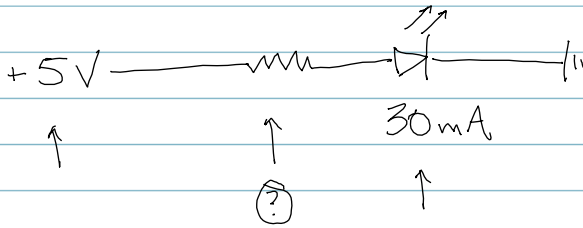


# CRAFT OF ELECTRONICS

## OHM'S LAW



$$V = I R$$

↓      ↓      ↓  
 Volts    Amps    Ohms  $\Omega$

$$5V = \frac{30mA}{1000 \text{ mA} \Rightarrow 1A} \Rightarrow \frac{5}{.03} = \frac{.03 \cdot R}{.03}$$

$$.030 \cdot .03 A \quad \frac{5}{.03} = R$$

$$5\% \text{ or } 10\% \quad \rightarrow \quad 166.\bar{6} = R$$

POOF!      LESS!       $R = 166 \Omega$       WIRE → SAFE!