Teacher's Guide

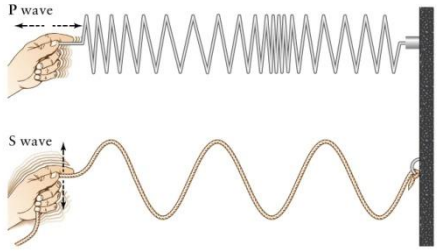

Figure 1: Picture showing the motion of a longitudinal P wave vs. a transverse S wave. *Image retrieved on February 10, 2009 from:* http://www.physast.uga.edu/~jss/1010/ch9/waves.jpg

Start	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
X P S	X	X	X	X	X	X
X	X S	X	X	X	X	X
X	X P	X S	X	X	X	X
X	X	X	X S	X	X	X
X	X	X P	X	X S	X	X
X	X	X	X	X	X S	X
X	X	X	X P	X	X	X S
X	X	X	X	X	X	X
X	X	X	X	X P	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X P	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X P
X	X	X	X	X	X	X
X	X	X	X	X	X	X
0 seconds	1 second One space apart	2 seconds Two spaces apart	3 seconds Three spaces apart	4 seconds Four spaces apart	5 seconds Five spaces apart	6 seconds Six spaces apart

Figure 2: P and S wave demonstration procedure. P represents the student who is the P wave, S represents the student who is the S wave, and X represents the rest of the students.

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Table 1: Timing and distances for the first earthquake:

city	time between S and P waves	distance from epicenter
Sydney	5 seconds	7,500 km
San Francisco	12 seconds	18,000 km
Mumbai	3 seconds	4,500 km

Table 2: Timing and distances for the second earthquake:

city	time between S and P waves	distance from epicenter
Sydney	6 seconds	9,000 km
San Francisco	4 seconds	6,000 km
Mumbai	12 seconds	18,000 km