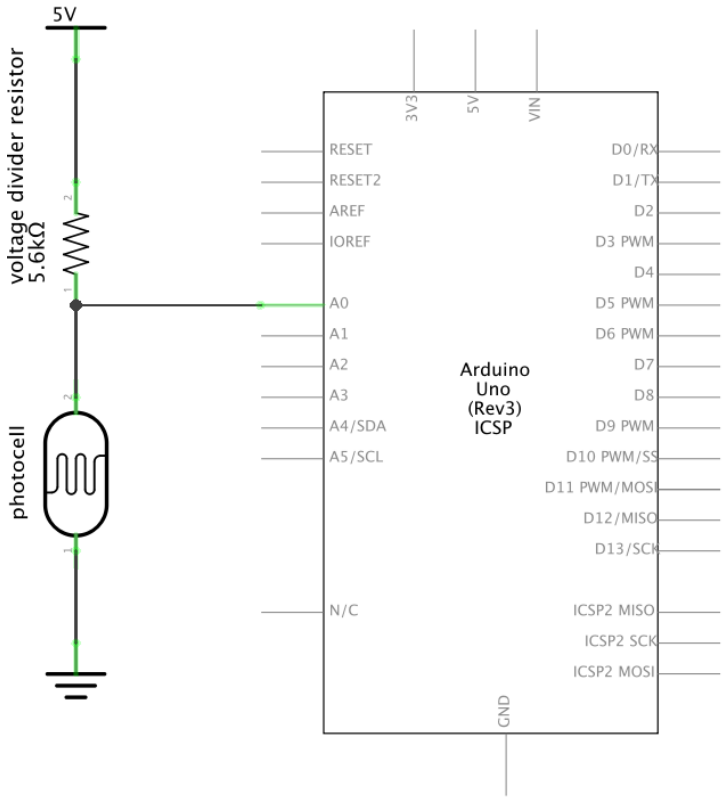
Basic photocell use on an Arduino



A standard photocell is very easy to wire, as shown in the schematic.

The purpose of the 5.6kΩ resistor in series with the photocell is to make it so that the photocell's changing resistance is reliably detectable.

You might be tempted to attach 5V to one side of the photocell, and the other side to A0. But! Consider that at very high photocell resistances this is like leaving A0 with a floating input (which would give you unpredictable values); and at any lower values, it's just wiring 5V right into A0 (which should just read as 1023 all the time). That's why instead of doing that you build a "voltage divider" circuit like the one shown.

Sample Arduino sketch to use serial monitor feedback to display the photocell value

After uploading this code to the Arduino, in the desktop software go Tools–>Serial Monitor, or starting in Arduino 1.6.0, you can try using Tools–>Serial Plotter to see a graph of the incoming data over time.

```
int photocell = A0; // shortcut to refer to the photocell pin later

void setup() {
  pinMode(photocell, INPUT); // we will be reading the photocell pin
  Serial.begin(9600); // starts serial communication at 9,600 baud (the rate)
}

void loop() {
  int readVal; // initialize a new integer to store the photocell value
  readVal = analogRead(photocell); // do the analog read and store the value
  Serial.println(readVal); // push the most recent value to the computer
  delay(50); // slow the loop down a bit before it repeats
}
```