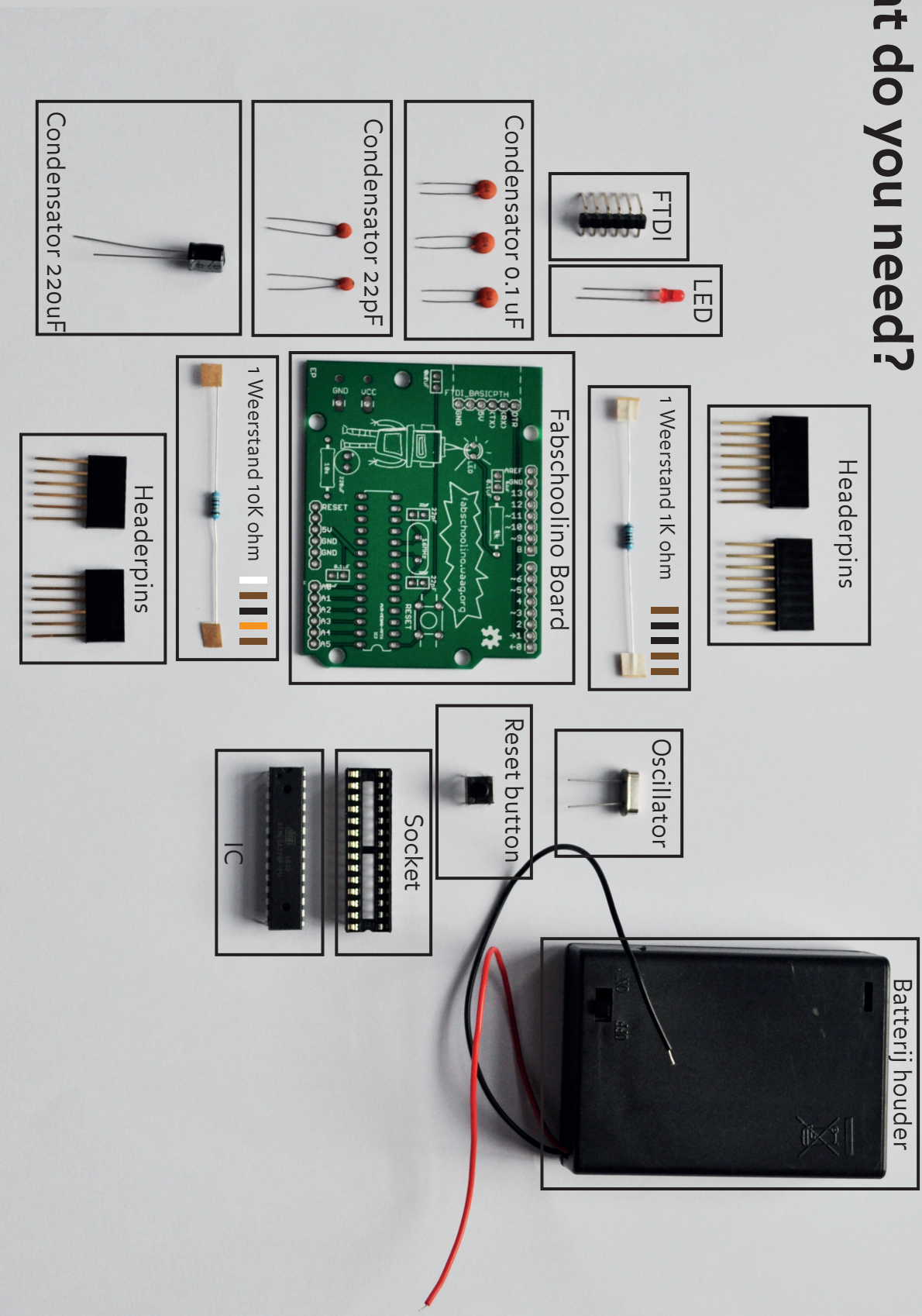
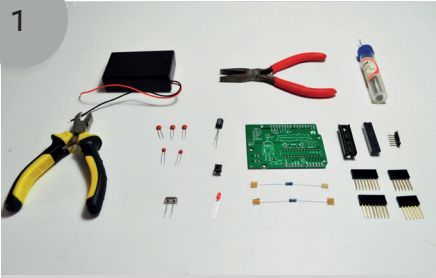


What do you need?



