

SCIENCE NODE V1 BOM		Engineer:	Trevor Murphy, Nefertari Shipley			Prepared for:	OSURC Rover Team										
Category	Item Name	Part Designator (if applicable)	Part Value	Link	Vender	Vender No.	Price	BOM Quantity	BOM Total	Purchase Quantity	Purchase Total	Notes	BOM Total	\$39.81	Purchase Total:	\$65.67	
PCB	Board				PCBWay						\$0.00		\$0.00				
Res		R1	169k	[link]	DigiKey	RMCF0603FT169KCT-ND	\$0.01	1	\$0.01	100	\$0.71		\$0.71				
Res		R2	10.2k	[link]	DigiKey	RMCF0603FT10K2CT-ND	\$0.01	1	\$0.01	100	\$0.71		\$0.71				
Res		R3	24.3k	[link]	DigiKey	RMCF0603FT24K3CT-ND	\$0.01	1	\$0.01	100	\$0.71		\$0.71				
Res		R4	22.6k	[link]	DigiKey	RMCF0603FT22K6CT-ND	\$0.01	1	\$0.01	100	\$0.71		\$0.71				
Res		R5	732	[link]	DigiKey	RMCF0603FT732RCT-ND	\$0.01	1	\$0.01	100	\$0.71		\$0.71				
Res		R6	100k	[link]	DigiKey	RMCF0603FT100KCT-ND	\$0.01	1	\$0.01	100	\$0.71		\$0.71				
Res		R7	120k	[link]	DigiKey	RMCF0603FT120KCT-ND	\$0.01	1	\$0.01	100	\$0.71		\$0.71				
Res		R8,R10,R14	2.2k	[link]	Digikey	RMCF0603FT2K20CT-ND	\$0.01	3	\$0.02	100	\$0.71		\$0.71				
Res		R9	10k	[link]	Digikey	RMCF0603FT10K0CT-ND	\$0.01	1	\$0.01	100	\$0.71		\$0.71				
Res		R11	1k	[link]	Digikey	RMCF0603FT1K00CT-ND	\$0.01	1	\$0.01	100	\$0.71		\$0.71				
Res		R12,R15,R18,R19,R20,R21	470	[link]	DigiKey	RMCF0603FT470RCT-ND	\$0.01	6	\$0.04	100	\$0.71		\$0.71				
Res		R13	220	[link]	DigiKey	RMCF0603FT220RCT-ND	\$0.01	1	\$0.01	100	\$0.71		\$0.71				
Res		R16,R17	33	[link]	DigiKey	RMCF0603FT33R0CT-ND	\$0.01	2	\$0.01	100	\$0.71		\$0.71				
IC	12v Reg	U1		[link]	DigiKey	296-39414-1-ND	\$1.65	1	\$1.65	3	\$4.95		\$4.95				
IC	RS485	U2		[link]	DigiKey	497-6540-1-ND	\$1.59	1	\$1.59	0	\$0.00		\$0.00				
IC	3v3 Reg	U3		[link]	DigiKey	MCP1700T-3302E/MB	\$0.38	1	\$0.38	3	\$1.14		\$1.14				
IC	5v Reg	U4		[link]	DigiKey	576-2770-1-ND	\$0.92	1	\$0.92	5	\$4.60		\$4.60				
IC	Teensy 3.2	U5		[link]	Mouser	841-MK20DX256VLH7	\$7.85	1	\$7.85	0	\$0.00		\$0.00				
IC	Teensy Cortex	U6		[link]	PJRC	IC_MKL04Z32_TQFP32	\$6.95	1	\$6.95	5	\$34.75		\$34.75				
Conn	2 pin header	J1		[link]	Digikey	WM3423-ND	\$0.34	1	\$0.34	0	\$0.00		\$0.00				
Conn	3 Pin Molex	J2, J3, J4		[link]	Digikey	WM7586-ND	\$0.52	3	\$1.56	0	\$0.00		\$0.00				
Conn	Mini USB	J5		[link]	Digikey	WM171115-ND	\$1.85	1	\$1.85	0	\$0.00		\$0.00				
Conn	5 Pin Molex	J6		[link]	Digikey	WM10107-ND	\$0.69	1	\$0.69	10	\$6.93		\$6.93				
Conn	4 Pin Molex	J7, J8		[link]	Digikey	WM3424-ND	\$0.41	2	\$0.81	10	\$4.07		\$4.07				
Diode	Schottky	D1		[link]	DigiKey	SS26FLCT-ND	\$0.48	1	\$0.48	0	\$0.00		\$0.00				
