WEATHER STATION

by AaronB299 (/member/AaronB299/) Follow

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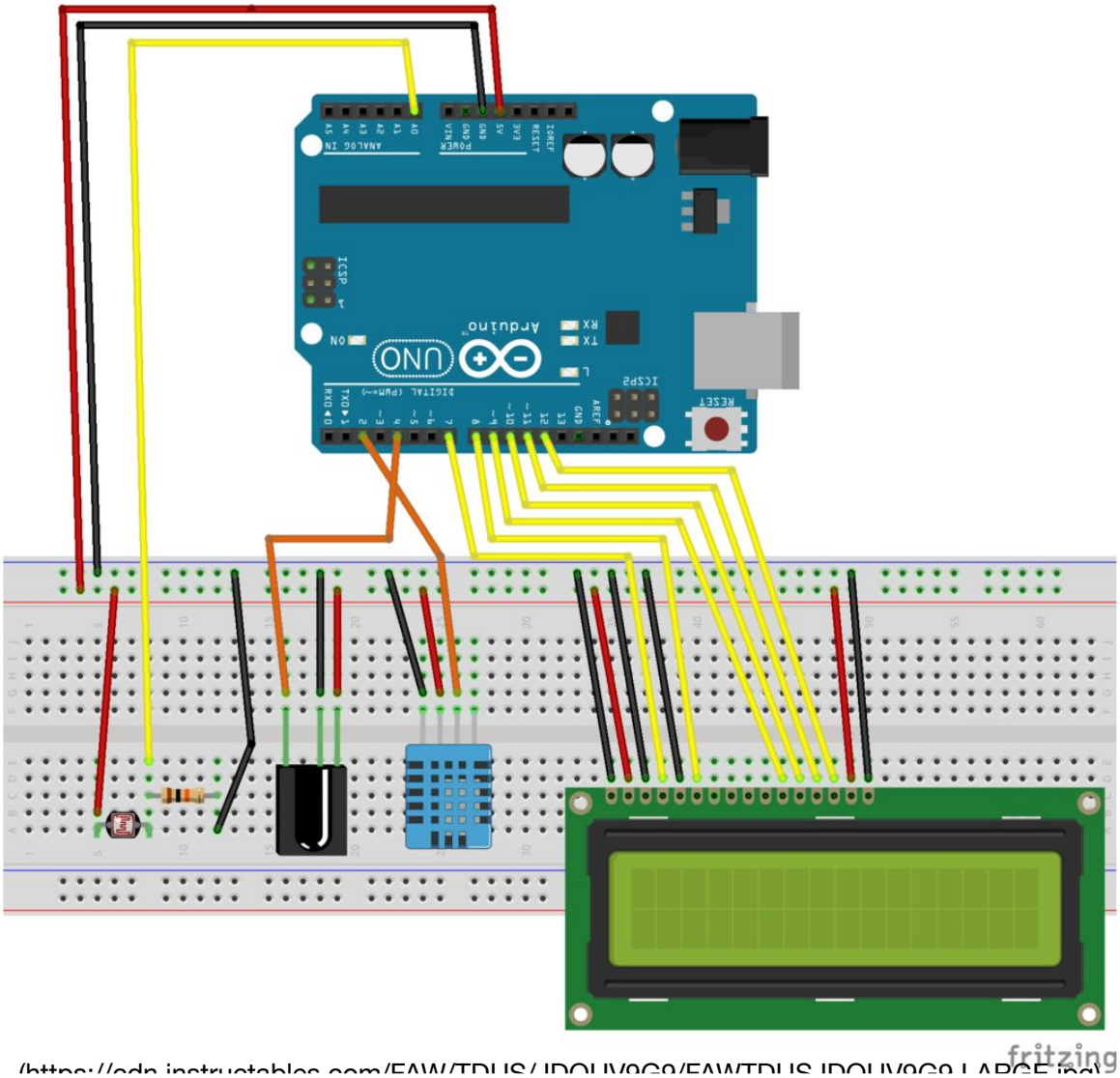

(https://cdn.instructables.com/FAW/TDUS/JDQUV9G9/FAWTDUSJDQUV9G9.LARGE.jpg)

