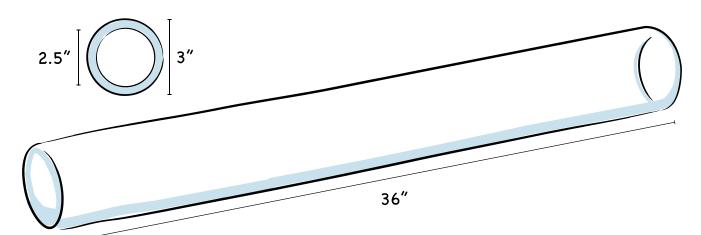
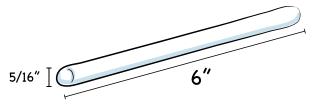
Kerplunk Feeder

Ethan Riepl Saint Louis Zoo

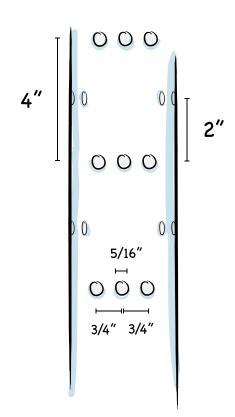


The kerplunk feeder is made from a 36" long clear acrylic tube, with an outside diameter of 3" and inside diameter of 2.5"

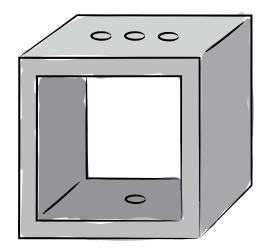


The sticks are clear acrylic rods 5/16" in diameter and about 6" long.

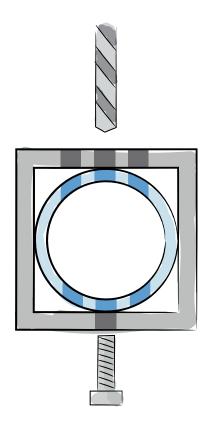
The feeder contains 10 rows of sticks 2" apart, alternating perpendicularly. There are three holes in each row, with the middle hole centered on the side of the tube. The center of each hole in the row is ¾" inches apart. The holes are 5/16" in diameter.



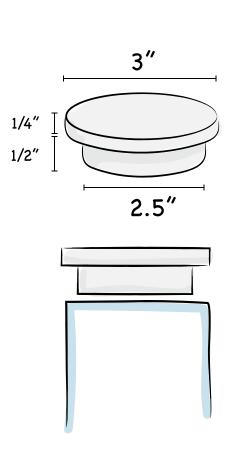
As the sticks in each row need to be parallel, the holes also need to be drilled parallel. Strongly suggest building a jig to help ensure that everything lines up perfectly, as drilling into a curved surface will be extremely difficult to do accurately and cleanly. Build a square sleeve that the tube fits snuggly into (3"x3" internal dimensions.) Drill a 5/16" hole into the middle of one side, and another directly across from it on the other side. One on of the sides, drill the two side holes on either side.



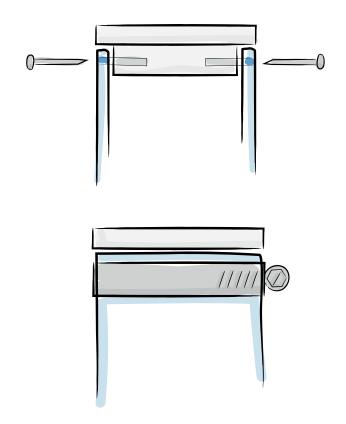
Using the jig, drill out the center hole. Insert a 5/16" bolt to hold the tube in place and drill the two side holes. Remove the bolt, rotate the tube 180°, insert the bolt into the bottom hole to hold the tube in place and drill the three top holes. Repeat this every 2" down the length of the tube, with alternating rows being perpendicular.

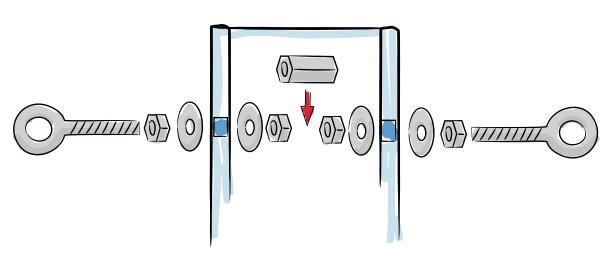


If using with primates, a lid is strongly recommended. Cut a 3" diameter disc from ¼" material and a 2.5" diameter disc from ½" material. Fasten the two together using glue, screws, etc.



Place the lid into one end of the tube, and drill two small holes (~1/8") into the sides of the tube about 1/4" from the end. Find two nails that fit the hole size and insert them through the holes to secure the lid in place. Use a hose clamp of the appropriate size to cover the nail heads and tighten firmly.





Below the hole clamp, drill two ¼" holes directly across from each other through the tube. Using two eyebolts, four fender washers, two hex nuts, and one coupling nut, assemble the support bracket that the feeder will hand from. Once the eyebolts are secured together by the coupling nut, tighten each set of hex nuts so that the wall of the tube is firmly sandwiched between them. Use cable, chain, or rope to hang the feeder. To keep animals from tipping the feeder over, another bracket can be added to the bottom to anchor from below as well, if desired.

Use a narrow circular file to widen and/or straighten any holes so that the sticks slide smoothly into each set of holes, but not to the point where they fall out easily when the feeder it tilted or jostled.

To add difficulty, sticks can be made to only be removeable from one direction. Using a heat gun, warm the last ½" of the stick until it start to soften. Clamp the end in a vise or large pliers to flatten to an oval shape.

