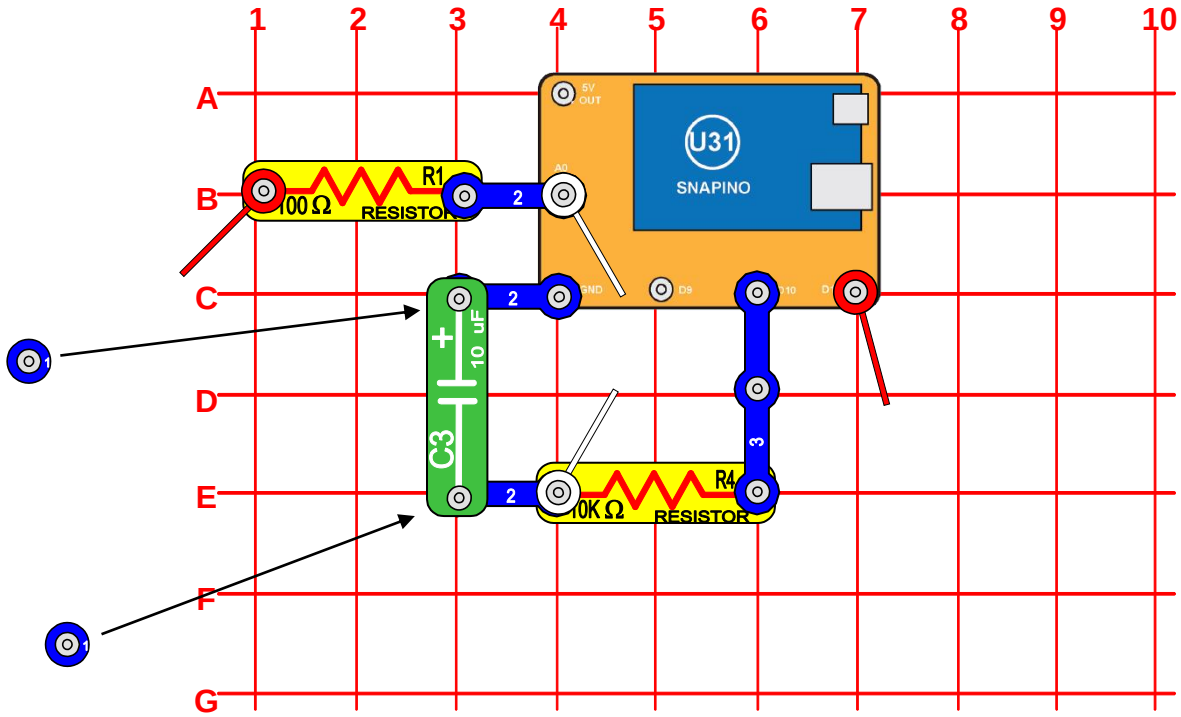

OBJECTIVE: This experiment will demonstrate the Arduino **Capacitance Meter and RC Time Constants** project found at https://www.arduino.cc/en/Tutorial/CapacitanceMeter.

Parts List

Quantity	ID	Name	Part #
1		Base Grid Base Grid (11" x 7.7")	6SCBG
2	1	1-snap wire	6SC01
3	2	2-snap wire	6SC02
1	3	3-snap wire	6SC03
1	U31	Snapino	6SCU31
1	R1	100 Ω Resistor	6SCR1
1	R4	10K Ω Resistor	6SCR4
1	C3	10 µF Capacitor (or any other capacitor)	6SCC3
1	J1	Jumper Wire (white)	SCJ3F
1	J5	Jumper Wire (red)	6SCJ5RED
1		USB Cable	9TLSCUSBAB

Step by Step Guide

1) Place the upper-left corner of the Snapino at **A4**.
2) Snap component **R1** between position **B1** and **B3**.
3) Snap component **B2** between position **B8** and **E8**.
4) Snap a 1-snap wire at **C3**.
5) Snap a 1-snap wire at **E3**.
6) Snap a 2-snap wire over the components between **B3** and **B4**.
7) Snap a 2-snap wire over the components between **C3** and **C4**.
8) Snap a 2-snap wire over the components between **E3** and **E4**.
9) Snap a 3-snap wire over the components between **C6** and **E6**.
10) Snap the Red Jumper wire over the components between **C6** and **E6**.
11) Connect the USB cable between the Snapino and your computer.
12) Open the sketch for this project in the Arduino IDE.
13) Select **Arduino Genuino/Uno** as the board type.
14) Select the COM port for your Snapino.
15) Open the **Serial Monitor**.
16) Upload the sketch to the Snapino.
17) When the upload has completed, watch the output on the Serial Monitor.
18) Try various sized capacitors to see if the Snapino can correctly measure their value.
19) If some capacitors cannot be measured, try changing the resistor values but do not forget to change the code in the sketch to match the values.