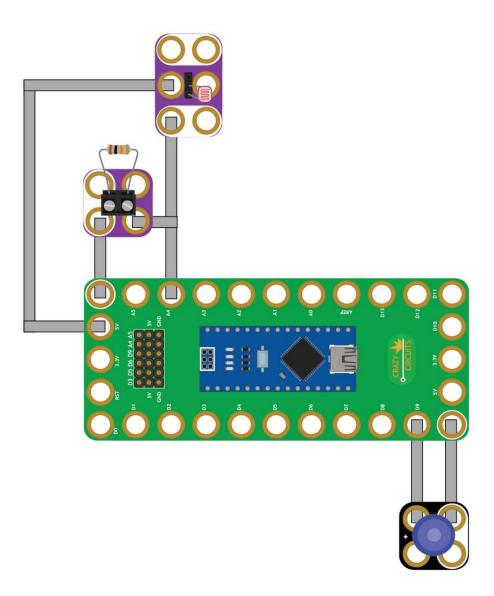


## 07 - Light Dependent Resistor with LED

Use our Programming 101 kit to control an LED with a light dependent resistor.

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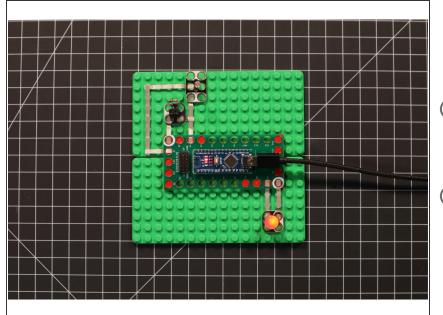
## INTRODUCTION

Use our Robotics Board to control an LED with a light dependent resistor.

FTOOLS:	DARTS:
<ul> <li>Scissors (1)</li> </ul>	<ul> <li>Crazy Circuits Robotics Board (1)</li> </ul>
<ul> <li>Computer (1)</li> </ul>	<ul> <li>Light Dependent Resistor (1)</li> </ul>
<ul> <li>Slotted Screwdriver (1)</li> </ul>	<ul> <li>10K Ohm Resistor (1)</li> </ul>
	<ul> <li>Female Header Chip (1)</li> </ul>
	<ul> <li>Crazy Circuits Screw Terminal Chip (1)</li> </ul>
	<ul> <li>Crazy Circuits LED Chip (1)</li> </ul>
	<ul> <li>Maker Tape (1)</li> </ul>
	1/8'' Wide

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## Step 1 — Build the Circuit



- Build the circuit as shown in the diagram using the components specified.
- (i) The light dependent resistor can be inserted into two of the pin sockets on the Female Header component.
- (i) The standard resistor can be inserted into the Screw Terminal component. (You'll need a small screwdriver to tighten the connectors.)

## Step 2 — Upload the Code

•••	Light_Detecting_Resistor_with_LED   Ardui	no 1.8.13
		2
Light_Detecting_Resistor_with_LED		
1 * 2 * Light_Detecting_Resistor_with_LL	D Jac	
3 *	D. LHD	
4 * https://www.browndoggadgets.com		
5 * 6 */		
7		
8		
10 // set variable name for an analog	input pin	
11 int LDRpin = A4; 12		
13 // set variable name for a digital	output pin with Pulse Width Modulation	
14 // pins 3, 5, 6, 9, 10, 11 support	PWM	
15 int LEDpin = 9; 16		
17 // set variable name to hold the in	put value	
18 int LDRvalue;		
20 // set variable name to hold the as	justed value	
21 int LDRvalueMapped; 22		
23		
24 // the setup runs once at the begin	ning of the sketch	
25 void setup() { 26		
27 // analog pins are set to input b	y default but	
28 // we still need to set the LEDpi 29 pinMode(LEDpin, OUTPUT);	n for output	
30		
31 } 32		
33		
34 // the loop runs forever after the	setup is complete	
35 void loop() { 36		
37 // assign the value of input usir	g analogRead on the pin	
38 LDRvalue = analogRead(LDRpin); 39		
40 // use the map function to set se	ale of 0-1023 to scale of 255-0	
41 LDRvalueMapped = map(LDRvalue, 0, 42	1023, 255, 0);	
43 // write the value between 255-0		
44 analogNrite(LEDpin, LDRvalueMappe 45	d);	
45 46 }		
		Arduino Nano, ATmega328P (Old Beetloader) on (dev/cu.usbserial-14114

- Upload the Arduino sketch to the Robotics Board.
- You can find the code here: <u>https://github.com/BrownDogGadgets</u> /Progr...

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