New Covenant Christian Academy
Home School Robotics Club
1603 Belvue Drive
Forest Hill, MD 21050
http://www.techbrick.com

You will need to build a competition class table to practice your missions. It is not necessary to build the lighting structure.

1.1.1 Optional Table

With safety, weight, height, and cost in mind, a simple design is offered here, but as long as your surface is smooth, and your Border Walls are located properly, how you support the field is up to you.

See your manual for high resolution images.

1.1.2 Materials

Material	Quantity (with light)	Quantity (no light)
Luan, 96" X 48" X 1/4"	1	1
Two-by-four, 8'	3	3
One-by-three, 8'	2	2
Two-by-three, 8'	1	N/A
Two-by-three, 10'	1	N/A
Black paint	1 pt. or spray can	1 pt. or spray can
Coarse drywall screws, 6 X 2-1/2"	1/2 lb.	1/2 lb.
Saw horse (kit), about 24" high and 36" wide	2	2
48" fluorescent shop light w/(2) 40-watt tubes	1	N/A

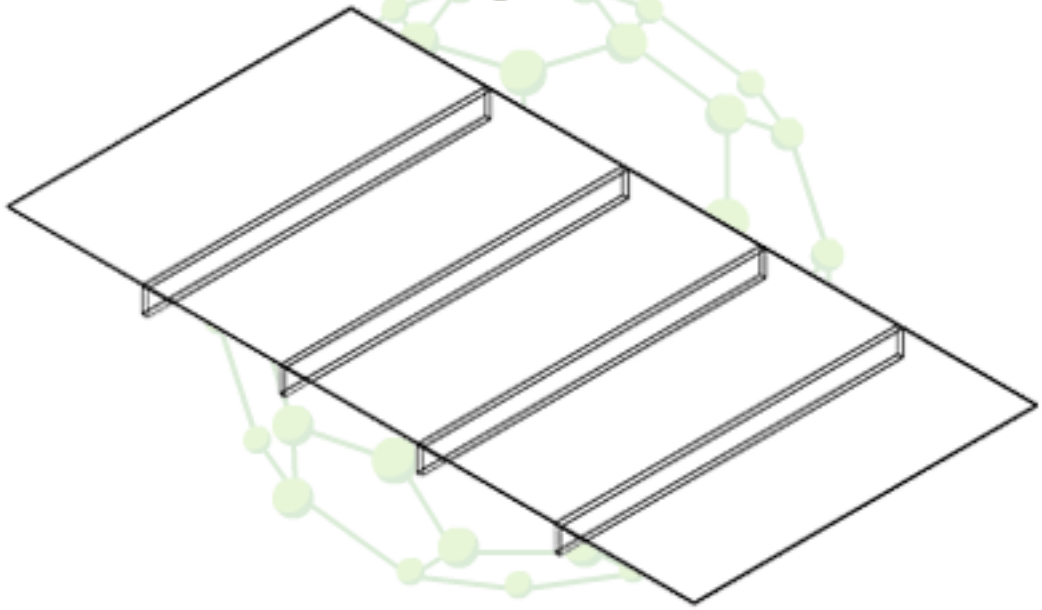
1.1.3 Parts

Part	Make From	Dimensions	Paint	Quantity (with light)	Quantity (no light)
Table surface	luan	96" X 48"	no	1	1
Long Field Border	two-by-four	96"	yes	2	2
Short Field Border	two-by-four	45"	yes	2	2
Stiffener	one-by-three	48"	no	4	4
Upright	two-by-three	48"	yes	2	N/A
Cross beam	two-by-three	99"	yes	1	N/A
Saw horse	kit	H ~ 24" W ~ 36"	no	2	2

1.1.4 Asssembly

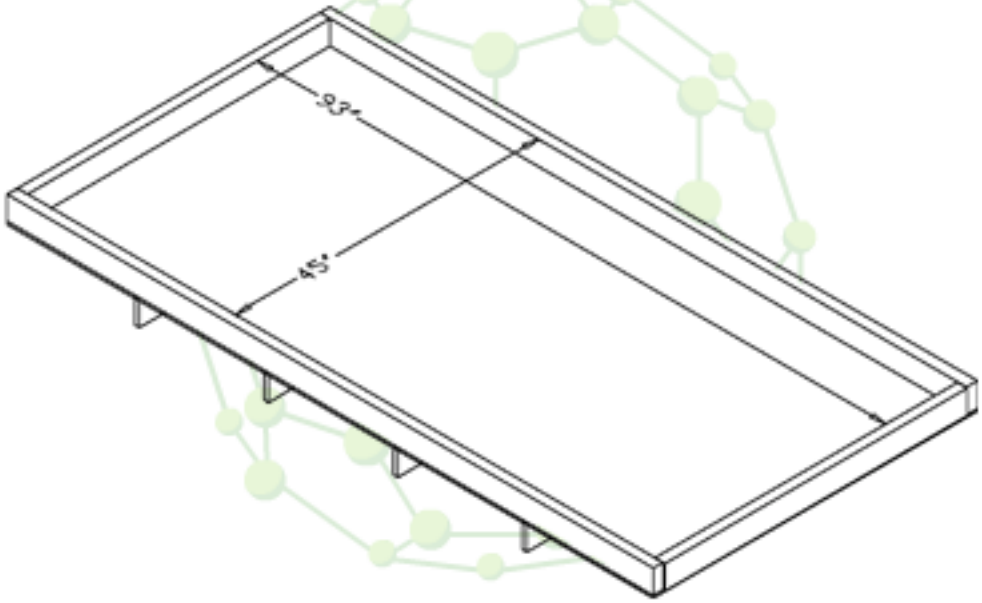
Step 1:
Decide which face of the luan is least smooth, and consider that the bottom face. On the bottom face, locate, clamp, and screw on the Stiffeners as shown in Figure 1 (about every 18 inches).

Figure 1



Step 2:
On the top face of the plywood, locate and clamp the framework of Field Borders around the perimeter as shown in Figure 2.

Figure 2



Step 3:
As shown in Figure 3, center, clamp, level, and screw the uprights onto the outside face of the short Field Borders. With the help of another person, situate the Cross Beam on top of the two uprights and screw it down. Hang the shop light by its chains from the center of the Cross Beam. With the help of another person, place the whole assembly on short saw horses. If you do not have two fields to join back to back, center a dummy board made from scrap (at least 6 inches long) along the back Border Wall, since most Challenges include a Mission Model that rests across the three inch thickness of two borders next to each other.

Figure 3