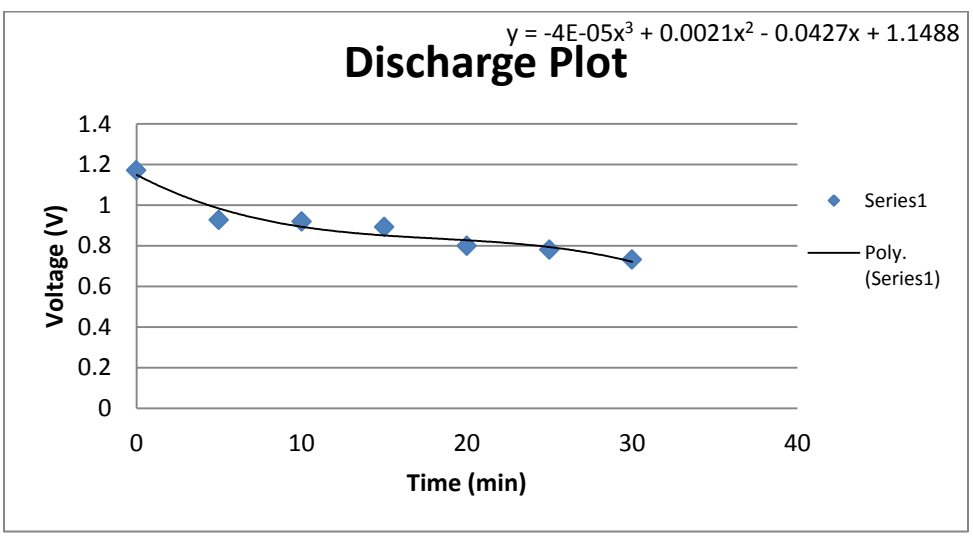
Performance of AA Cells in Recyclable Disposable Cameras

Using a multimeter and a simple circuit, we measured the average power output of a battery with a one ohm resistor (actually 1.05) . This was done by directly observing the voltage value of the active circuit for 30 minutes in 5 minute intervals. The power was calculated by first obtaining the current (by dividing by 1.05 ohms) and then by taking the product of the voltage and the current (V*I=P). Assuming that the power output average accurately represents a relative 'constant' output over the battery's lifetime, we divided this value by the average power required to commit to one flash. This produced a value of about 235 flashes possible. Assuming that an individual user takes all 27 pictures with a flash, 8 consumer cycles are possible.

Time (min)	Voltage (V)	current	power
0	1.17	1.114286	1.303714
5	0.926	0.881905	0.816644
10	0.919	0.875238	0.804344
15	0.891	0.848571	0.756077
20	0.799	0.760952	0.608001
25	0.779	0.741905	0.577944
30	0.731	0.69619	0.508915
		Avg. Current	**Avg. Power**
		0.845578	0.767948
		0.422789	Ampere/Hour
		234.8828	# of flash charges possible.
		maximum # of pictures: 27, assuming a flash is used every time:	
		=234.8828/27	
		8.6994	customer cycles