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Plate Tectonics and Earthquakes Worksheet

Data Table

Pencil Position (cm)	Leading Edge of Plain Block (cm)	Leading Edge of Sandpaper Block (cm)	
			Crustal uplift Continental crust Cocean crust Cocean crust Cocean crust Cocean crust Continental crust Deep subduction Cocean crust Continental crust Deep subduction Cocean crust Continental crust Deep subduction Continental crust Continental crust Continental crust Deep subduction Continental crust Continental crust Cont

Discussion Questions and Calculations

- 1. Analyze the data for the plain block. (a) How many times did the plain block slip? (b) Determine how many centimeters the block moved for each slip, and find the average distance per slip.
- 2. Repeat the analysis in question 1 for the sandpaper block data.
- 3. How much did the leading rubber band chain stretch before the plain block slipped the first time? Before the sandpaper block slipped?
- 4. What caused the blocks to slip? Describe the forces involved and the transfer of energy that took place from one slip of each block to the next.
- 5. The motion of the rubber bands and blocks in this activity provides a model for the movement and forces involved in subduction zone earthquakes. What does the movement of the chain of rubber bands represent? What does each block of wood represent? Refer to Figure A.
- 6. How is this model similar to the subduction zones created by converging tectonic plates? How is it different?

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