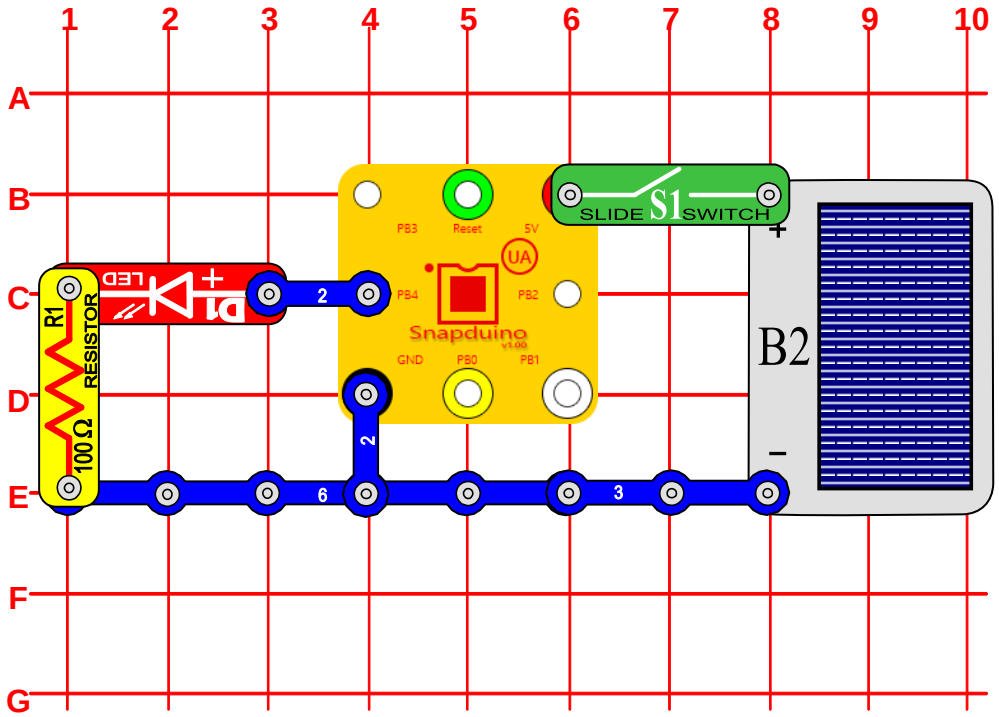

OBJECTIVE: This experiment will demonstrate how the Snapduino can run from the solar panel when there is enough light present.

Parts List

Quantity	ID	Name	Part #
1		Base Grid Base Grid (11" x 7.7")	6SCBG
2	2	2-snap wire	6SC02
1	3	3-snap wire	6SC03
1	6	6-snap wire	6SC06
1	UA	Snapduino	
1		Snap-FTDI Cable	
1	R1	100 Ω Resistor	6SCR1
1	D1	Red LED	6SCD1
1	S1	Slide Switch	6SCS1
1	B2	Solar Cell	6SCB2

Step by Step Guide

1) Place the upper-left corner of the Snapduino at **B4**.
2) Snap component **D1** between position **C1** and **C3**.
3) Snap component **B2** between position **B8** and **E8**.
4) Snap a 6-snap wire over the components between **E1** and **E6**.
5) Snap component **R1** over the components between position **C1** and **E1**.
6) Snap component **S1** over the components between position **B6** and **B8**
7) Snap a 2-snap wire over the components between **C3** and **C4**.
8) Snap a 2-snap wire over the components between **D4** and **E4**.
9) Snap a 3-snap wire over the components between **E6** and **E88**.
10) Snap a 4-snap wire over the components between **C7** and **F7**.
11) 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*).
12) 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*).
13) 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*).
14) 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*).
15) 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*).
16) Place the switch **S1** in the OFF position.
17) Open the sketch for this project in the Arduino IDE and upload it to the board.
18) When the upload has completed, remove the Snap FTDI Cable from the Snapduino.
19) Place the switch **S1** in the ON position and place the circuit under a light or take it outside in the direct sunlight. If there is enough light the red LED will begin to flash every second.

    The solar cell will output 3 volts DC at 20mA under normal lighting and up to 4.5 volts DC at 90mA under very intense and bright light. This is enough to power both the Snapduino and the red LED.