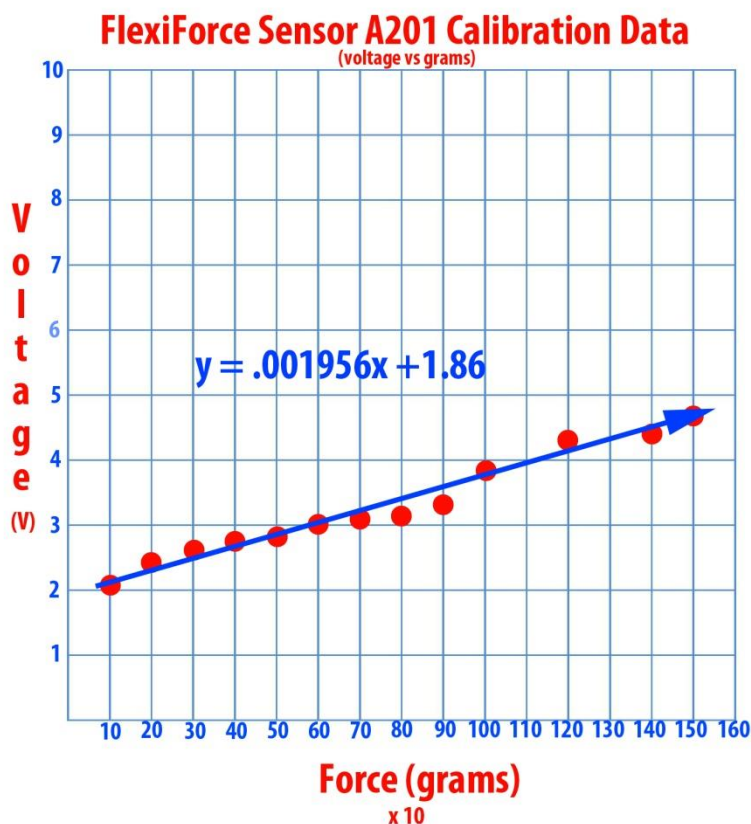


Building an Electric Circuit to Convert the Sensor Resistance into a Usable Voltage **EVALUATION SHEET Answer Key**

Force (grams)	Voltage (V)
100	2.09
200	2.45
300	2.57
400	2.79
500	2.85
600	3.00
700	3.07
800	3.11
900	3.31
1000	3.91
1200	4.32
1400	4.33
1500	4.71
1700	5.55
2000	5.86



Instructions: Now that you know the best fit line, use it to calculate the minimum force required to crack an egg. The goal is to progressively add pressure to the egg, record the voltage, and calculate the pressure using the line of best fit.



Force Required to Crack an Egg



Voltage	Solve for Force	Force Applied	Cracked (Y/N)
y	$x = (y-1.86)/.001956$	x	(Y/N)
1.96	$x = (1.96-1.86)/.001956$	51.12	N
2.09	$x = (2.09-1.86)/.001956$	117.59	N
2.22	$x = (2.22-1.86)/.001956$	184.05	N
2.69	$x = (2.69-1.86)/.001956$	424.34	N
2.72	$x = (2.72-1.86)/.001956$	439.67	N
2.84	$x = (2.84-1.86)/.001956$	501.02	Y

Note: The force required to crack an egg may vary from these example answers.