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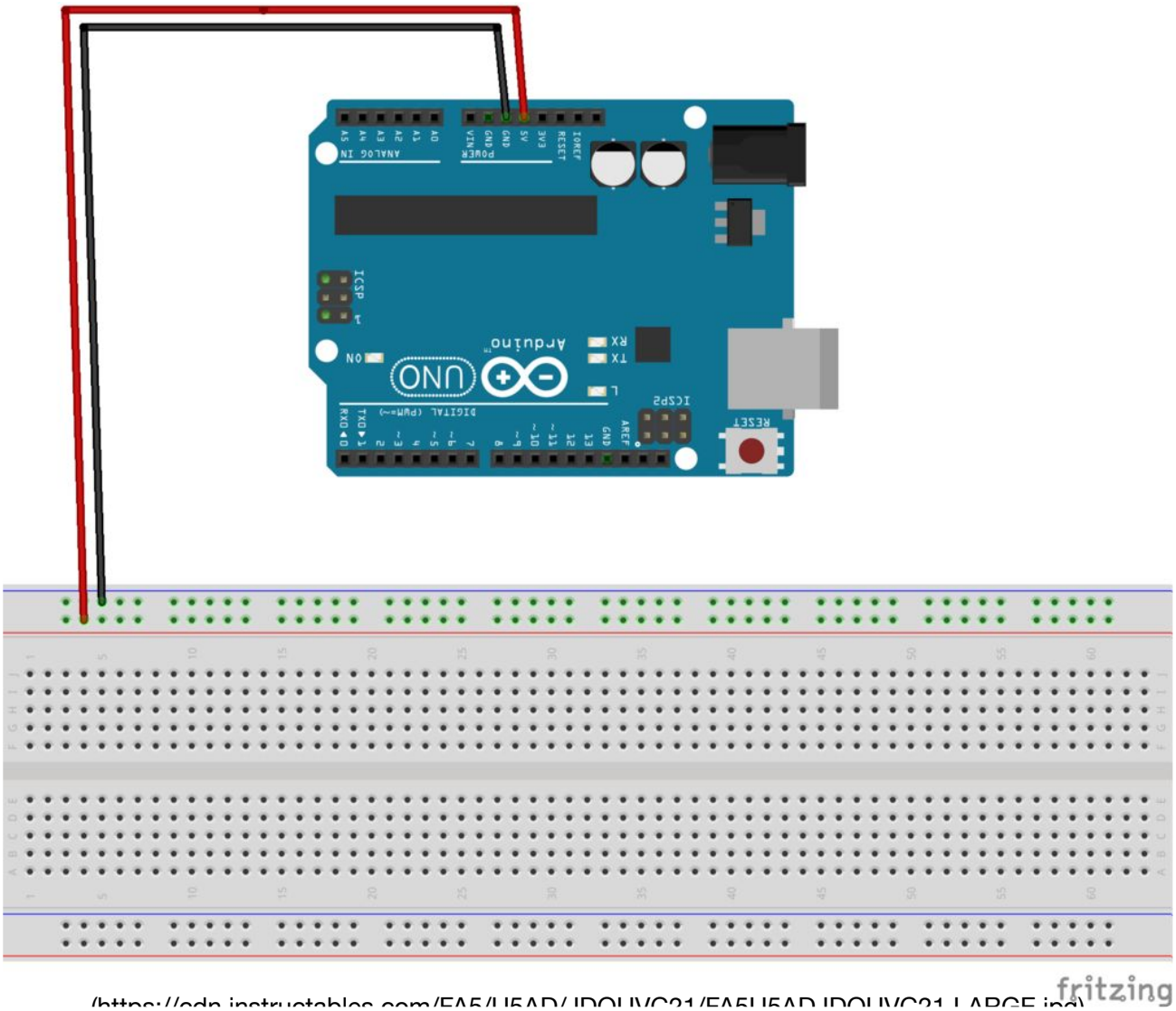
Step 1: Add Basic Components



(https://cdn.instructables.com/FA5/U5AD/JDQUVC21/FA5U5ADJDQUVC21.LARGE.jpg)

