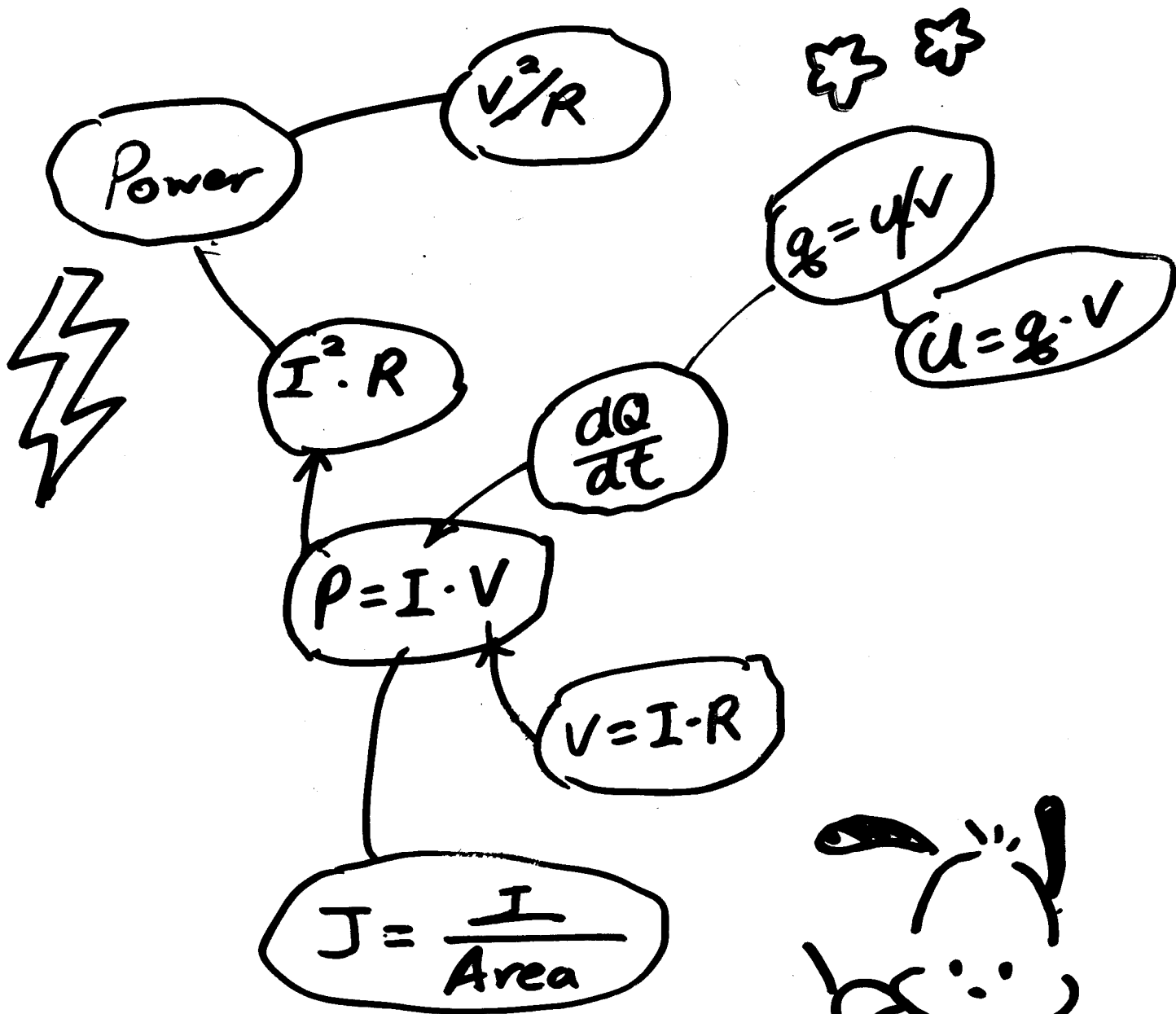


- Wardo, Joe, Mike, Howie, Kevin



$P = \text{Power (J)}$
 $I = \text{Current (amp)}$
 $V = \text{Voltage (v)}$

$R = \text{Resistance (}\Omega\text{)}$
 $u = \text{Work}$
 $J = \text{Current density}$

