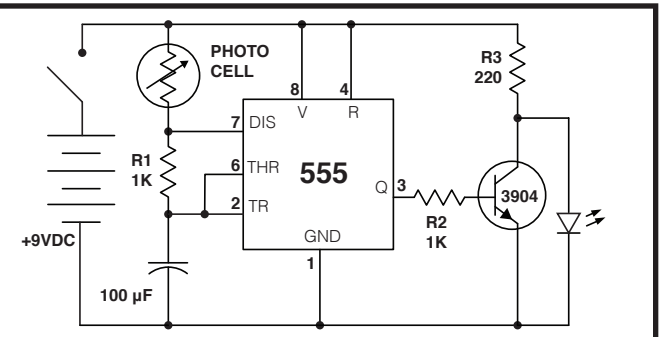
# Building a Blinky Circuit!

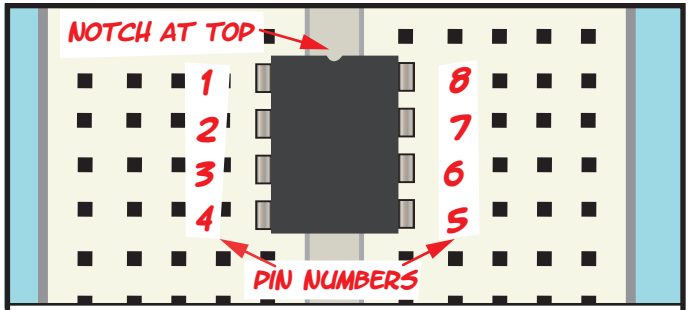
Make: makezine.com

BY JODY CULKIN &

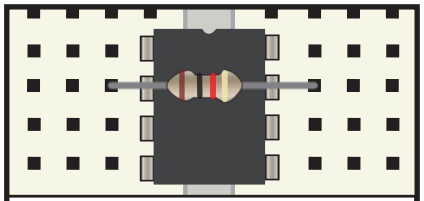
WE'RE GOING TO BUILD A SIMPLE **PHOTOMETER** USING A **PHOTORESISTOR** AND AN **LED**. THE MORE LIGHT FALLS ON THE PHOTORESISTOR, THE FASTER THE LED FLASHES.



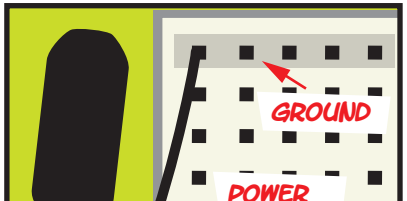

HERE IS THE SCHEMATIC.



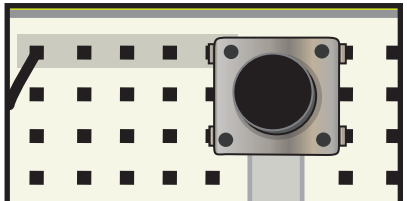

FIRST PUT THE **555 TIMER IC** ACROSS THE TRENCH RIGHT IN THE MIDDLE OF THE BOARD.



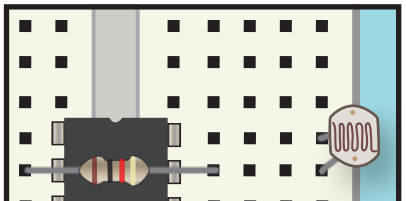
ATTACH A **1K RESISTOR** ACROSS THE IC, BRIDGING PINS 2 AND 7. TRIM AND BEND COMPONENT LEADS, AS YOU GO, TO KEEP EVERYTHING COMPACT.



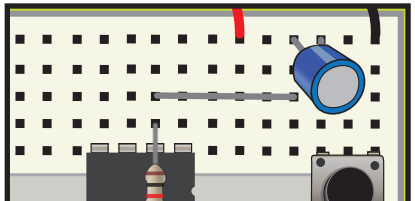

ATTACH THE BATTERY CLIP.



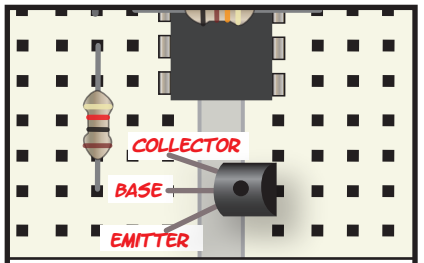
ATTACH A **MOMENTARY SWITCH** TO GROUND AT THE TOP OF THE BOARD.



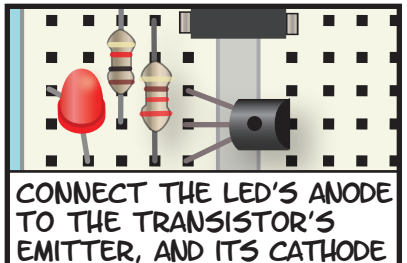
THE **PHOTORESISTOR** IS CONNECTED TO PIN 7 AND 8.



