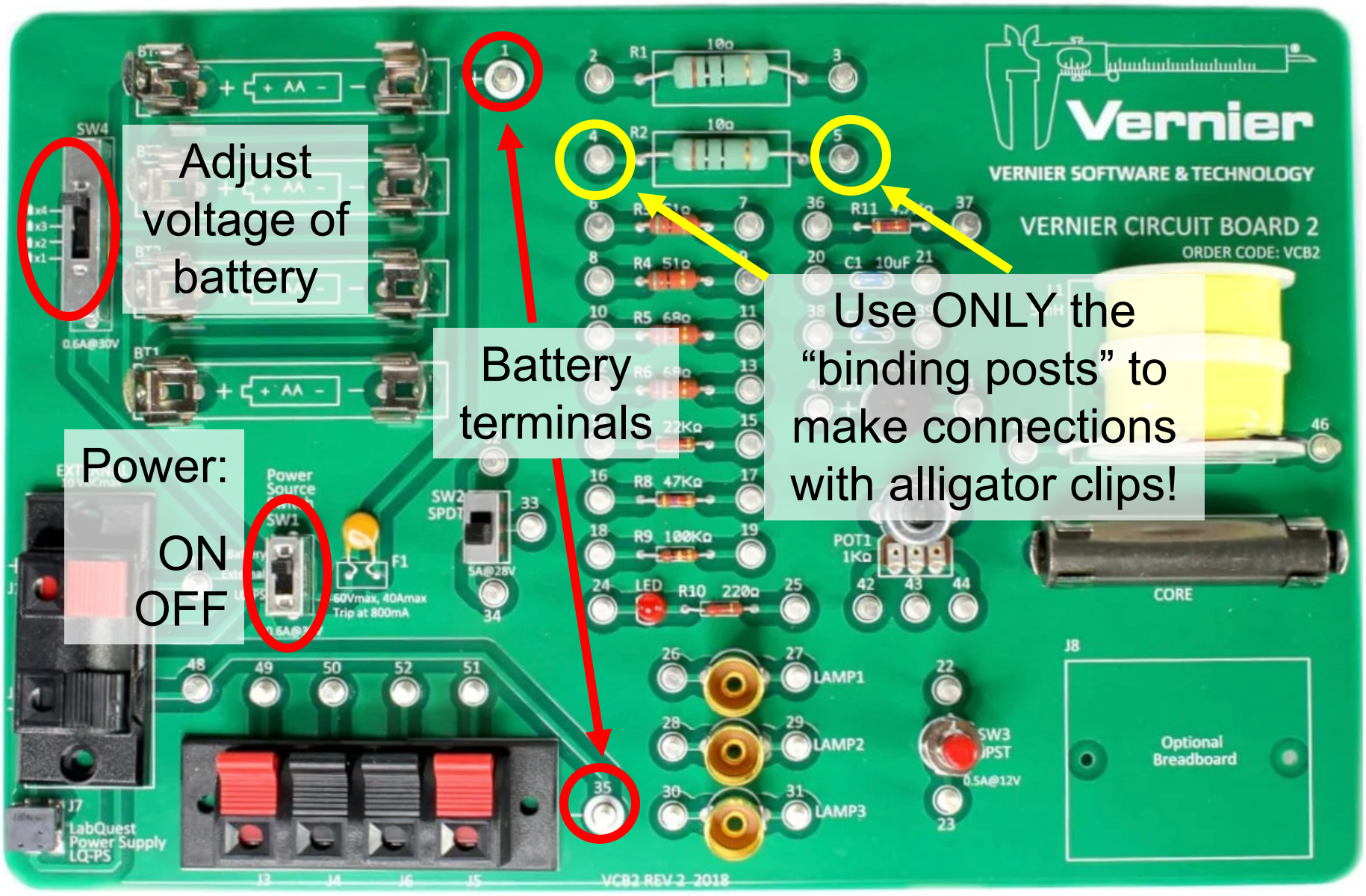
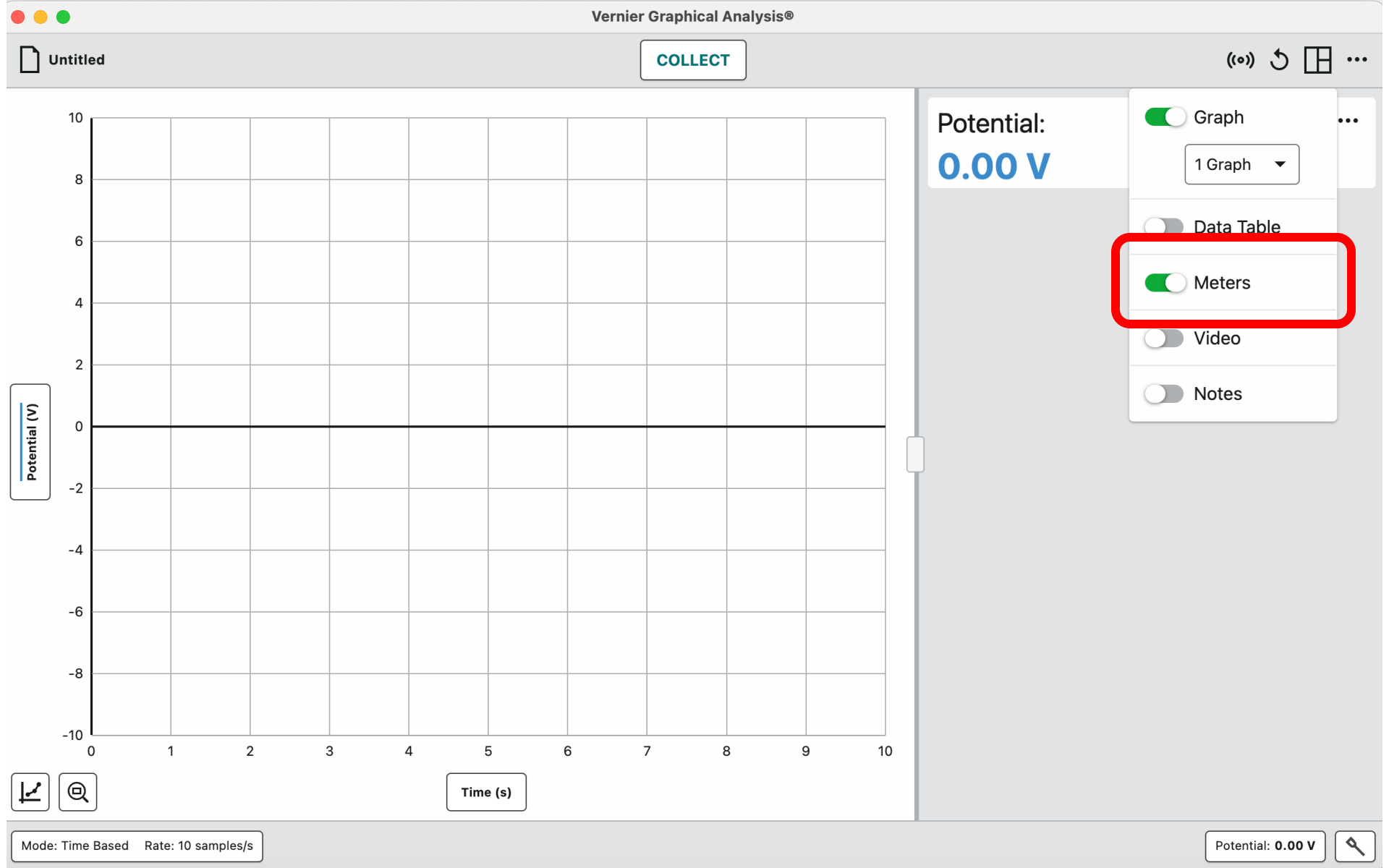