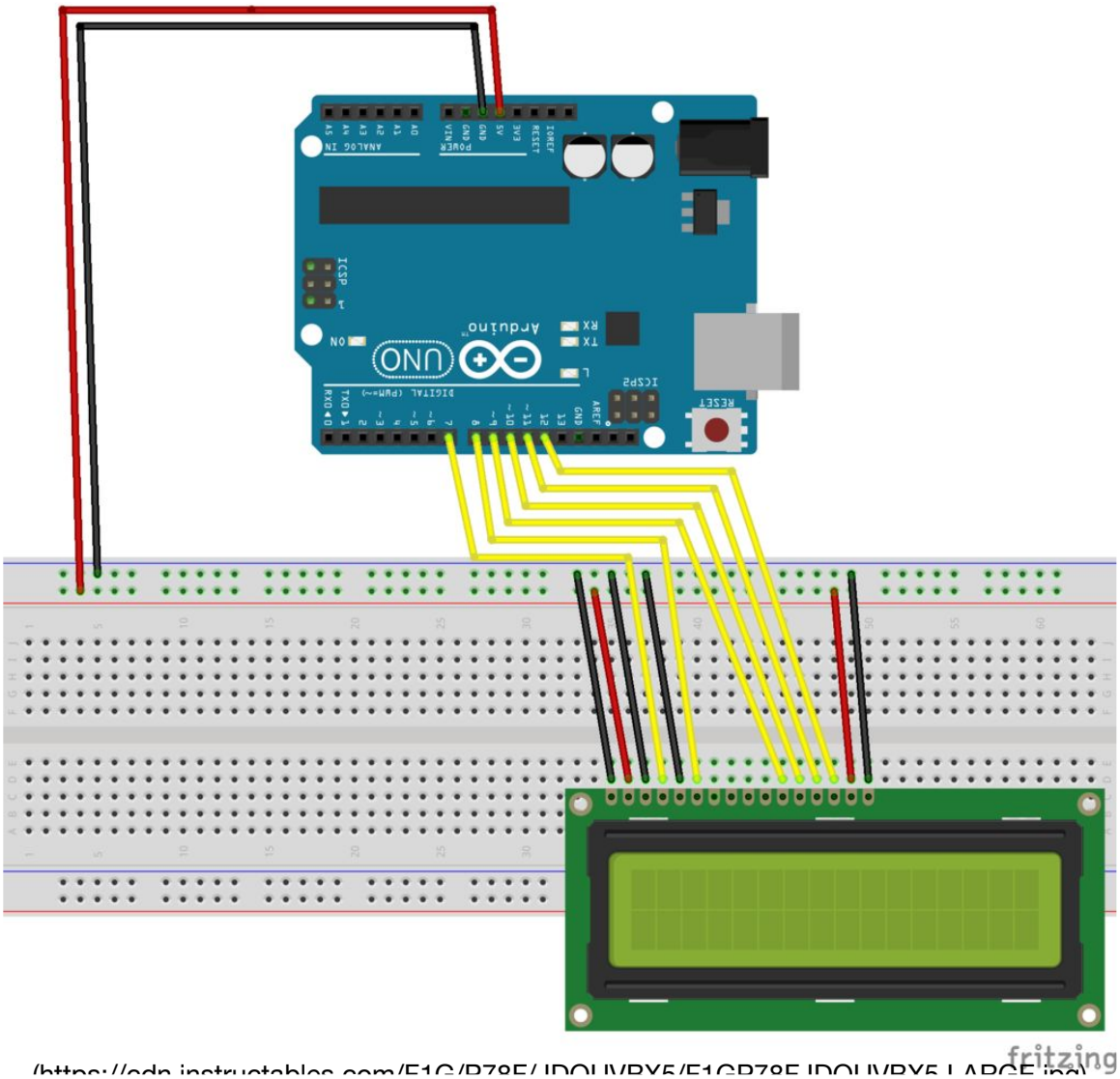
1. Add Arduino UNO RV3

2. Add breadboard

3. Connect 5v to breadboard power rail

4. Connect GND to breadboard ground rail

Step 2: Add LCD Screen



The LCD screen's pins must be connected to the breadboard and Arduino UNO R3 in the following order. From left to right with the left starting at LCD pin 1 and ending at the right with LCD pin 16:

