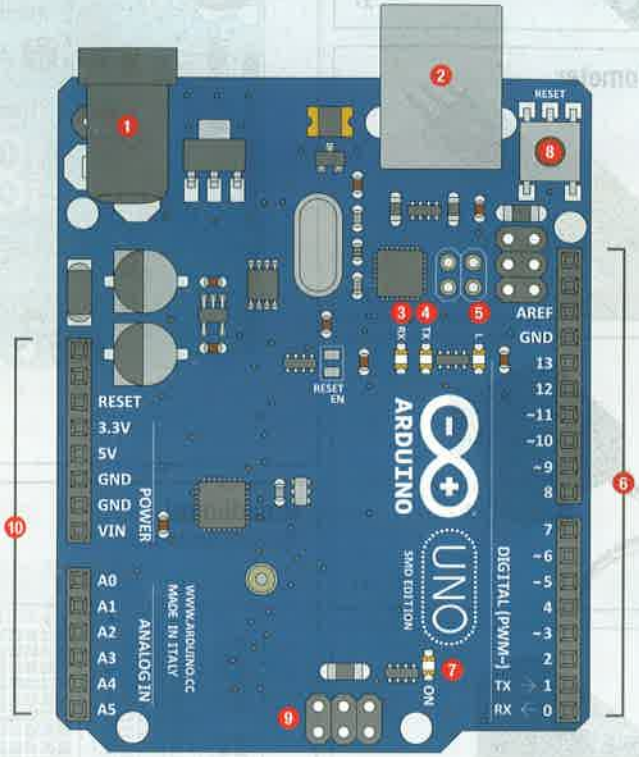
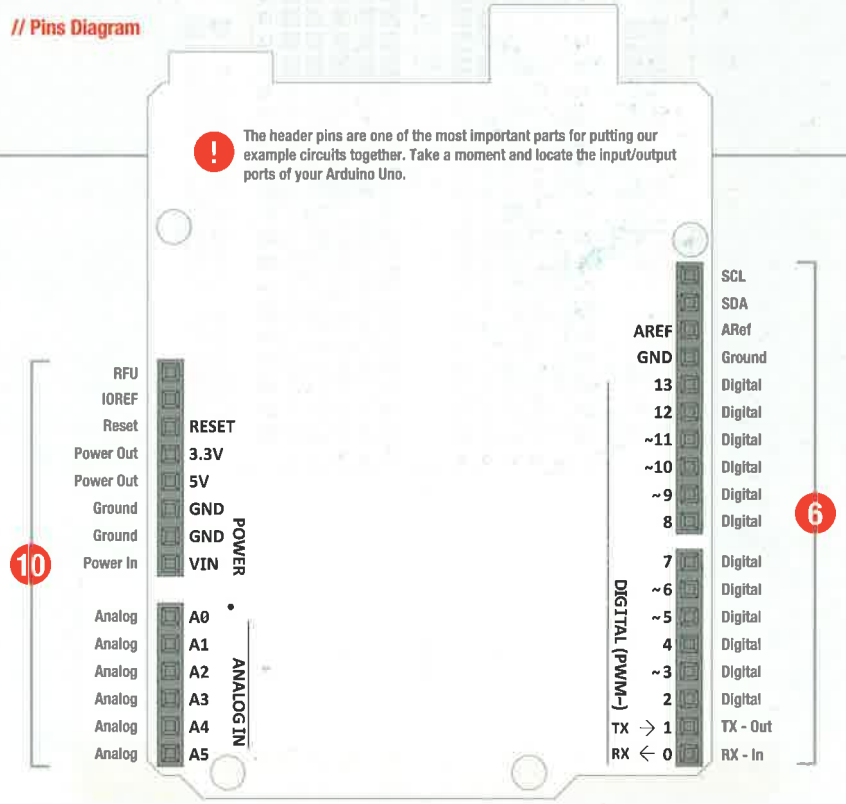
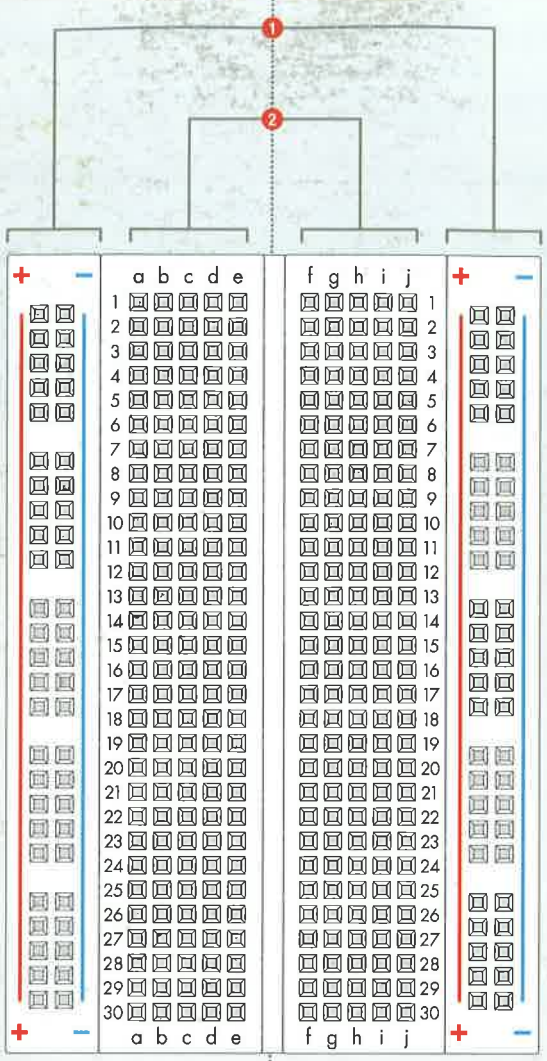


