

Seismic Waves Comparison Chart

	<u>Primary Seismic Wave</u>	<u>Secondary Seismic Wave</u>	<u>Surface Seismic Wave</u>
Speed	Travels the fastest	Travels 2 nd fastest	Travels the slowest
How does it move the crust or rock particles?	Moves the crust back and forth like an accordion; this wave compresses and expands the rock	Moves the crust up and down mostly (some side to side)	Makes the crust roll like a wave
How do the rock particles move compared to the direction the energy of the wave is moving?	The rock particles and the energy are moving in the <u>same direction</u>	The rock particles are moving up and down and the energy is moving horizontally; thus, the crust movement is <u>perpendicular</u> to the energy movement	The rock particles are moving in a <u>circle</u> in the direction that the wave energy is moving
What state of matter or which earth layers do they move through?	<ul style="list-style-type: none"> P-waves can move through both solids and liquids P-waves can move through all layers of the earth 	<ul style="list-style-type: none"> Secondary Waves only move through solids; they cannot move through liquids Secondary Waves cannot move through the outer core Secondary waves can move through the crust and mantle 	<ul style="list-style-type: none"> Surface waves only move along the earth's solid surface on the crust. They do not move anywhere else
How destructive is the wave?	Primary waves cause the least damage	Secondary waves are 2 nd in the amount of damage they cause	Surface Waves cause the most destruction

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Speed			
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How do the rock particles move compared to the direction the energy of the wave is moving?			
What state of matter or which earth layers do they move through?			
How destructive is the wave?			

Use pages 188-189 in red book to help you.

