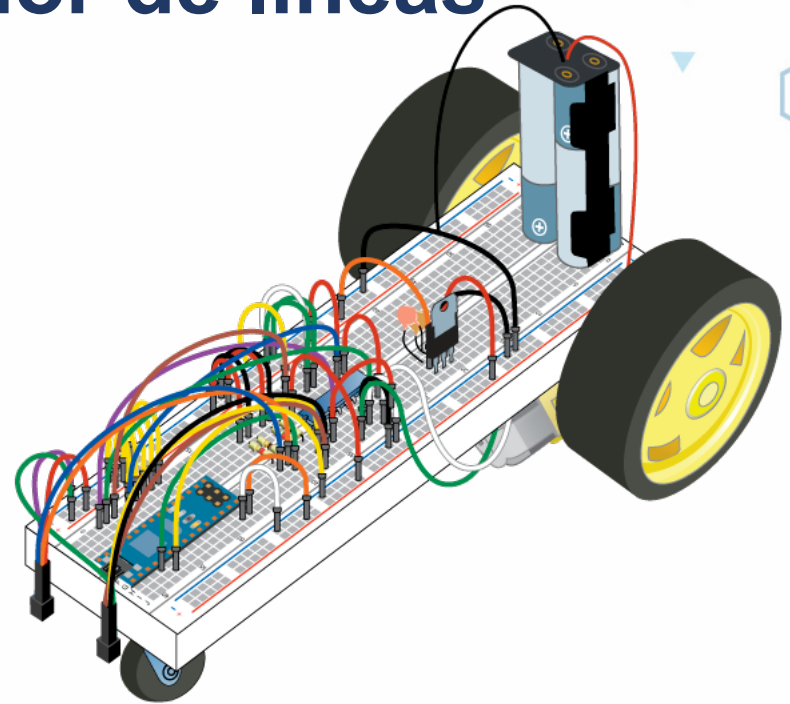




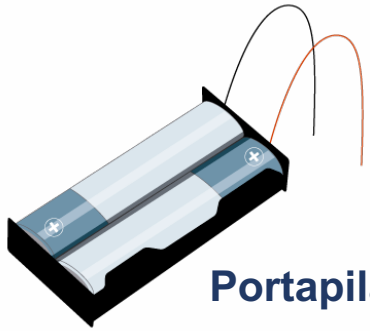
Práctica 18

Vehículo seguidor de líneas

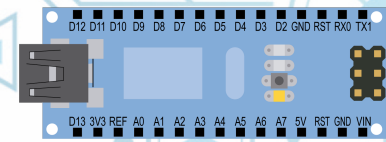




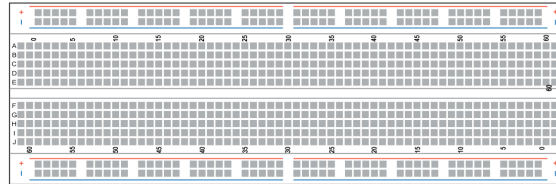
Materiales



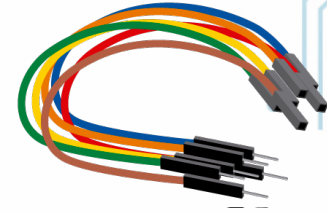
Portapilas



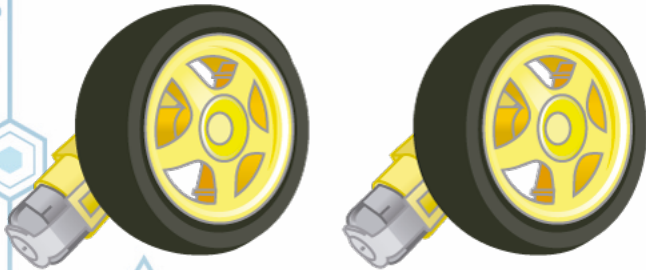
Tarjeta Arduino No. 1



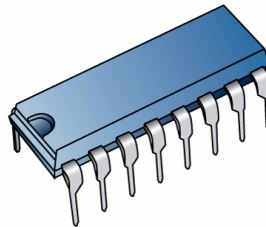
Protoboard



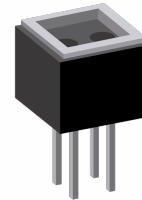
8 cables macho-hembra



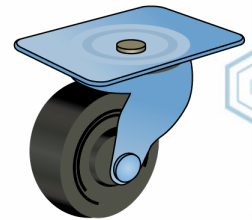
2 Motorreductores



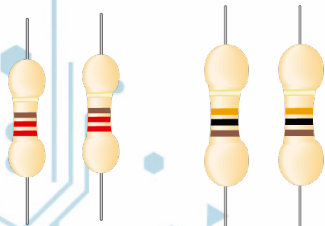
Driver de potencia
Tipo Puente H



Sensor CNY70



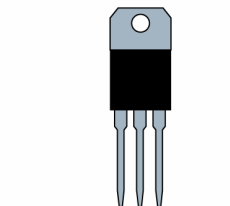
Rueda loca



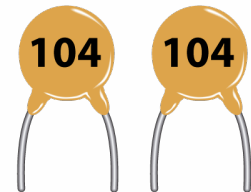
220 ohms 10 K



Cables de distintos
