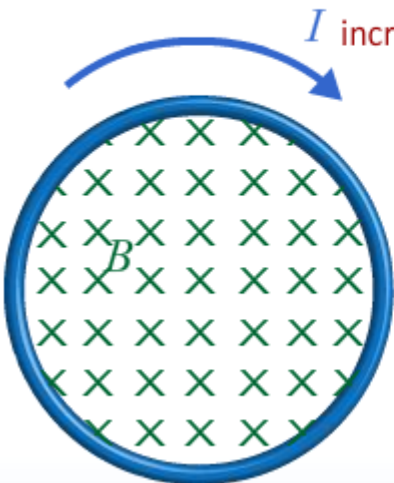


# From the Prelecture: Self Inductance



$I$  increases

Faraday's Law

$$\mathcal{E} = -\frac{d\Phi_B}{dt} = -\frac{d(LI)}{dt} = -L\frac{dI}{dt}$$


Self-Inductance

$$L \equiv \frac{\Phi_B}{I}$$

SI Unit

$$H = T \cdot m^2/A$$

Wrap a wire into a coil to make an “inductor”...


$$\mathcal{E} = -L\frac{dI}{dt}$$