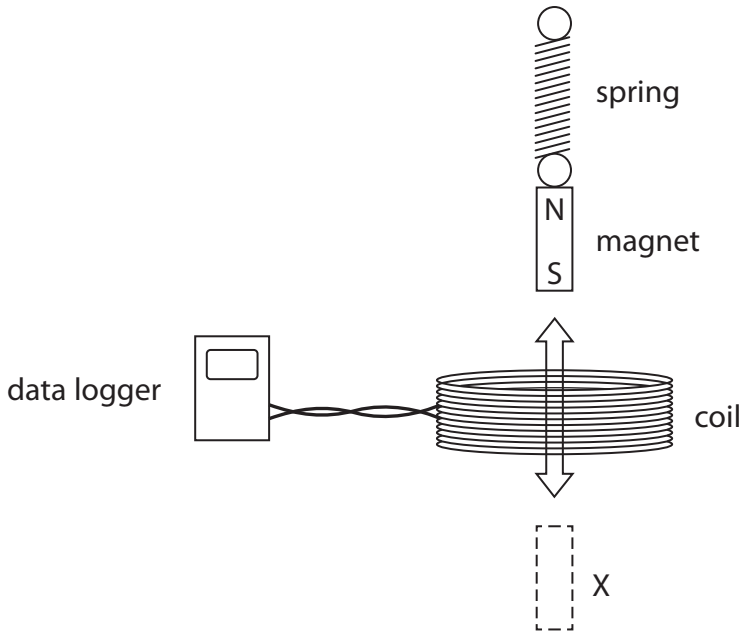
14 A student investigates how to produce a voltage.

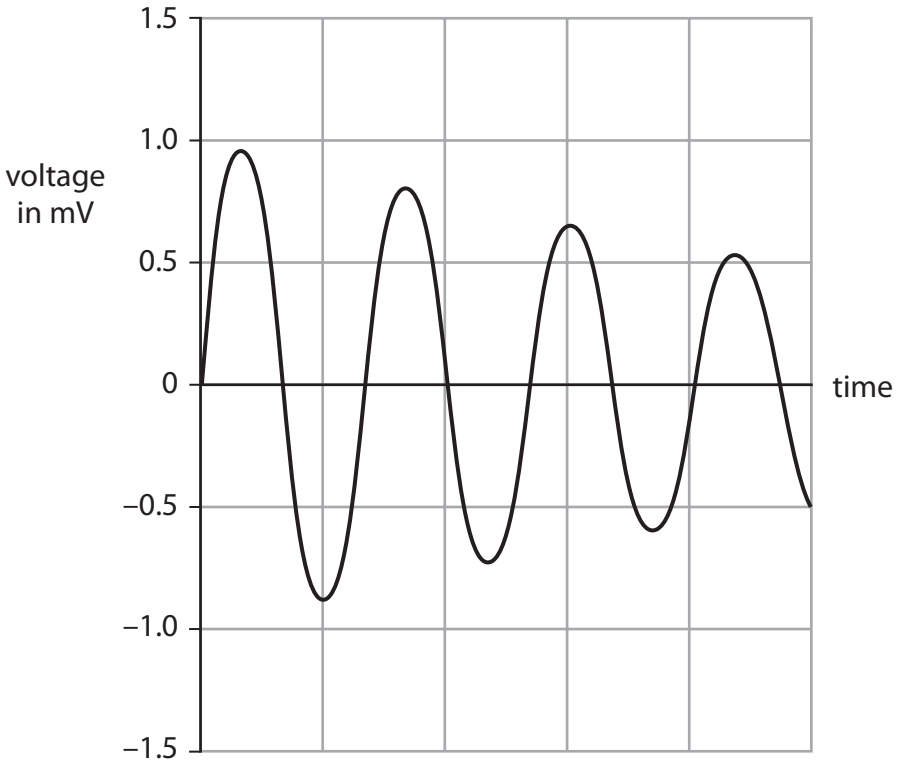
He hangs a magnet from a spring, above a coil that is connected to a data logger.



(a) The student pulls the magnet through the coil to X and then releases it.

The magnet moves up and down through the coil.

The data logger produces this graph of voltage against time.



(i) Explain why the data logger records a varying voltage.

(2)

(ii) Which feature of the graph shows that the voltage is alternating?

(1)

(iii) Suggest why the voltage changes as shown by the graph.

(2)