1. Ground
2. Power
3. Ground
4. Pin 7
5. Ground
6. Pin 8

7. Leave unconnected

8. Leave unconnected

9. Leave unconnected

10. Leave unconnected

11. Pin 9

12. Pin 10

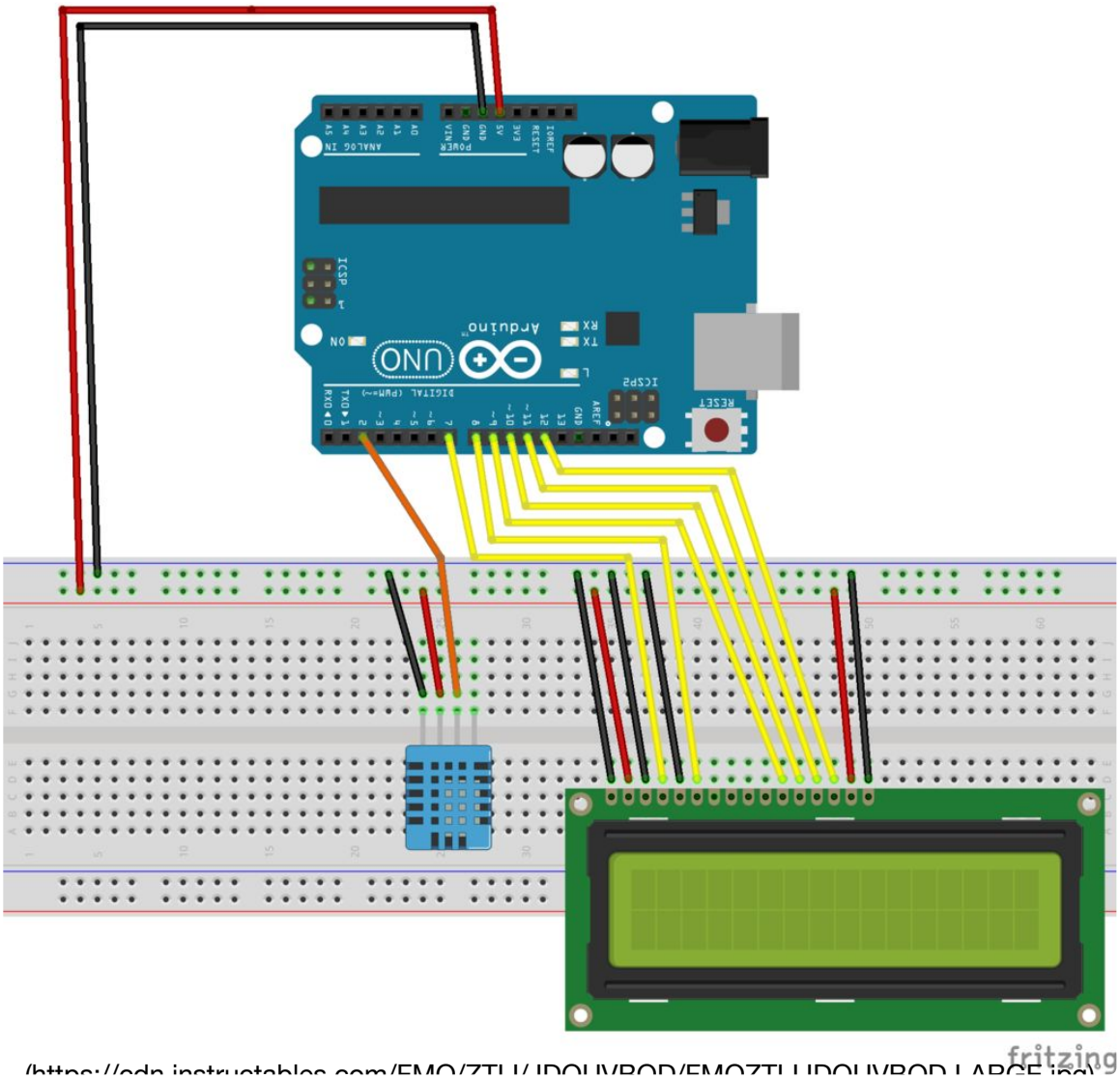
13. Pin 11

14. Pin 12

15. Power

16. Ground

Step 3: Add DHT11 Sensor



1. Add DHT11 temperature and humidity module

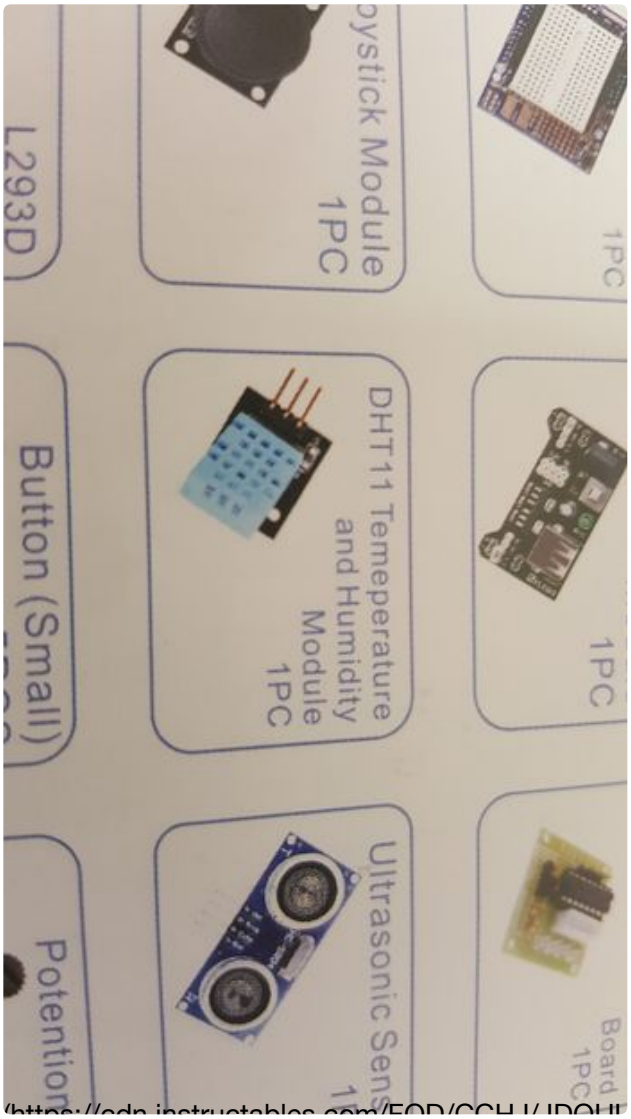
