

Acceleration: Contour, topographic, elevation, climatic

Essential Question: How do you distinguish between different types of maps?

Activating Strategy: Have students list ways that we use maps. (Brainstorm and make a class list.) “Could we use a world map for these things?” (No.) What kind of maps would we need?

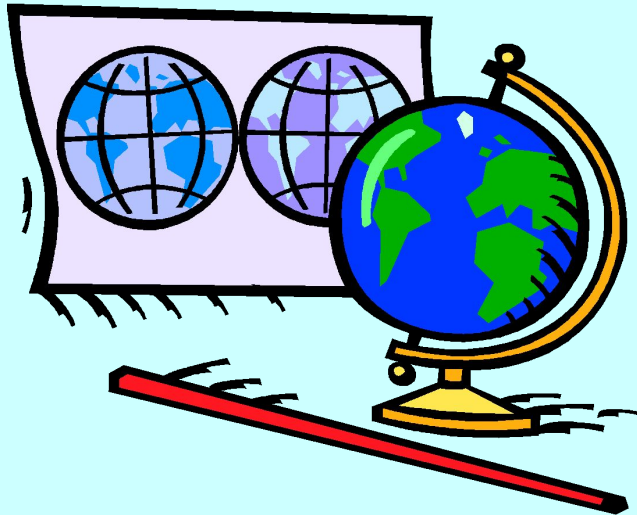
Teaching:

- Students will create a blank booklet. They will cut out and paste definitions of various types of maps as they are introduced in the power point. They will then cut out and paste an example map for each type.
- Various maps will be posted and numbered around the room. Students must identify each type of map.

Summary: Pair/Share 1s:2s “Describe a contour map.” 2s:1s “Describe an elevation map” 1s:2s “What is a topographic map?” 2s:1s “How is a topographic map different from contour map?”

Hw: Elevation Map worksheet 20-C & “Determining Elevation” wkst & “Types of Map” wkst

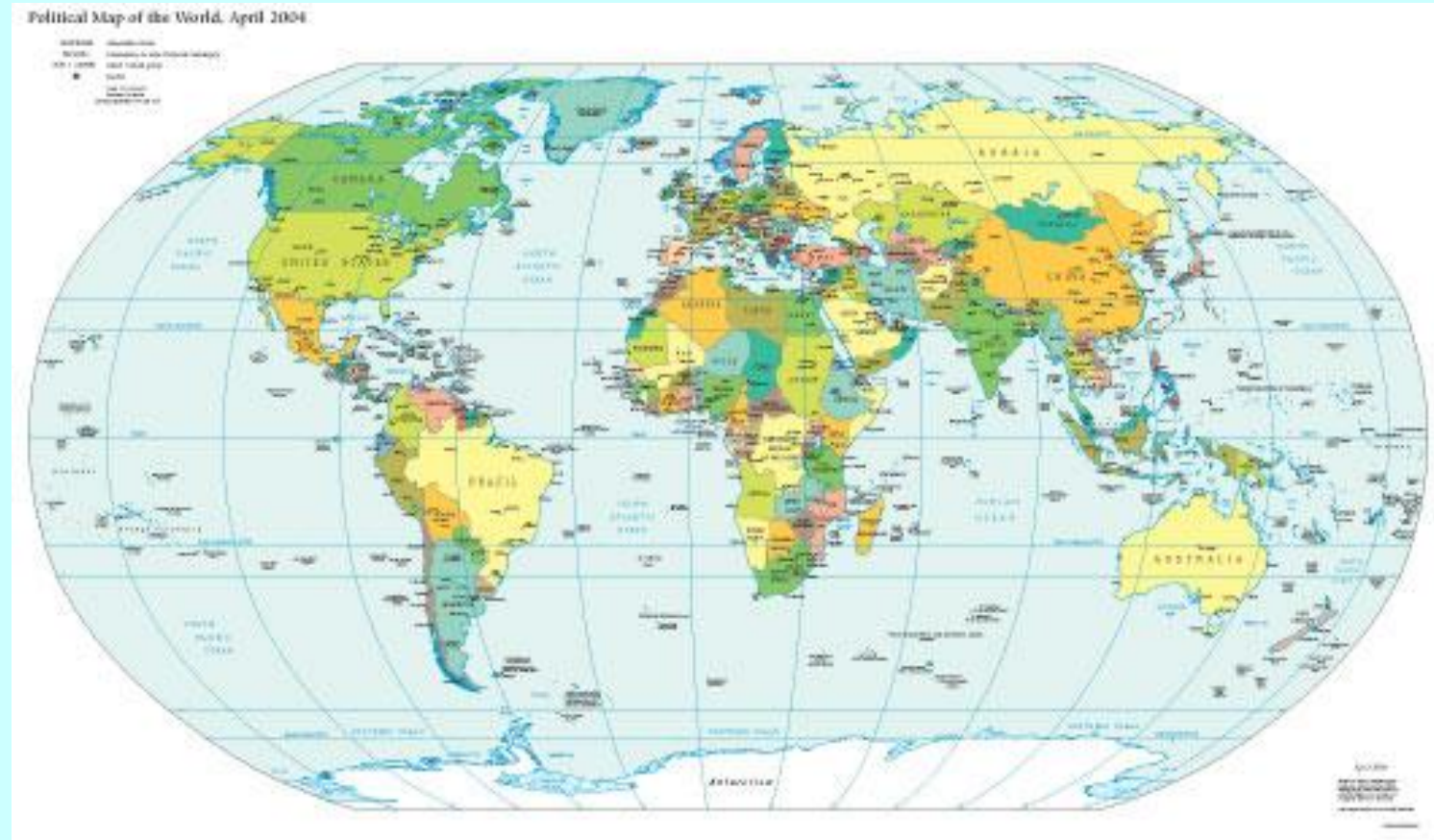
How are different
types of maps
distinguished?