tamaños



Regulador
L7805CV



Capacitores 104



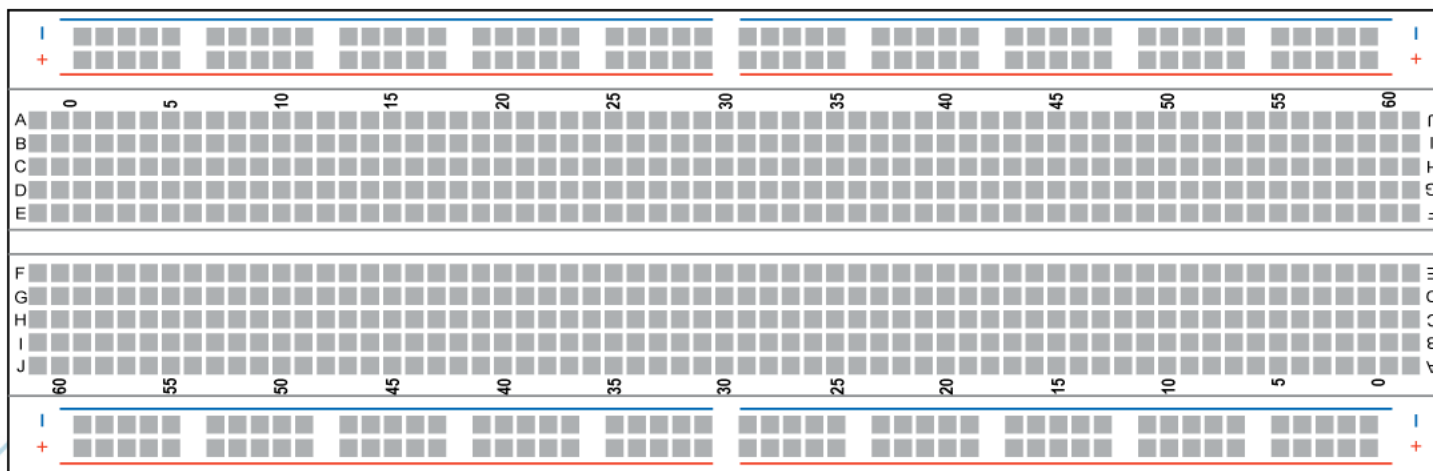
4 minutos



2 minutos



Iniciamos con la protoboard

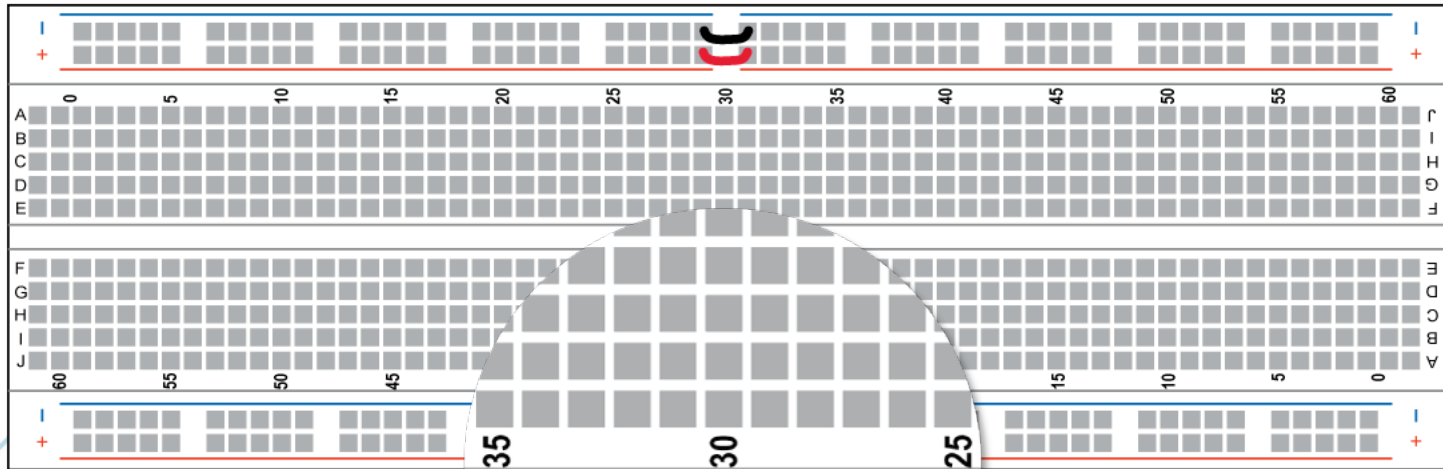


2 minutos



Coloca puentes en las líneas de voltaje de ambos extremos

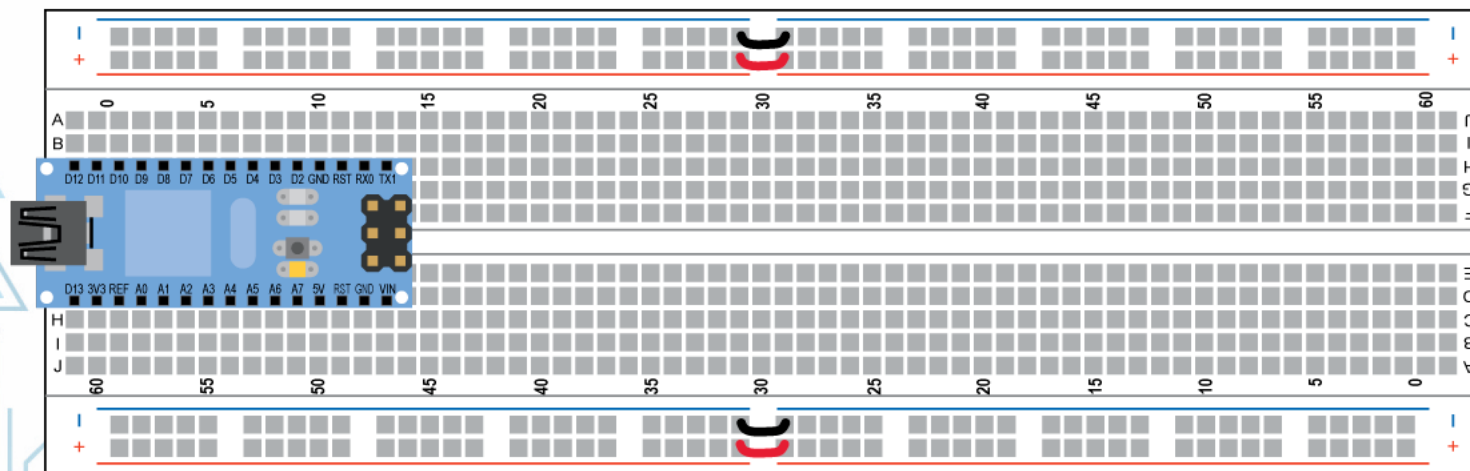
(si tu protoboard es continua, omite este paso)



2 minutos



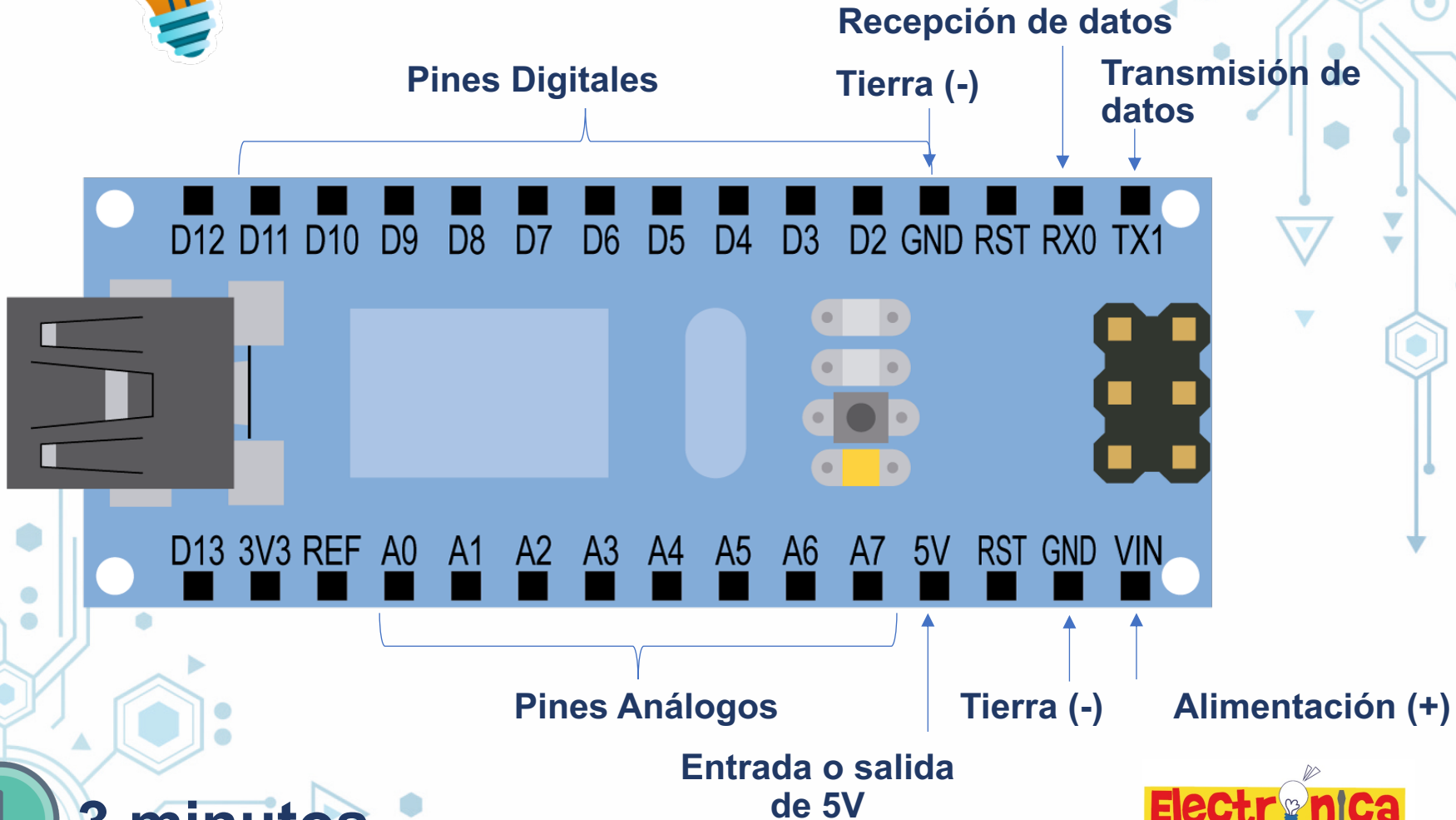
Coloca la Tarjeta Arduino



2 minutos



Identifica las terminales

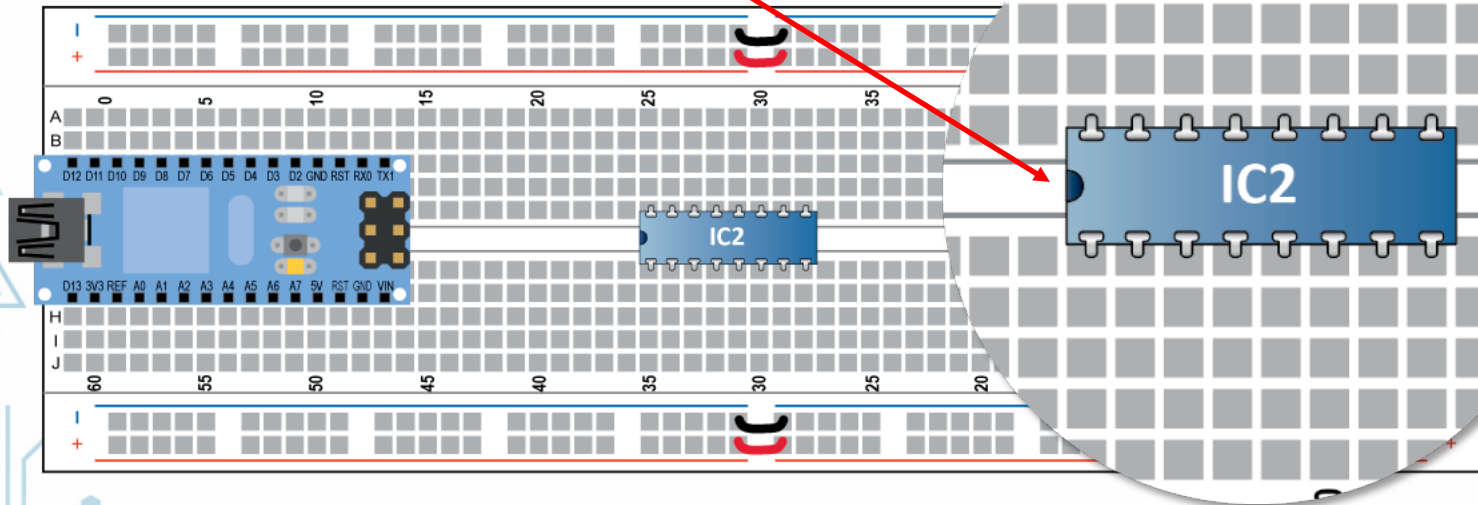


3 minutos

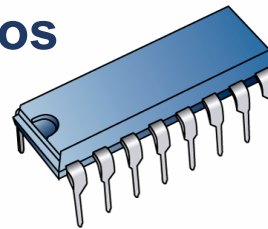


Conectamos el Driver Puente H

Coloca el Puente
respetando la posición
este borne



El Puente H se usa para permitir a
un motor eléctrico girar en ambos
sentidos, avanzar y retroceder