   - Note, please add the 3 pin DHT11 type, not the 4 pin type as displayed. A 3 pin type is not available in Fritizing so only use 3 pins. Use the 3 pins on the left and ignore the one on the right.

2. Connect the first DHT11 pin on the left to the ground rail on the breadboard

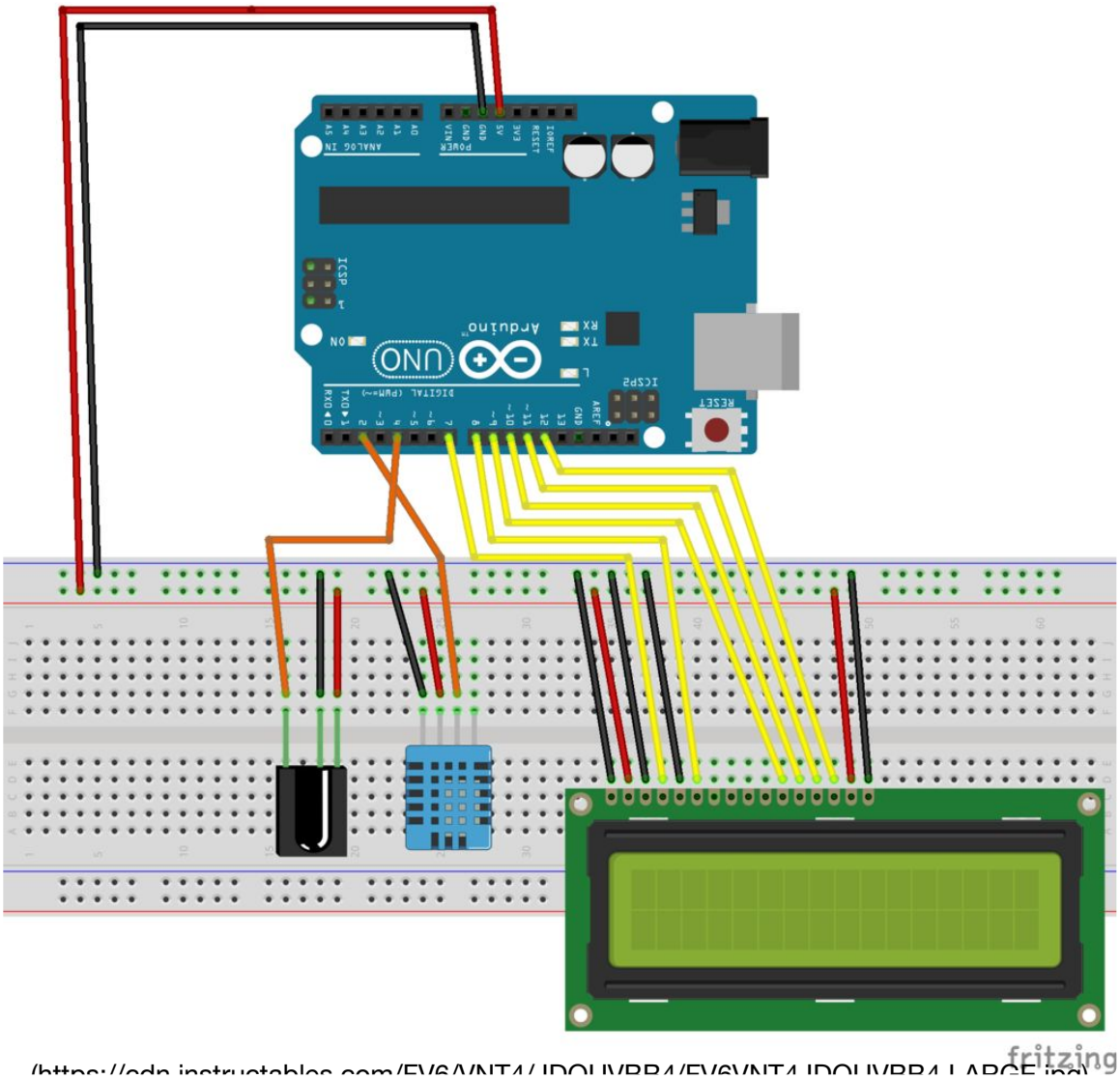
3. Connect the second DHT11 pin on the left to the power rail on the breadboard

