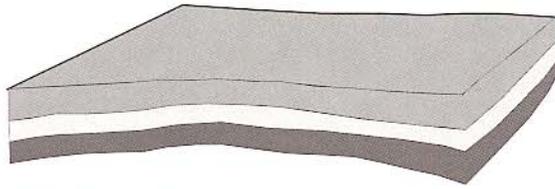


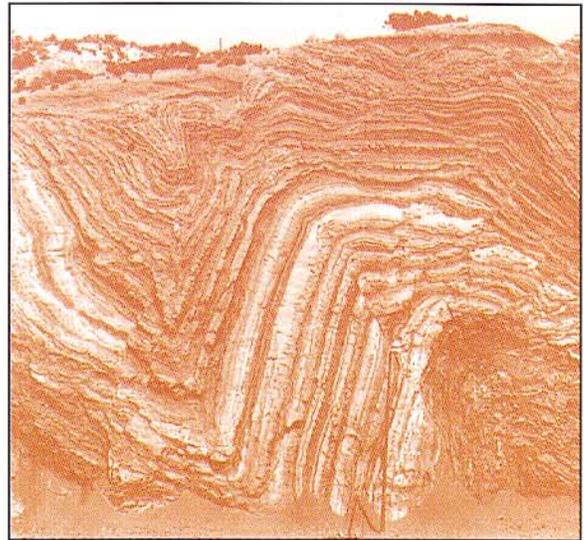


MOUNTAIN BUILD



FOLDING AND FAULTING

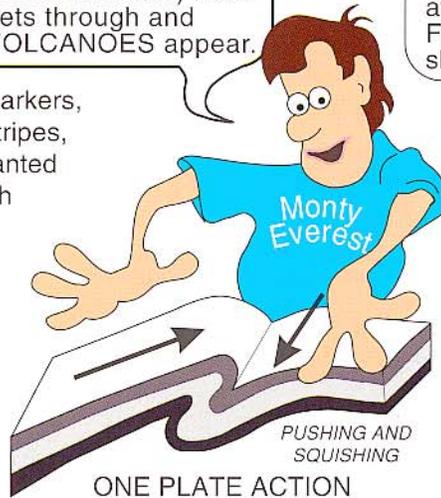
The earth is always moving because **pressure** and **heat** from inside builds and moves the land plates. Sometimes one plate is affected and heat **lifts** or **folds** the layers. Where two plates meet, they push or crash. Our highest mountain ranges formed where two plates crashed into each other! It takes a long time for these things to happen.



ACTIVITY

To show **one plate** action, fold three colored towels the long way. To show **two plate** action, use two phone books. With markers, make rows of thick and thin stripes, small circles, and diagonal slanted lines on sides. When you push the ends of the towels and books, watch the edges and markings to see the layers squish (**compress**) or rise, forming small openings or pockets where water, gases, and oil gather and get stored in the earth.

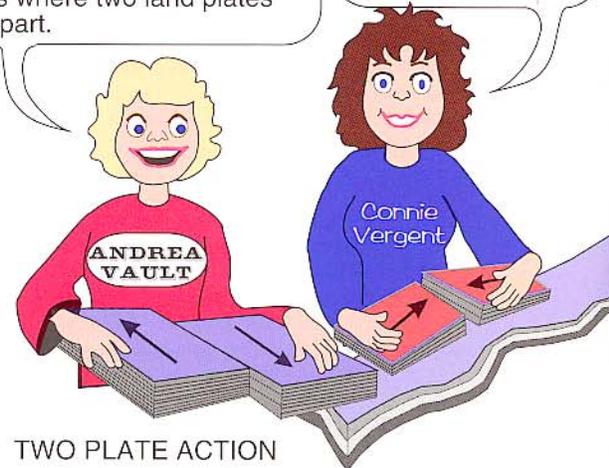
When one plate slides under another plate (SUBDUCTION) heat gets through and VOLCANOES appear.



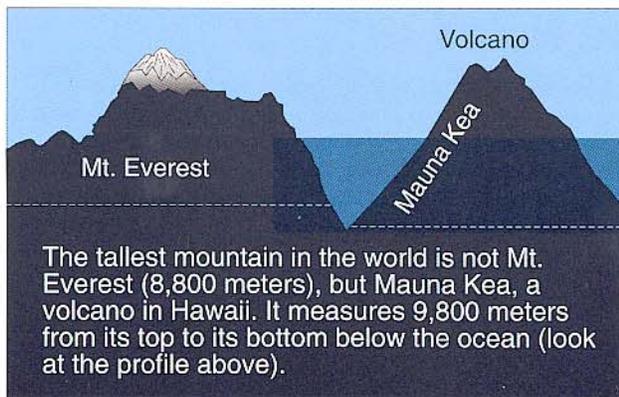
ONE PLATE ACTION

Draw a line on top of two phone books, slide one to you and one away (FAULT). The San Andreas Fault is where two land plates slide apart.

Push books together and see uplifting (CONVERGENCE).

