Blink

This shows the simplest thing you can do with an Arduino or Genuino to see physical output: it blinks the on-board LED.

Hardware Required

* Arduino or Genuino Board
* LED
* 220 ohm resistor

Circuit

This uses the built-in LED that most Arduino and Genuino boards have. This LED is connected to a digital pin and its number may vary from board type to board type. To make your life easier, we have a constant that is specified in every board descriptor file. This constant is *LED\_BUILTIN* and allows you to control the built-in LED easily. Here is the correspondence between the constant and the digital pin.

If you want to lit an external LED with this sketch, you need to build this circuit, where you connect one end of the resistor to the digital pin correspondent to the *LED\_BUILTIN* constant. Connect the long leg of the LED (the positive leg, called the anode) to the other end of the resistor. Connect the short leg of the LED (the negative leg, called the cathode) to the GND. In the diagram below we show an UNO board that has D13 as the LED\_BUILTIN value.

The value of the resistor in series with the LED may be of a different value than 220 ohm; the LED will lit up also with values up to 1K ohm.

### Schematic