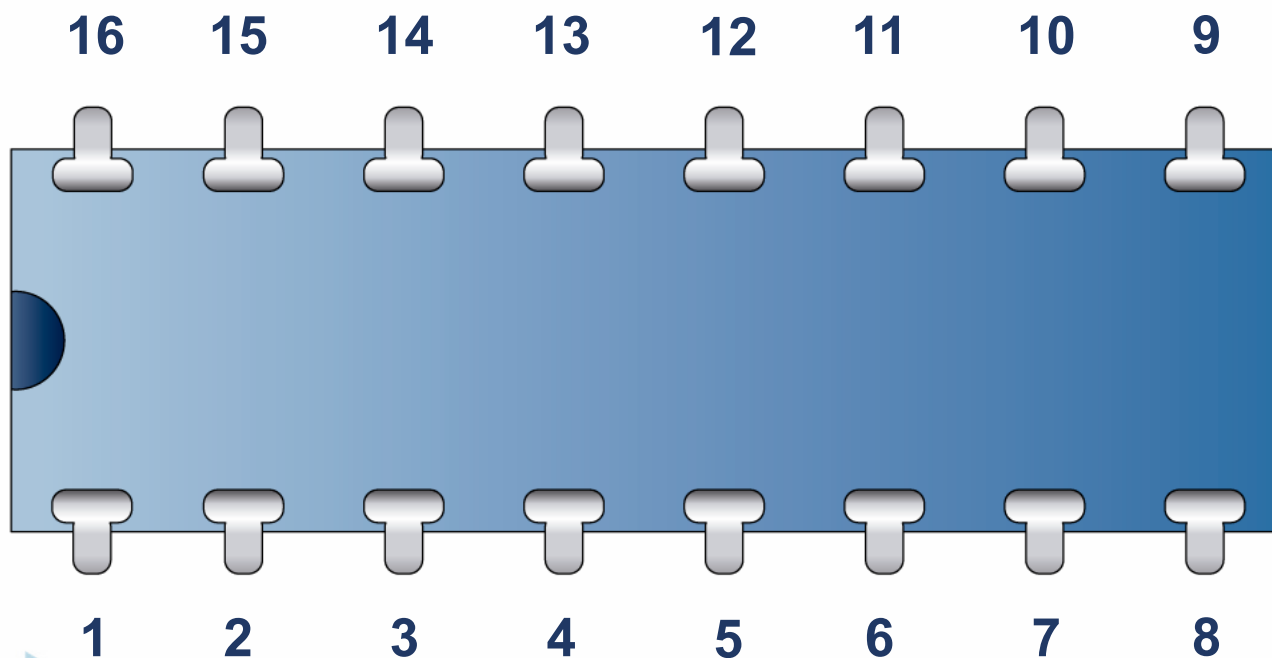


2 minutos



Terminales del Puente H

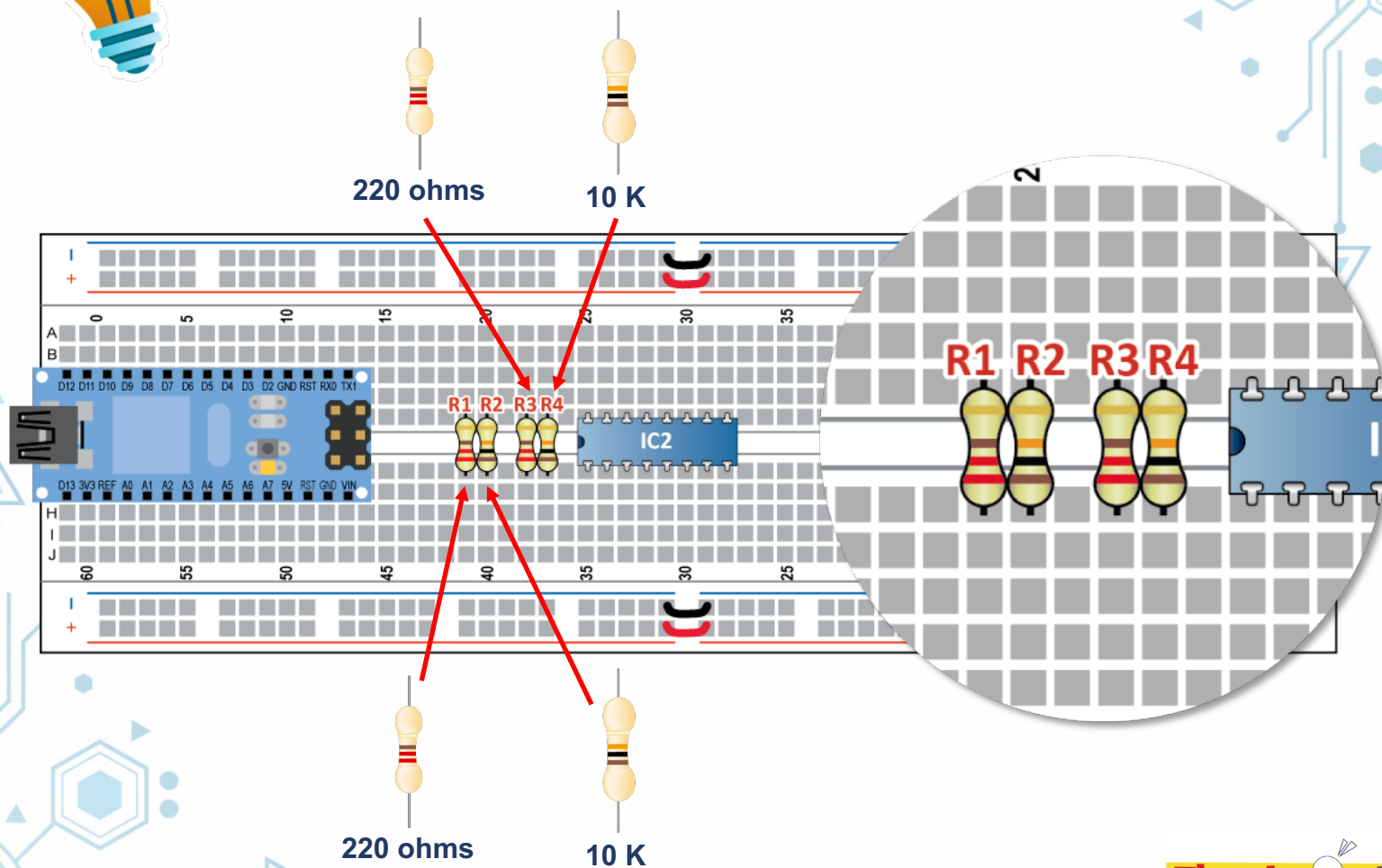
Borne inicial



2 minutos



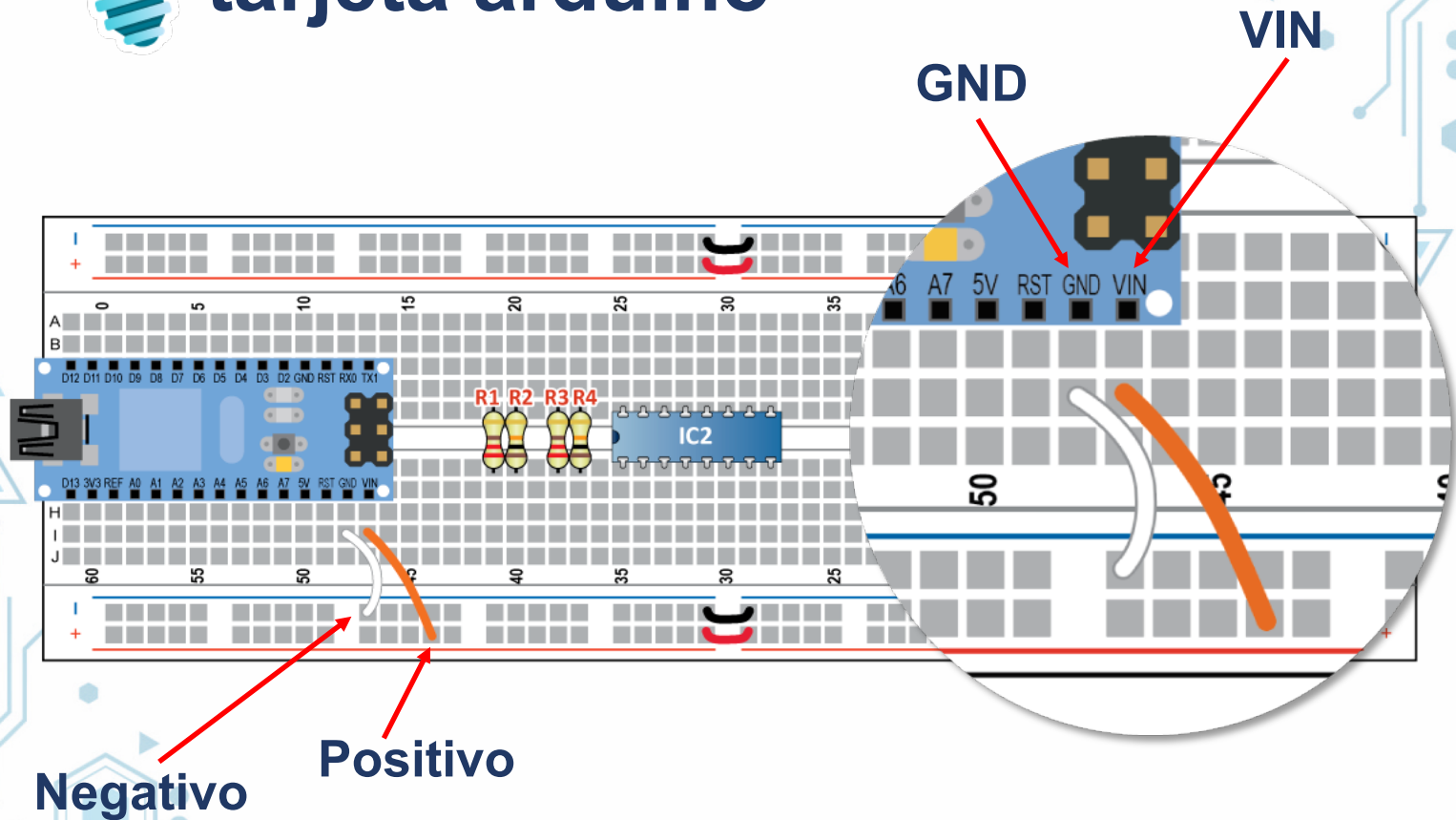
Conectamos las 4 resistencias



