



EFFECT OF LOOPS ON THE INDUCED VOLTAGE OF AN DC MOTOR

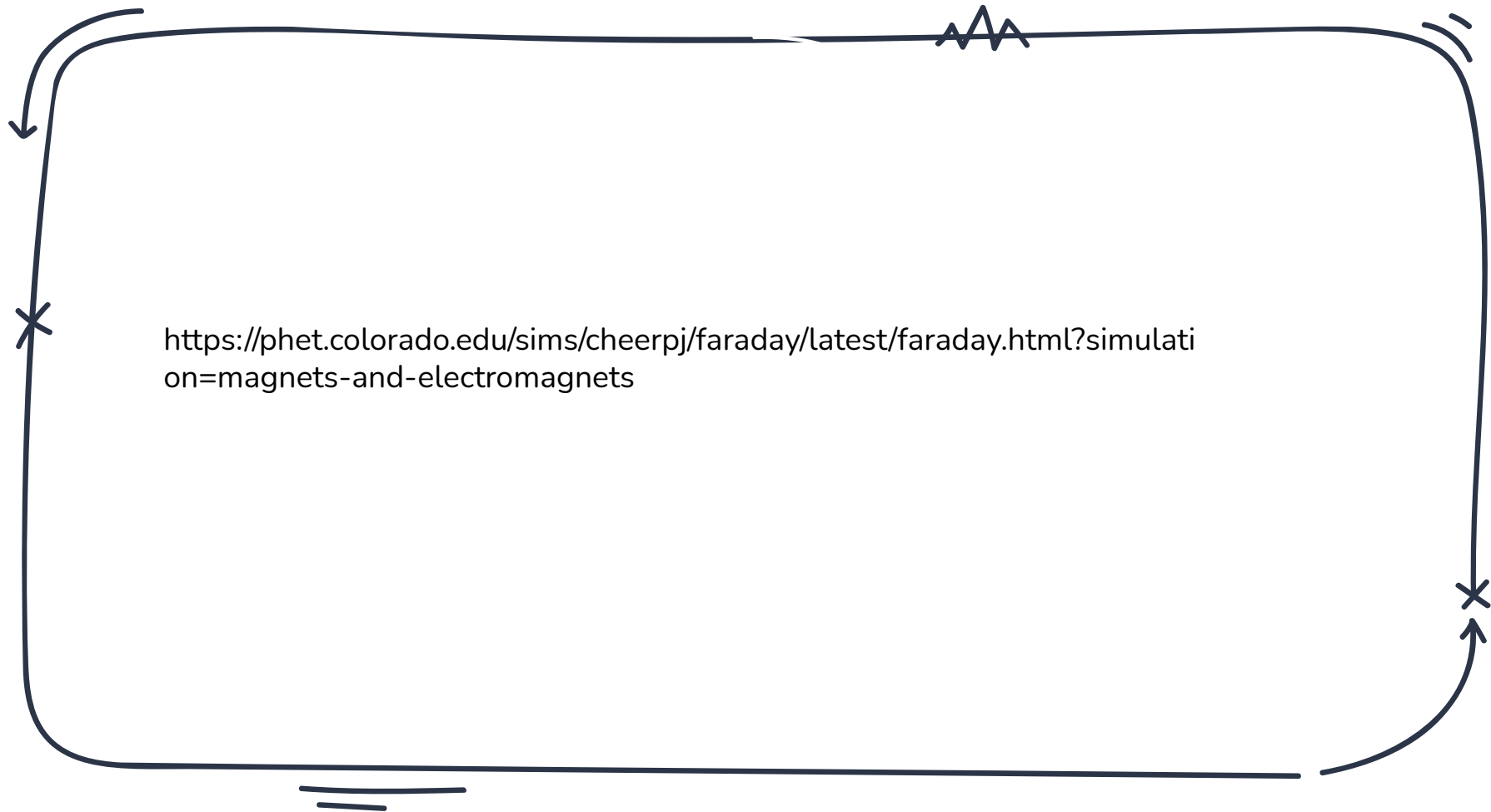


SETUP AND HYPOTHESIS

An increase in the number of loops in a DC current has a linear effect on the relative strength of the B force.

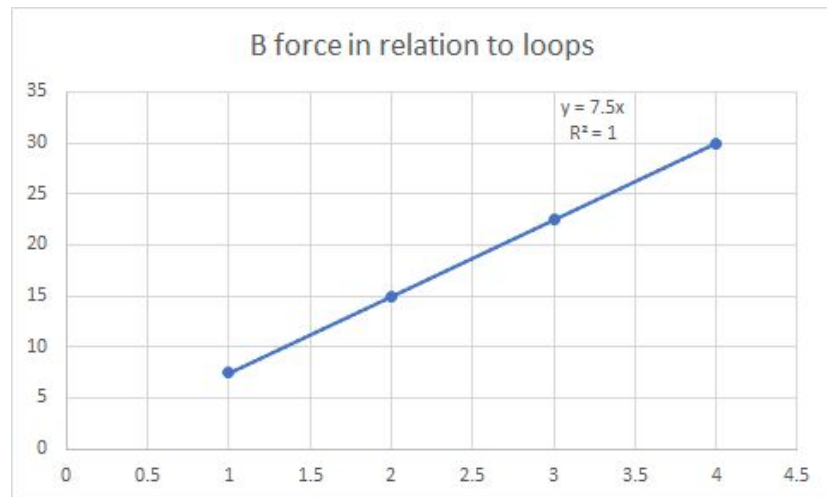
The experiment involved measuring the magnetic field after each successive addition of a loop and then fitting the the increase in magnetic field force to a linear model.

