Name:

Klasse:

# USA – Creating a West-East Elevation Profile – Solution



**Höhenstufen**

| | |
|---|---|
| ■ | über 3000 m |
| ■ | 2000 – 3000 m |
| ■ | 1000 – 2000 m |
| ■ | 500 – 1000 m |
| ■ | 200 – 500 m |
| ■ | 0 – 200 m |
| ■ | unter 0 m |

0 250 500 km

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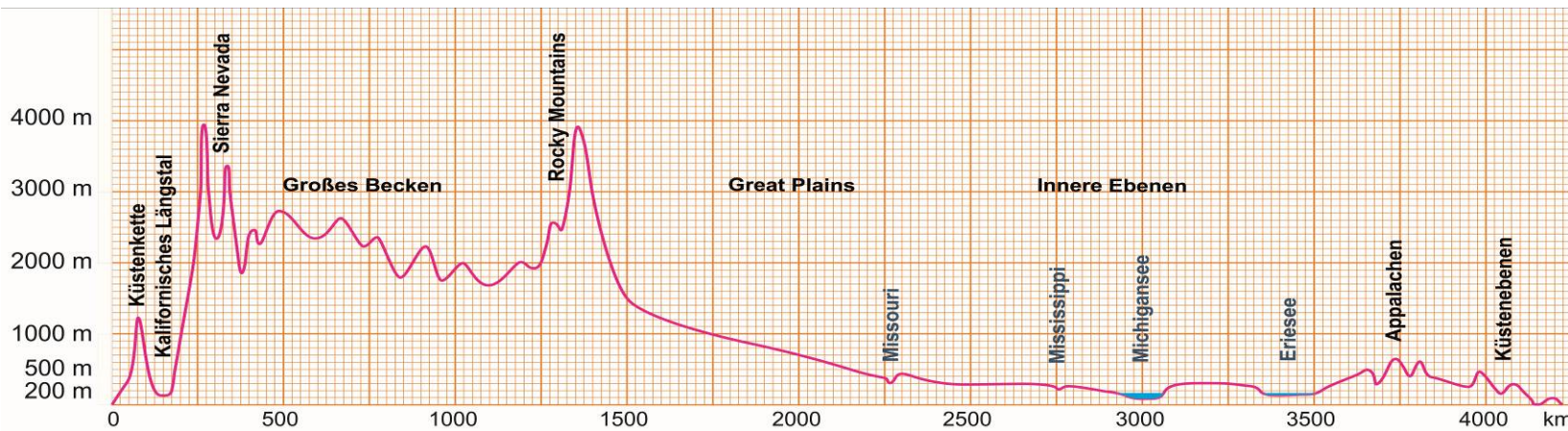


An elevation profile is the representation of the differences in height of a landscape along a (theoretical) vertical cut through the Earth's surface.

Since the scales are different on the X- and Y-axis, the mountains seem much higher than in reality.

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⇒ **Create an elevation profile of the U.S. from San Francisco to New York following the instructions below.**

In preparation, some steps were already done in advance on the worksheet.

a) The profile line, according to which the profile is supposed to be drawn, is already entered into the topographic map.

b) The line SF – NY already roughly matches the X-axis on the graph paper.

c) The scale and the altitude (orientation on the highest and lowest points) are set.

**1.** Draw the profile line on the graph paper:

a) At first label the different altitudinal belts from the topographic map on the graph paper. For example: San Francisco marks a point of 0 meters on the X-axis, because this point has a corresponding value on the key. A certain degree of inaccuracy is a given. It gets easier when the topographic map gives exact altitudes, 4411 meters for a mountain for example. In this case you would enter the value 4400 meters on the base line of the graph paper.

b) Before you connect the identified values, you have to determine the dimensions if each altitudinal belt. The region between Mississippi and Missouri for example is between 200 and 500 meters high and spans over a distance of about 500 kilometers. This means the altitude belt has to be drawn at about two centimeters on the graph paper.

c) Now you can connect the different altitude points and altitude lines to create the profile line.

**2.** Labelling the profile: Other than distinctive rises or lakes and rivers, cities can be entered for orientation.