3 minutos



Conecta la alimentación de la tarjeta arduino



Negativo

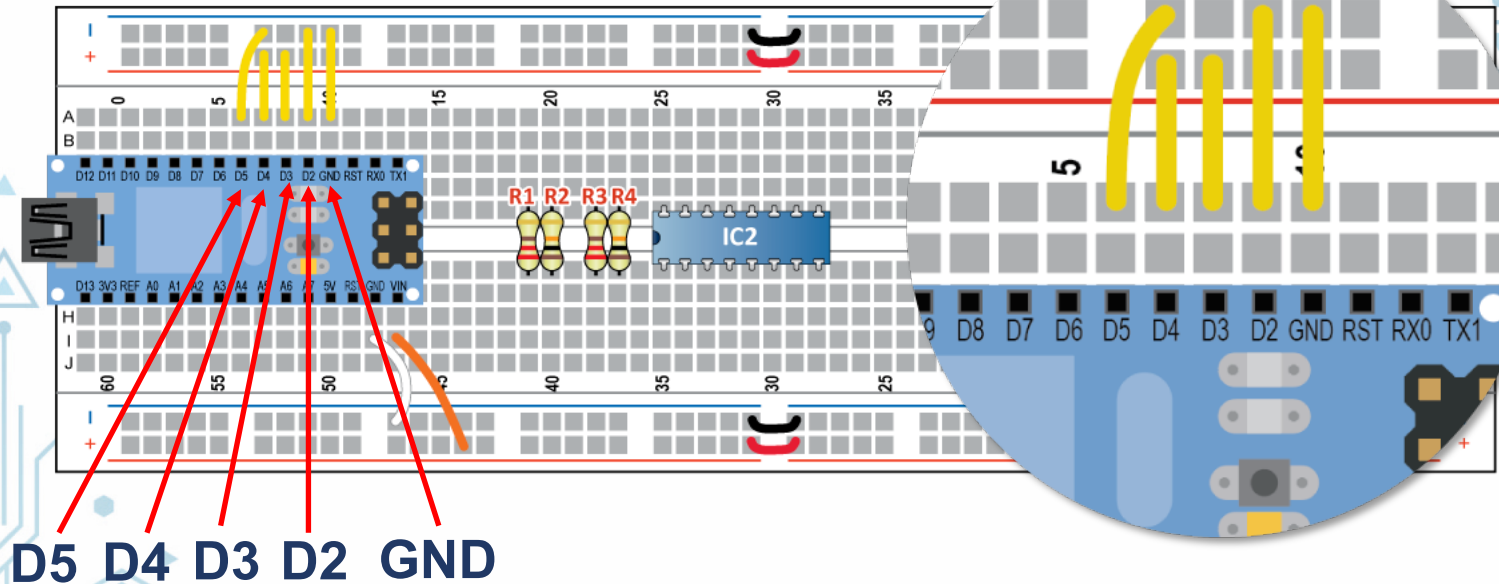
Positivo

3 minutos





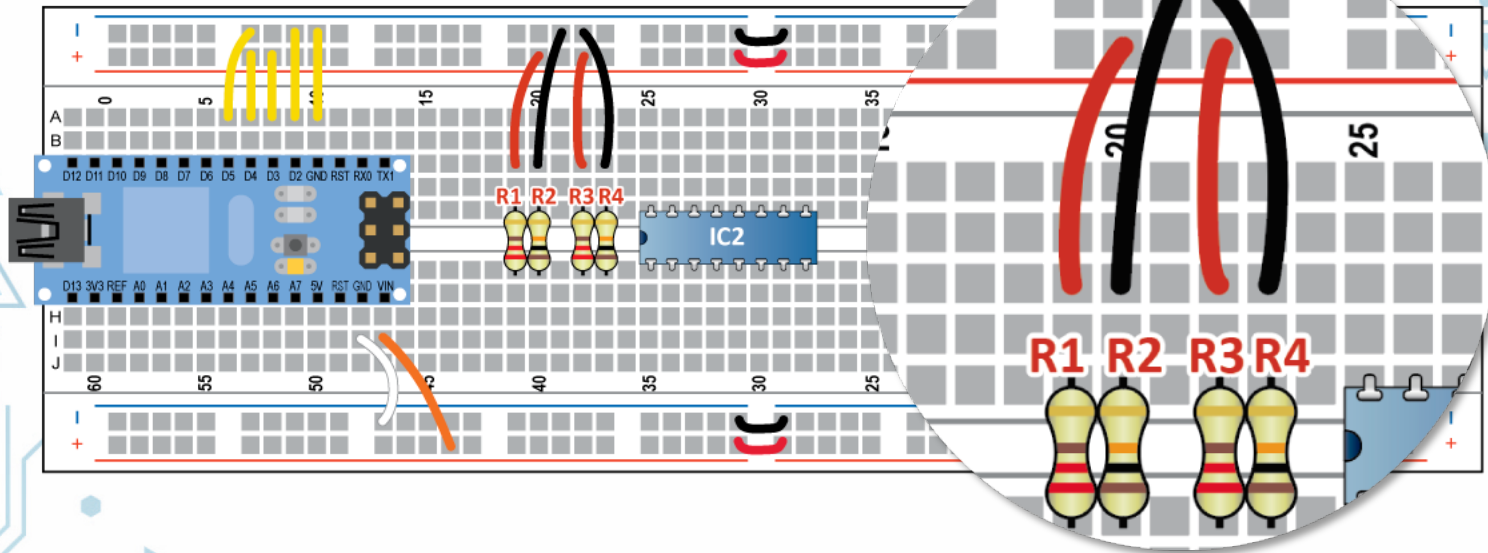
Conecta terminales de la tarjeta Arduino