$$P = \frac{dU}{dt}$$
$$\Delta U = qV$$

$$I = \frac{dQ}{dt}$$
$$I = nqv_d \cdot A$$

$$J = I / \text{area}$$
$$J = \sigma \vec{E}$$
$$J = nqv_d$$

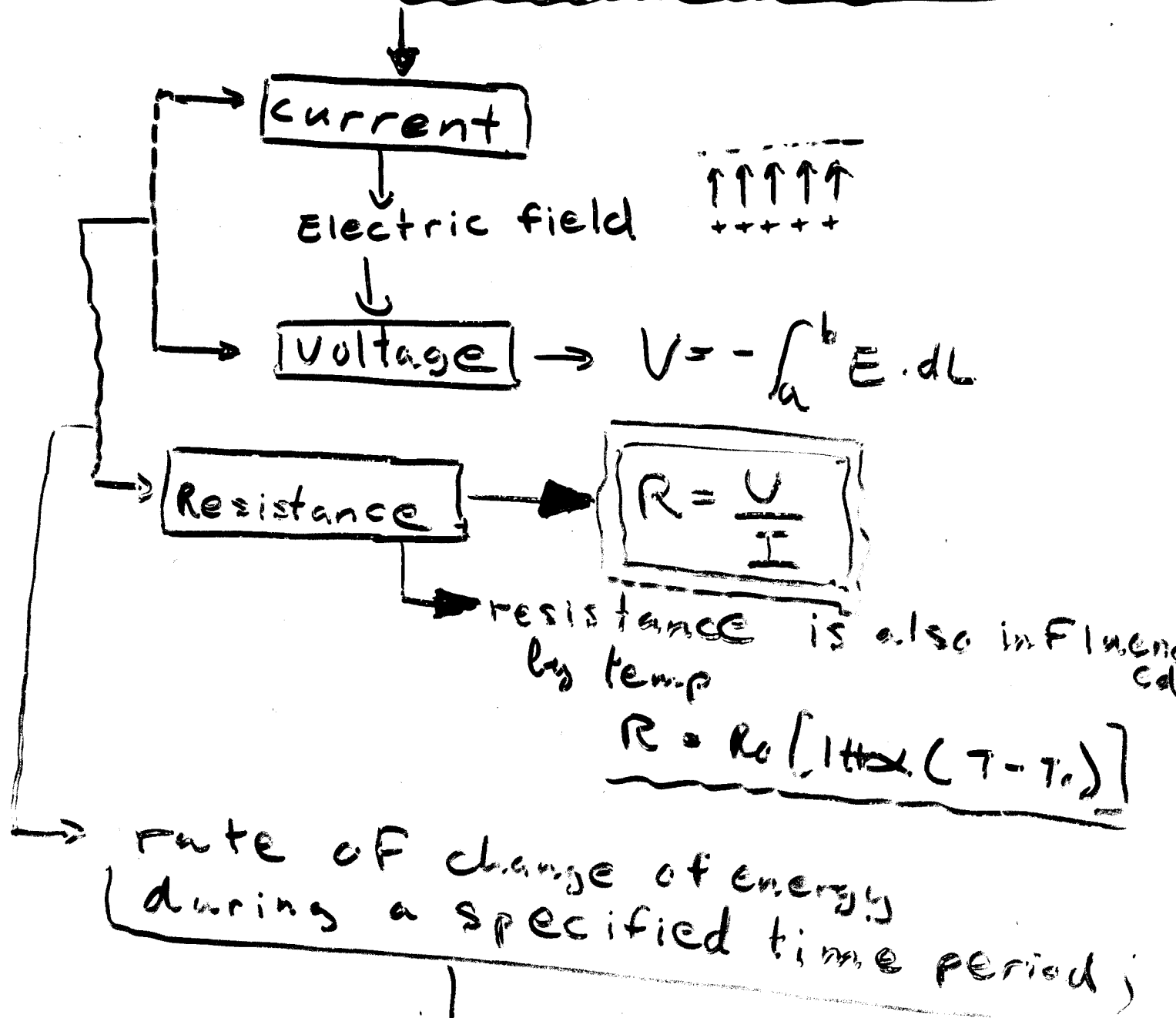
$$P = IV$$

$$V = IR$$

$$V = - \int_a^b E \cdot dl$$
$$V = V_b - V_a$$
$$V = El$$

$$R = R_0 [1 + \alpha(T - T_0)]$$
$$R = \frac{l}{A\sigma} = \rho \frac{l}{A}$$
$$\rho = \frac{1}{\sigma}$$