Political Maps

- Usually colored by country or by state
- Political colors make it easy to compare size, shape, and location
- Bold letters often make the country names stand out
- Symbols make it easy to tell capitals from other cities
- Political maps also name certain physical features, such as rivers and lakes

World Political Map



Physical Map

- Has colors that make natural patterns stand out
- The colors on the map can stand for types of vegetation, mountain, and natural features
- Names of big natural features are easy to see
- Physical maps also include some political information, such as boundaries

World Physical Map

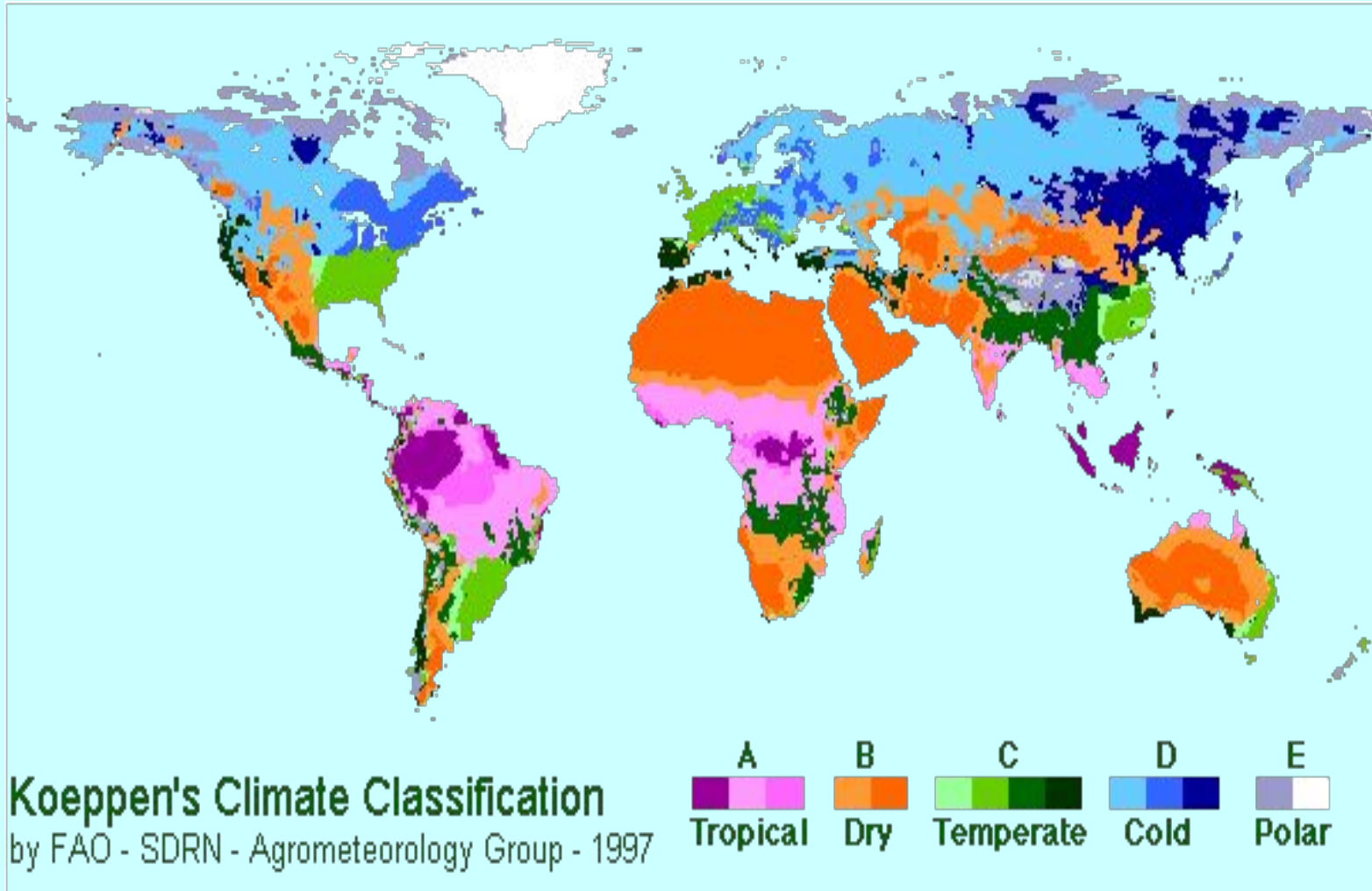
Physical Map of the World, April 2004



Climate Map

- The climate of a place is the weather it has season by season, year after year
- Rainfall and temperature are climate's main ingredients
- Climate is affected by elevation, distance from the ocean, and latitude

World Climate Map

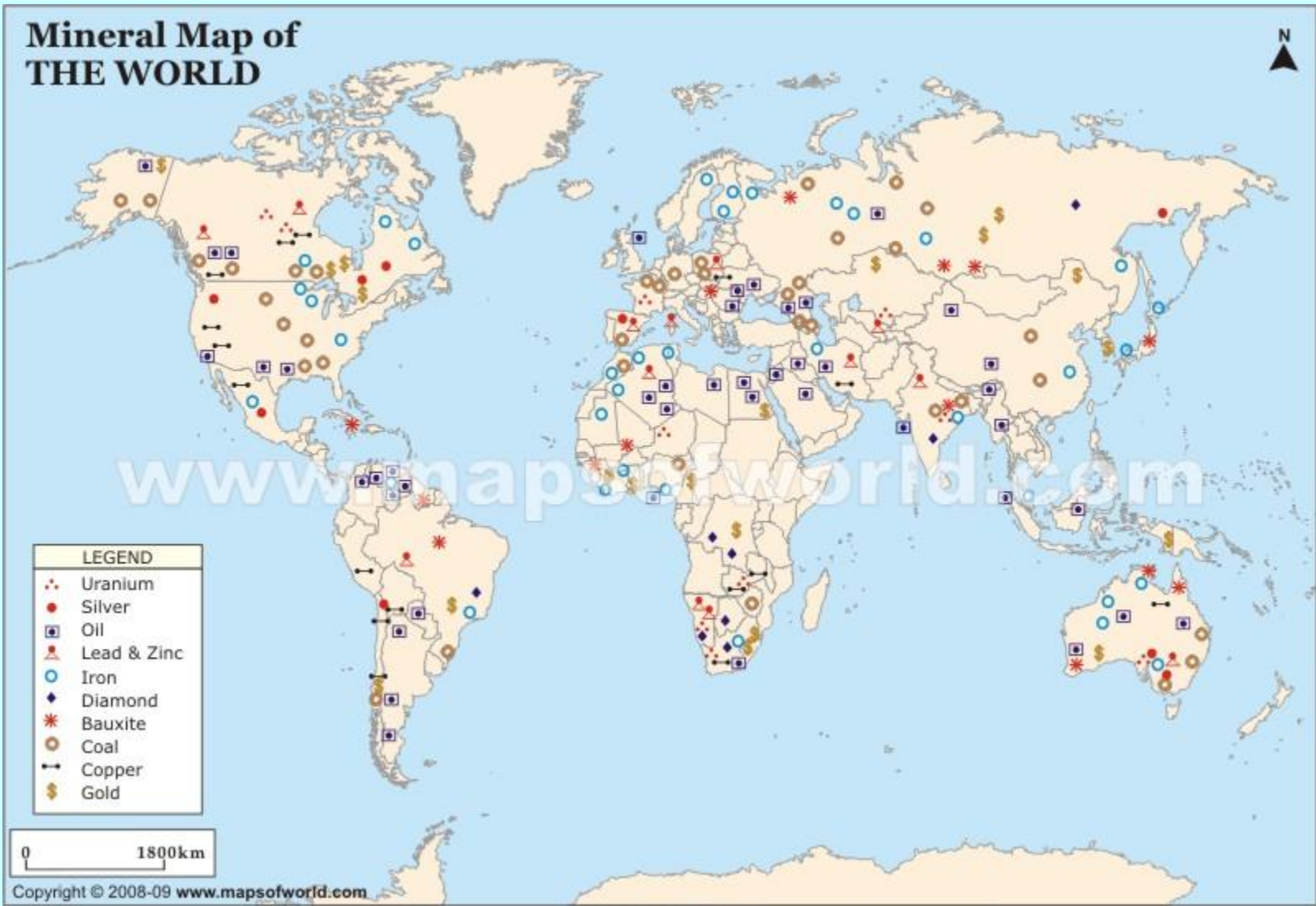


Land Use Resource Map

These maps show how land is being used. This might refer to:

- vegetation**
- crops being grown**
- forest vs. Agriculture**
- mines and wells**
- city zoning.**

Mineral Map of THE WORLD



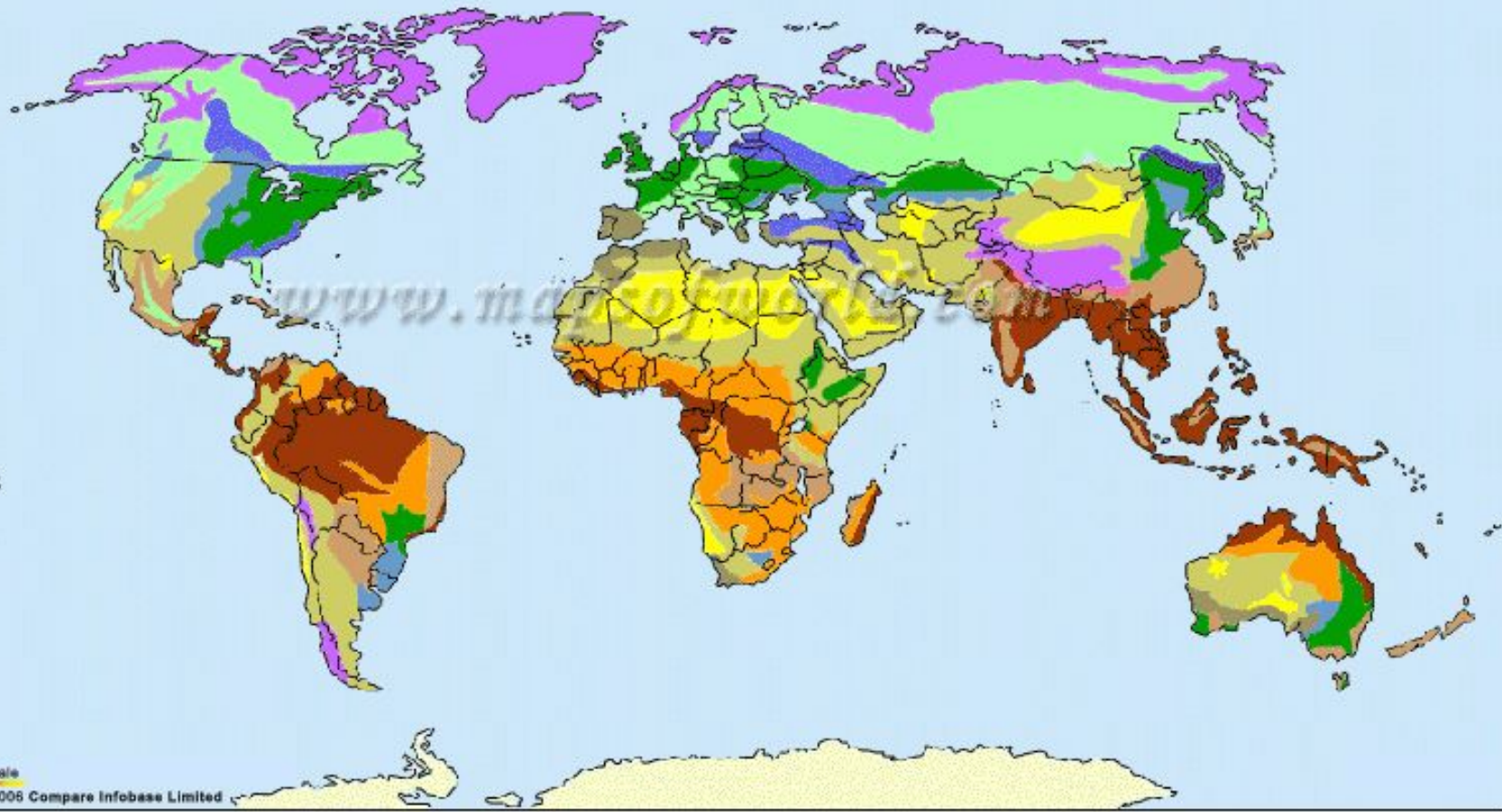
www.mapsofworld.com

| LEGEND | |
|--------|-------------|
| ⋄ | Uranium |
| ● | Silver |
| ◻ | Oil |
| △ | Lead & Zinc |
| ○ | Iron |
| ◆ | Diamond |
| * | Bauxite |
| ⊙ | Coal |
| ↔ | Copper |
| ⌘ | Gold |

0 1800km

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Natural Vegetation region of the WORLD