4 minutos



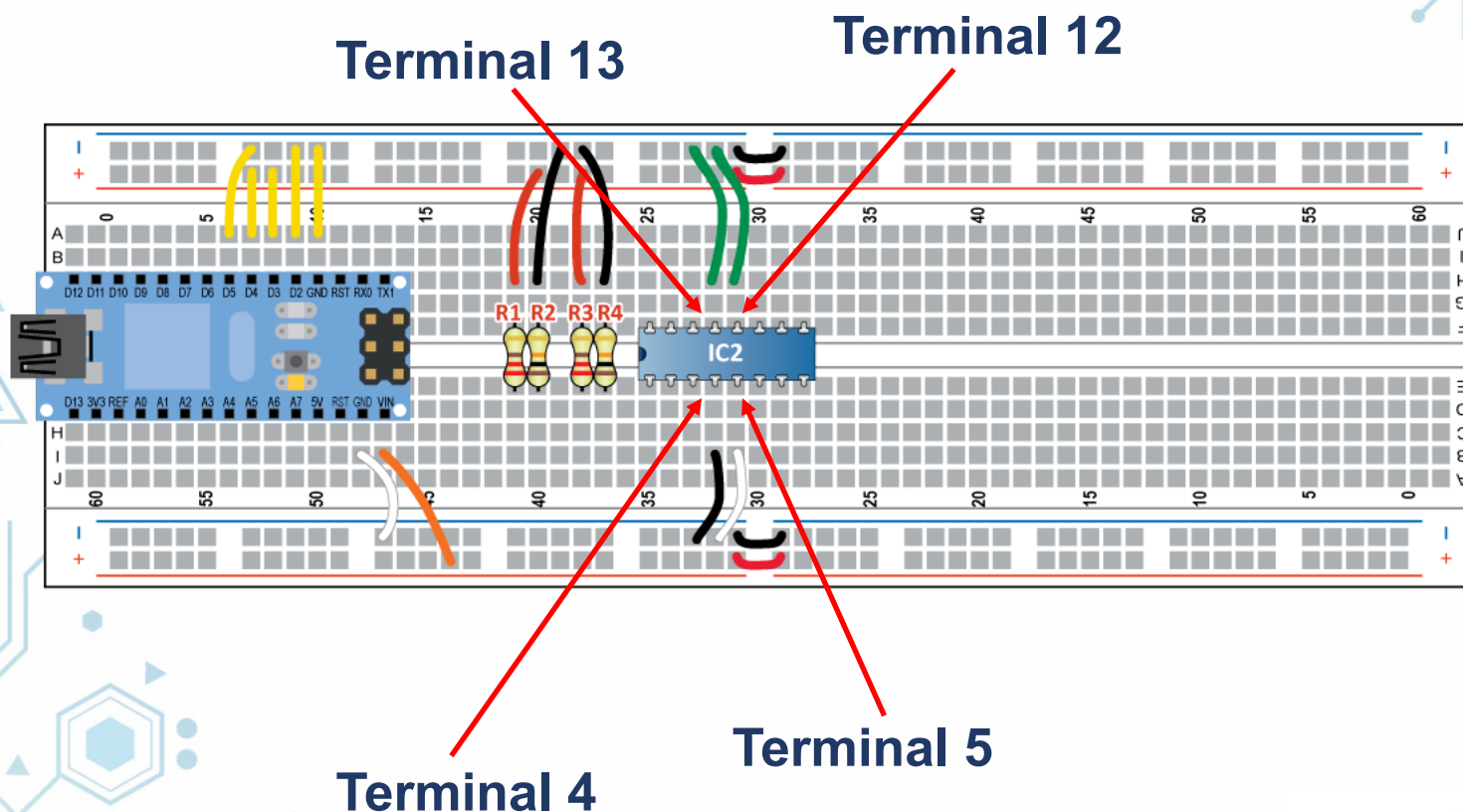
Conectamos los puentes de las resistencias



4 minutos



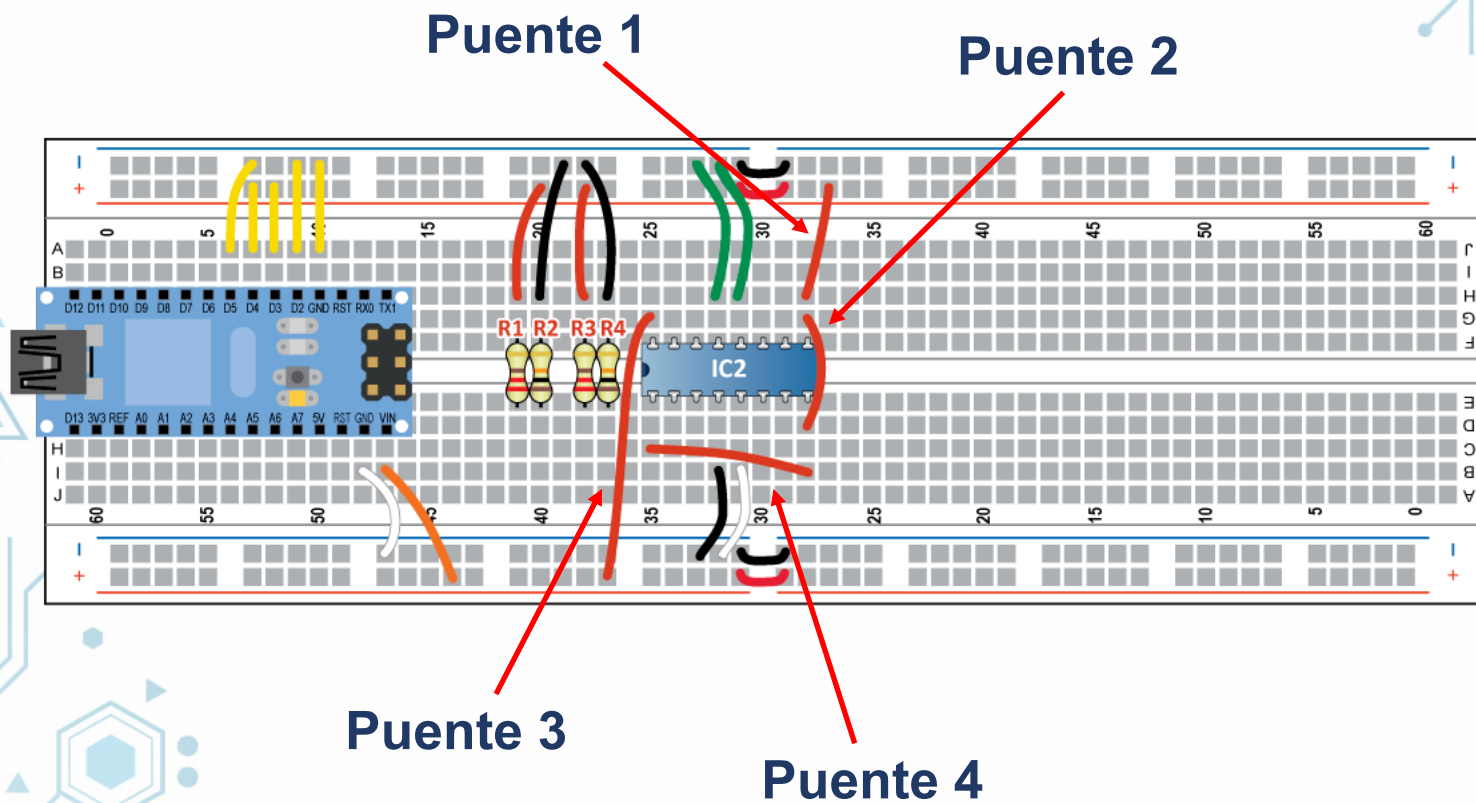
Conecta hacia negativo estas 4 terminales del Puente H



3 minutos



Conectamos los 4 puentes



3 minutos

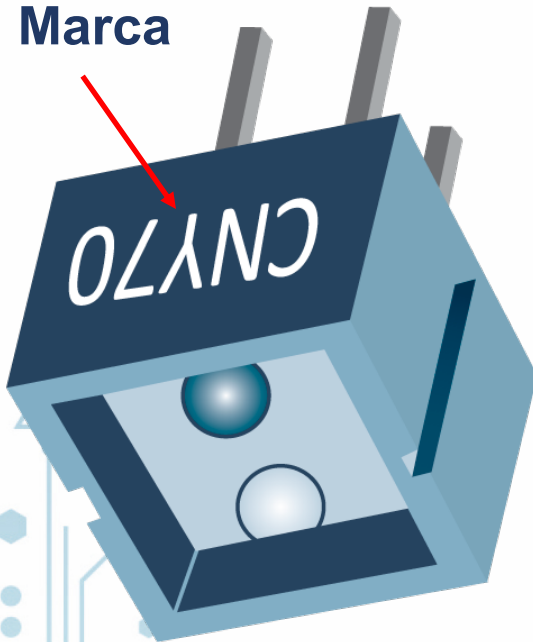


2 minutos

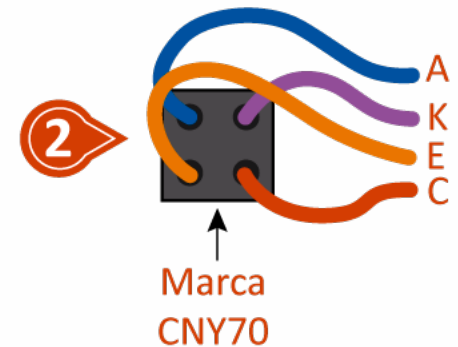
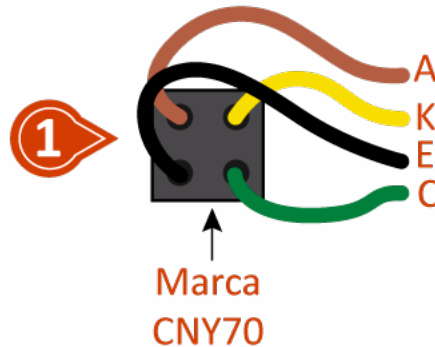