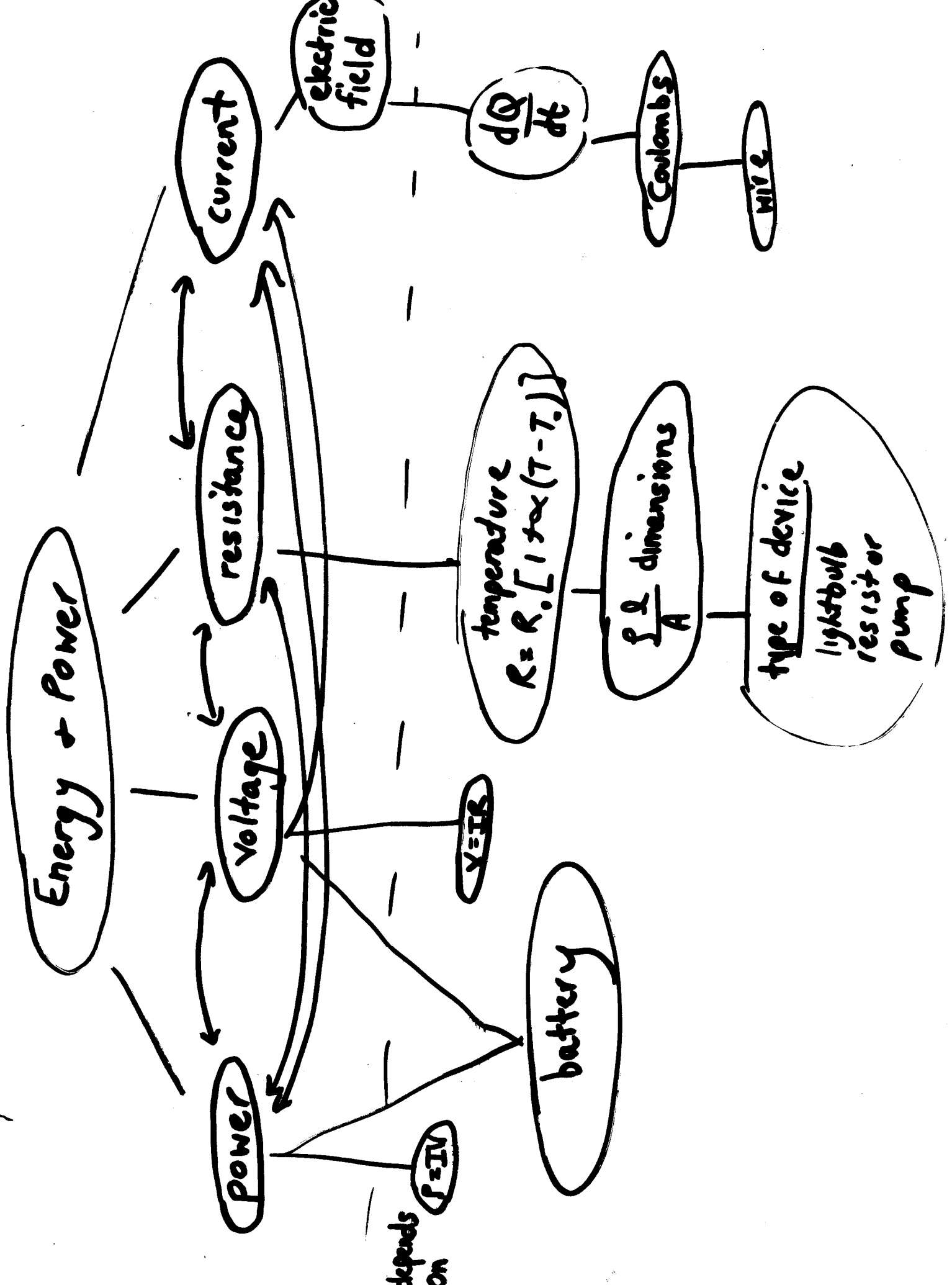
Flow of charge w.r.t Time



POWER

$$P = IV \quad \text{or} \quad \frac{V^2}{R} \quad \text{or} \quad I^2 R$$





Gain Respect & Credibility

Goals in Education

Bloom's Taxonomy
Knowledge, Application

Application of other
Engineering Fields

Mechanical, etc.

Electrical Engineering

Understanding Fundamentals
(Basic Applications; ENG 203)

Field Concepts
(Don't Ask, Just Do It)

Current, Voltage
Resistance, Power

Basic Applications

related to Temperature,
Power, Work

