Power Budget-Bradley Pollock

Student:	**Bradley Pollock**						
Project Name:	**Interactive STEM Exhibit for**						
Team:	**201**						
Version:	**1**						
All Major Components	**Component Name**	**Part Number**	**Supply Voltage Range**	**#**	**Absolute Maximum Current**	**Total Current (mA)**	**Unit**
	PIC18 Microcontroller	PIC18F27Q84	1.8V-5.5V	1	350	350	mA
	Stepper motor	35BYHJ30-36A	12V	1	259	259	mA
	Stepper motor driver	IFX9201SG	-0.3-40V	2	13	26	mA
	3.3V regulator	LM2575D2T-3.3R4G	<45V	1	3000	3000	mA
"+12V Power Rail"	**Component Name**	**Part Number**	**Supply Voltage Range**	**#**	**Absolute Maximum Current**	**Total Current (mA)**	**Unit**
	Stepper motor	35BYHJ30-36A	12V	1	259	259	mA
	3.3V regulator	LM2575D2T-3.3R4G	<45V	1	3000		
					Subtotal	259	mA
					Safety Margin	25%	
					Total Current Required on +12V Rail	323.75	mA
c1. Regulator or Source	Triad 12V Wall Supply	WSU120-3000	12V	1	3000	3000	mA
					Total Remaining Current Available on +12V Rail	2676.25	mA
"+3.3V Power Rail"	**Component Name**	**Part Number**	**Supply Voltage Range**	**#**	**Maximum Current (mA)**	**Total Current (mA)**	**Unit**
	PIC18 Microcontroller	PIC18F27Q84	1.8V-5.5V	1	350	350	mA
	Stepper motor driver	IFX9201SG	-0.3-40V	2	13	26	mA
					Subtotal	376	mA
					Safety Margin	25%	
					Total Current Required on +3.3V Rail	94	mA
c2. Regulator or Source Choice	3.3V regulator	LM2575D2T-3.3R4G	3.3V	1	3000	3000	mA
					Total Remaining Current Available on +3.3V Rail	2906	mA
External Power Source 1	**Component Name**	**Part Number**	**Supply Voltage Range**	**Output Voltage**	**Absolute Maximum Current (mA)**	**Total Current (mA)**	**Unit**
Power Source 1 Selection	Triad 12V Wall Supply	WSU120-3000	100-240VAC	12V	3000	3000	mA
	3.3V regulator	LM2575D2T-3.3R4G	<45V	3.3V	3000	3000	mA
					Total Remaining Current Available on External Power Source 1	0	mA