Conexión de los sensores CNY70

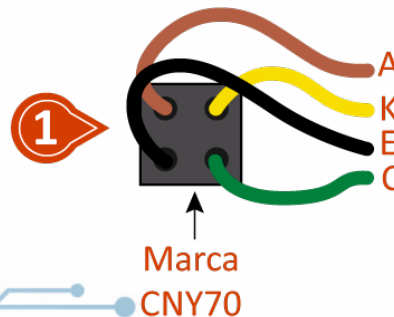
Marca



El sensor tiene una marca, la cual debe colocarse como se indica para que las terminales de conexión correspondan.



2 minutos



3 minutos

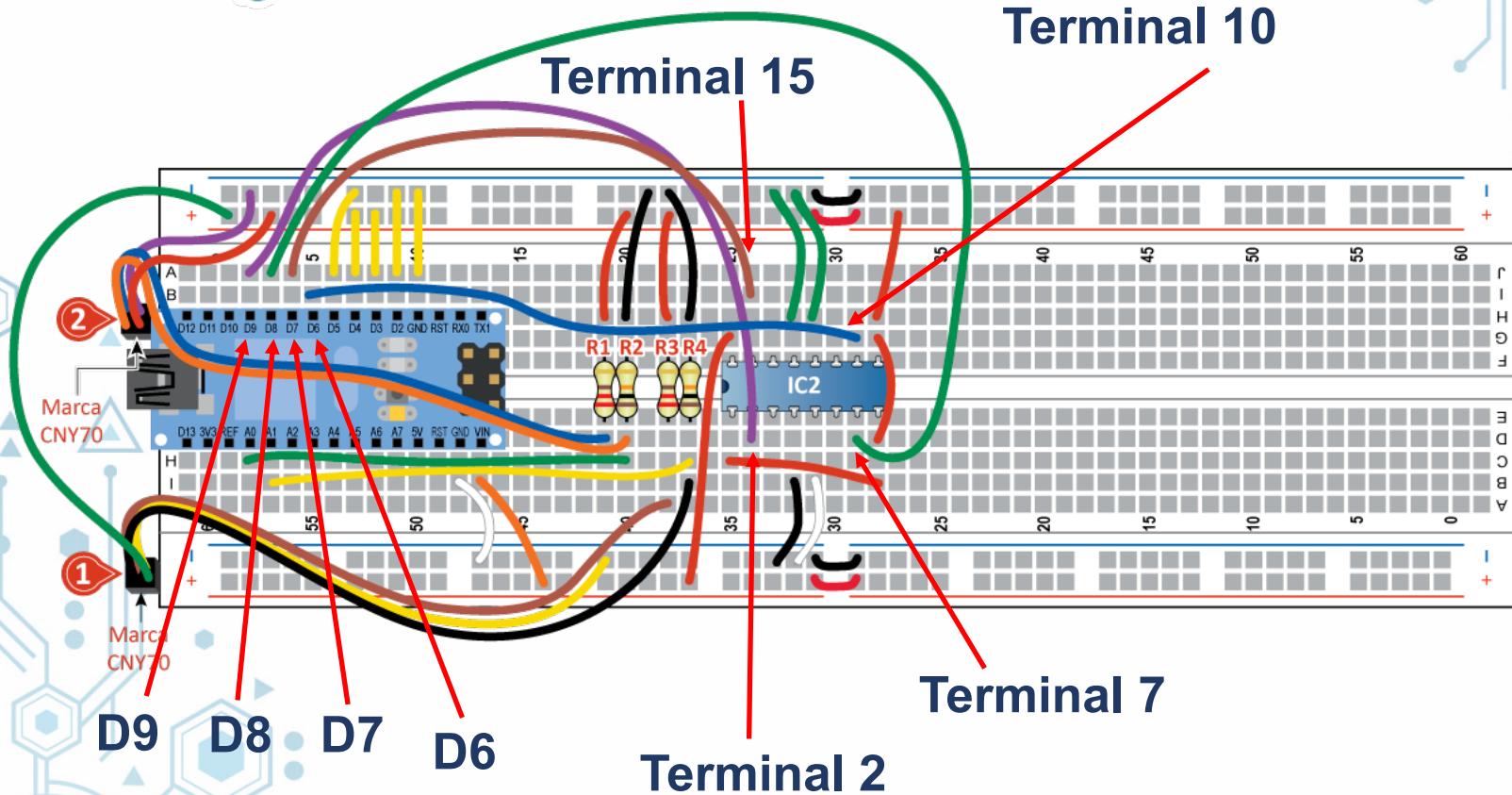


3 minutos





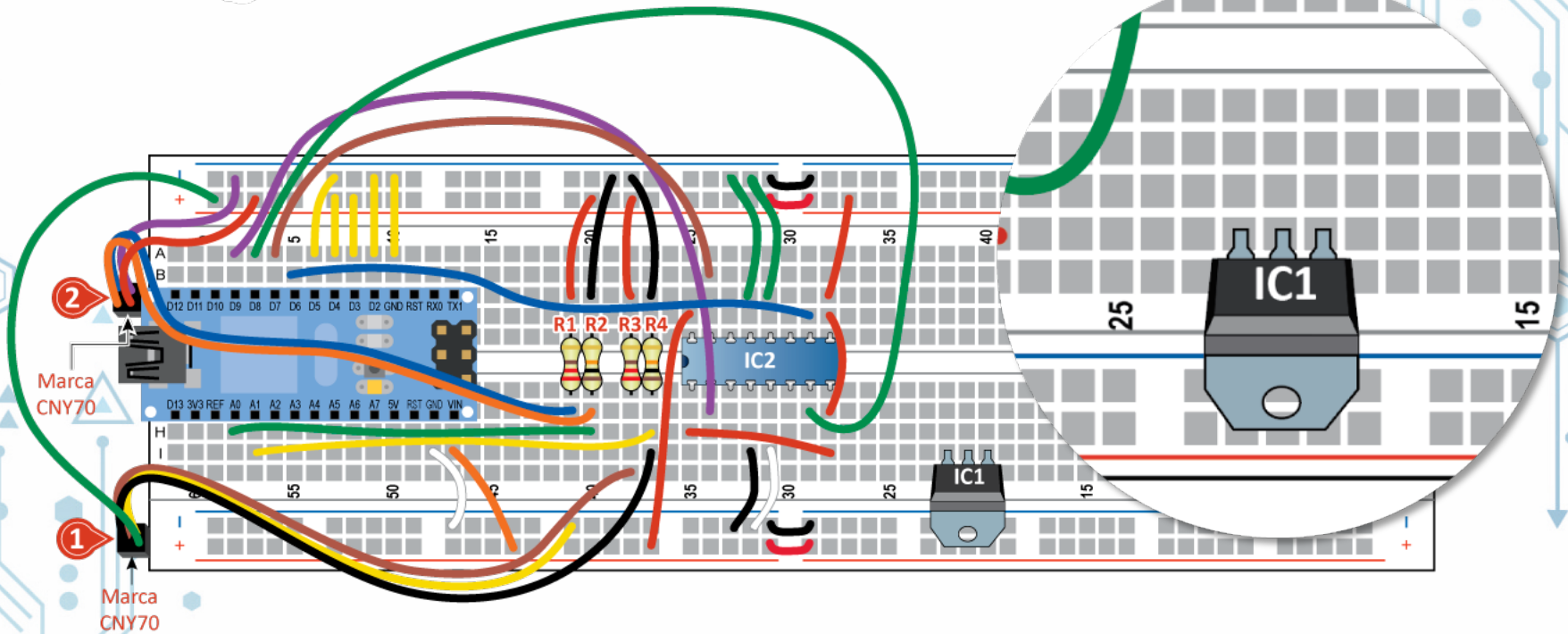
Conecta 4 cables de las terminales de la Arduino al Puente H



