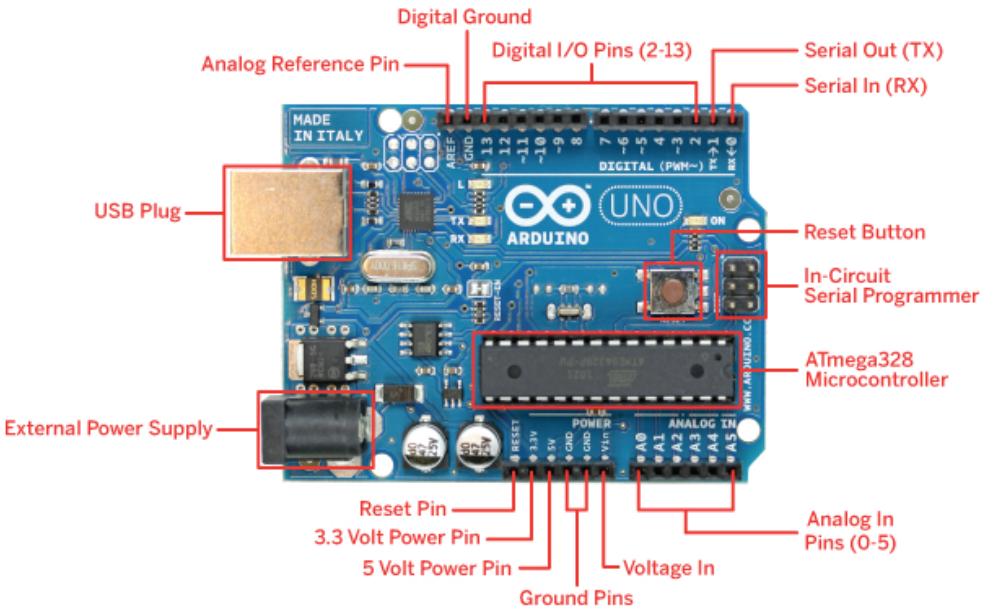
0 Arduino

Basic Information

Arduino is a series of prototyping boards combined with the **Arduino IDE** (integrated development environment), the software you use to write code to control your **Arduino** with. The most popular **Arduino** board is the **Arduino Uno**. It has 14 **digital** inputs/outputs (numbered 0-13). Note that 0 and 1 are used for **USB serial** so don't use them. There arethen 6 **analog** input pins (A0-A5), these can also be used as **digital** inputs/outputs. Finally, there are 6 PWM outputs marked with ~. **Arduino Unos** cost from £11 to £22.
A tiny test **LED** is included on the board and is connected to pin 13, this is useful for **debugging**.

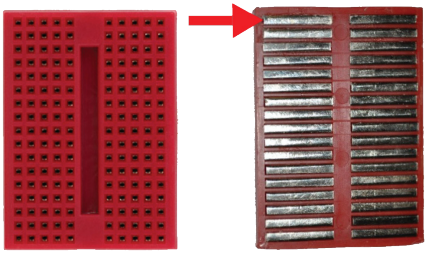


Testing your Arduino

To test your board is working, open the **Arduino IDE**. Click file, examples, 01. Basics, blink.

This will load the blink **sketch**. A **sketch** in **Arduino** is another name for a program. The blink sketch turns the built in **LED** (connected to pin 13) on and off.

Once it is open, click the upload button to upload to your **Arduino**. If it fails, try unplugging and replugging in your **Arduino**, pressing the reset button or trying a different **serial** port



Breadboard

A Breadboard is used for rapid prototyping (trying out designs). It allows you to connect cables without soldering, they are connected inside as shown to the left

Arduino IDE

Verify - Checks all your code informing you of errors

Upload - Uploads your code to the connected **Arduino** board

Serial Monitor - Launches **Arduino serial** monitor, used mainly for debugging

Ardublock - Launches the graphical **Arduino** code writer called Ardublock

Serial Port - If your code fails to upload, try a different **serial** port

Code - Your code goes in this area