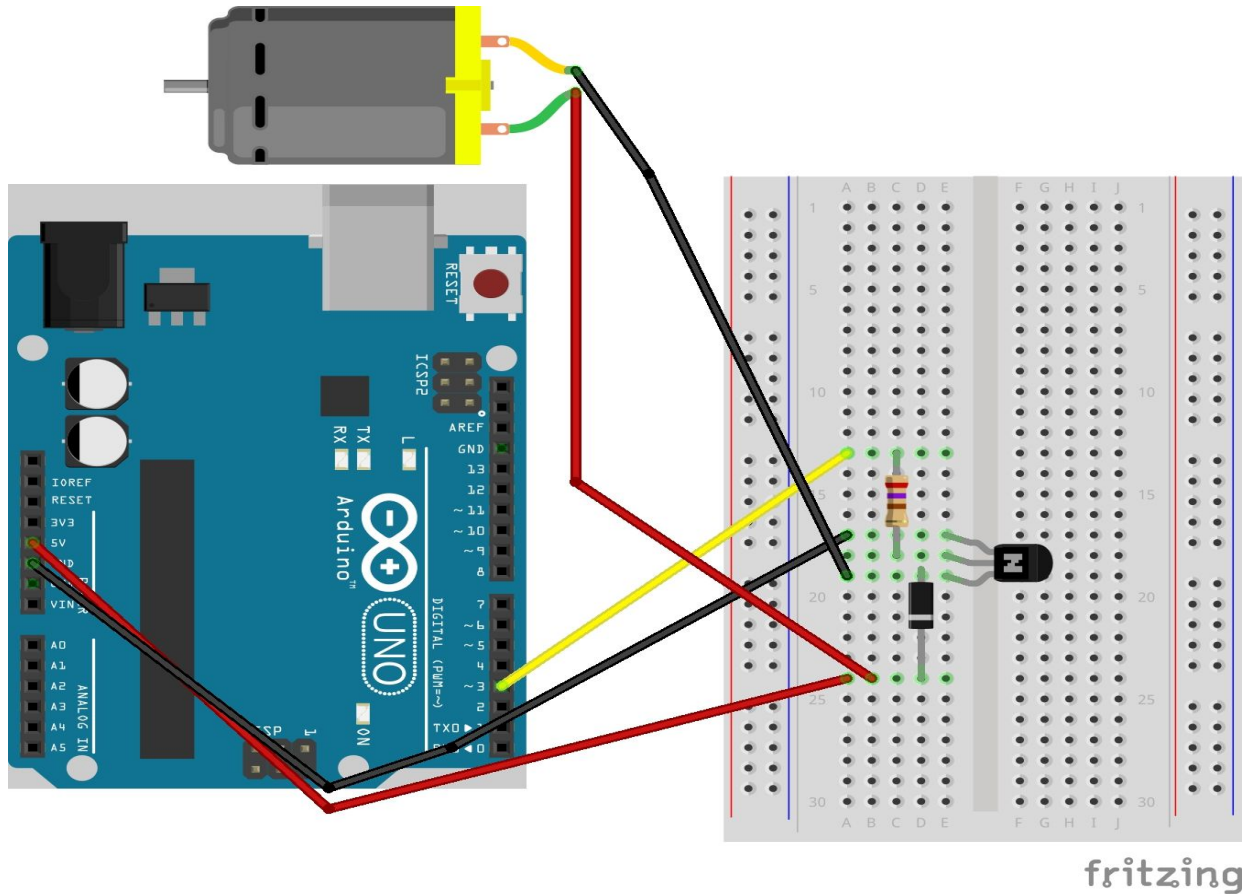


## DC Motor Circuit (Illusionist Spiral)



### Circuit Steps:

1. For now, place the **DC motor** off to the side. Keep it close enough so that you can connect the wires, but it isn't mounted on the Arduino or breadboard.
2. Place the **transistor** in the breadboard so that the *flat side* faces toward the Arduino. In the diagram above, the flat side is facing to the left.
3. Connect the **diode** to the bottom lead of the **transistor**. The diode has a tiny gray stripe on it. Make sure that this is directed away from the transistor. In the above diagram, the diode is placed so that the gray stripe is closer to the bottom of the breadboard.
4. Place a **270 Ohm resistor** with one end in the same row as the middle lead of the transistor.
5. Connect the **Arduino 5v** to the same breadboard row as the bottom leg of the diode. This should be the end with the gray stripe.
6. Connect the diode to the **DC motor red wire**.
7. Run a jumper wire from **Arduino digital output pin ~3** to the top lead of the resistor.
8. Connect the bottom lead of the transistor (the same one with the non-striped end of the diode) to the **DC motor black wire**.
9. For the last step, connect the **Arduino GND** to the top lead of the transistor.