

Item	Size	Item # from CAD	Backstop		Corner Base		Trigger		Chute		Center Goal		Total	UPC	Source	Comment
			1 per assy	assemblies total	4 per assy	assemblies total	4 per assy	assemblies total	4 per assy	assemblies total	1 per assy	assemblies total				
1/2" PVC - Schedule 40																
pipe	10.5" long	41	3	3									3	754826200488	Home Depot	UPC is for a 10' long piece of pipe - you'll need 5 of them and then cut them to make these quantities
pipe	24" long	42	9	9									9			
pipe	40" long	43	2	2									2			
pipe	1.25" long	81,111					1	4					4			
pipe	4" long	82,112					1	4					4			
pipe	6" long	83,113					1	4					4			
pipe	23" long	84,114					1	4					4			
pipe	8" long						1	4					4			
Tee		44,86,116	5	5			1	4					9	012871620621	Home Depot	Contractor pack of 10 UPC is 012871636080
Cross			1	1									1	012871624810	Home Depot	
90 degree Elbow		85,115					2	8					8	012871623318	Home Depot	Contractor pack of 10 UPC is 012871636127
45 degree Elbow		87,117					1	4					4	012871624537	Home Depot	
3/4" PVC - Schedule 40																
pipe	1.5" long	91,121							1	4			4	754826200495	Home Depot	UPC is for 10' long piece of pipe - you'll need 3 of them and then cut them to make these quantities
pipe	2" long	92,122							2	8			8			
pipe	3" long	93,123							3	12			12			
pipe	13.5" long	94,124							2	8			8			
pipe	18" long	95,125							2	8			8			
90 degree Elbow		96,126							5	20			20	012871623332	Home Depot	Contractor pack of 10 UPC is 012871636042 - you'll need 2 of them
Tee		97,127							2	8			8	012871620645	Home Depot	
Cross		98,128							1	4			4	012871624834	Home Depot	
Bushing, 3/4" - 1/2"		99,129							2	8			8	012871626470	Home Depot	
1" PVC - Schedule 40																
pipe	5.75" long	151									1	1	1	754826200501	Home Depot	UPC is for 10' long piece of pipe - you'll need 1 of them and then cut them to make these quantities
pipe	13" long	152									6	6	6			
pipe	21.25" long	153									1	1	1			
Tee		154									1	1	1	012871620669	Home Depot	
Cross		155									2	2	2	012871624858	Home Depot	
4" PVC - Drain or Sewer Pipe (Sch 40 may be too heavy)																
pipe	40" long	71,101							1	4			4		Home Depot	Schedule 40 PVC may be too heavy to use. Drain pipe will work
Lumber																
Plywood, 1/4" thk	17" x 33.25" trapezoid	52			1	4							4			
Plywood, 1/2" thk	7" x 7" triangle	53			1	4							4			
Plywood, 1/2" thk	3" x 3" triangle				1	4							4			
Plywood, 3/4"	3' x 3'	141									1	1	1	099167465364	Home Depot	UPC is for 4'x4' piece of HardiPlank that you will need to cut to 3'x3'
2" x 2" furring strip	14" long	142									4	4	4	621241202086	Home Depot	UPC is for 8' long piece of wood - you'll need 3 of them and then cut them to make these quantities
2" x 2" furring strip	33 1/8" long	143									2	2	2			
2" x 2" furring strip	36" long	144									2	2	2			
Dowel, 1/2" dia	43" long	149									1	1	1	038453062085	Home Depot	UPC is 48" length. Cut to size per build instructions
Other																
Gaffers Tape, blue	2" wide	21,102,106,156,183													Findtape.com	Scapa 125 Economy Grade 2 in. x 60 yds. (4 8mm x 55m)
Gaffers Tape, red	2" wide	22,72,76,157,182													Findtape.com	Scapa 125 Economy Grade 2 in. x 60 yds. (4 8mm x 55m)

