

The Best Current Model – Answer Key

Steps

Line up a group of wooden blocks in a straight line. Make sure the blocks are touching.

Push on an end block a few times at different speeds. Observe the block at the other end. How does the speed with which you push affect the length of time between the moment when you start pushing and the moment when the block at the other end starts to move?

The blocks move almost immediately. The harder you push on the first block, the faster the blocks move.

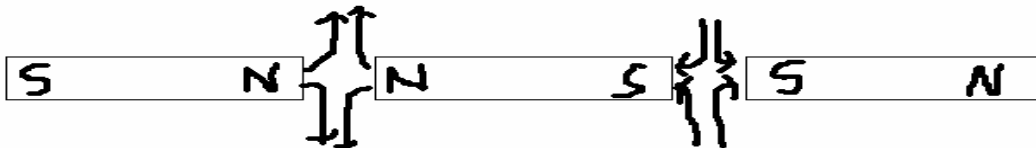
Using straws and rollers, line up the magnets as shown on page 329. Observe the motion of the magnet on the other end.

1) Explain how the wooden blocks model electrons in a circuit.

The wooden blocks model the instantaneous movement of the charges in a circuit.

2) Explain how the magnets model electrons in a circuit.

The magnets model that like charges repel, the same way electrons repel one another in a circuit.



3) Which is a better model? Why

The magnets show how electrons repel each other in a circuit. However, the blocks show the immediate movement of the electrons. It could be argued that both are a good model.