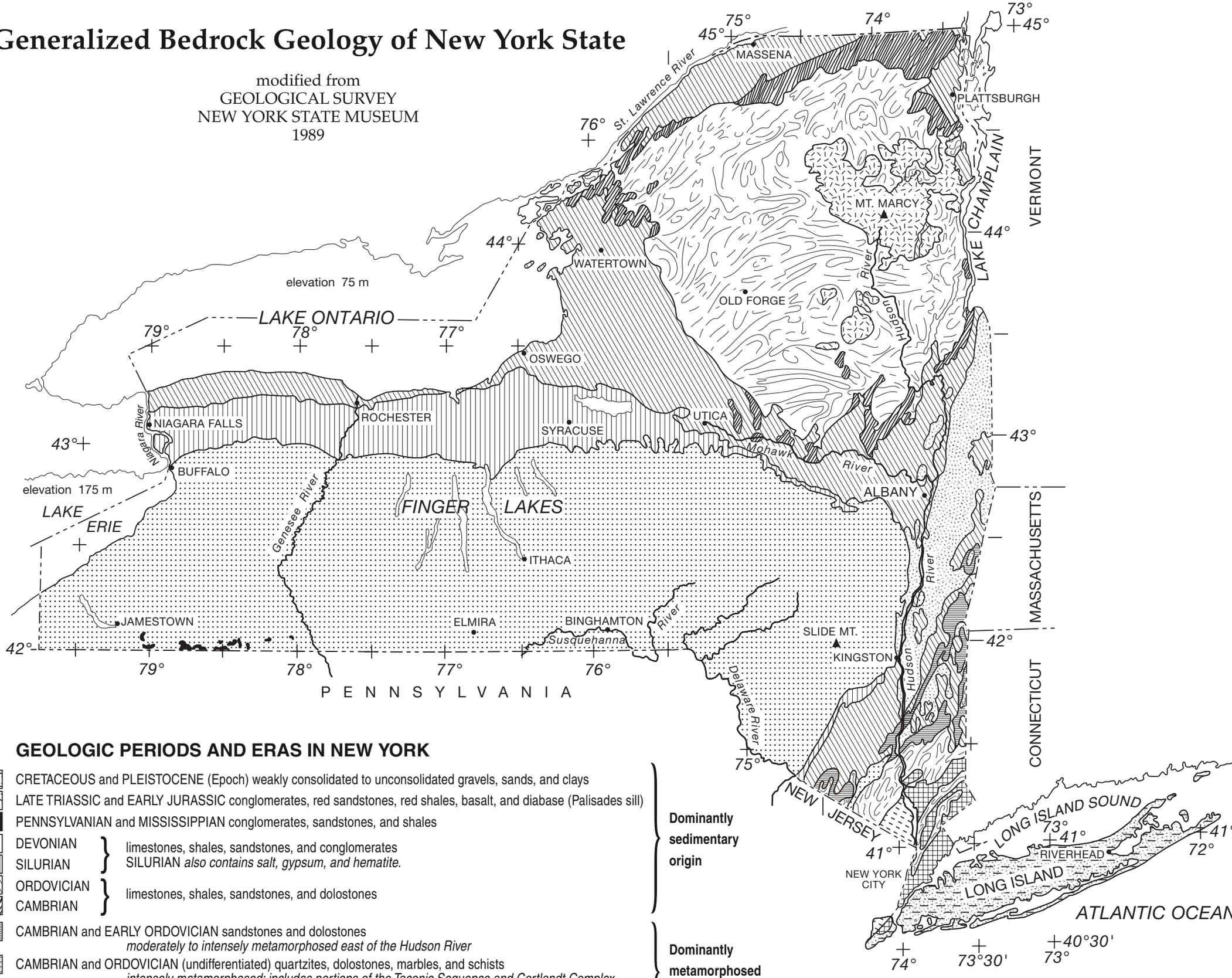
Generalized Landscape Regions of New York State



BACK

Generalized Bedrock Geology of New York State

modified from
GEOLOGICAL SURVEY
NEW YORK STATE MUSEUM
1989



GEOLOGIC PERIODS AND ERAS IN NEW YORK

Dominantly sedimentary origin

- CRETACEOUS and PLEISTOCENE (Epoch) weakly consolidated to unconsolidated gravels, sands, and clays
- LATE TRIASSIC and EARLY JURASSIC conglomerates, red sandstones, red shales, basalt, and diabase (Palisades sill)
- PENNSYLVANIAN and MISSISSIPPIAN conglomerates, sandstones, and shales
- DEVONIAN, SILURIAN — limestones, shales, sandstones, and conglomerates; SILURIAN *also contains salt, gypsum, and hematite.*
- ORDOVICIAN, CAMBRIAN — limestones, shales, sandstones, and dolostones

Dominantly metamorphosed rocks

- CAMBRIAN and EARLY ORDOVICIAN sandstones and dolostones
  moderately to intensely metamorphosed east of the Hudson River
- CAMBRIAN and ORDOVICIAN (undifferentiated) quartzites, dolostones, marbles, and schists
  intensely metamorphosed; includes portions of the Taconic Sequence and Cortlandt Complex
- TACONIC SEQUENCE sandstones, shales, and slates
  slightly to intensely metamorphosed rocks of CAMBRIAN *through* MIDDLE ORDOVICIAN *ages*
- MIDDLE PROTEROZOIC gneisses, quartzites, and marbles
  Lines are generalized structure trends.

Intensely metamorphosed rocks
(regional metamorphism about 1,000 m.y.a.)

- MIDDLE PROTEROZOIC anorthositic rocks

Miles
0 10 20 30 40 50
0 20 40 60 80
Kilometers

N
W
S

BACK