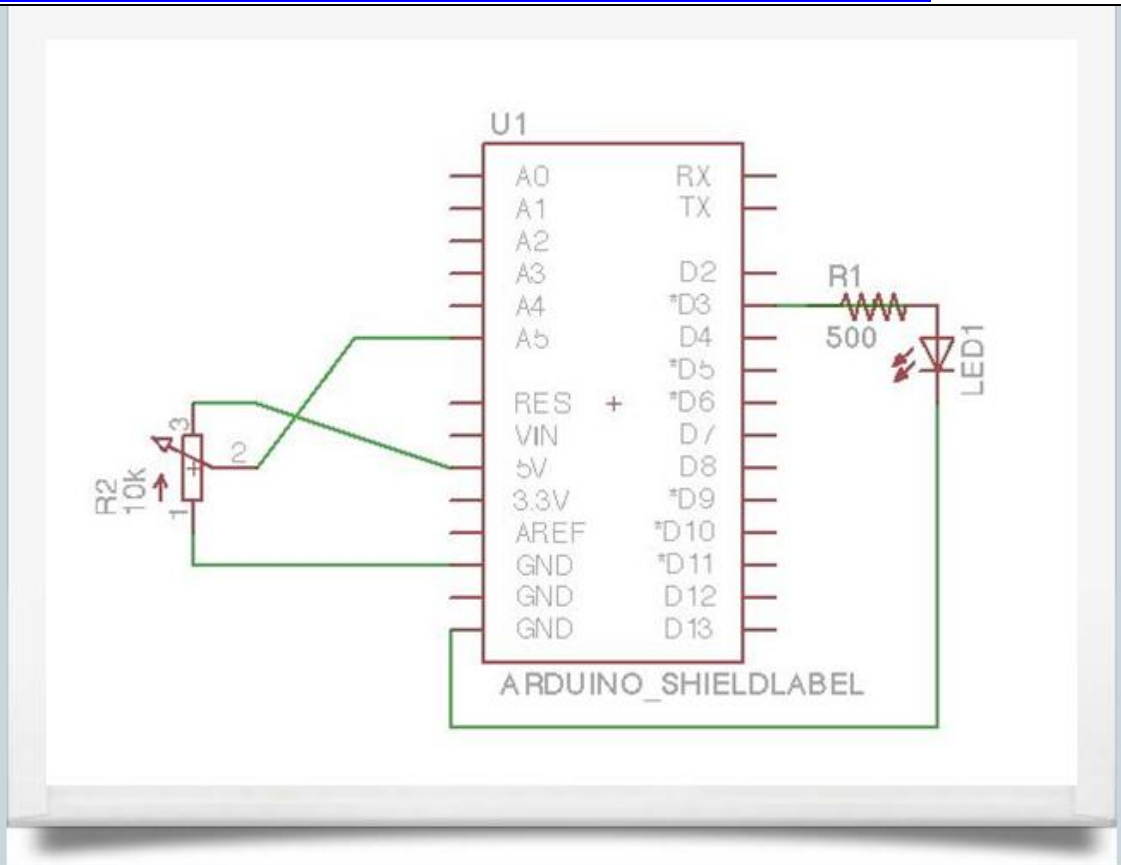
Dalkey Dojo

Potentiometer 4 Ardi

http://www.instructables.com/id/Arduino-Basics-Using-potentiometers-I-made-it-a/



This is a fairly simple circuit. The Arduino can provide power for the potentiometer and a logical high from the digital pins is high enough to run a simple led.

Connect the LED to pin 3 with a current limiting resistor of 500 ohms. Connect the long end of the led to the resistor and the short side to ground. Connect the potentiometer to power and ground and the third leg to analog pin 5. This creates a variable voltage divider. Once the Arduino is connected to a computer, the board will have power.

The following is the code for the blinking device.

```
#define POT_PIN 5
#define LED_PIN 3

void setup(){

  //set this to output
  pinMode(LED_PIN, OUTPUT);

}

void loop(){

  int val;

  val=analogRead(POT_PIN);

  digitalWrite(LED_PIN, HIGH);

  delay(val);

  digitalWrite(LED_PIN, LOW);

  delay(val);

}
```

So what's going on here? First the arduino needs to set the led pin to an output. Then the program loops through and does a few things. First it sets aside a little memory for the value that will be read from the potentiometer. Then it reads the voltage value from analog pin 5. This is a value from 0 to 1023 which translates to 0 -5v. Once that value is determined, it sets that value as the delay for the duration of the on and off cycles of the led.

And that's it, a potentiometer used to control a blinking light.