



Exterior



Polycarbonate Roof

Woven Polyethylene Wall



BEFORE

- Cracked and weathered polycarbonate panels
- Deteriorated frame
- Broken and missing windows
- Exposed Nails
- No Shelving
- Sand Floor and trash

AFTER

- New single walled polycarbonate roof
- Woven polyethelene wall
- Replaced windows
- Built a raised bed and shelves
- Installed a tree pot
- Replaced the sand floor with decomposed granite
- Hung vertical gardens

Interior



Background

The Redwood Coast Montessori Elementary School (RCM) is a kindergarten-8th grade public school located in Manila, California. The RCM allows children to work through the curriculum at their own pace as they discover their passions. Their goal is to work toward educating students about the responsibilities each child has within their community and environment.

Criteria	Weight
Educational Value	10
Safety	10
Upcycled Materials	7
Plant Space	6
Effectiveness of Growing	6
Capacity	4
Level of Maintenance	4

Objective

The goal is to transform a deteriorated greenhouse into an engaging learning environment. The green house should be a safe space composed of mostly upcycled materials in which students can grow and learn about plants.

Maintenance Table			
Task	Time [Hours/ Months]	Time [hours/ year]	Annual Maintenance [Hours/
Hose Down Exterior	0.25	-	3.0
Clean Windows	0.50	-	6.0
Disinfection	-	1.5	1.5
Total			10.5

Cost Table			
Item	Quantity	Retail Cost	Our Cost
Primer	1 Gallon	\$23.99	\$0.00
Composite Bender Board (20' each)	2	\$57.98	\$57.98
Twine (40 ft.)	1	\$5.99	\$5.99
2" Wood Screws	1 Box	\$5.99	\$5.99
2" Roofers Screws	36	\$9.27	\$9.27
Wood (2 in. x 4 in. x 12 ft.	6	\$34.56	\$34.56
Wood (1 in. x 3 in x 8 ft.)	5	\$24.95	\$24.95
Polycarbonate Panels (12' x 2')	9	\$341.99	\$37.99
Silicone Caulking (10.1 oz Tube)	1	\$2.28	\$2.28
Paint Brush	1	\$2.99	\$2.99
Paint Roller	1	\$3.99	\$3.99
Polycarbonate Ridge Flashing	3	\$75.87	\$75.87
Thermometer/ Hygrometer	1	\$15.95	\$15.95
Stainless Steel Washers	30	\$6.00	\$6.00
Decomposed Granite	2/3 Scoop	\$50.17	\$50.17
Woven Poly 12 ft. x 22 ft.	1	\$114.32	\$0.00
Total Cost		\$778.28	\$335.97

