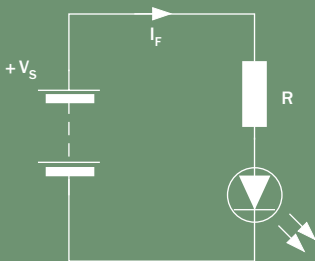
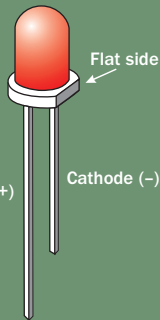
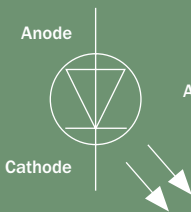


# HINTS & TIPS

## RESISTOR USAGE WITH LEDs

Suggested values for resistors when using LEDs with batteries or power supplies.

Voltage	Value
3V	150Ω
5V	270Ω
9V	470Ω
12V	560Ω



$$R = \frac{V_S - V_{LED}}{I_F}$$

$V_{LED}$  = Foward volt drop of LED.

# **Rapid**

We bring STEAM to life

[www.rapidonline.com](http://www.rapidonline.com)