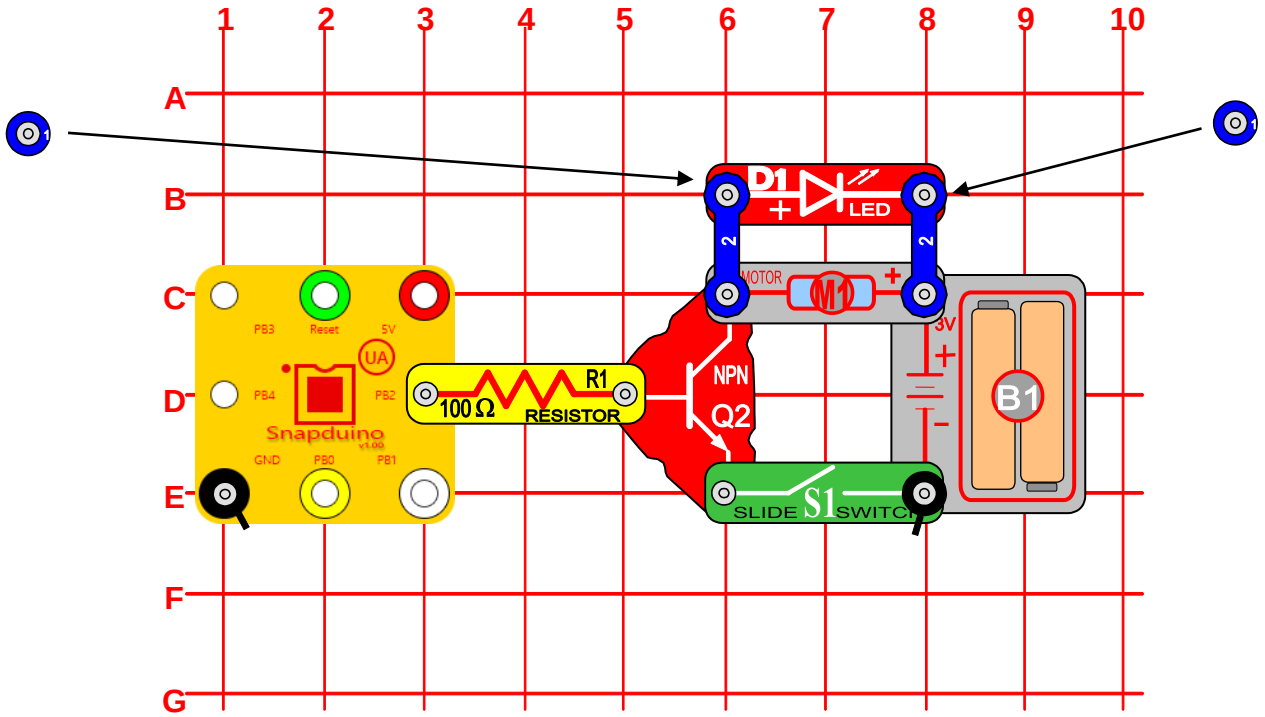

OBJECTIVE: This experiment will demonstrate how a motor can store electricity and release it when it stops.

Parts List

Quantity	ID	Name	Part #
1		Base Grid Base Grid (11" x 7.7")	6SCBG
2	1	1-snap wire	6SC01
2	2	2-snap wire	6SC02
1	UA	Snapduino	
1		Snap-FTDI Cable	
1	R1	100 Ω Resistor	6SCR1
1	D1	Red LED	6SCD3
1	S1	Slide Switch	6SCS1
1	M1	Motor	6SCM1
1	Q2	NPN Transistor	6SCQ2
1	B1	Battery Holder	6SCB1
1		Jumper Wire (Black)	6SCJ1

Step by Step Guide

1) Place the upper-left corner of the Snapduino at **C1**.
2) Snap component **Q2** between position **D5, C6** and **E6**.
3) Snap a 1-snap wire on the component at **B6**.
4) Snap a 1-snap wire on the component at **B8**.
5) Snap component **D1** between position **B6** and **B8**.
6) Snap component **B1** between position **C8** and **E8**.
7) Snap component **R1** over the components between position **D3** and **D5**.
8) Snap component **M1** over the components between position **C6** and **C8**.
9) Snap component **S1** over the components between position **E6** and **E8**.
10) Snap a 2-snap wire over the components between **B6** and **C6**.
11) Snap a 2-snap wire over the components between **B8** and **C8**.
12) Connect the black jumper wire over the components between **E1** and **E8**.
13) Connect the **black** lead of the FTDI cable to the **GND** snap marked with a black ring on the Snapduino (*snap it over the top of any components that may already be connected to this snap*).
14) Connect the **green** lead of the FTDI cable to the **Reset** snap marked with a green ring on the Snapduino (*snap it over the top of any components that may already be connected to this snap*).
15) Connect the **yellow** lead of the FTDI cable to the **PB0** snap marked with a yellow ring on the Snapduino (*snap it over the top of any components that may already be connected to this snap*).
16) Connect the **white** lead of the FTDI cable to the **PB1** snap marked with a white ring on the Snapduino (*snap it over the top of any components that may already be connected to this snap*).
17) Connect the **red** lead of the FTDI cable to the **5V** snap marked with a red ring on the Snapduino (*snap it over the top of any components that may already be connected to this snap*).
18) Open the sketch for this project in the Arduino IDE and upload it to the board.
19) Place two fresh AA batteries into the battery holder.
20) When the upload has completed, Place the switch **S1** in the ON position.
21) The motor will run for 3 seconds and then stop for 3 seconds. This will repeat while the Snapduino is powered and the switch **S1** is in the ON position. Each time the motor stops the red LED will flash quickly. This is from the current built up in the motor. You ay need to turn the lights out or go into a ark room to see the quick flash.