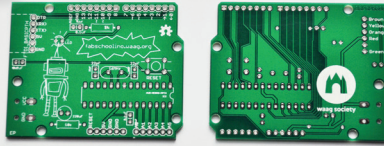
This is a list of all the components included in the the basic FabSchoolino kit from Waag Society.
Want to get started on the Instructable? First check to be sure you have all of the required materials listed above.

1



You will need: a soldering iron, solder, a battery holder, the Fabschoolino board (PCB, ATMEGA 328P (ic)), the individual components, and the instructions: Soldering is easy.

2



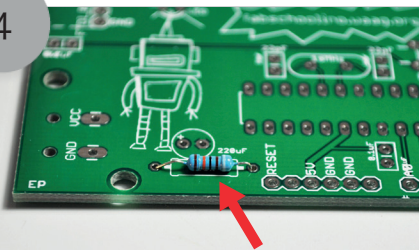
Before we get started, it's good to know which sides are the front and the back of the Fabschoolino. The side with the robot is the front.

3



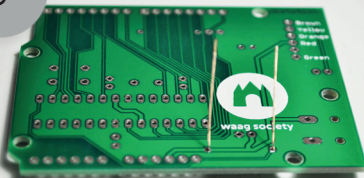
Pick up the ends of the resistor (10k ohms) and bend it at an angle of 90 degrees on both sides. NOTE: This is the resistor with the orange bar on it!

4



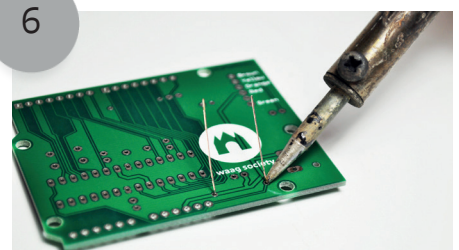
Now take the circuit board and place the resistor in the holes provided.

5



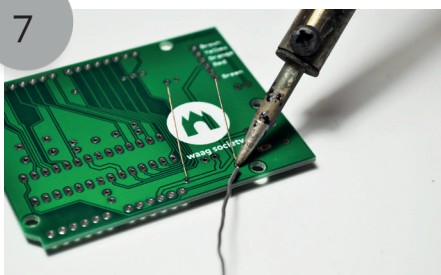
Turn the circuit board to make the legs of the resistor point upwards.

6



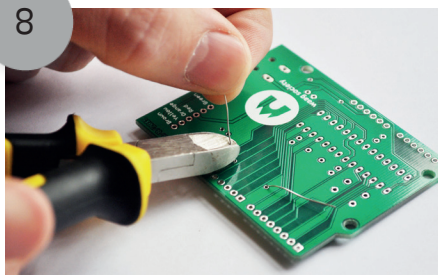
Now you're ready to begin soldering! Hold the soldering iron tip at the foot of the resistor. Hold this for 1 second to warm up the right place on your circuit board.

7



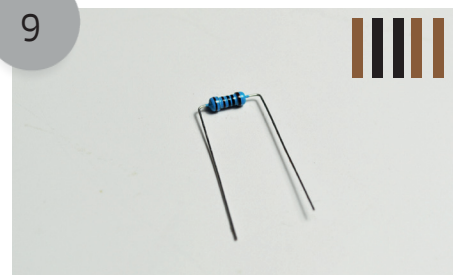
Grab some solder and hold it against the tip of your soldering iron. NOTE: To make a good connection, you won't need very much solder.

8



After you've soldered both legs of the first resistor, hold the leg firmly and cut it off with your cutting tool.

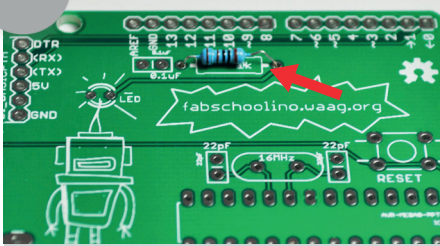
9



Now take the second resistor (1k ohm). NOTE: The resistor should have only brown and black stripes.

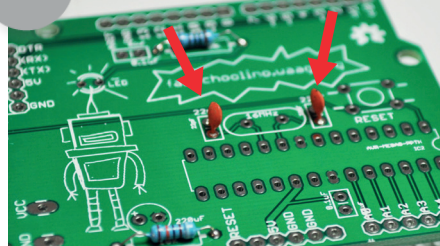


10



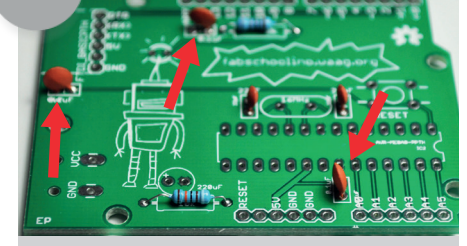
Take the 1k resistor and place it in the Fabschoolino. Solder it in place.