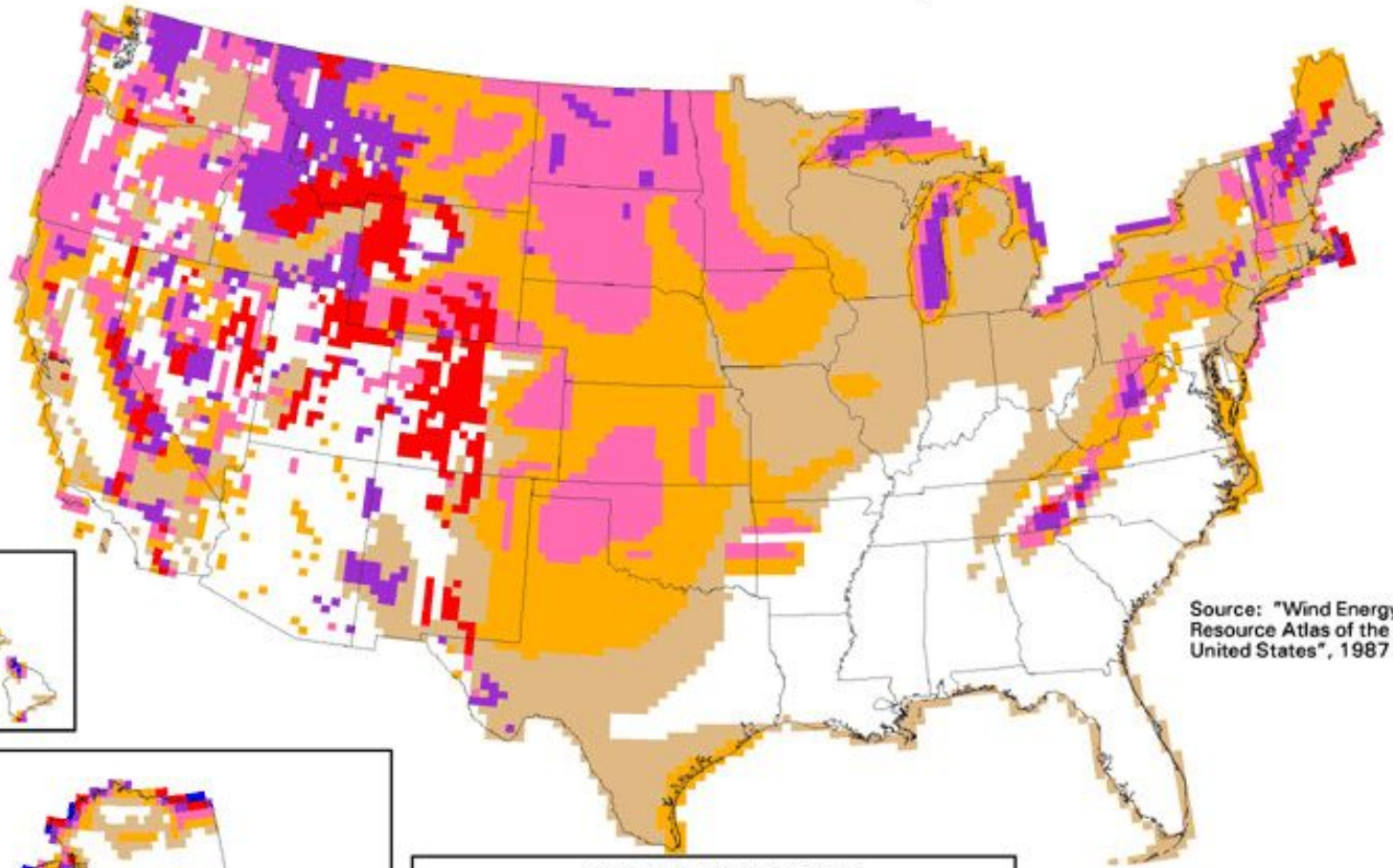


Map not to Scale

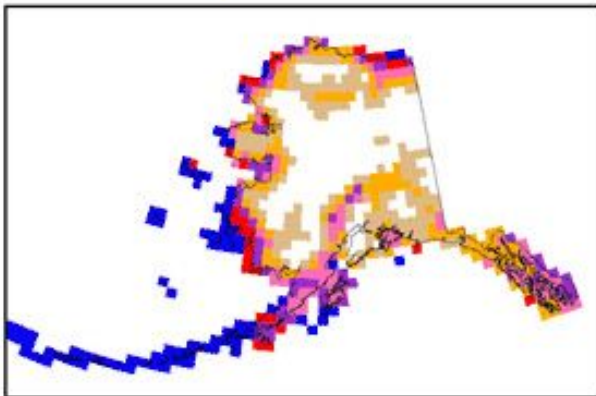
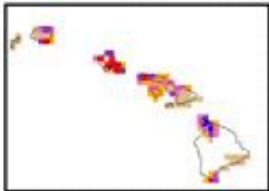
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| | | | | | |
|------------------------------|---|--|-------------------|--|---|
| Tundra & Mountain Vegetation | Mixed Needleleaf evergreen & broadleaf deciduous woodland | Mid-latitude grassland | Semi-desert scrub | Tropical Grass land | Subtropical broadleaf & needleleaf Forest |
| Needleleaf evergreen forest | Broadleaf deciduous woodland | Evergreen broadleaf & deciduous trees & shrubs | Desert | Tropical broadleaf rainforest & monsoon forest | No data |

United States - Wind Resource Map



Source: "Wind Energy Resource Atlas of the United States", 1987



Wind Power Classification

| Wind Power Class | Resource Potential | Wind Power Density at 50 m W/m^2 | Wind Speed ^a at 50 m m/s | Wind Speed ^a at 50 m mph |
|------------------|--------------------|------------------------------------|-------------------------------------|-------------------------------------|
| 2 | Marginal | 200 - 300 | 5.6 - 6.4 | 12.5 - 14.3 |
| 3 | Fair | 300 - 400 | 6.4 - 7.0 | 14.3 - 15.7 |
| 4 | Good | 400 - 500 | 7.0 - 7.5 | 15.7 - 16.8 |
| 5 | Excellent | 500 - 600 | 7.5 - 8.0 | 16.8 - 17.9 |
| 6 | Outstanding | 600 - 800 | 8.0 - 8.8 | 17.9 - 19.7 |
| 7 | Superb | 800 - 1600 | 8.8 - 11.1 | 19.7 - 24.8 |

