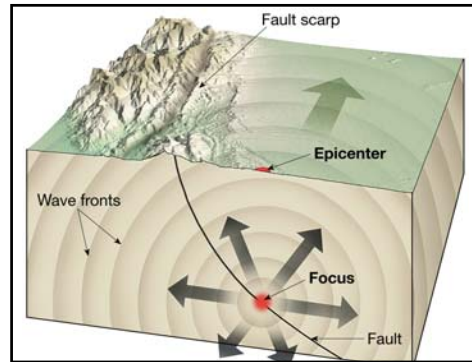
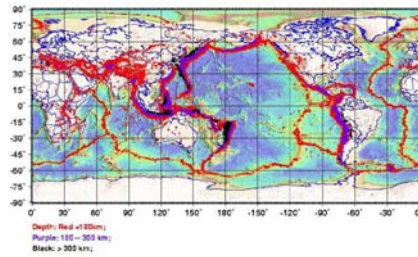


Evidence of Plate Tectonics Earthquakes



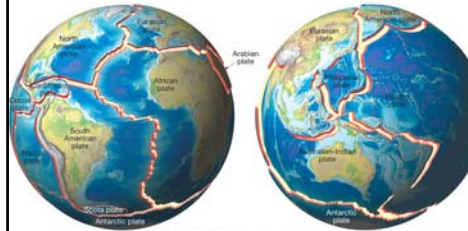
Earthquake Locations

Global Seismicity (1910 - 99, magnitudes ≥ 4.5)



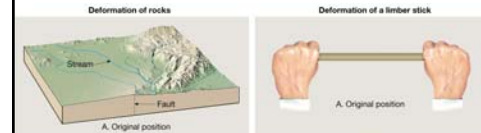
• http://earth.geol.kau.edu/sgo/g100/plots/0916_global_seismicity.jpg

Lithospheric Plates

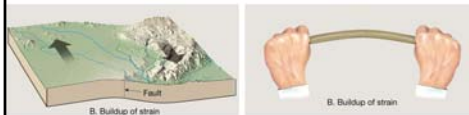


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Before deformation



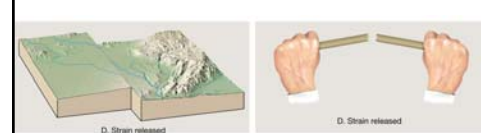
Strain

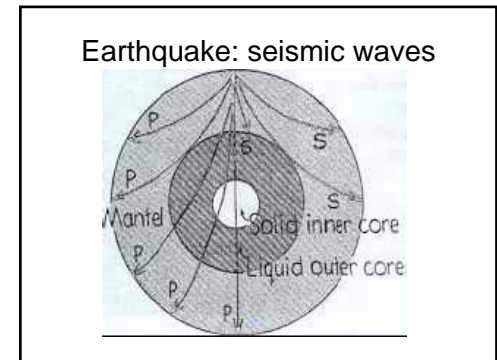
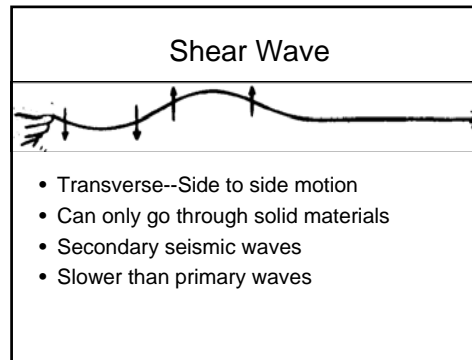
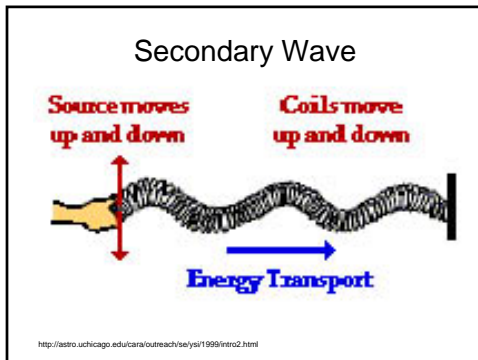
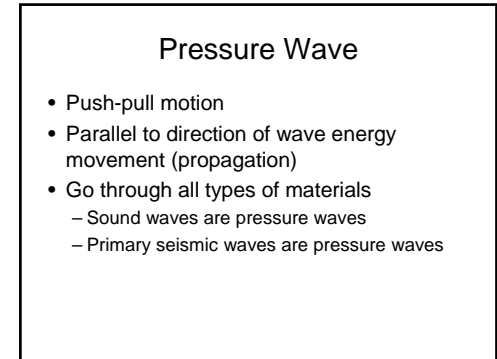
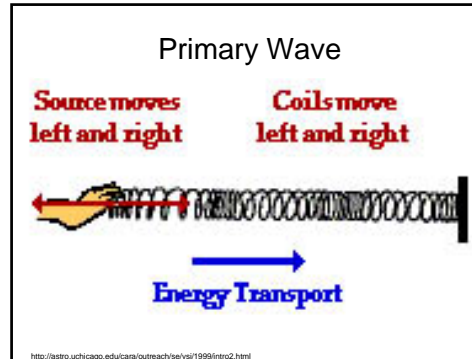
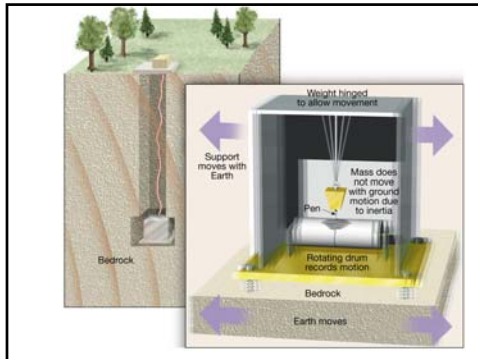
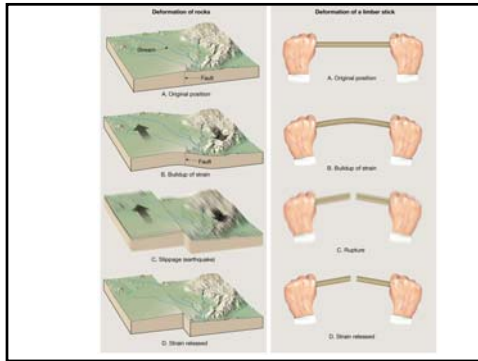