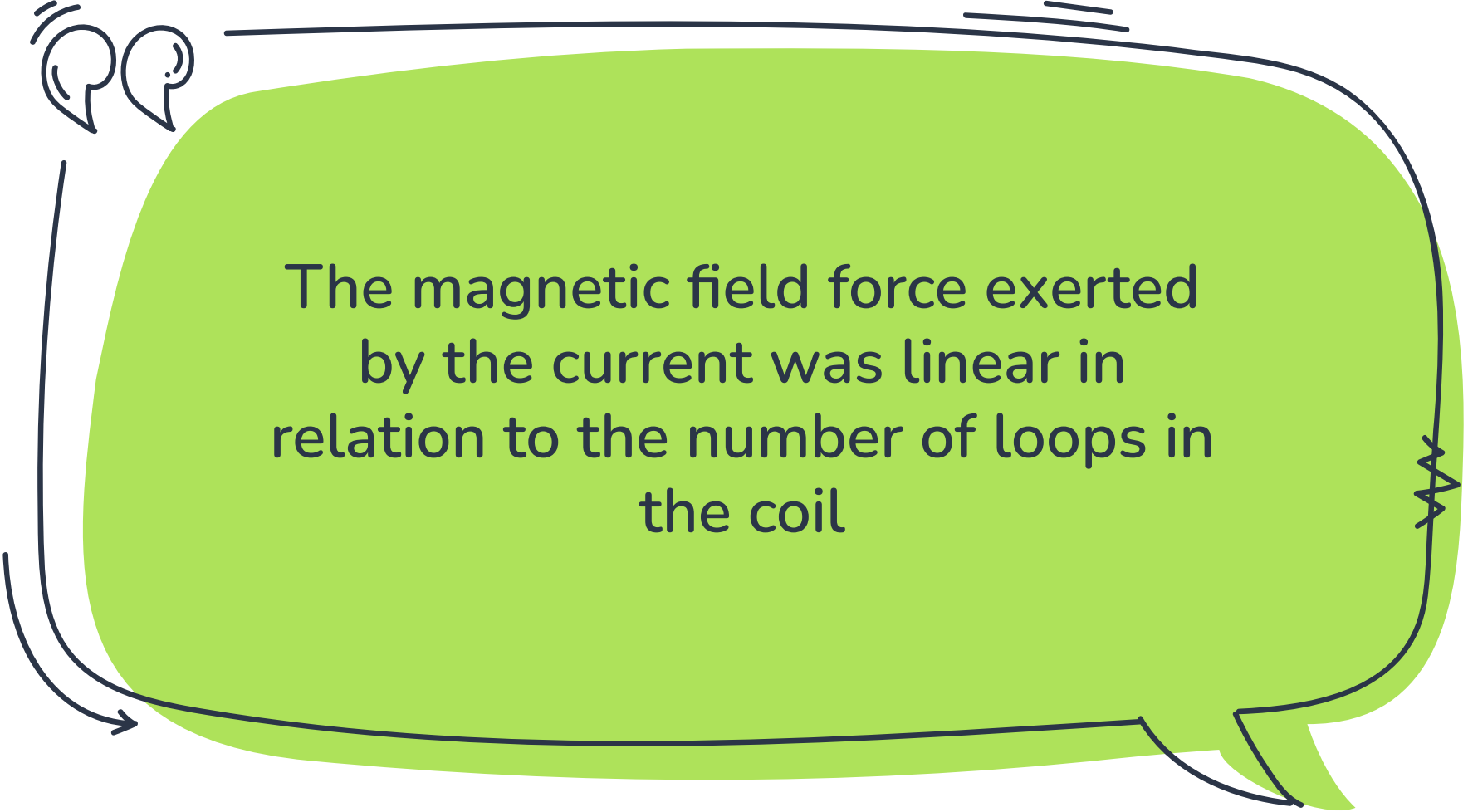




<https://phet.colorado.edu/sims/cheerpj/faraday/latest/faraday.html?simulation=magnets-and-electromagnets>

Magnetic force exerted at 1V





The magnetic field force exerted
by the current was linear in
relation to the number of loops in
the coil

A hand-drawn diagram featuring a large, light-green speech bubble with a dark blue outline. The bubble is centered on the page and contains text. A dark blue line forms a rectangular loop around the bubble, with a zigzag resistor symbol on the right vertical segment. An arrow on the left vertical segment points downwards. In the top-left corner, outside the bubble, are two small circles with dots inside, representing a coil, with two short parallel lines above them. The entire diagram is drawn in a simple, hand-drawn style.