Diode	Red	D2		[link]	DigiKey	160-1176-1-ND	\$0.39	1	\$0.39	0	\$0.00		\$0.00				
Diode	Green	D3, D4, D5, D6		[link]	DigiKey	160-1423-1-ND	\$0.29	4	\$1.16	0	\$0.00		\$0.00				
Diode	Blue	D9		[link]	DigiKey	732-4966-1-ND	\$0.16	1	\$0.16	0	\$0.00		\$0.00				
Diode	RGB	D10		[link]	DigiKey	516-3280-1-ND	\$0.66	1	\$0.66	0	\$0.00		\$0.00				
Diode		D7		[link]													
Cap		C1,C7,C13,C14,C15,C19,C20,C21	100nF	[link]	DigiKey	1276-1099-1-ND	\$0.05	8	\$0.38	30	\$1.41						
Cap		C2	8.2nF	[link]	DigiKey	1276-2546-1-ND	\$0.06	1	\$0.06	10	\$0.58						
Cap		C3	4.7uF	[link]	DigiKey	490-10751-1-ND	\$0.26	1	\$0.26	0	\$0.00						
Cap		C4	10uF	[link]	DigiKey	1276-2891-1-ND	\$0.21	1	\$0.21	10	\$2.10						
Cap		C5	39pF	[link]	DigiKey	1276-6650-1-ND	\$0.17	1	\$0.17	10	\$1.70						
Cap		C6	1.8nF	[link]	DigiKey	1276-2465-1-ND	\$0.06	1	\$0.06	10	\$0.56						
Cap		C8,C9	1.0uF	[link]	Digikey	1276-1066-1-ND	\$0.08	2	\$0.16	10	\$0.80						
Cap		C10,C12,C16,C17,C18	2.2uF	[link]	DigiKey	1276-2953-1-ND	\$0.16	5	\$0.82	20	\$3.26						
Cap		C11	470pF	[link]	DigiKey	1276-2516-1-ND	\$0.10	1	\$0.10	10	\$1.04						
											\$0.00						
Ind		L1	22uH	[link]	Digikey	732-3034-1-ND	\$2.11	1	\$2.11	0	\$0.00						
Ind		L2, L3		[link]	Digikey	240-2378-1-ND	\$0.13	2	\$0.26	0	\$0.00						
											\$0.00						
CT	Crystal Timer	X1	16 MHz	[link]	Digikey	1253-1122-1-ND	\$0.92	1	\$0.92	0	\$0.00						
Mos	Reverse Protection	Q1		[link]	Digikey	IPD90P04P405ATMA1CT-ND	\$1.74	1	\$1.74	0	\$0.00						
Mos	Reverse Protection	Q2		[link]	Digikey	1727-4692-1-ND	\$0.20	1	\$0.20	0	\$0.00						
SW	Tactile Switch	SW1		[link]	Digikey	P13349SCT-ND	\$0.92	1	\$0.92	0	\$0.00						
TP	Test Point	SCL		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00						
TP	Test Point	SDA		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00						

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TP	Test Point	GND		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00					
TP	Test Point	DIG9		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00					
TP	Test Point	DIG10		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00					
TP	Test Point	3v3		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00					
TP	Test Point	5v		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00					
TP	Test Point	12v		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00					
TP	Test Point	24v		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00					
TP	Test Point	ANL7		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00					
TP	Test Point	ANL8		[link]	Digikey	36-5116-ND	\$0.35	1	\$0.35	0	\$0.00					