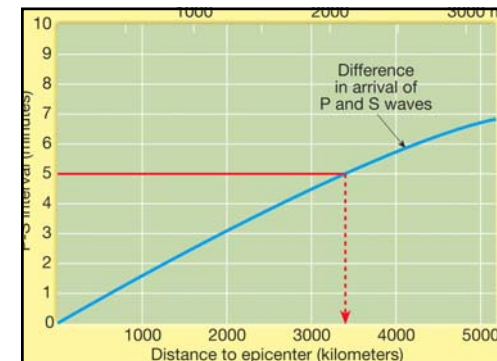
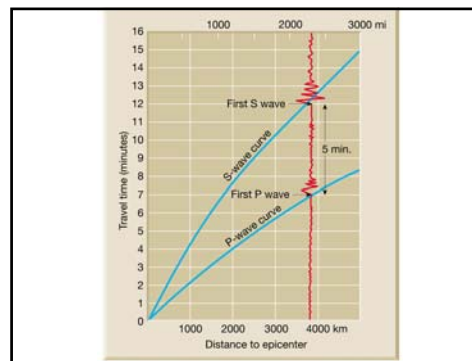
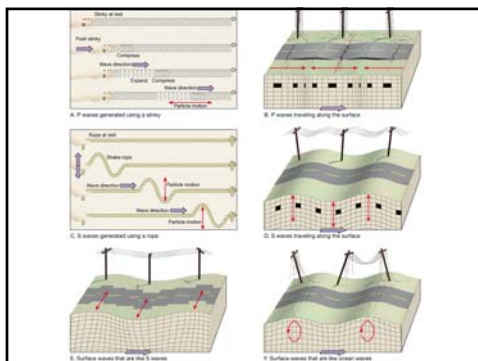
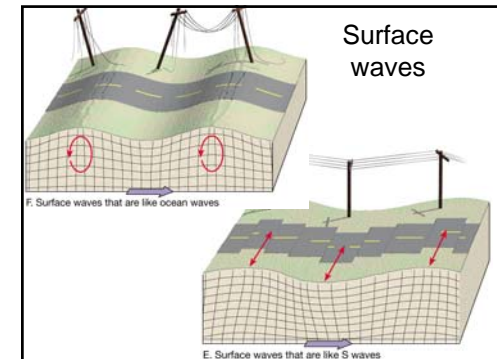
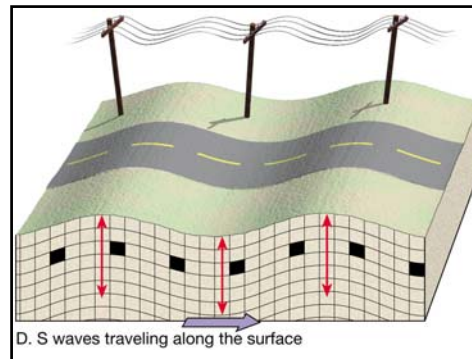
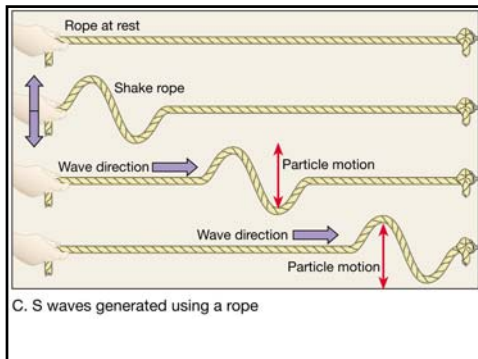
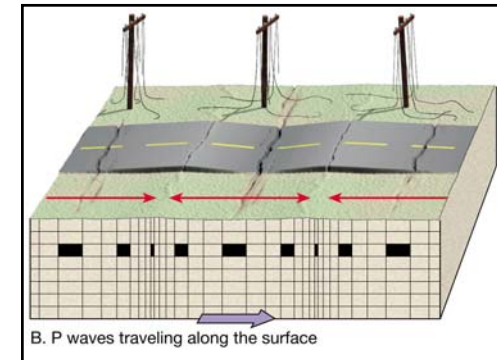
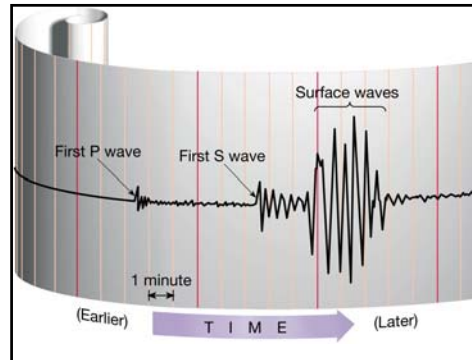
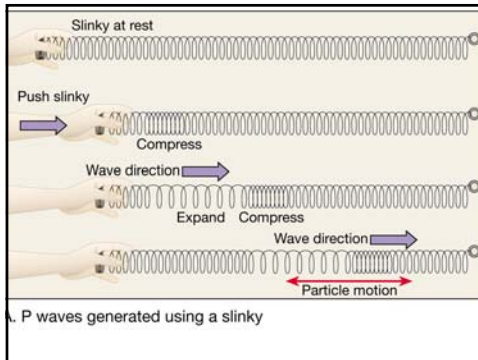
Release of strain



