

BUILD YOUR OWN DUMP TANK

I THOUGHT IT WOULD BE COOL TO HAVE A DUNK TANK FOR A SCHOOL CARNIVAL. AFTER DOING A LITTLE RESEARCH, I FOUND THAT "TRADITIONAL" DUNK TANKS ARE A BIT DANGEROUS (AND QUITE LARGE TO STORE, CUMBERSOME TO TRANSPORT AND EXPENSIVE TO PURCHASE). SO I CAME UP WITH AN IDEA TO HAVE THE WATER DUMP ON TOP OF A PERSON. THIS CONTRAPTION HANGS FROM A STANDARD BASKETBALL HOOP. WHEN A TARGET ON A PLATFORM IS HIT, IT FALLS OFF A SHELF AND CAUSES THE TANK TO FLUSH. WE USED A DUMP TANK AT OUR SCHOOL CARNIVAL TO THE JOY OF MANY KIDS AND ADULTS.



MATERIALS

ALL OF THE MATERIALS CAN BE PURCHASED AT A LOCAL HARDWARE STORE. TOTAL COST IS ABOUT \$70.

- WASTEBASKET (AROUND 20 QUARTS WITH A FLAT, STURDY BOTTOM) - \$10
- TOILET FLUSH VALVE - \$10-20 (FILL VALVE OPTIONAL)
- METAL TOILET LEVER - \$3
- 4 ROPE CLIPS - \$3
- 4 SPRING HOOKS - \$10
- 4 PIECES 2' LONG CHAIN - \$8
- 2 METAL TIE STRAPS- \$2
- 2 ALUMINUM EXTENSION BARS - \$8
- COLANDER - \$3



STEP 1 - MOUNTING SYSTEM

THE DUMP TANK IS DESIGNED TO HANG FROM A BASKETBALL HOOP. STRONG CHAIN AND METAL CLIPS HOLD THE TANK SECURELY.

- DRILL HOLES IN THE METAL TIE STRAPS TO MATCH THE ROPE CLIPS.
- CONNECT CHAIN TO ROPE CLIPS, USING THE TIE STRAPS AS REINFORCEMENT IN THE BACK. TIGHTEN NUTS.



STEP 2 - CUT HOLES AT BOTTOM OF WASTE BASKET

CUT A HOLE IN THE WASTEBASKET FOR THE FLUSH VALVE, AND THE OPTIONAL FILL VALVE. THE FILL VALVE IS ONLY NEEDED IF YOU WISH TO FILL THE DUMP TANK WITH A WATER HOSE AND HAVE IT STOP FILLING AUTOMATICALLY (LIKE A TOILET).

- USE A 2.5" HOLE CUTTER FOR THE FLUSH VALVE. LOCATE HOLE OFF TO ONE SIDE.
- USE A 7/8" BIT FOR THE FILL VALVE.



STEP 3 - MOUNTING PLATE FOR COLANDER

EARLY PROTOTYPES OF THE DUMP TANK JUST HAD THE FLASH VALVE AT THE BOTTOM, BUT THE WATER CAME OUT UNEVENLY, AND IT LOOKED A BIT UGLY. A COLANDER GIVES A NICE SHOWER-LIKE SPRAY. MOUNTING THE COLANDER DIRECTLY TO THE WASTEBASKET MAY CAUSE LEAKS. INSTEAD, CREATE A WOODEN MOUNTING PLATE MADE OUT OF THIN PLYWOOD (3/8" THICK IS FINE).

- CUT MOUNTING PLATE TO EXTEND BEYOND WASTEBASKET.
- CUT HOLES TO MATCH ONES ON THE WASTEBASKET.



STEP 4- INSTALL METAL TOILET LEVER

CUT A HOLE FOR THE FLUSH LEVER. IF THE HOLE FOR THE FLUSH VALVE IS ON THE LEFT SIDE, THE FLUSH LEVER SHOULD BE ON THE RIGHT SIDE, OR VICE-VERSA.

- USE A 7/8" BIT FOR THE FLUSH LEVER HOLE.
- CUT A SLIT ON THE SIDE OF THE WASTEBASKET BY THE HANDLE. THIS SLIT IS FOR THE EXTENSION ARM USED TO FLUSH THE TANK.



STEP 5 - MOUNT COLANDER

INSERT THE FLUSH VALVE THROUGH THE HOLE IN THE WASTEBASKET AND MOUNTING PLATE. TIGHTEN THE RING NUT TO HOLD SECURELY IN PLACE. REPEAT FOR FILL VALVE.

- USE A SHORT METAL PIECE AS SUPPORT BACKING.
- DRILL HOLES THROUGH MOUNTING PLATE, COLANDER AND SUPPORT PIECE. USE SHORT BOLTS TO HOLD COLANDER IN PLACE.



STEP 6- EXTENSION BAR, COUNTER WEIGHT

THE EXTENSION BAR IS USED TO FLUSH THE TANK. ATTACHED TO THE END OF THE EXTENSION BAR IS A STRING WITH A TARGET, WHEN HIT, CAUSES THE FLUSH LEVER TO GO DOWN. A COUNTERWEIGHT IS REQUIRED SO THE FLUSH VALVE STAYS CLOSED.

- DRILL HOLE IN ALUMINUM EXTENSION BAR. ATTACH TO METAL TOILET LEVER.
- INSTALL COUNTERWEIGHT. EXAMPLE USES A 2 LB. FISHING WEIGHT.
- CONNECT TO BASKETBALL HOOP USING SPRING HOOKS.



FILL THE DUMP TANK WITH A GARDEN HOSE

THERE ARE SEVERAL WAYS TO FILL THE DUNK TANK. OF COURSE YOU CAN DO THIS MANUALLY.

IF THE FILL VALVE IS USED, A GARDEN HOSE CAN CONNECT WITH A HOSE ADAPTER. THE TANK WILL FILL AND SHUT OFF AUTOMATICALLY!



FILL THE DUMP TANK WITH A PUMP

THERE ARE TIMES WHEN A GARDEN HOSE IS NOT HANDY. OR WHEN DRAINAGE FOR LOTS OF WATER IS POOR.

AN ALTERNATIVE IS TO USE A MARINE BILGE PUMP (ABOUT \$ 50) TO FILL THE TANK, AND USE AN INFLATABLE CHILDREN'S SWIM POOL TO CATCH AND RECYCLE THE WATER.



TARGET

ONE WAY TO CREATE A TARGET IS TO USE A 2'X6' PIECE OF PLYWOOD. ADD LEGS AND CUT A HOLE IN THE CENTER. BEHIND THE HOLE IS A SHELF AND A HINGED DOOR. PAINT THE DOOR TO CONTRAST THE TARGET.

WHEN A PERSON THROWS AN OBJECT (JUGGLING BAGS OR BEAN BAGS SEEM TO WORK THE BEST) AND HITS THE TARGET, A WEIGHT WILL BE PUSHED OFF THE SHELF AND FLUSH THE TANK.