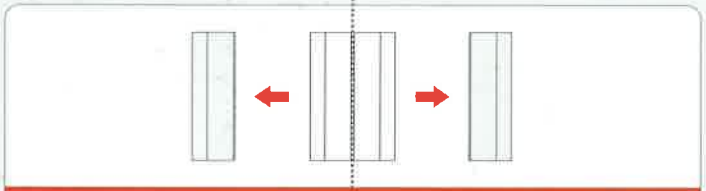
Arduino Uno

1. **Power In** (Barrel Jack) - Can be used with either a 9V or 12V wall-wart or battery.
2. **Power In** (USB Port) - Provides power and communicates with your board when plugged into your computer via USB.
3. **LED** (RX: Receiving) - This shows when the Arduino is receiving data (such as when being programmed).
4. **LED** (TX: Transmitting) - This shows when your Arduino is transmitting data (such as when running a program).
5. **LED** (Pin 13: Troubleshooting) - This LED is incorporated into your sketch to show if your program is running properly.
6. **Pins** (ARef, Ground, Digital, Rx, Tx) - These various pins can be used for inputs, outputs, power, and ground. // See Diagram Below
7. **LED** (Indicates Arduino is ON) - This is a simple power indicator LED.
8. **Reset Button** - This is a way to manually reset your Arduino, which makes your code restart.
9. **ICSP Pins** (Uploading Code without Bootloader) - This is for "In-Circuit Serial Programming," used if you want to bypass the boot loader.
10. **Pins** (Analog In, Power In, Ground, Power Out, Reset) - These various pins can be used for inputs, outputs, power, and ground. // See Diagram Below

// Pins Diagram





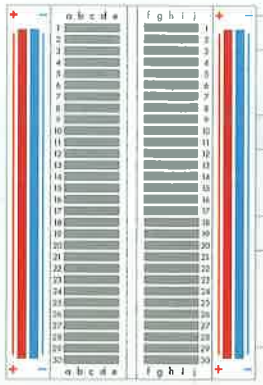


This line divides the board in half, restricting electricity to one half or the other.

Breadboard

1. Vertical Connection (+ Power and - Ground // See Diagram Below)
2. Horizontal Connection (a-e & f-j // See Diagram Below)

How's it all connected?



