

## Appendix C: Constructing a Plywood Platform and Ramp

Constructing the platform is a good project activity for 4H, FFA or vocational agriculture students. Several platforms can be constructed for use by community agencies and leaders who make farm health and safety presentations.

The directions for constructing the ramp are presented in two parts. The first part starts on this page and is the printed list of instructions. The second part is a one-page set of diagrams that accompany the printed instructions. Note that the diagrams are numbered from Figure 10 through 13. Figures 1 through 9 are found in Appendix B.

1. Constructing the plywood ramp and platform is easy. Obtain a 1/2-inch thick piece of plywood and two 12-inch long 2 x 4 or 2 x 6 sections. Look at Figures 10-13 and follow these instructions
  - a) Platform - Cut a piece of plywood 28 inches long and 12 inches wide (see Figure 10).
  - b) Ramp - Cut a second piece of plywood 14 inches long and 12 inches wide (see Figure 10).
  - c) Breakaway section - Using a saber saw or a jig saw, cut a 12-inch by 3 1/4 -inch section from one side of the platform. The cut should be made 4 inches from one end of the platform and 12 inches from the other end (see Figure 10). Save this piece.
  - d) Hinges for breakaway section - Attach the 12 x 3 1/4-inch piece of plywood to the platform with two small hinges and screws as shown in Figure 10. Place the hinges on the bottom side about 1 1/2 inches from each end of the breakaway section. Use small screws so that the tips don't come through the top side of the platform.
  - e) Hinges for the ramp - Attach the 12 x 14-inch plywood ramp to the platform with two small hinges and screws as shown in Figure 10. Place the hinges on the bottom side about 1 1/2 inches from each side of the ramp. Make sure to put the two hinges on the 12-inch width of the ramp, and not on the 14-inch length of the ramp. Use small screws so the tips don't come through the top side of the ramp.
  - f) Platform supports - Cut two 12-inch lengths from a 2 x 4 or a 2 x 6-inch piece of scrap. Make sure both pieces are the same width and length (see Figures 11 & 12).
  - g) Pull out block - Cut a 4-inch-long section of 2 x 4 or 2 x 6 (whichever you used for the platform supports). Drill a small hole in the center of one end of the block. Then screw a round eyelet hook into the block. Attach a 2-foot length of string to the eyelet (see Figures 11 & 12).

2. Assembling the platform, ramp, and supports is easy.
  - a) Place the two 2 x 4 (or two 2 x 6) supports under each end of the platform as shown in Figure 11.
  - b) Place the pullout block and string as shown in Figures 11, 12, and 13.
  - c) If you wish, drill two holes from the top of the platform into the two supports at the ends of the platform. Use flathead screws, flathead roofing nails, or wooden dowels to pin the platform to the supports. If you use flat-head nails and a hole slightly larger than the diameter of the nail, you can easily assemble and disassemble the platform and the supports. Wooden dowels also work well for this purpose. An alternative is to fasten the two support blocks to the bottom side of the platform by using Velcro hook and loop fastener tape.
  
3. Now you are ready to use the platform and ramp.
  - a) Place a Mr. Good Egg Farmer on the tractor seat as shown in Figure 1 on page 5 of the Instructor's Guide and in Figure 2 in Appendix B.
  - b) Select two people from the group. Have one person push the tractor slowly up the ramp and onto the platform as shown in Figure 13 in Appendix C.
  - c) Have the second person hold the string attached to the pull block.
  - d) When both the right-side front and rear wheels of the model tractor roll onto the breakaway section, tell the second person to pull the string to jerk the block out from under the platform.
  - e) When the block is pulled out, the breakaway section will fall down, and the model tractor will overturn.
  - f) Without a ROPS, the egg will be smashed.
  - g) With a ROPS and seat belt (sticky back hook and loop fasteners), the egg will be undamaged.
  
4. Before you conduct the activity for a group, test your apparatus. Find out how it works and make adjustments in the way you roll the tractor up the ramp and across the platform. It works best if the tractor is rolled slowly ahead in the approximate direction and position shown in Figure 13 on the next page.

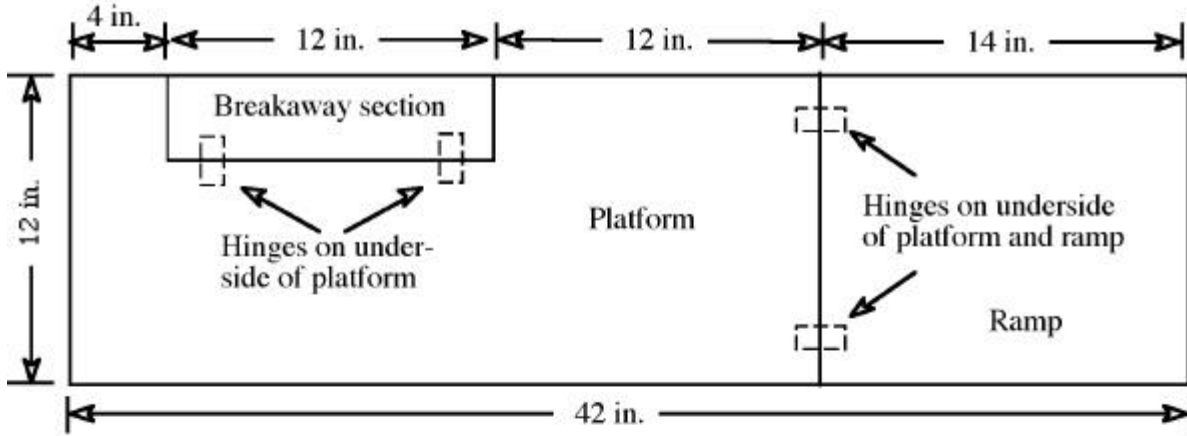


Figure 10: Top view of platform, breakaway section, and ramp

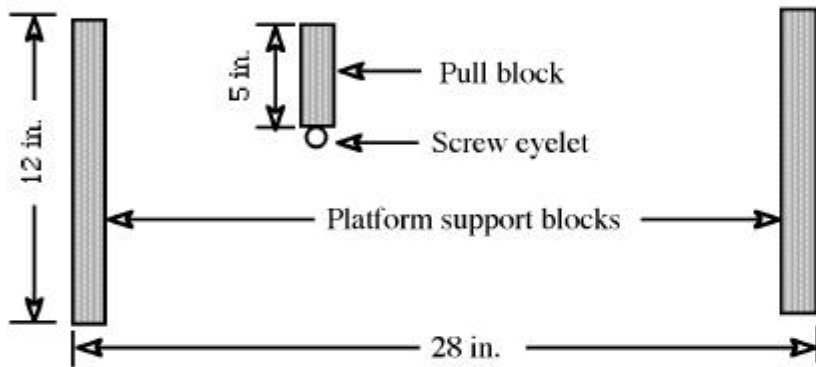


Figure 11: Top view of 2 x 4 bridge support blocks and pull block

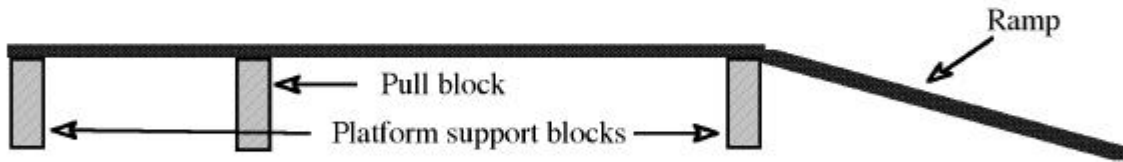


Figure 12: Side view of 2 x 4 supports, platform, and ramp