^a Wind speeds are based on a Weibull k value of 2.0

U.S. Department of Energy
National Renewable Energy Laboratory

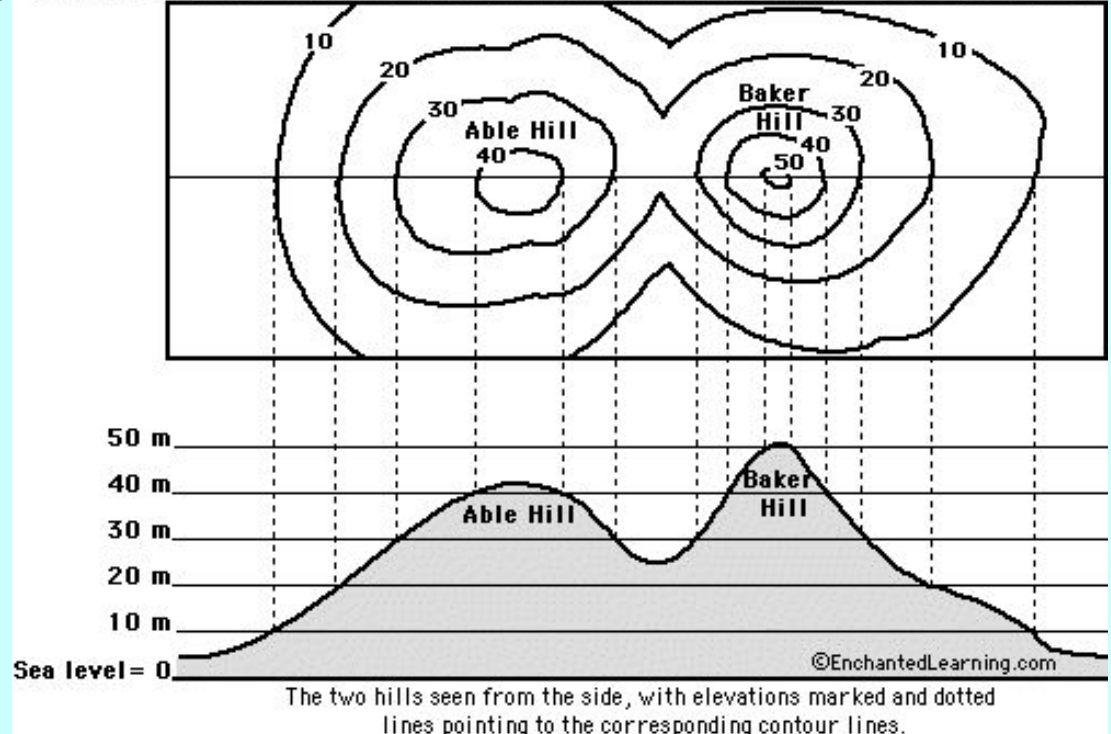


20-MAR-2000 1.1.5

Contour maps

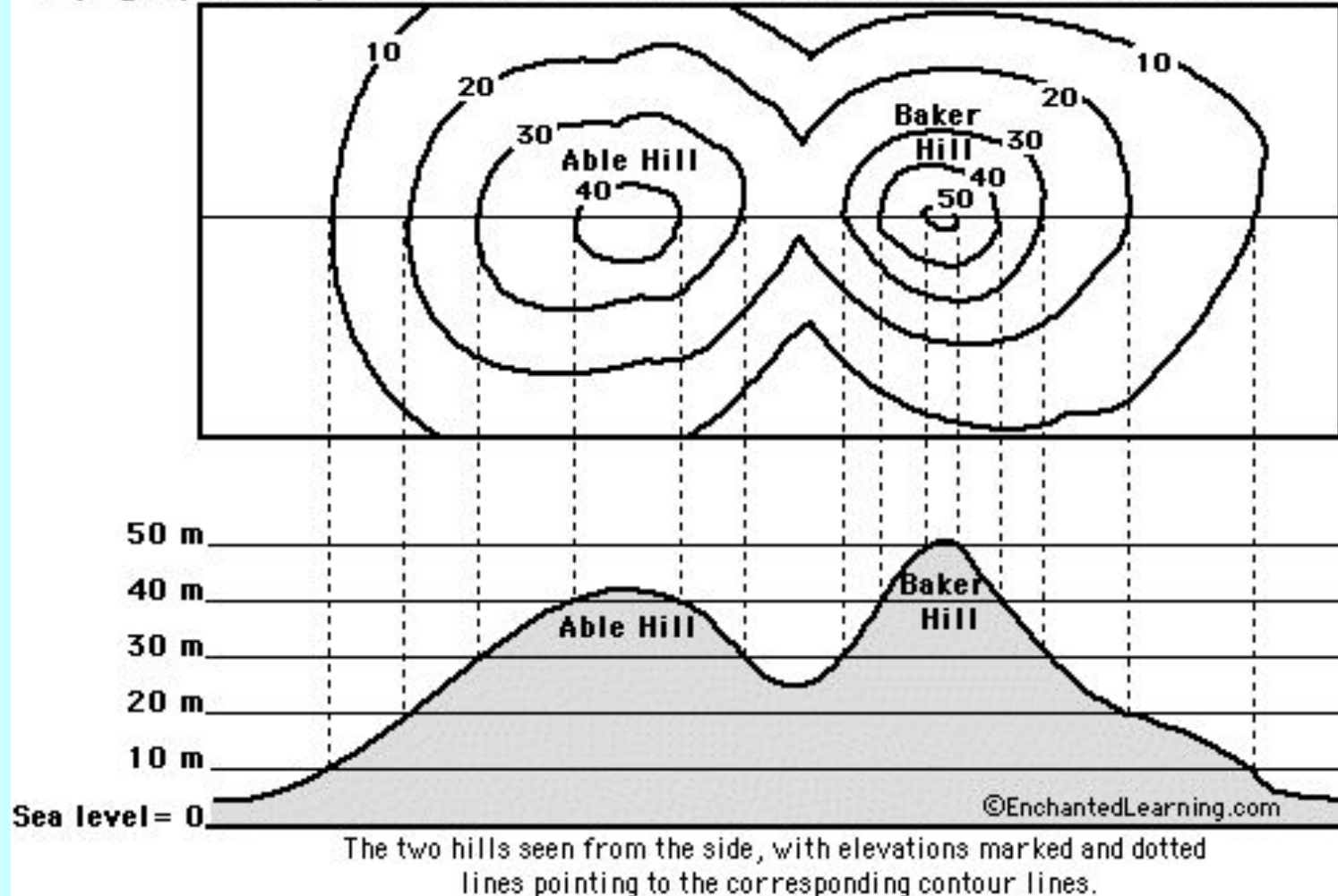
Contour lines represent the elevation at that line. If you were to walk across a line, you are changing elevation.

Topographic Map (with contour lines that show points that are on the same level)