4. Connect the third DHT11 pin on the left to pin 2 on the Arduino UNO

Step 4: What the DHT11 Sensor Ought to Look Like



Step 5: Add IR Receiver



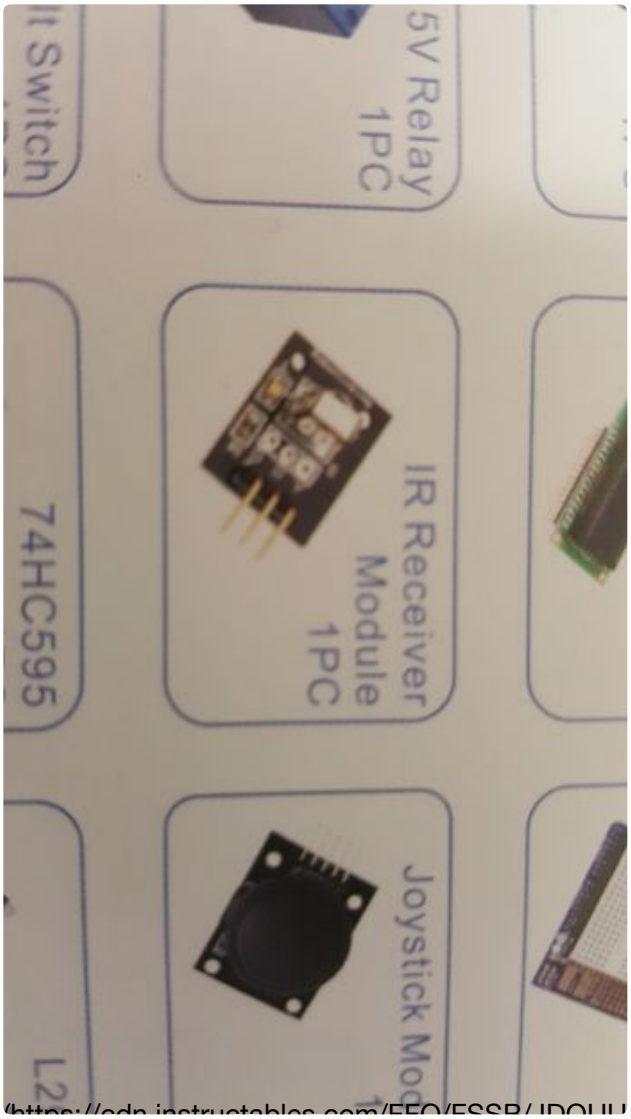
My IR receiver looks different and denotes G for ground, R for power, and Y for output pin.