Gaffers tape, white	1" wide	23													Findtape.com	Scapa 125 Economy Grade 1 in. x 60 yds. (2 4mm x 55m)	
Backstop Netting	36"x 80"	45	1	1								1	099713032064	Home Depot	UPC is for Plastic Garden Fence with a 1" Mesh, however brand is not important. Audience must be able to see through the net to see the field. Other UPC's include: 038398006045 (Easy Gardner Bird Block)		
Narrow utility hinge	1 1/2" long	51			1	4						4	030699151622	Home Depot	UPC is for a package of 2 - you'll need 2 of them		
Paint, white	Behr Interior Flat	57,1412											082474105016	Home Depot	Behr Interior Flat Ultra Pure White. UPC is for 1 gallon		
Hose Clamps	6" diameter	73,103									2	8		8	078575179957	Home Depot	Careful: Not all hose clamps tighten enough to secure the ball chutes to the ball chute support. This UPC does.
PVC Cement		88											038753310138	Home Depot	Any good PVC cement will do		
Pipe flange, 1/2" pipe		145										1	1	1	019442149505	Home Depot	
Creatology Foam sheet, Red	12" x 18"	147										4	4	4	400100241059	Michaels	Michael's may stop carrying this brand so you can also use Creative Hands Cool Foam (UPC 02844567828 at Michaels) or Darice Foamies Sheet (UPC 082676164033 from JoAnn's Fabric)
Creatology Foam sheet, Blue	12" x 18"	148										4	4	4	400100241073	Michaels	Michael's may stop carrying this brand so you can also use Creative Hands Cool Foam (UPC 02844567859 at Michaels) or Darice Foamies Sheet (UPC 082676632969 from JoAnn's Fabric)
Net, fiberglass screen for goal		164										2	2	2	047888116089	Home Depot	UPC is for a 36"x84" Silver Gray Fiberglass screen roll - you only need 1. Brand is not important. Mesh must be tight for balls to stay in goal, yet viewable by the audience. Another brand is UPC 011646705877 (pet resistant screening)
Hinge	1-1/16 in. x 12" long	166										2	2	2	082901143024	Ace Hardware	Ace brand hinge. Part number 5298328. This size hinge is also carried at some Lowe's stores
Polycarb, 1/8" thk	12" x 24"	171										2	2	2	726941133019	Home Depot	
Polycarb, 1/8" thk	12" x 12"	172										2	2	2	726941133019	Home Depot	UPC is for the 12"x24" piece to be cut in half - you only need 1 piece to make the 2 1' squares
Scotch Double-sided tape	1/2" clear	173															
Bin, Sterilite	64 quart	191										2	2	2	073149928276	WalMart	
Steel Pipe, 1/2" dia	36" long	1410										1	1	1	019442606954	Home Depot	
Multi Purpose Spray Adhesive		1413													021200212109	Home Depot	UPC is for 1 can of 3M Super 77 Spray Adhesive

Game Elements

balls	white															76		
bonus balls	yellow	36										1	4			4		
IR Beacon		1613											2	2	2		HiTechnic.com	Available by 10/1. Wait for word from FTC. Teams should only buy 1. A/Ps will be able to buy a pair (master/satellite) for the goal
9 Volt Battery		1613											1	1	1			Powers the IR Beacon
Sticky-back Hook-n-Loop	1/2" - 3/4" strip	1612											2	2	2	075967900816		UPC is not important. Any brand of Velcro will do

Hardware

Wire Ties	4" long	46,1611	18	18								31	31	49	032076070335	Home Depot	UPC is for package of 40. You'll need 9 more.
Wire Ties	8" long	38,58			2	8								8	032076070342	Home Depot	UPC is for package of 20
8-32 lock nut		54			4	16						12	12	28	030699192410	Home Depot	UPC is for package of 4 - you'll need 7 of them

2009 FTC Game
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Bill Of Materials
Rev 5.2

8-32 Button Head Screw	1/2" long	55			2	8					1	1	9	030699293513	Home Depot	UPC is for brass package of 6 - you'll need 2 of them. Also UPC 030699329311 is Stainless package of 6
8-32 Button Head Screw	3/4" long	56			2	8							8	030699329519	Home Depot	UPC is for stainless package of 5 - you'll need 2 of them
Wood screw	#10 x 3/4"	146									4	4	4		Home Depot	For attaching the flange
Wood screw	#10 x 1 1/2"	1411									26	26	26	030699211029	Home Depot	UPC is for package of 50
1-4 20 Button Head Bolt	1 1/2" long	167			4	16						0	16	030699280216	Home Depot	These 4 are for connecting the 7" triangle to the field borders.
1-4 20 Button Head Bolt	2" long	167									8	8	8		Home Depot	
1-4 20 Lock Nuts		168			2	8					8	8	16	030699192618	Home Depot	UPC is for package of 2 - you'll need 4 of them
10-32 Button Head Bolt	1/2" long	169									12	12	12	030699295319	Home Depot	UPC is for package of 4 - you'll need 3 of them
10-32 Lock Nuts		1610									12	12	12	030699321117	Home Depot	UPC is for package of 4 - you'll need 3 of them

highlighted items are what has changed since last revision