Resource from animation found at: <http://www.iris.edu/hq/inclass/search>

**Narration from the animation:**

**Pakistan’s earthquakes and tectonics**

(This animation accompanied an IRIS Recent Earthquake Teachable Moment from the September 24, 2013 earthquake: <http://www.iris.edu/hq/retm/event/2057>

Pakistan is split along the boundary between the Eurasian and Indian plates where the India plate slides northward relative to the Eurasia plate in the east. The Eruasia Plate is also being shoved by the Arabia plate as *it* subducts northward beneath the Eurasia plate along the boundary south of this map. These motions typically result in north-south to northeast-southwest strike-slip motion. as shown on this generalized fault map.

The September 24, M7.7 earthquake in south-central Pakistan occurred as the result of oblique-strike-slip type motion at shallow crustal depths.

The event occurred within the transition zone between northward subduction of the Arabia platebeneath the Eurasia plate and northward collisionof the India plate with the Eurasia plate. A hazard map of greatest damage shows regions that have been particularly vulnerable to earthquakes. Although the earthquake fell within a medium low zone, 30% of the homes in the area were destroyed and dozens were killed.

This map shows 25 years of earthquakes magnitude 6 or greater

We will zoom in to the center of the earth to how seismic waves travel from the epicenter to stations 30, 60, 90, and 120 degrees away. For this earthquake, most of the United States is in the P & S wave shadow zone, so seismograph stations will receive PP, SS, and Surface waves.