3 minutos



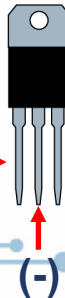
Conectamos el regulador L7805CV



Convierte el voltaje
a 5V

Entrada
de voltaje

Salida
de voltaje



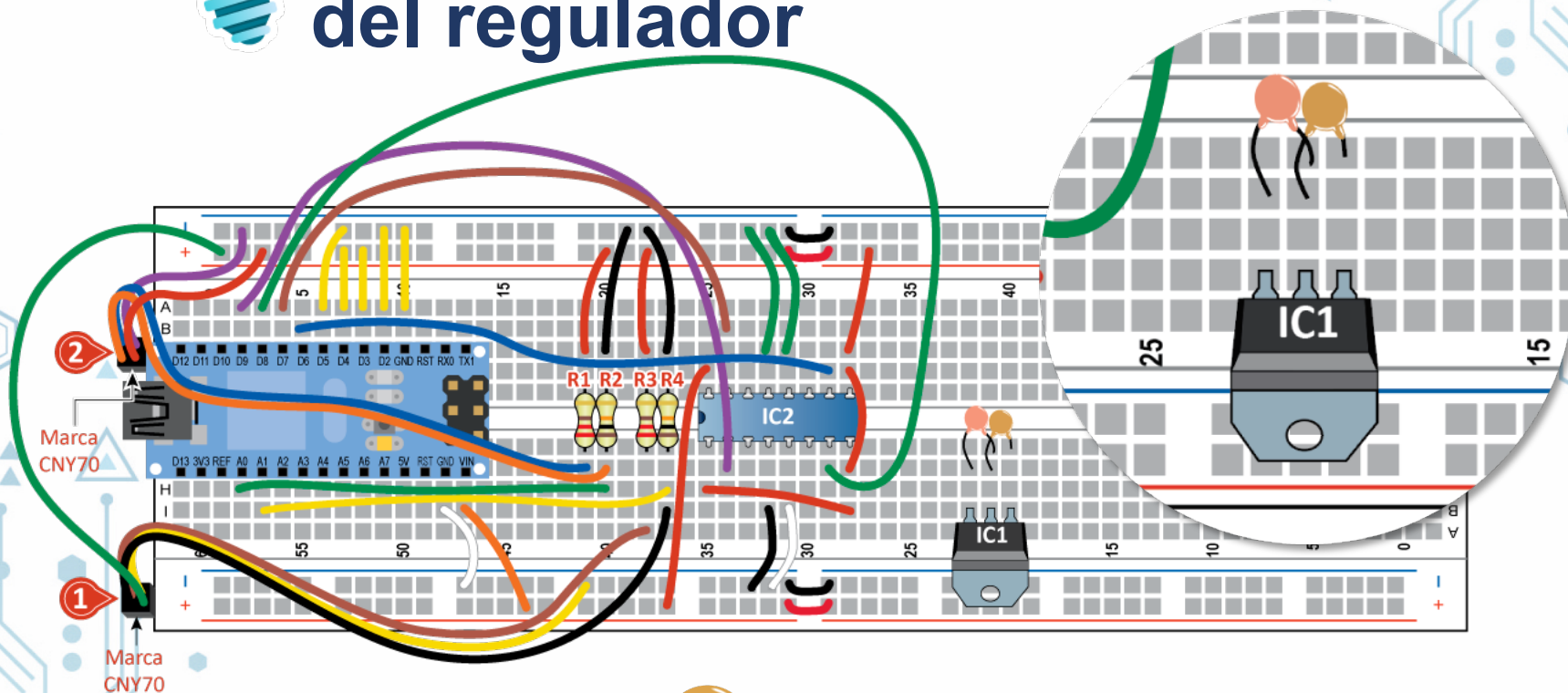
(-)



2 minutos



Conecta los 2 capacitores cerámicos, en las terminales del regulador



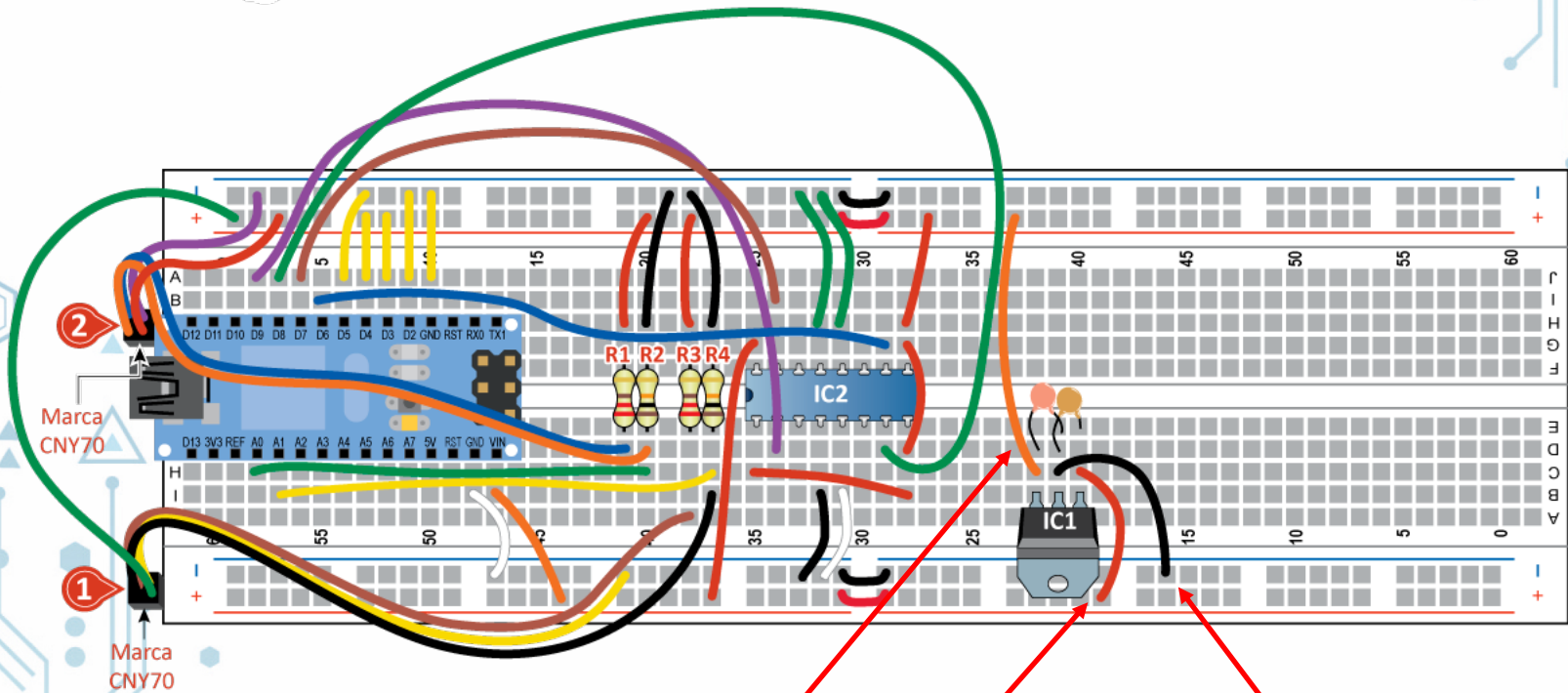
Mejora la estabilidad del voltaje del circuito