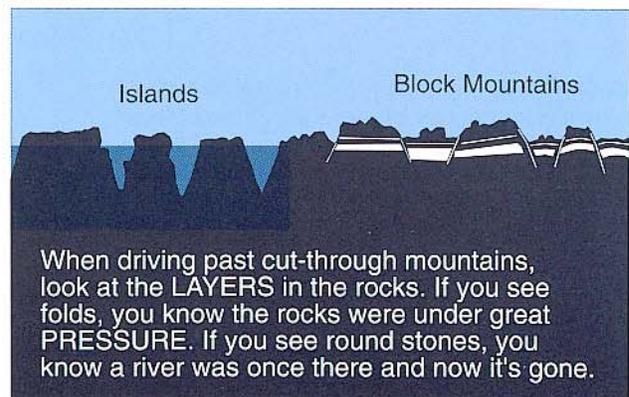


TWO PLATE ACTION



The tallest mountain in the world is not Mt. Everest (8,800 meters), but Mauna Kea, a volcano in Hawaii. It measures 9,800 meters from its top to its bottom below the ocean (look at the profile above).

PROFILES OF MOUNTAINS

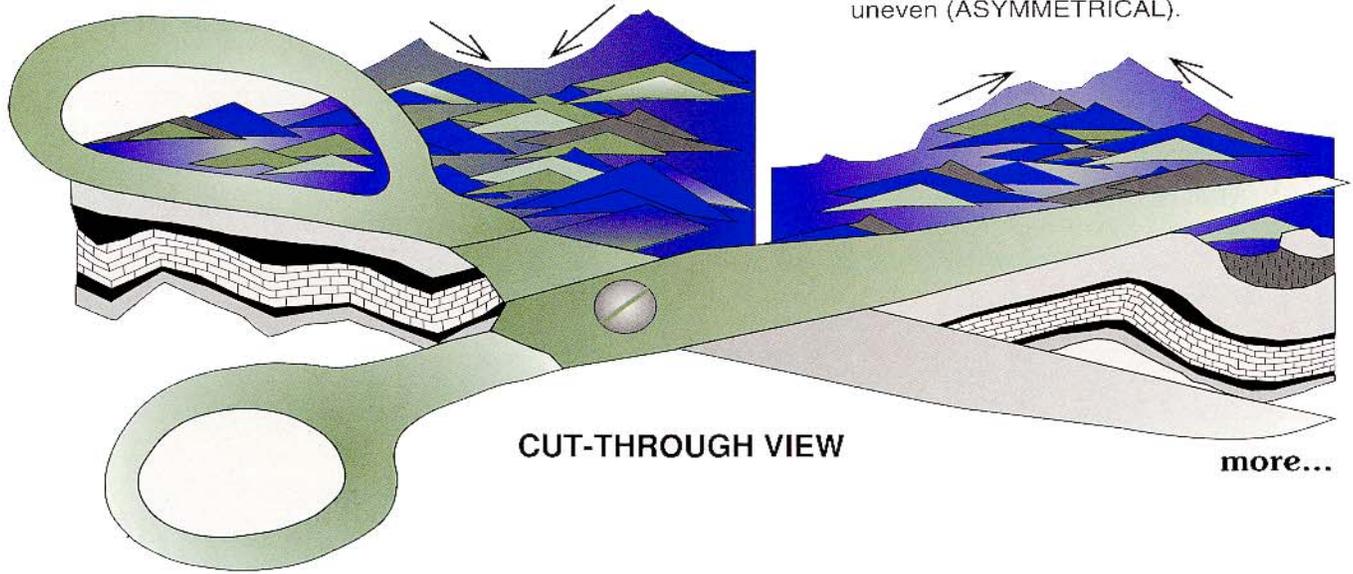


When driving past cut-through mountains, look at the LAYERS in the rocks. If you see folds, you know the rocks were under great PRESSURE. If you see round stones, you know a river was once there and now it's gone.

Information taken from *EARTH SCIENCE for Everyone: WHAT'S UNDER YOUR FEET?* by Penni Rubin and Eleanora I. Robbins, U.S. Department of the Interior, U.S. Geological Survey.

Where rocks fold down, a v-shaped valley (SYNCLINE) is formed between peaks.

When layers lift upwards (ANTICLINE), they can be even (SYMMETRICAL) or uneven (ASYMMETRICAL).



...more Teacher Feature

1. What did one rock say to the other rock?
2. What did the round rock say to the square rock?
3. What did the volcano say to the rock?
4. How do you know when a volcano is angry?

Answers: 1. You crack me up. 2. Get in shape. 3. Don't eat too much basalt and have a gneiss day. 4. It blows its top.

CALIFORNIA GEM and MINERAL SHOWS—1997

August 2-3. San Francisco. San Francisco Gem and Mineral Society. "History on the Rocks." Hall of Flowers, Golden Gate Park-9th Avenue and Lincoln Way. Contact Carleen Mont-Eton at (415) 564-4230.

September 27-28. Monterey. Carmel Valley Gem and Mineral Society. "38th Annual Show." Monterey California Fairgrounds. Contact Charlene Stitt at (408) 633-0109.

October 11-12. Lancaster. Valley Gems and Mineral Club. "Tailgating Event." Clubhouse 9050 1/2 West Avenue J. Contact Connie Wilhelm at (805) 942-1570.