

2017 EXPLORER CLASS PARTS LIST						
Parts Required						
	Quantity	Item	Notes	Website	Individual Cost (\$)	Total Cost (\$)
Frame						0
	1	PVC Tee Coupling		https://www.lowes.com/pd/Keeney-1	3.49	3.49
	8	PVC 3-Way elbow	this is only one type of elbow, (imagine an L. we'll need 3 sided corner ones to	https://www.lowes.com/pd/LASCO-1-	1.72	13.76
	1	pvc pipes 10ft		https://www.lowes.com/pd/Charlotte	6.74	6.74
		Milk Crate Bottoms	taken from xbot		0	
Navigation Parts						
	8	T-200 Mounting Brackets	Mounting the motors	https://www.bluerobotics.com/store/	5	40
	8	T-200 Thrusters	For Moving	https://www.bluerobotics.com/store/	169	1352
	8	Basic 30A ESC (w/ forward/reverse firmware)	Use to manage motor control	https://www.bluerobotics.com/store/	25	200
ROV Electrical Housing						
	0	Customizable Cast Acrylic Tube (4" Series)	Use to House on board electronics	https://www.bluerobotics.com/store/	54	0
	0	O-Ring Flange (4")	Use to House on board electronics (no 3d printing)	https://www.bluerobotics.com/store/	29	0
	1	Dome End Cap (4" Series)	Use to House on board electronics	https://www.bluerobotics.com/store/	59	59
	0	Aluminum End Cap (4" Series) (No holes)	Use to House on board electronics	https://www.bluerobotics.com/store/	16	0
	2	Enclosure Vent and Plug (Vacuum Plug 4" Series)	Use to House on board electronics	https://www.bluerobotics.com/store/	8	16
Cable and Electrical Surface Housing						
	3	Waterproof electrical couplers	used to attach wires from tether to surface electrical housing	https://www.amazon.com/SMACKN-W	\$14.66	43.98
	30	All Electrical connectors	Get Different color Anderson connectors Get 30 Anderson Connectors	https://powerwerx.com/anderson-po	0.37	11.1
	30	All Electrical connectors	30 amp pins for Anderson connectors Get 30 Anderson Connectors	https://powerwerx.com/anderson-13	0.15	4.5
	1	Power Cable	12 Gauge Red and Black power cord. Get the 100 ft	https://powerwerx.com/red-black-bo	74.37	74.37
	1	Anderson Crimper		https://powerwerx.com/tricrimp-pow	39.99	39.99
	2	White LED lights	used to light environment underwater	https://www.bluerobotics.com/store/	199.99	399.98
	2	Circuit Breaker	use to turn on ROV	http://www.andymark.com/120-amp-	30	60
	2	Fuse Box for ESC	Fuse Box for ESC	http://www.wiringproducts.com/6-cir	14.33	28.66
	10	30 Amp fuses		https://powerwerx.com/mini-atm-bla	0.39	3.9
	1	CAT6 Cable (15m)	Use to communicate with Raspberry Pi	https://www.amazon.com/Outdoor-V	69.25	69.25
	2	DC-DC converter	used to step down voltage for Arduino	https://vetco.net/products/dc-dc-adju	6.95	13.9
Electrical components						
	3	Raspberry Pi Camera Module V2 - 8 Megapixel,1080p	Used to enable user Visual	https://www.amazon.com/Raspberry-	29.5	88.5
	2	Raspberry Pi 3	Used to communicate from joystick to arduino	https://www.adafruit.com/product/30	39.95	79.9
	2	Arduino Mega 2560 R3	used to operate motors/sensors	https://www.adafruit.com/product/15	45.95	91.9
	2	IMU	Gyroscope and Accelerometer	https://www.adafruit.com/product/15	19.95	39.9
	3	SOS Water Sensor	Water Sensor to detect leakage	http://www.bluerobotics.com/store/e	29	87
	4	HS-5646WP	WaterProof servos	https://www.bluerobotics.com/store/	54	216
	1	GPS Module	Tracking ROV	https://www.adafruit.com/product/15	44.95	44.95
Waterproofing						
	3	Water proofing liquid or spray	used to make things waterproof	http://www.shop.corrosionx.com/Cor	12.95	38.85
	1	plastic dip	want to test the "waterproofness"	https://www.amazon.com/Performix-	22	22
	1	liquid silicone	test waterproofing	https://www.amazon.com/Permatex-	4.99	4.99
	1	liquid silicone	test waterproofing	https://www.amazon.com/Permatex-	6.85	6.85
	Quantity					
Competition components						
	1	3d printing filament	material for the 3d printer	https://shop3duniverse.com/collection	50	50
	1	lift bag	test and see what we are working with. do you want a more specific answer?	https://www.amazon.com/XS-Scuba-C	39.97	39.97
	1	ROV pc	its the pc for the ROV	https://pcpartpicker.com/list/yqx7U	650.1	650.1
	1	pneumatics parts	pneumatics parts	http://www.andymark.com/Pneumat	180	180

				Additional Costs	
				Pneumatics Test	15
				MATE Competition Registration	250
				XBOT Fiscal Fee	300
				Travel	25
				Food	200
				Parts Total	Project Total
				4081.53	4871.53