Name Period Date

Unit	Handout	*Lesson 2: Testing the Motion of Waves*
3	5	

Purpose:	To use a spring to investigate different kinds of waves.
Guiding Questions:	- What is a wave? - How are the waves generated by an earthquake similar and different to each other?

Instructions. Follow the procedure starting on page 14 of your XPT textbook. A few modifications will be made:
- We will not use string, we will simply hold the spring.
- We will not use construction paper, we will use the floor tiles for measurement.

Question: How does the type of wave affect the time it takes the wave to travel back and forth in a spring?

Ind. variable: _____ Dep. variable: _____

Data Table.

Title: _____

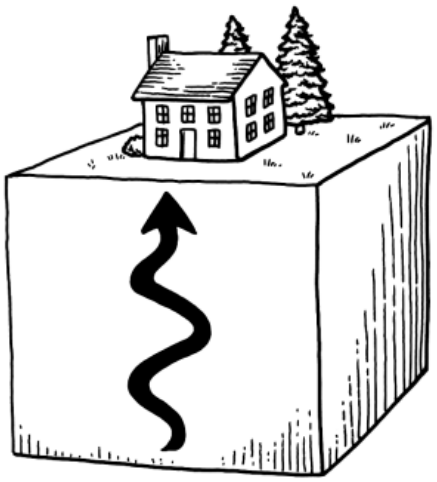
Type of Earthquake Body Wave	Sketch of How Spring Moves	Time for Wave to Travel Back and Forth One Complete Trip (in seconds)			
		Trial 1	Trial 2	Trial 3	Mean*
Push and Pull (P-Wave), Step 6					
Side to Side (S-Wave), Step 7					

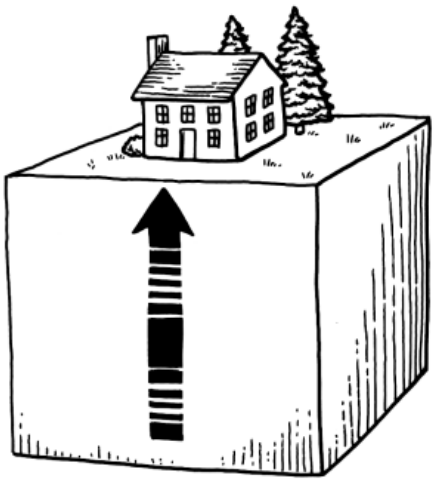
* Average mean. Add trials and divide by 3.

Continue on to the back of the sheet.

Wave Type	Your Average	Class Average
P-Wave		
S-Wave		

Identifying Waves. Below are two illustrations of the body wave types we have learned about. For each picture **a)** say if it is a P- or S-wave and **b)** provide evidence that supports your choice. (See the diagram on p. 17 for additional help.)





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Apply Ideas.

1. In the illustrations above, draw arrows on each house to show how the earthquake *body* wave might move the ground.

2. Which type of wave, P-wave or S-wave, is more likely to cause damage to buildings? Explain.