+ Power:

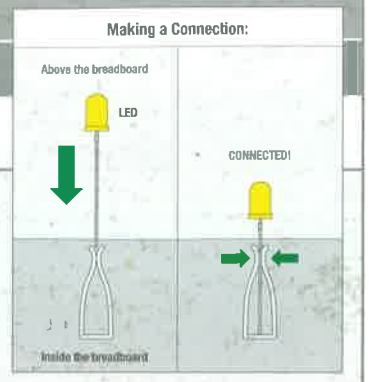
Each + sign runs power anywhere in the vertical column.

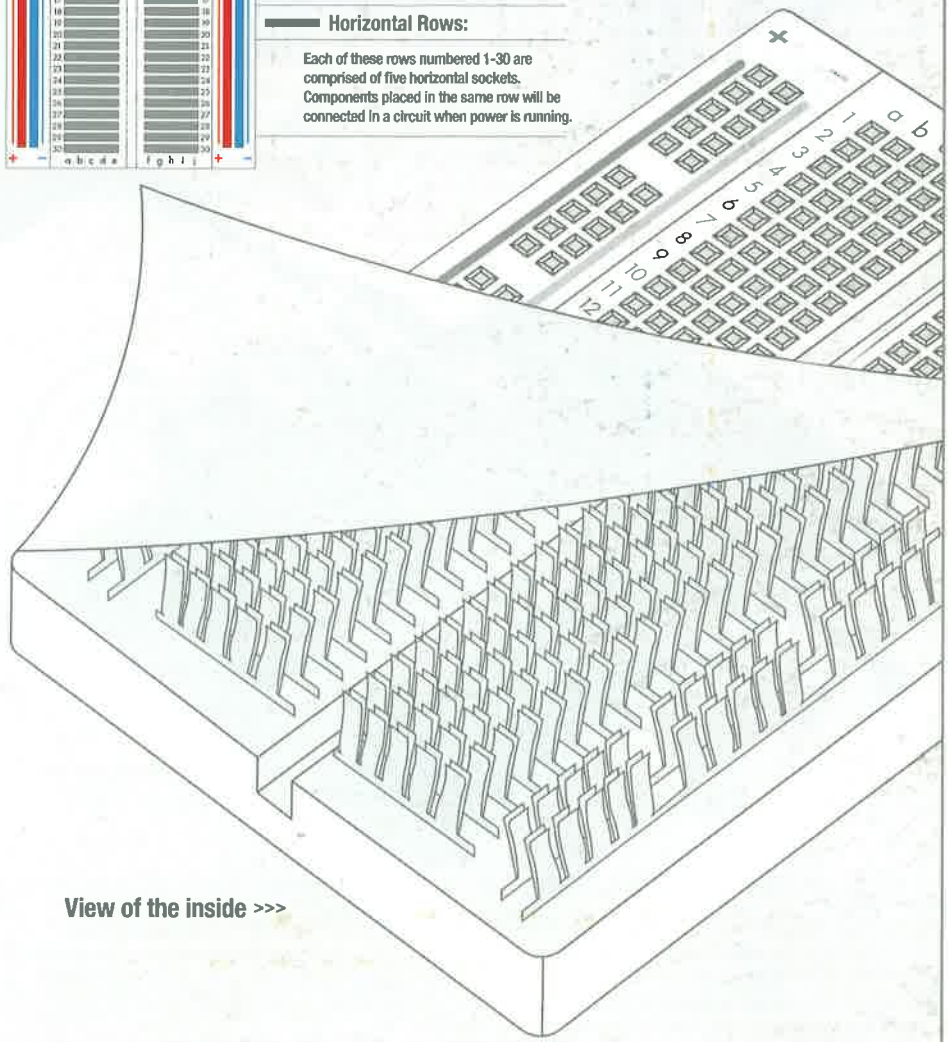
− Ground:

Each - sign runs to ground anywhere in the vertical column.

Horizontal Rows:

Each of these rows numbered 1-30 are comprised of five horizontal sockets. Components placed in the same row will be connected in a circuit when power is running.





View of the inside >>>