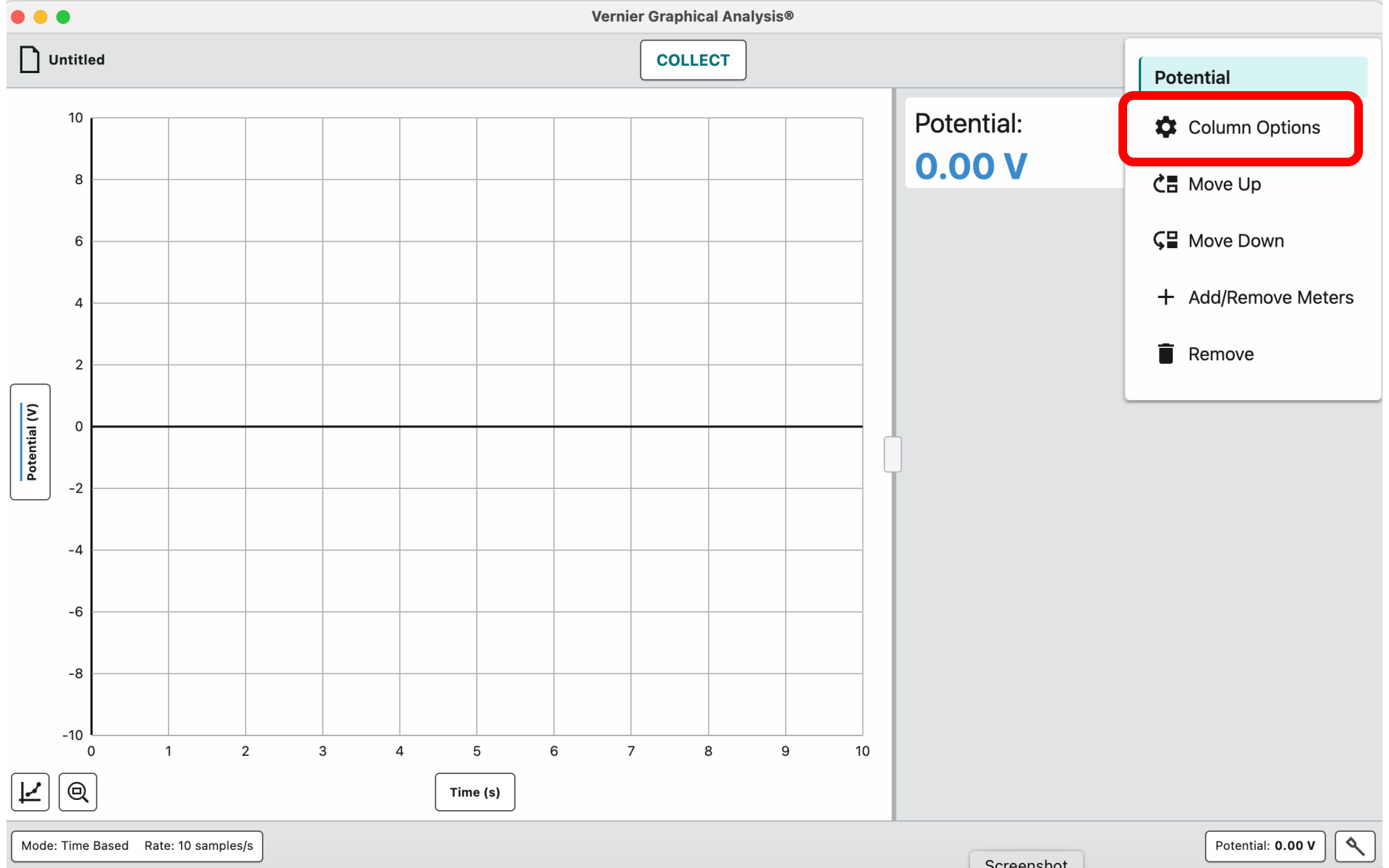
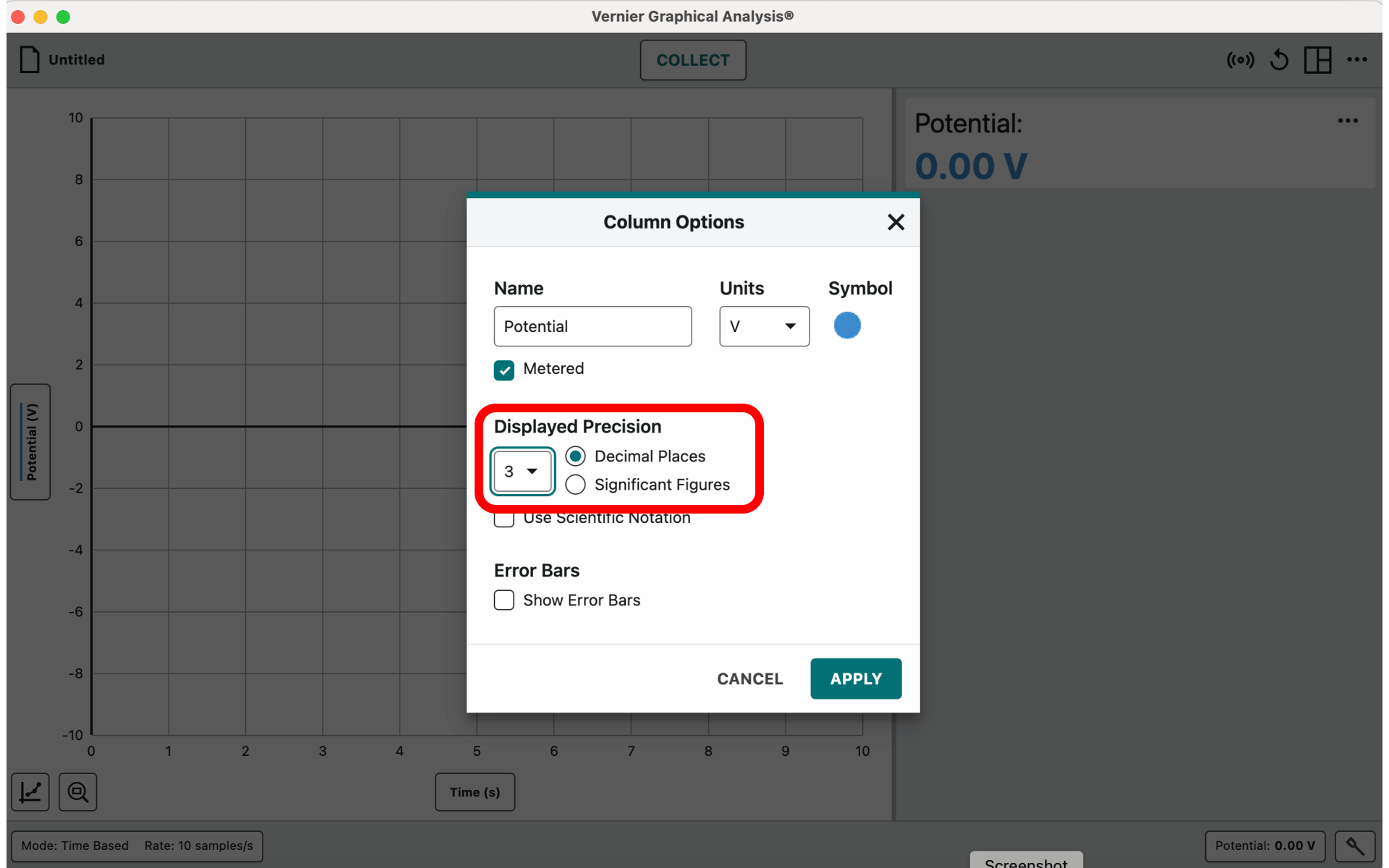