After strain released







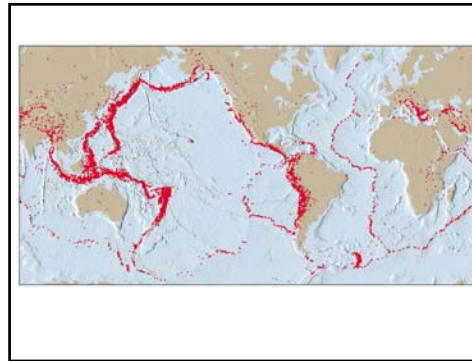
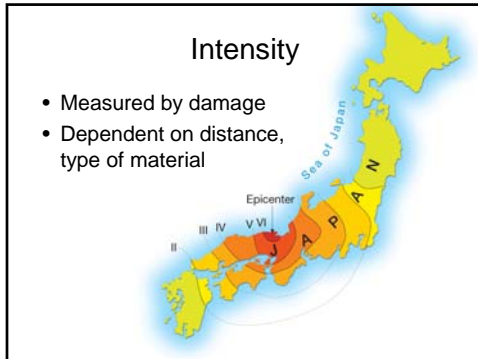


TABLE 7.1 Modified Mercalli Intensity Scale.

- I Not felt except by a very few under especially favorable circumstances.
- II Felt only by a few persons at rest, especially on upper floors of buildings.
- III Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake.
- IV During the day felt indoors by many, outdoors by few. Sensation like heavy truck striking building.
- V Felt by nearly everyone, many awakened. Disturbances of trees, poles, and other tall objects sometimes noticed.
- VI Felt by all; many frightened and run outdoors. Some heavy furniture moved; few instances of fallen plaster or damaged chimneys. Damage slight.
- VII Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight-to-moderate in well-built ordinary structures; considerable in poorly built or badly designed structures.
- VIII Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. (Fall of chimneys, factory stacks, columns, monuments, walls.)
- IX Damage considerable in specially designed structures. Buildings shifted off foundations. Ground cracked conspicuously.
- X Some well-built wooden structures destroyed. Most masonry and frame structures destroyed. Ground badly cracked.
- XI Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground.
- XII Damage total. Waves seen on ground surfaces. Objects thrown upward into air.

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Seattle, WA

- Feb 28, 2001, Nisqually quake rocked the Central Puget Sound region
- 6.2 Richter Magnitude
- 6.8 Moment magnitude
- Centered 57.5 km south-southwest of Seattle and 52.4 km deep

<http://www.scec.org/earthquakes/>

<http://128.205.131.100:591/archives/Seattle.html>



TABLE 7.2 Earthquake Magnitudes and Expected World Incidence.

Richter Magnitudes	Effects Near Epicenter	Estimated Number
<2.0	Generally not felt, but recorded.	600,000
2.0-2.9	Potentially perceptible.	300,000
3.0-3.9	Felt by some.	49,000
4.0-4.9	Felt by most.	6200
5.0-5.9	Damaging shocks.	800
6.0-6.9	Destructive in populous regions.	266
7.0-7.9	Major earthquakes. Inflict serious damage.	18
8.0 and above	Great earthquakes. Destroy communities near epicenter.	1.4

Source: Earthquake Information Bulletin and others.

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