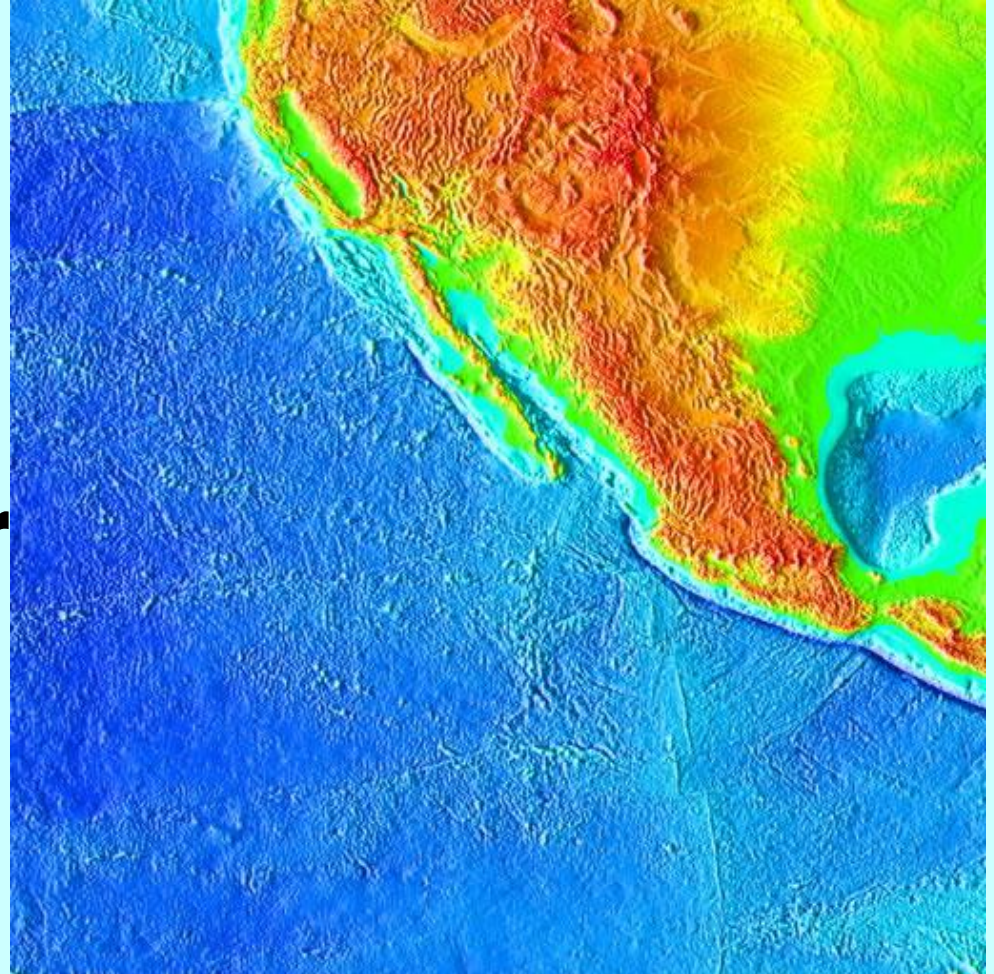
Contour map

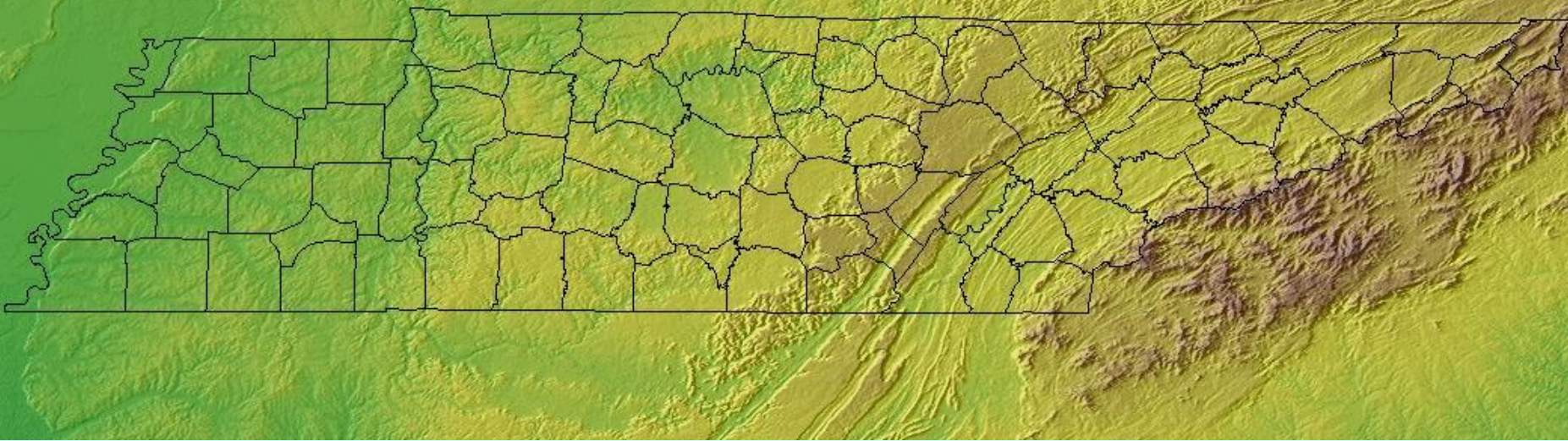
Topographic Map (with contour lines that show points that are on the same level)



Elevation Maps

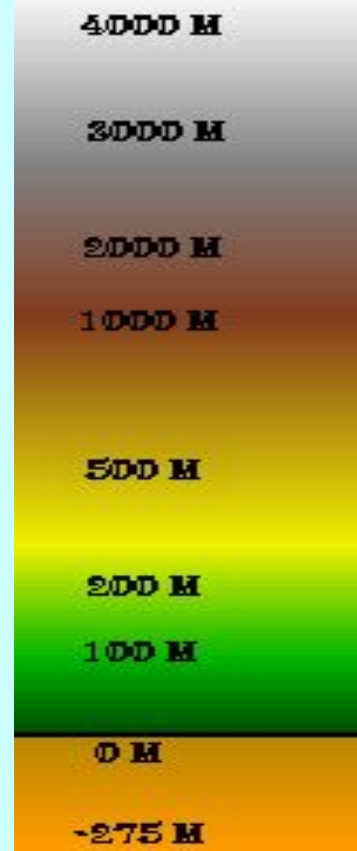
Maps that show elevation change by using color or shading.