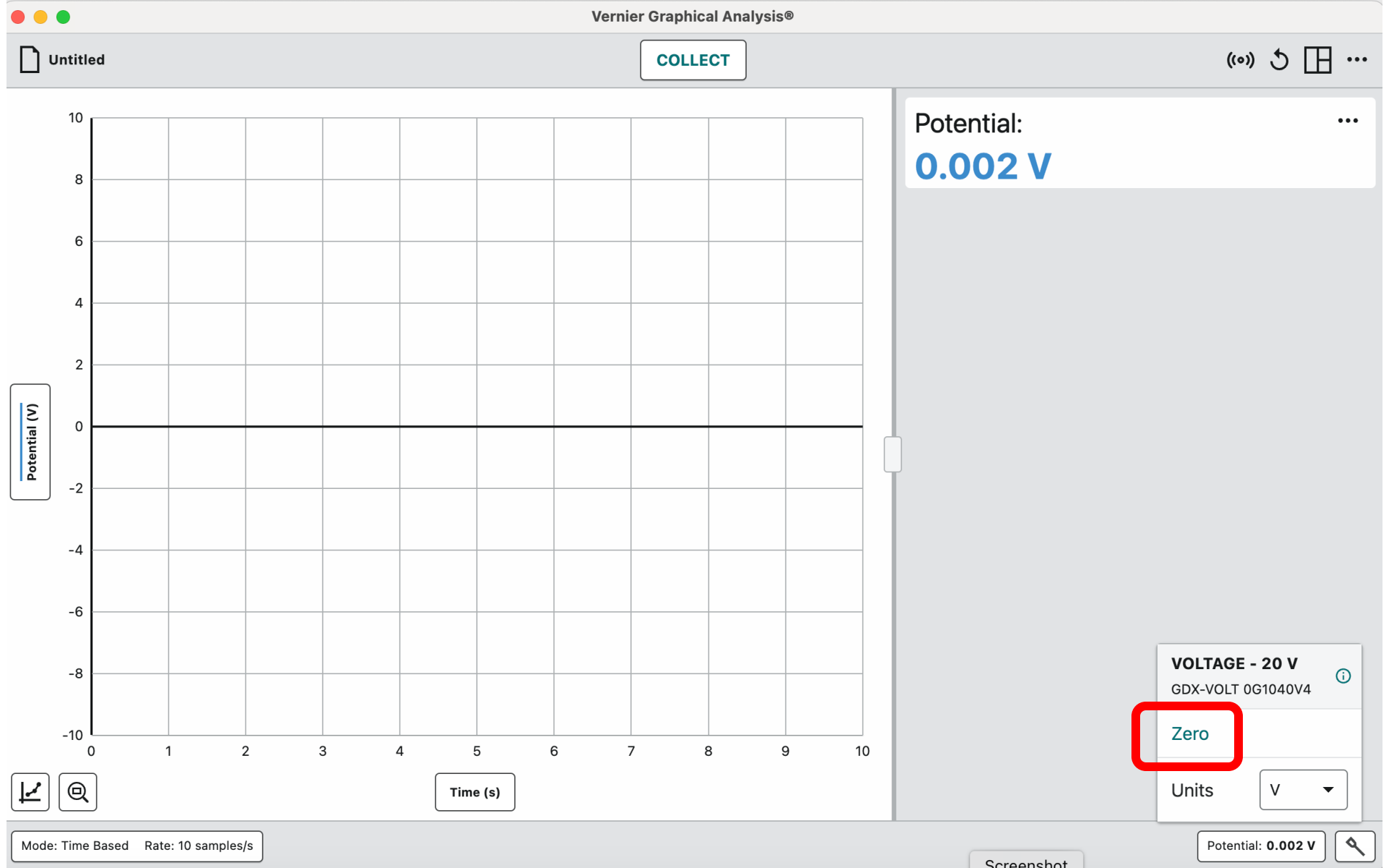

Adjust voltage of battery
Battery terminals
Use ONLY the "binding posts" to make connections with alligator clips!