1. Connect G pin to breadboard ground rail

2. Connect R pin to breadboard power rail

3. Connect Y pin to Arduino UNO pin 4

Step 6: What the IR Receiver Ought to Look Like



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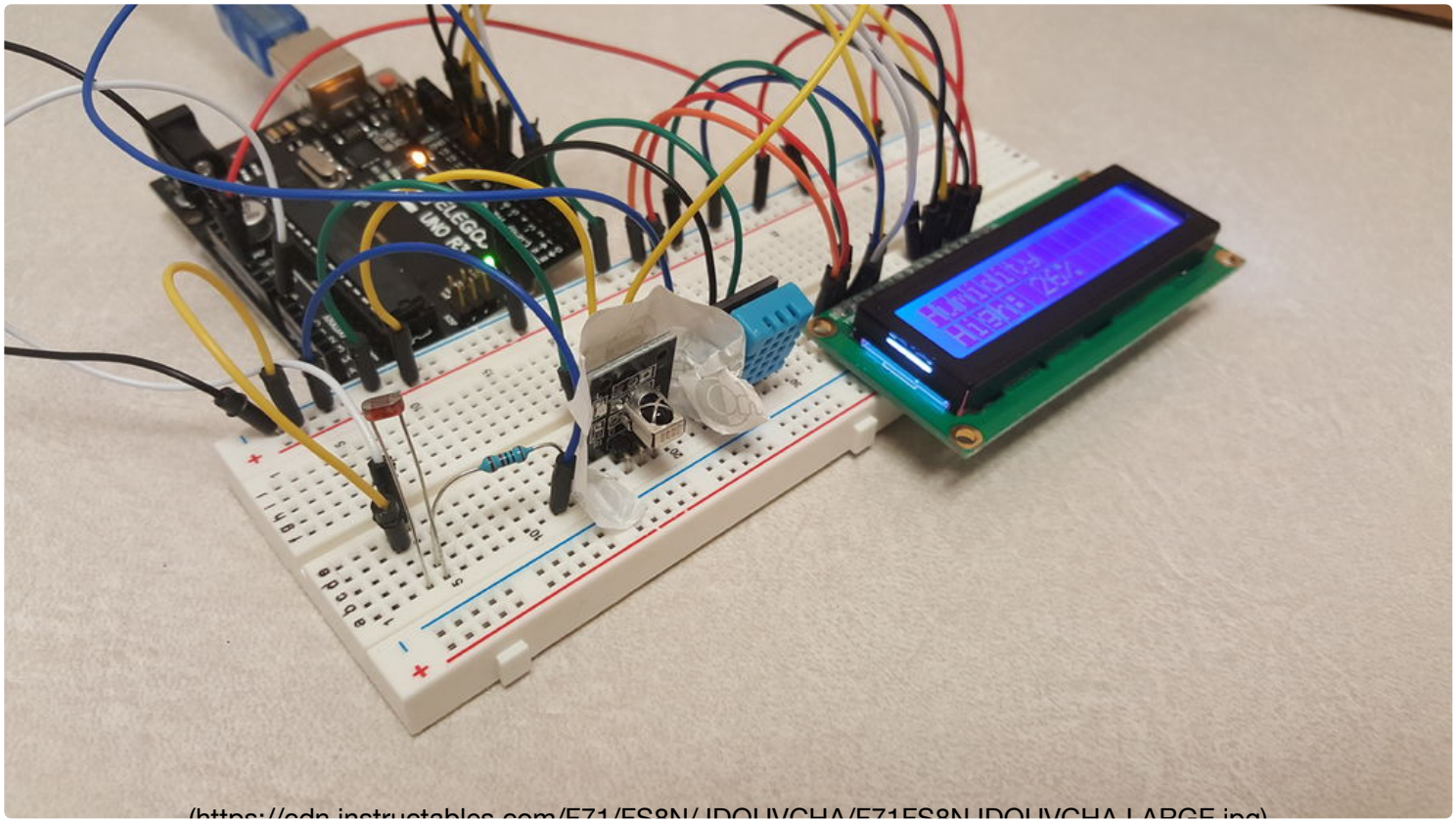
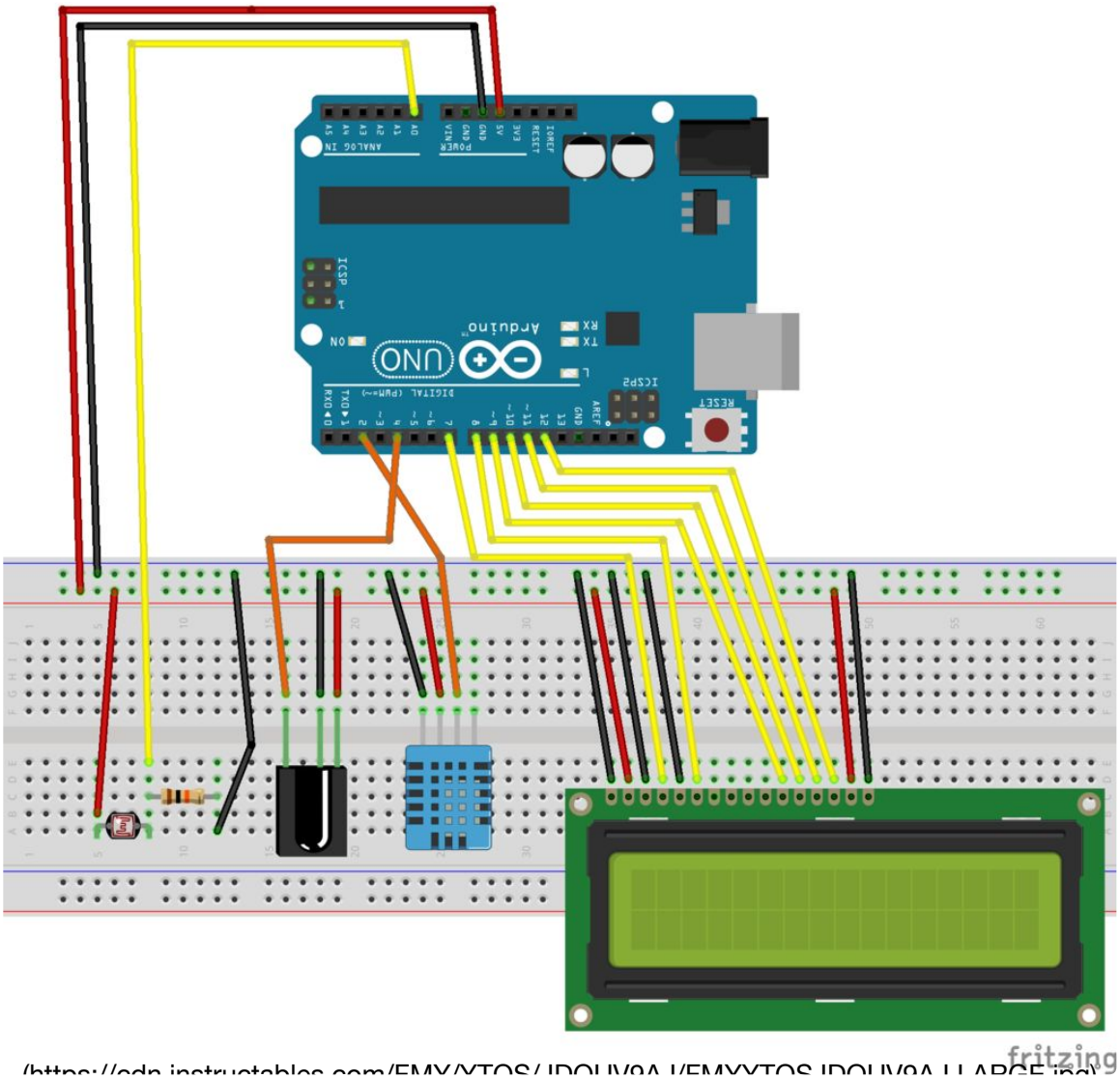
Step 7: Extremely Sensitive IR Receiver



Special note: I spent over 4 hours attempting to get the IR receiver to stop picking up random signals that were given when a button was pressed (or not). Even the wave of a hand or the flash of a light would trigger a non-usable IR read. For my IR receiver and remotes, it somewhat helped to put a gum rapper around the IR receiver.

Step 8: Add Photoresistor



1. Add photoresistor module to breadboard

2. Connect left node of the photoresistor to the power rail of the breadboard

3. Add a Connection between the right node of the photoresistor and analog pin A0 on the Arduino UNO. Be sure to leave a female pin open in the breadboard between the A0 and photoresistor wire.

4. Important: add a 10k resistor between the photoresistor and wire to pin A0

5. Ground unconnected 10k resistor to ground of breadboard

6. Observe image carefully to ensure you got it exactly!

Step 9: Add Code to Arduino UNO

1. Open supplied code in Arduino IDE

2. Connect Arduino to computer

3. Upload code to Arduino UNO

aaron_barlow_exam_p...

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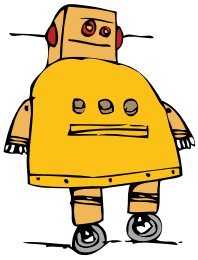

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