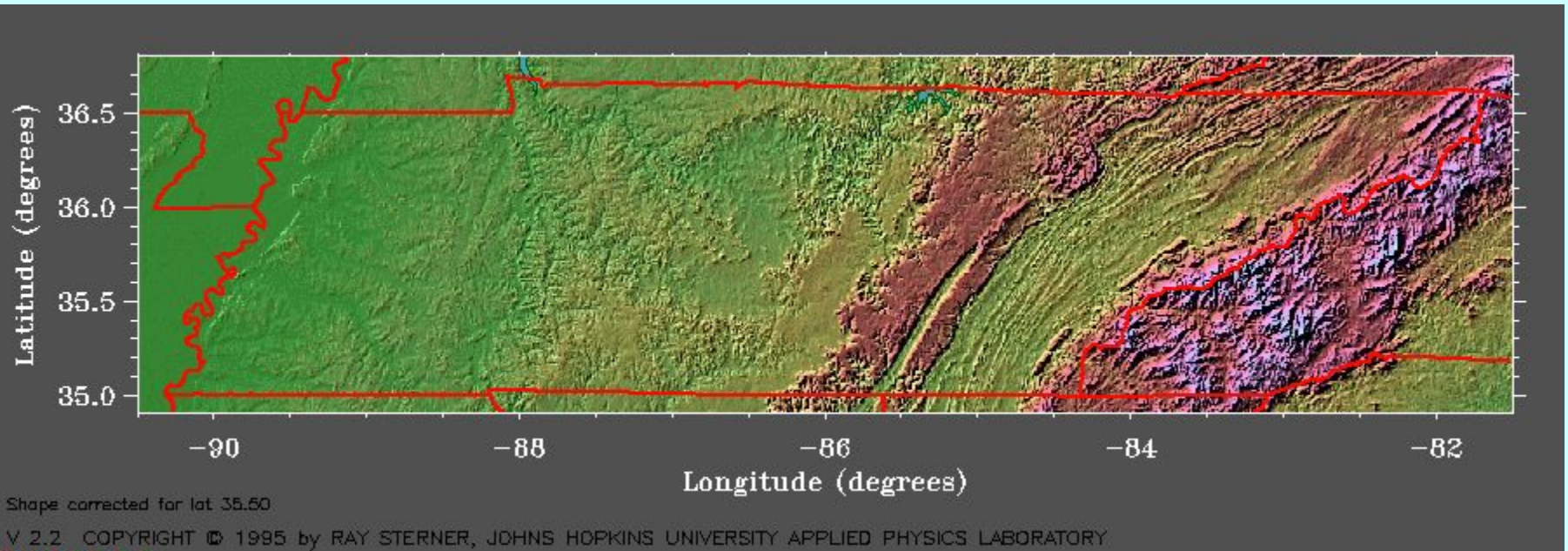


Elevation Map

- What is the average elevation of most of our state?