Power:
ON
OFF
Vernier
VERNIER SOFTWARE & TECHNOLOGY
VERNIER CIRCUIT BOARD 2
ORDER CODE: VCB2
SW4
BT1
Power Source
SW1
F1
SW2 SPDT
R1 10Ω
R2 10Ω
R4 51Ω
R5 68Ω
R8 47KΩ
R9 100KΩ
R10 220Ω
R11
C1 10uF
POT1 1KΩ
LED
LAMP1
LAMP2
LAMP3
SW3 SPST
0.5A@12V
CORE
J8
Optional Breadboard
J7
LabQuest Power Supply LQ-PS
VCB2 REV 2 2018

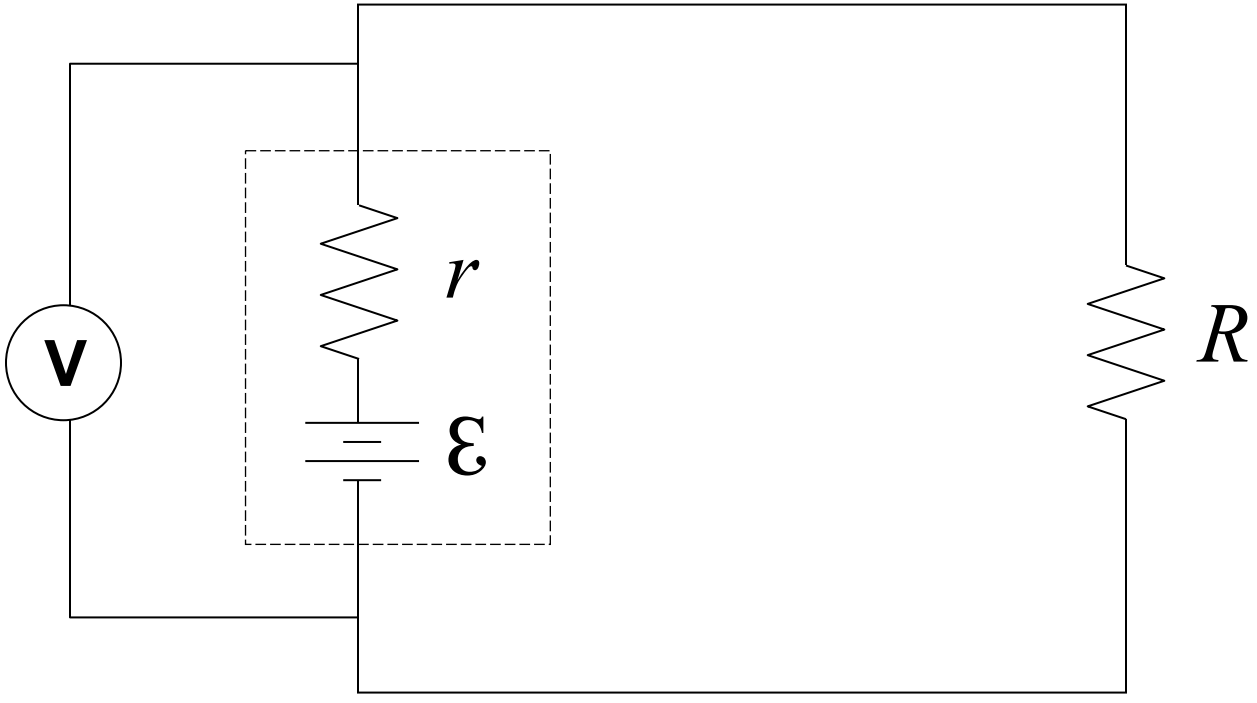

Vernier Graphical Analysis®
Untitled
COLLECT
Potential:
0.00 V
Graph
1 Graph
Data Table
Meters
Video
Notes
Potential (V)