11



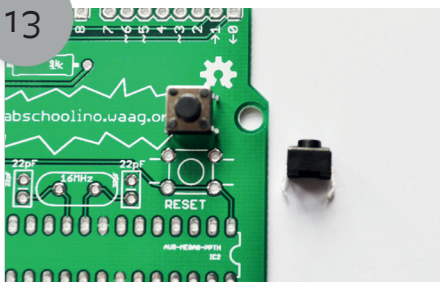
Now for the two capacitors (22pF). These are the two small capacitors. Solder both capacitors to your Fabschoolino.

12



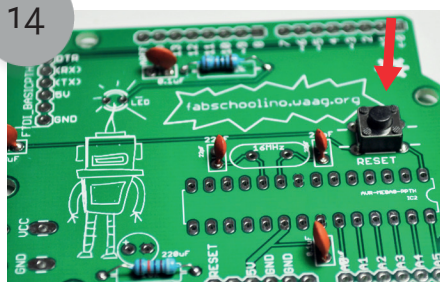
Now we'll install the other three capacitors (0.1 uF). Solder all three on to your Fabschoolino.

13



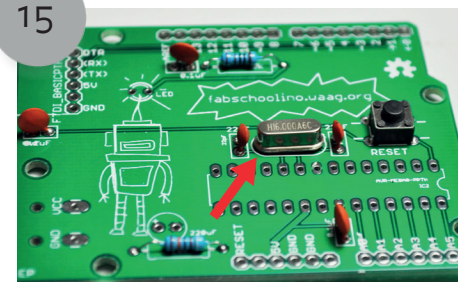
Now you are going to install the reset button. Don't push too hard! If it doesn't fit, you'll have to turn it a quarter turn.

14



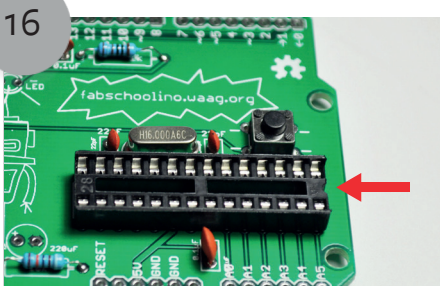
If you've situated the reset button into the holes correctly, you may solder it.

15



Insert the oscillator into the holes and solder it.

16



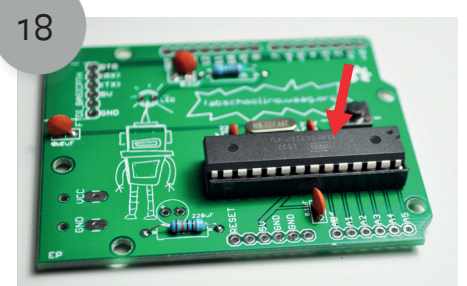
Now take the socket and place it in the holes provided. Solder the socket in place. Note: Make sure the half circle of the socket lines up on the semi-circle on the Fabschoolino.

17



Before you place the IC on top of the socket, you'll need to bend the legs gently. Do this as pictured above.

18



Now place the IC (chip). You just click it into the socket and you don't have to solder. Note: Make sure the half circle of the chip is on the semi-circle of the socket.

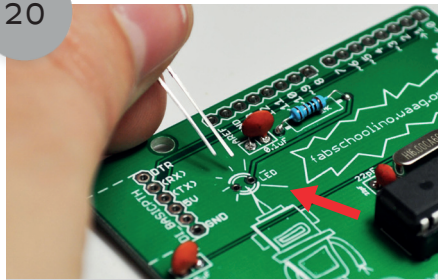


19



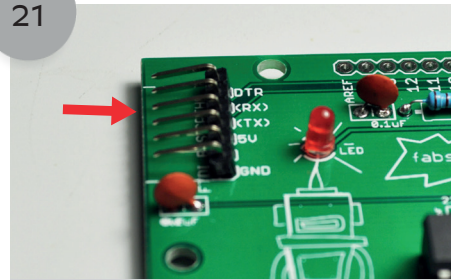
Your Fabschoolino also needs an LED. Please note that there is a short and a long leg on the LED. Check your circuit board carefully in order to see which leg goes where.