Elevation Map of Tennessee



Elevation Map

4000 M

3000 M

2000 M

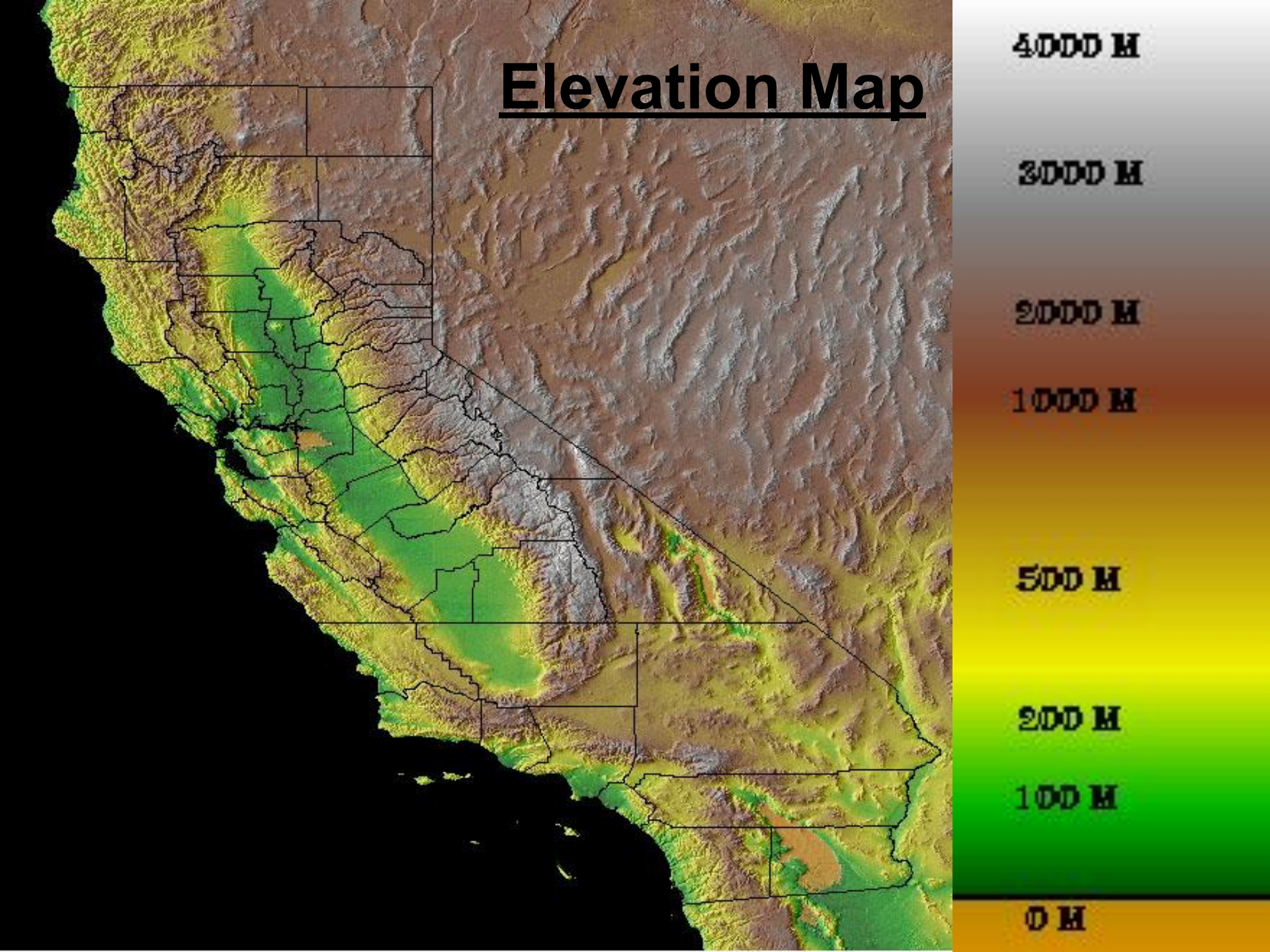
1000 M

500 M

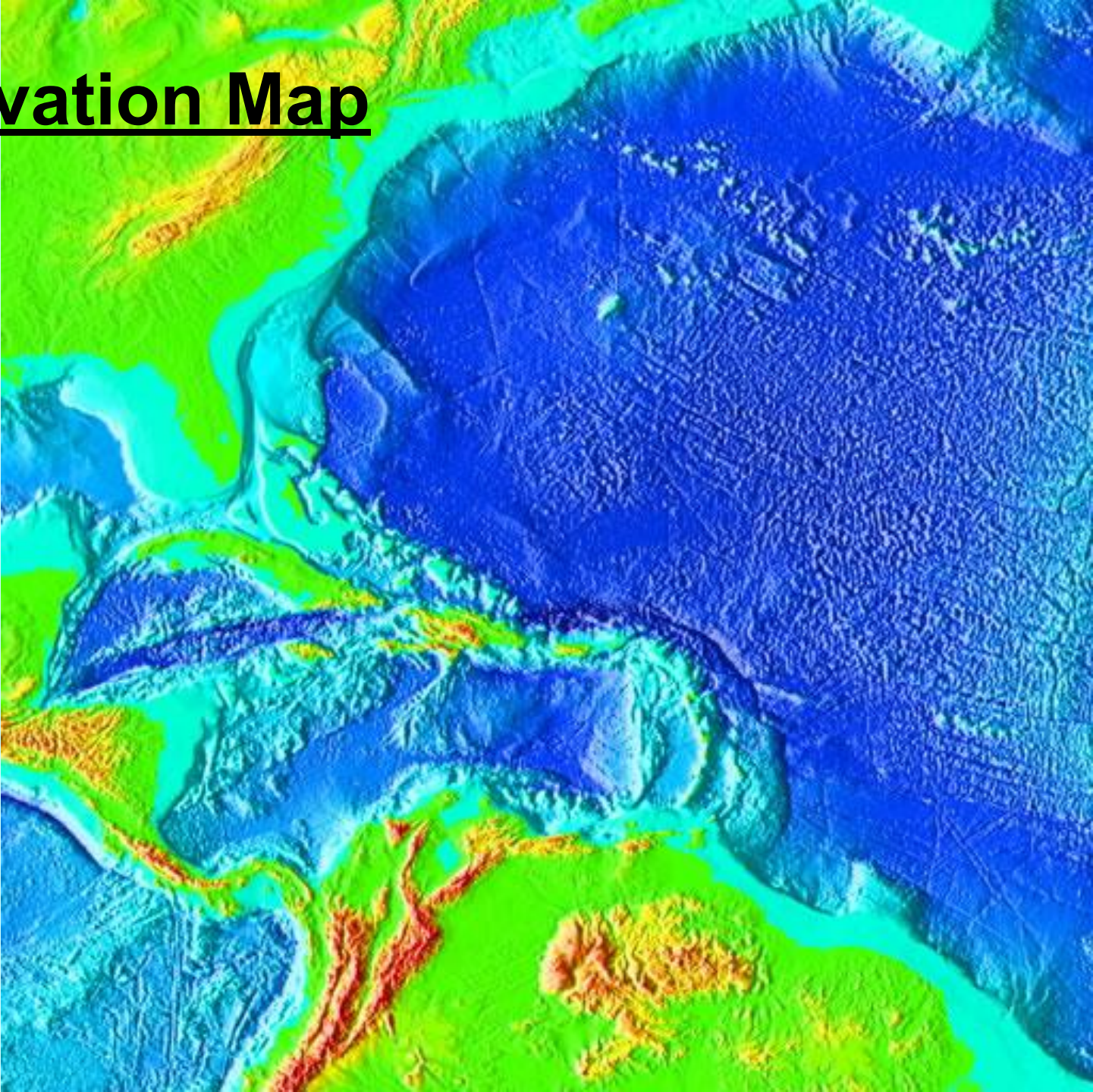
200 M

100 M

0 M



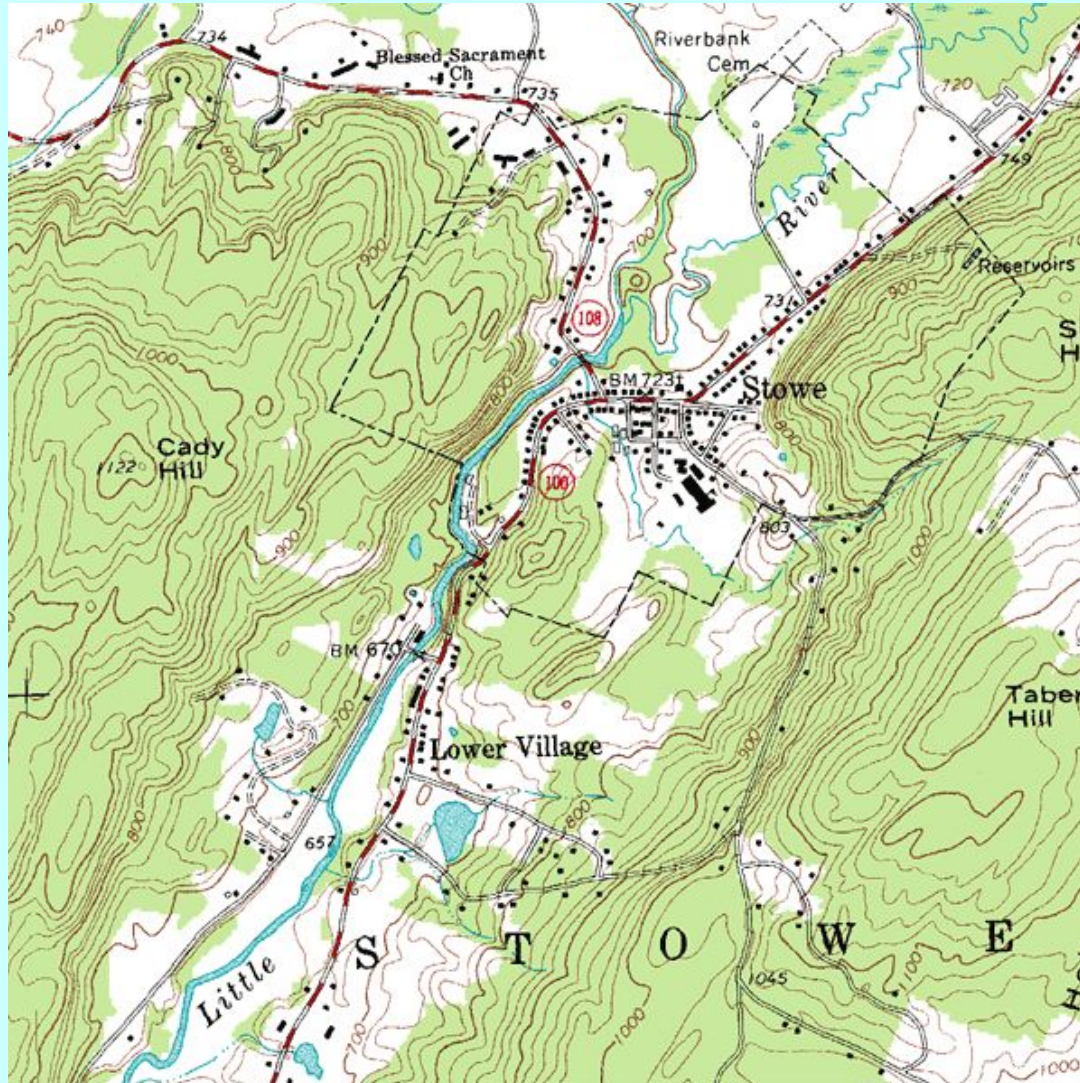
Elevation Map



Topographic Map

These maps generally represent a small area with a lot of detail. They show elevation with contour lines, natural and man-made features.

Topographic Map



<http://www.tasagraphicarts.com/activities/profile.html>

Types of Maps

1. This map represents a small area with lots of detail. It has contour lines as well as natural and man-made features.

2. This map uses colors to show height above sea level.

3. These colorful maps show lines that people use to divide countries and states. They also show major cities.

4. These maps show physical features on the Earth like rivers, mountains, and deserts. _____
5. These maps show how land is being used. For example, they might show which crops are being grown or what animals are being raised. _____
6. These maps show climate regions. _____