Time (s)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0
1
2
3
4
5
6
7
8
9
10
Mode: Time Based Rate: 10 samples/s
Potential: 0.00 V


Vernier Graphical Analysis®
Untitled
COLLECT
Potential
Column Options
Move Up
Move Down
Add/Remove Meters
Remove
Potential:
0.00 V
Potential (V)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0
1
2
3
4
5
6
7
8
9
10
Time (s)
Mode: Time Based Rate: 10 samples/s
Potential: 0.00 V

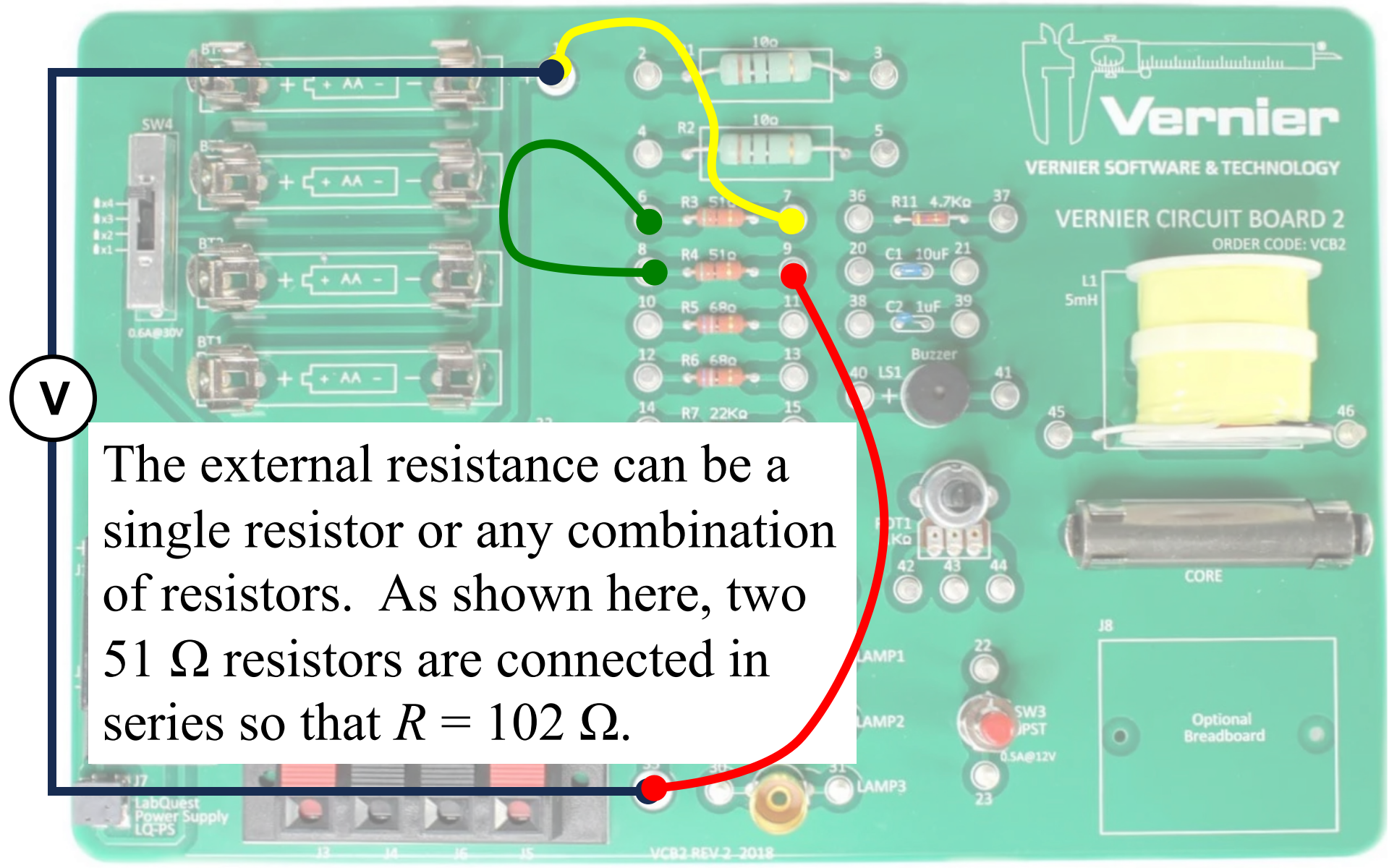

Vernier Graphical Analysis®
Untitled
COLLECT
Potential:
0.00 V
Column Options
