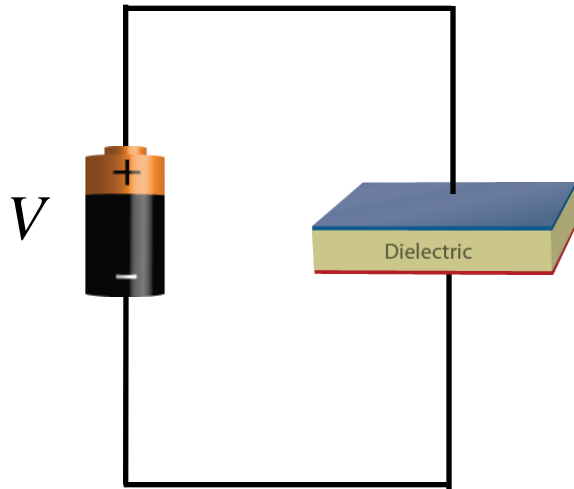# *Messing with Capacitors*

If connected to a battery V stays constant
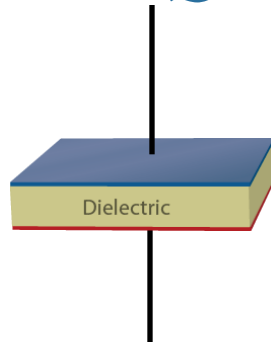
$$V_1 = V$$

$$C_1 = \kappa C$$

$$Q_1 = C_1 V_1$$

$$= \kappa C V = \kappa Q$$

If isolated then total Q stays constant

$$Q_1 = Q$$

$$C_1 = \kappa C$$

$$V_1 = Q_1 / C_1$$

$$= Q / \kappa C = V / \kappa$$