

Folded Mountains

Description of Model 7: Folded Mountains

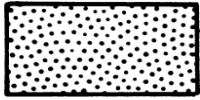
This model shows a region of folded strata which have formed mountains. The upward folds are **anticlines** (141) and the downward folds are **synclines** (142).

Anticlines and synclines may be **horizontal** or may be **plunging**. An anticline may form a mountain (anticlinal mountain) (126) and a syncline may form a valley (synclinal valley) (130). However, erosion of the folds usually removes the crests of the anticlines, and the more resistant strata of the sides (**limbs**) of the folds form long mountain ridges, known as **homoclinical ridges**, or **hogbacks** (131). If a fold is horizontal, the resistant strata on each side of the fold will form **parallel ridges**, but if the fold is plunging, the ridges on either side of an anticline will **converge** in the direction of the plunge and those of a syncline will **diverge** in the direction of the plunge.

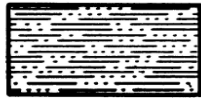
Continued erosion may further wear down the center of an anticline, reducing the anticline to a lower level than the adjacent synclines, thus forming an **anticlinal valley** (127). The mountains at the side are now the preserved synclines and form **synclinal mountains** (129).

The main stream (or streams) crossing the folded region persisted in their course as the folds were uplifted. They now cut across the structure as antecedent streams (not shown on this model). They cross the ridges in narrow valleys called **water gaps**. Tributaries to the master stream (or streams) draining the region have taken their courses later and these courses are controlled by the structure of the rocks. Those streams which have valleys cut along the outcrop of weak rocks, between ridges of more resistant rocks, are called **subsequent**. They usually have straight courses and enter the master stream at right angles. The pattern of these streams is like a trellis, and the pattern is called a **trellis drainage pattern**.

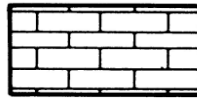
LEGEND



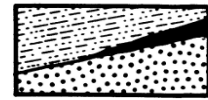
SANDSTONE



SHALE



LIMESTONE



COAL

Folded Mountains Find each feature on the model and write the number of the feature in the table below. Answer the questions below.

Feature Number (and/or Coördinates)	Feature Name
	Anticlinal Mountain(2)
	Anticlinal Valley
	Plunging Anticline
	Synclinal Mountain
	Synclinal Valley
	Homoclinal Ridge
	Scarp
	Trellis Drainage(2)
	Entrenched Meander
	Coal Bed
	Anticline
	Syncline

1. What is the difference between an Anticlinal Mountain and a Plunging Anticline?
2. What is the difference between a Synclinal Mountain and Synclinal Valley?
3. What is another name for a Homoclinal Ridge?
4. What happens when a Meandering Stream reaches its mature stage?
5. What is the difference between an Anticline and a Syncline?
6. Where in the United States do you think it mostly likely to find these types of Landforms?