Name
Potential
Units
V
Symbol
Metered
Displayed Precision
3
Decimal Places
Significant Figures
Use Scientific Notation
Error Bars
Show Error Bars
CANCEL
APPLY
Potential (V)
Time (s)
Mode: Time Based Rate: 10 samples/s
Potential: 0.00 V


Vernier Graphical Analysis®
Untitled
COLLECT
Potential:
0.002 V
Potential (V)
Time (s)
VOLTAGE - 20 V
GDX-VOLT 0G1040V4
Zero
Units
V
Mode: Time Based Rate: 10 samples/s
Potential: 0.002 V

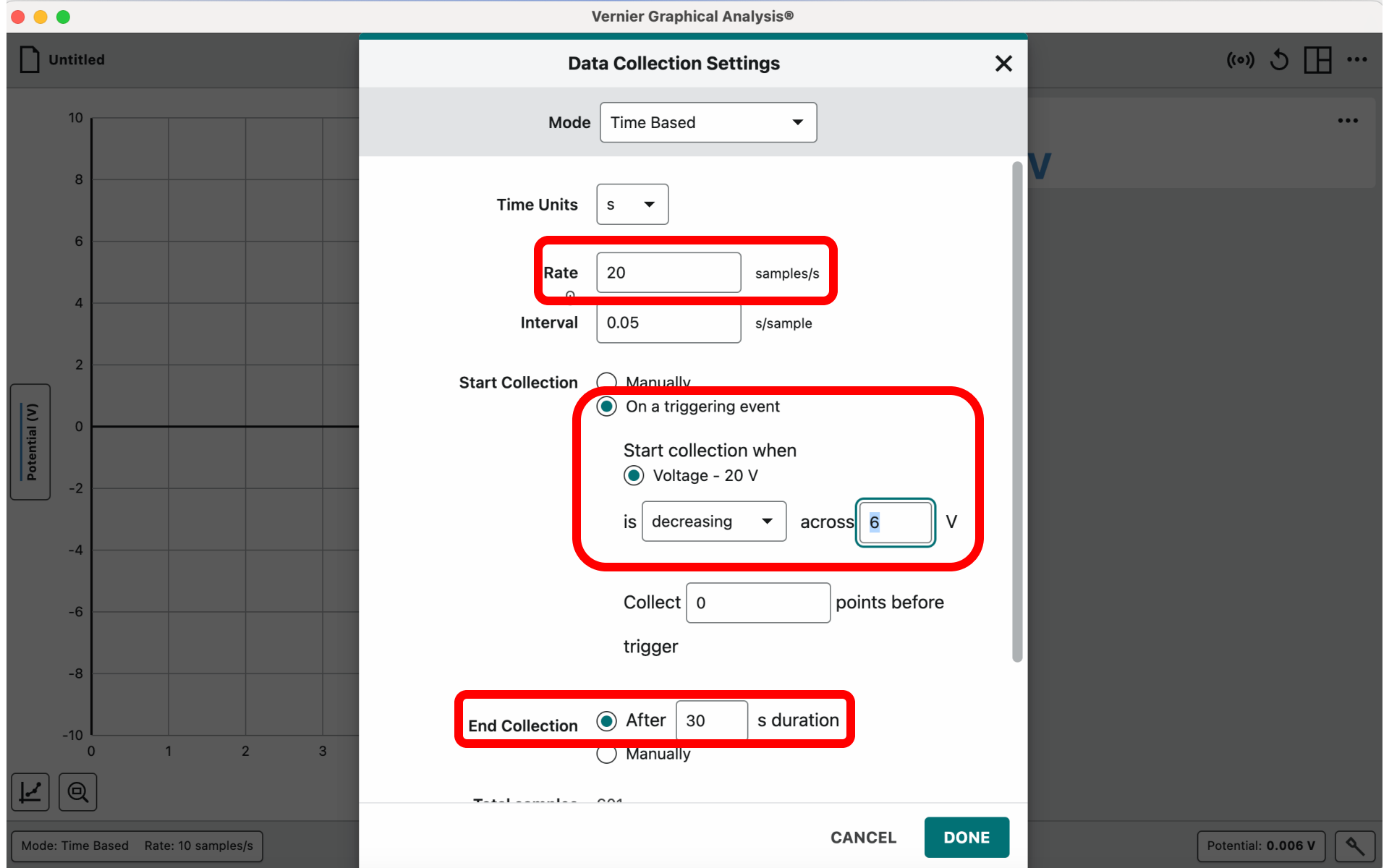
Measure the terminal voltage of the battery.