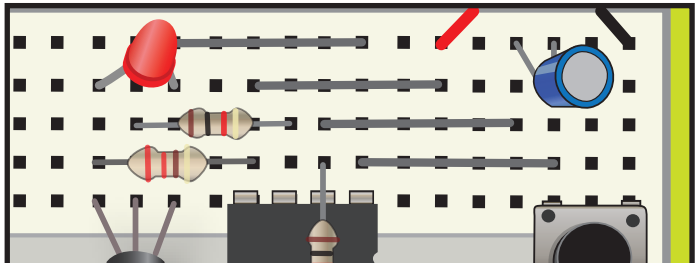
INSERT A 100UF CAPACITOR CONNECTING THE NEGATIVE LEAD TO THE SWITCH, AS SHOWN. JUMPER THE OTHER LEAD TO 555 PIN 2.



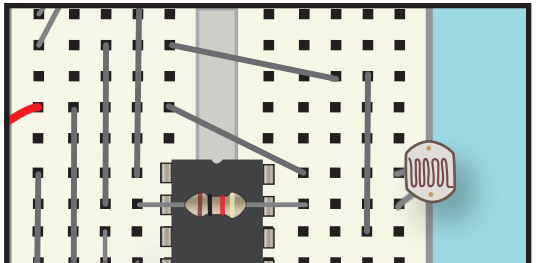

PLACE THE **NPN TRANSISTOR** BENEATH THE **IC**. PUT A 1K RESISTOR BETWEEN PIN 3 AND THE TRANSISTOR BASE.



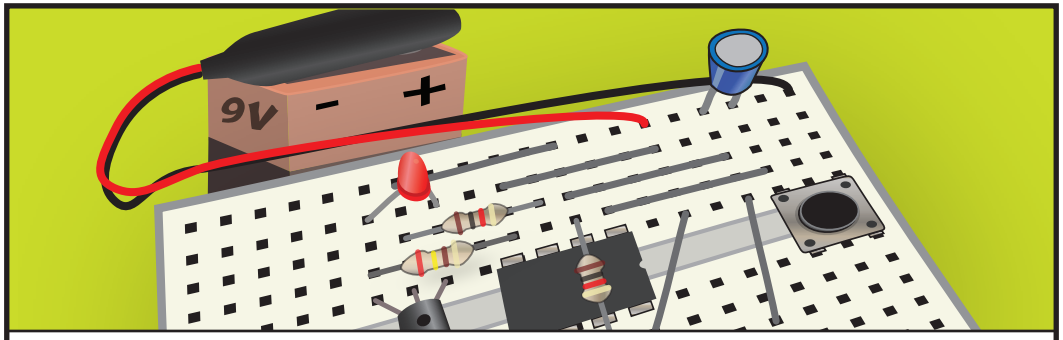
CONNECT THE LED'S ANODE TO THE TRANSISTOR'S EMITTER, AND ITS CATHODE TO THE COLLECTOR. CONNECT A 220(OHM) RESISTOR ACROSS THE EMITTER AND 555 PIN 4.



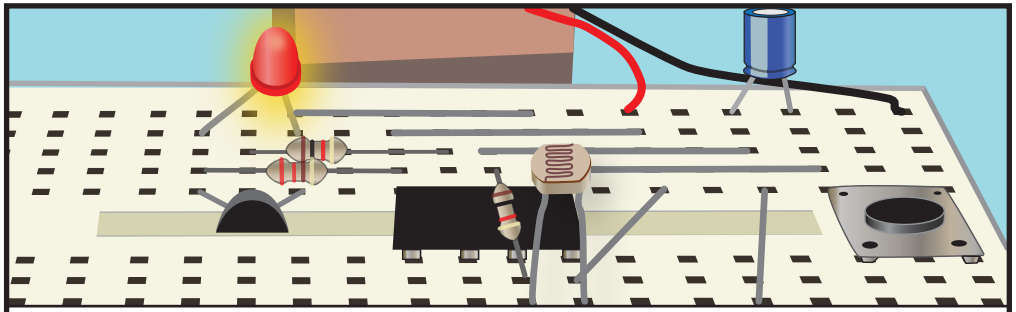
INSERT JUMPERS TO POWER AND GROUND.



INSERT THESE JUMPERS AS SHOWN.




ATTACH A **9 VOLT BATTERY** TO THE BATTERY CLIP.



NOW, THE LED WILL FLASH MORE FREQUENTLY WHEN THERE IS A LOT OF LIGHT, LESS FREQUENTLY WHEN THE ROOM IS DIMMER.