4 minutos



Conecta los 3 cables de alimentación del regulador



Cable 2

Cable 3

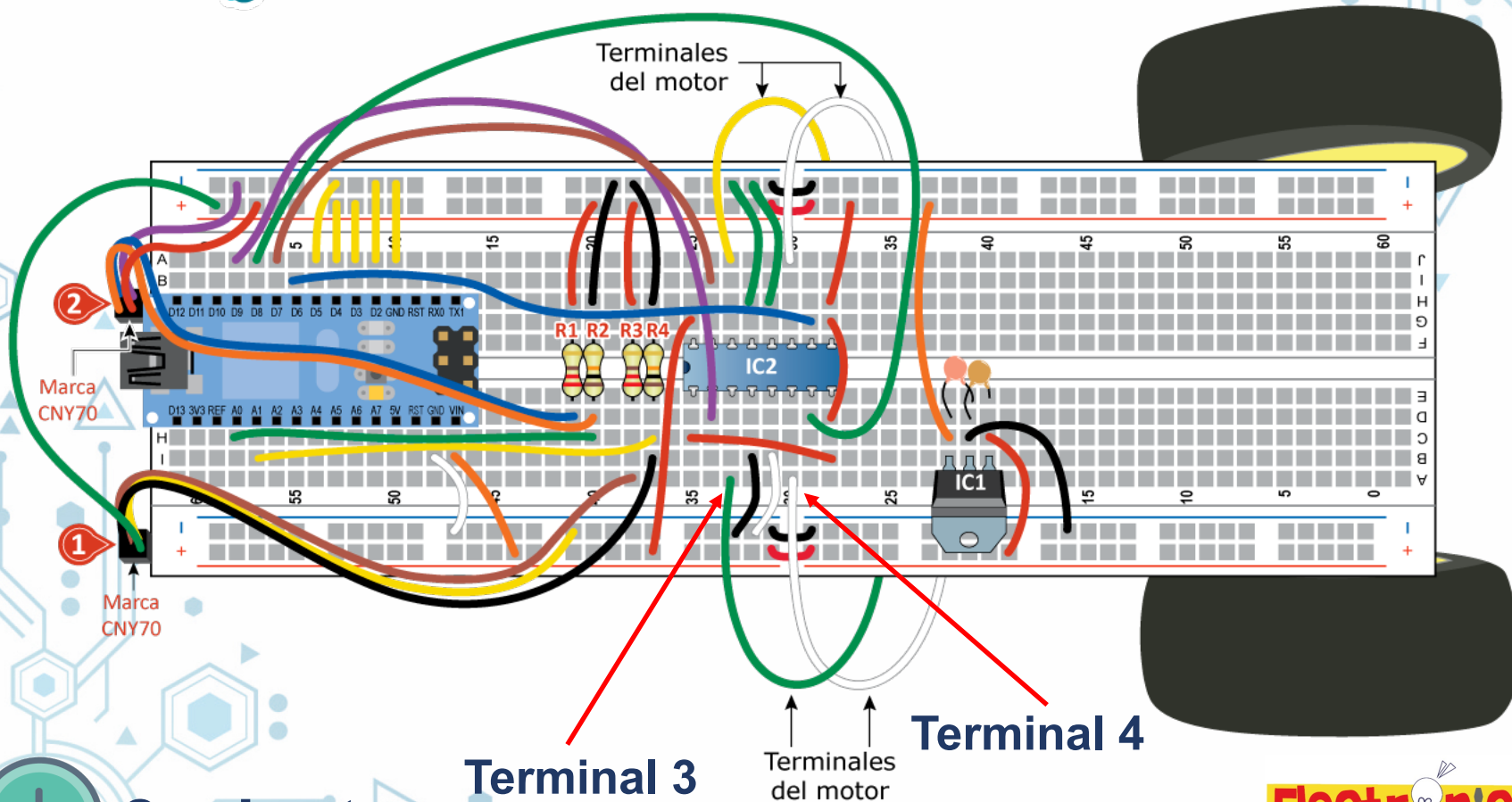
Cable 1

3 minutos





Conectamos el segundo motoreductor



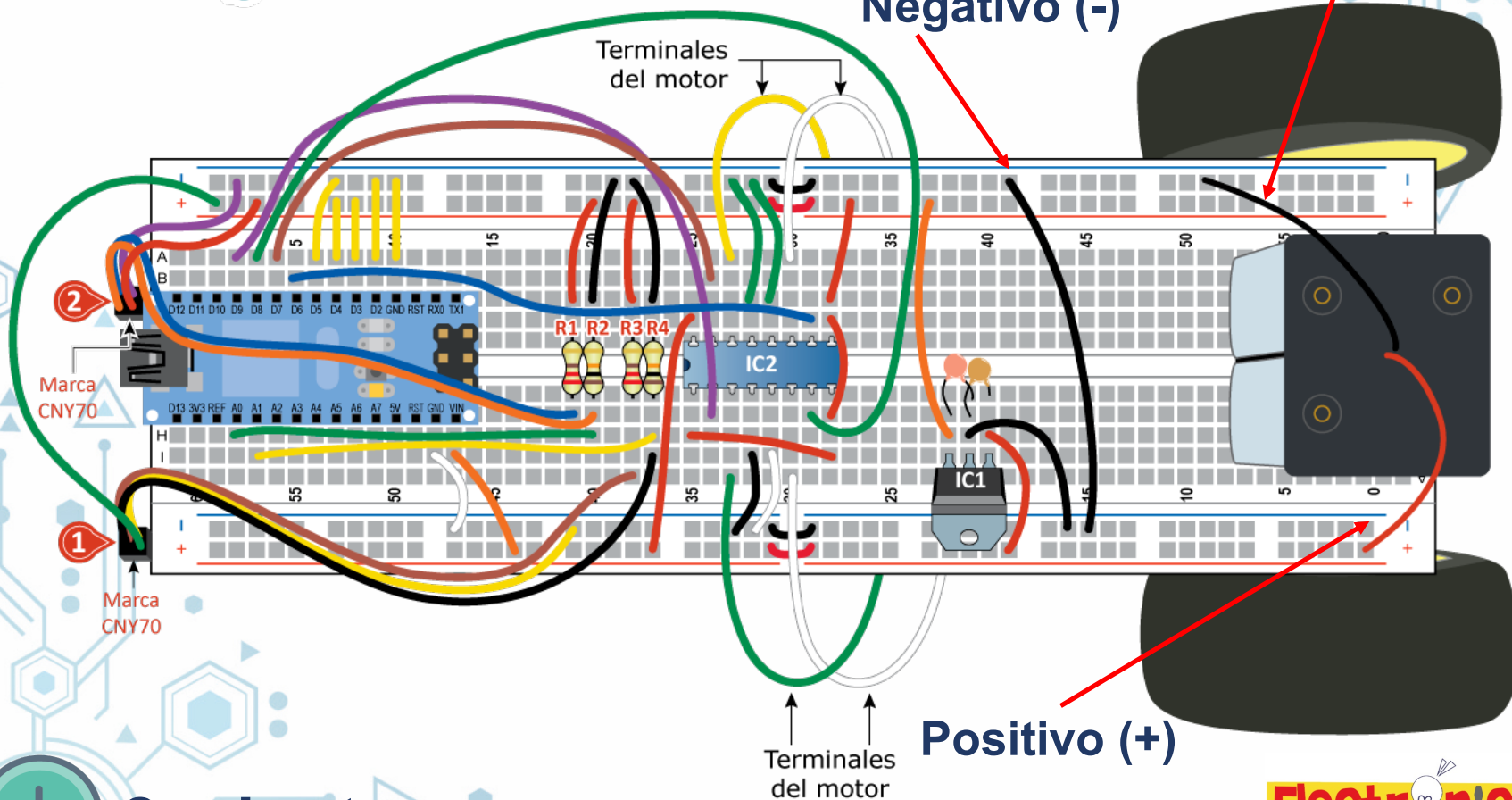
2 minutos



Conecta el portapilas y el puente a negativo

Puente
Negativo (-)

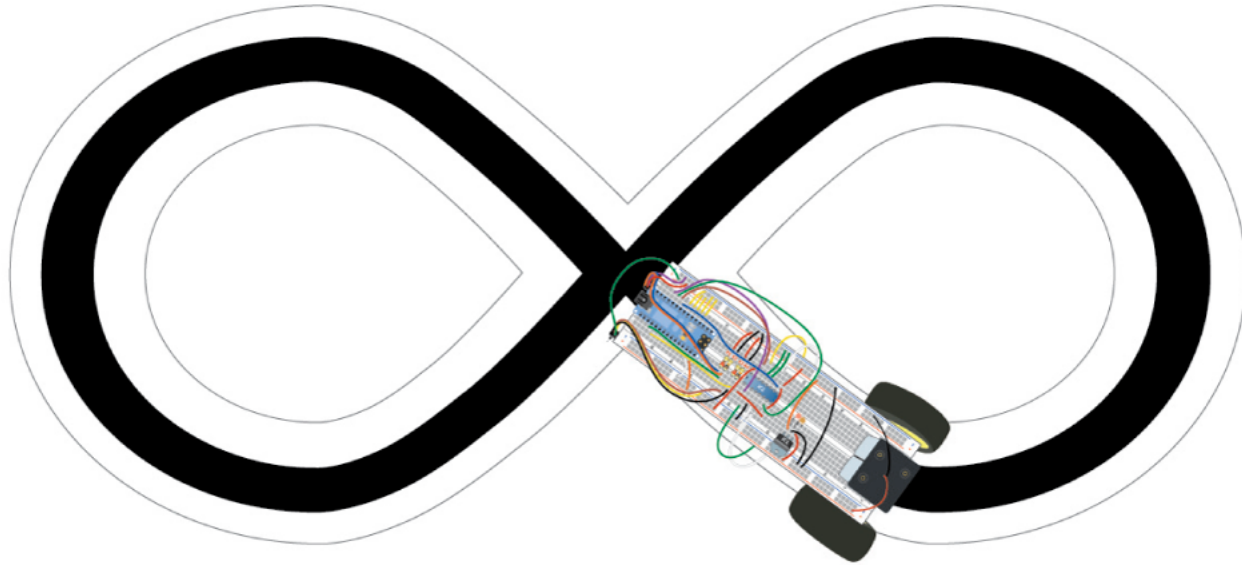
Negativo (-)



2 minuto



Pega líneas con cinta de aislar y coloca el proyecto para que veas como sigue las líneas



20 minutos