20



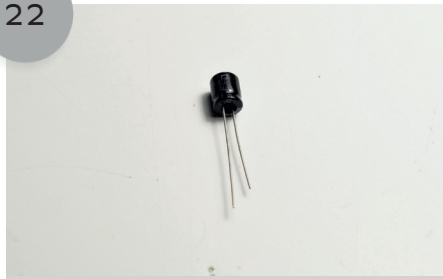
Place the LED in your Fabschoolino. The picture above shows where to insert the long and short legs. Solder it in place.

21



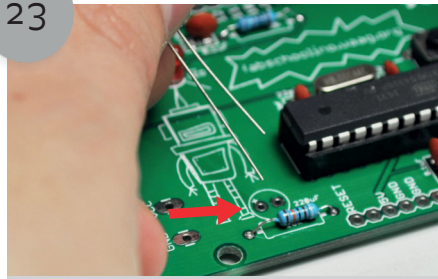
Place the FTDI connector into your Fabschoolino and solder it. Watch out: the short legs belong in the holes.

22



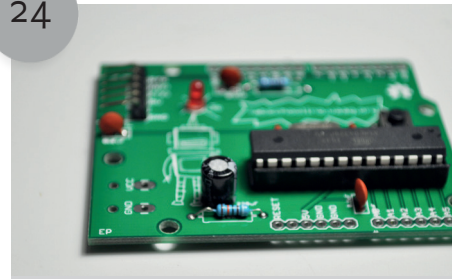
Install your capacitor. Please note that there is also a short and a long leg on the capacitor. The long leg is the positive side (the plus).

23



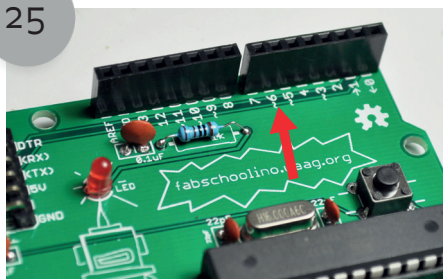
Place the capacitors in your Fabschoolino. There is a plus sign on your Fabschoolino. Place the long leg here.

24



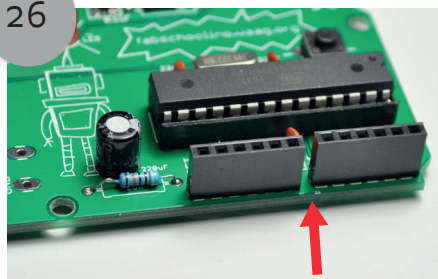
If you've installed the legs correctly into Fabschoolino, you can solder the capacitor to the Fabschoolino.

25



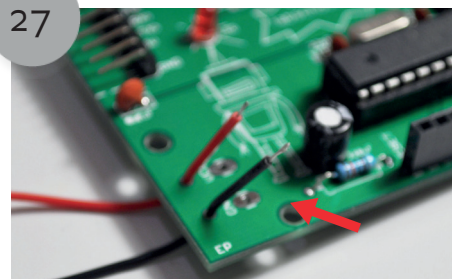
Solder the long header pins. Note: make sure it's correctly inserted and solder it afterwards.

26



Next, solder the short header pins and cut all 4 feet off the header pins with your cutting tool.

27



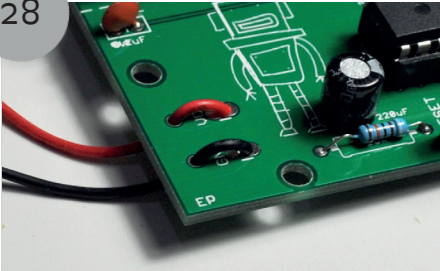
Take your battery holder and run the wires through the first hole as indicated in the picture. The wires should now be pointing out at the top of the Fabschoolino board.

fabschoolino

CODE / HACK / PLAY

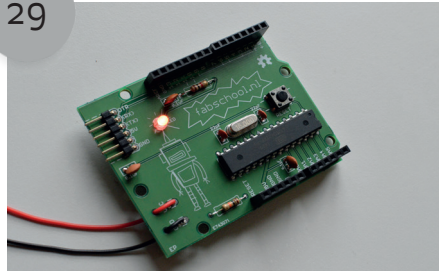
Build your own minicomputer

28



Insert the wire through the second hole. Solder the two wires behind the second hole.

29



Place three AA batteries in the battery compartment. If everything is working properly, then the LED should flash when you press the reset button. Congratulations, you Fabschoolino is ready to go!