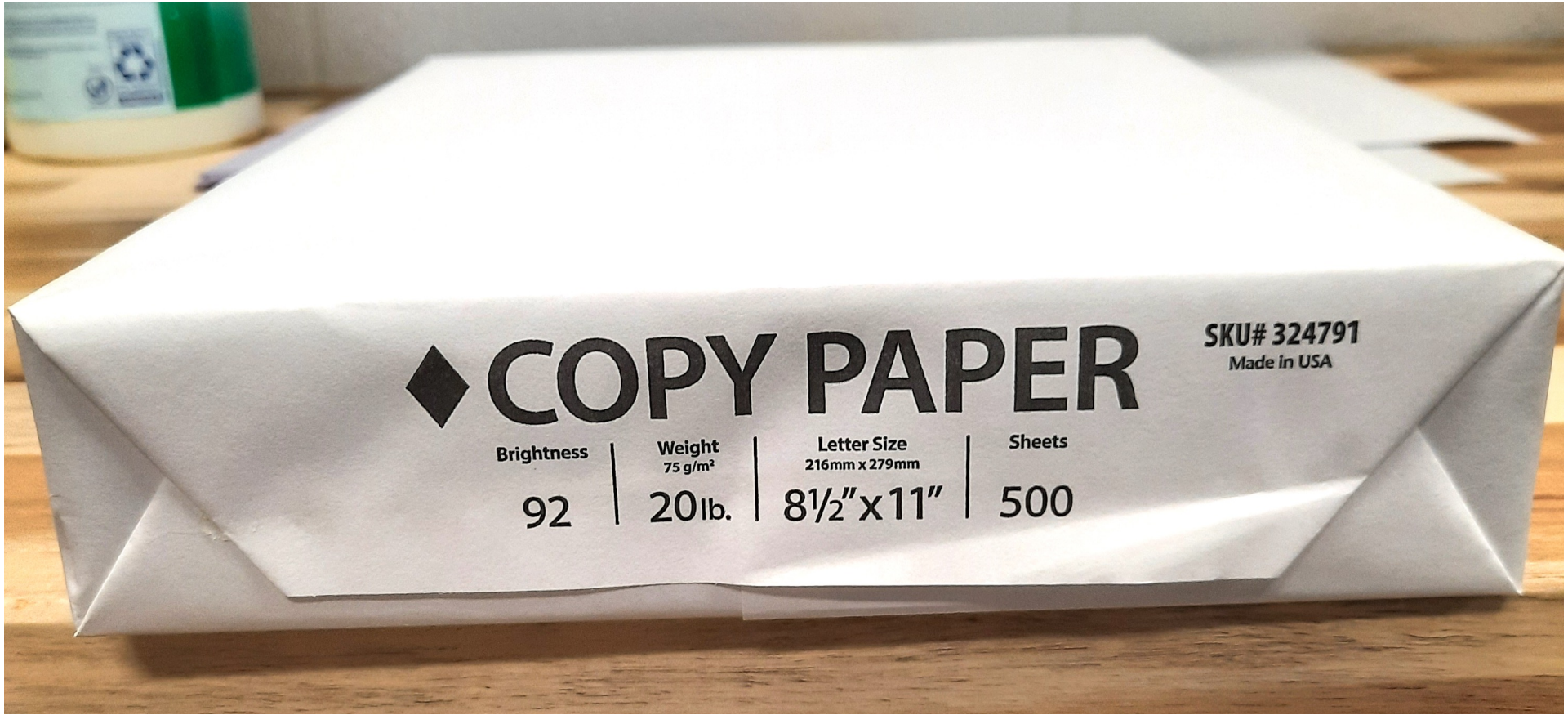


Vary the external resistance R and note the resulting voltage V; record both values.



The external resistance can be a single resistor or any combination of resistors. As shown here, two 51 Ω resistors are connected in series so that $R = 102\ \Omega$.


Vernier Graphical Analysis®
Untitled
Data Collection Settings
Mode
Time Based
Time Units
s
Rate
20
samples/s
Interval
0.05
s/sample
Start Collection
Manually
On a triggering event
Start collection when
Voltage - 20 V
is
decreasing
across
6
V
Collect
0
points before
trigger
End Collection
After
30
s duration
Manually
CANCEL
DONE
Potential (V)
Mode: Time Based
Rate: 10 samples/s
Potential: 0.006 V


COPY PAPER
SKU# 324791
Made in USA
Brightness
92
Weight
75 g/m²
20 lb.
Letter Size
216mm x 279mm
8½" x 11"
Sheets
500

500 sheets
COPY PAPER
Brightness
92
Weight
75 g/m²
20 lb.
Letter Size
216mm x 279mm
8½" x 11"
Sheets
500