

2 Liter Cat Feeder

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These instructions explain how to fabricate a cat feeder out of a 2 liter bottle. This manual is designed for those interested in helping our environment by recycling and for those who like cats.

Total project time: 30 to 60 minutes.

Tools required:

- * Scissors.
- * Box cutter.
- * Measuring tape.
- * High temperature hot glue gun & 1 glue stick.

Materials needed:

- * 1/8" thick, 6" by 6" (or larger) piece of cardboard.
- * One plastic 2 liter bottle.
- * Permanent marker.
- * One piece of 100 grit sand paper

These instructions will cover the following steps:

Preparing the container, fabricating the feed bowl & feed bowl opening, checking feed bowl clearance, creating the feed plate & feed plate supports, attaching feed plate supports, installing the feed plate, installing the feed bowl, fabricating & installing the feeder cap.

Motivation behind this project:

Many people in the U.S. don't take advantage of recycling or realize its many benefits to both our economy and environment.

This project is an attempt to save at least some plastic bottles from being littered or landfilled.

Recycling statistics:

According to a report created by the Container Recycling Institute (CRI) of Washington D.C. (www.container-recycling.org), American consumers purchase over 500 million beverage bottles and cans every day. Only one in three are recycled. The other two out of three are landfilled, incinerated or littered.

According to Patricia Franklin, executive director of the Container Recycling Institute "Beverage sales jumped five-fold in the last 30 years while container recycling rates have dropped from 53% in 1992 to 34% in 2004".

Warning:

Some of the following steps require the use of sharp objects and heated appliances. Personal injury can occur from improper use of these tools. Please use caution.

Note:

While gluing together the different parts described in this manual, you will need to lightly scuff the areas to be glued, for proper adhesion.

PARTS FABRICATION:

Step 1: Preparing the 2 liter bottle:

Remove the plastic label or wrapper which surrounds the body of the bottle. Wash the inside and outside of the bottle thoroughly. Make sure to remove any residue or other contaminants and let the bottle dry.

Step 2: Creating the "Feed bowl":

2-A: Pick up the bottle; notice the slight indentation around the circumference of the base of the bottle. Use this indentation as a guide and draw a cutting line around the base of the bottle, **figure 2-a**.

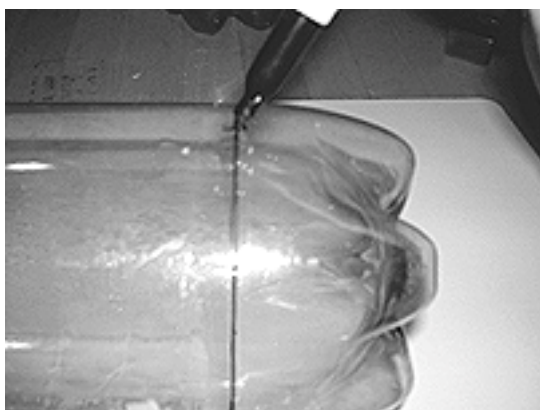


Figure 2-a

2-B: Place the bottle on a hard surface (**figure 2-b**) and carefully cut along the line you drew in step **2-A**.



Figure 2-b

Set the feed bowl aside for later use.

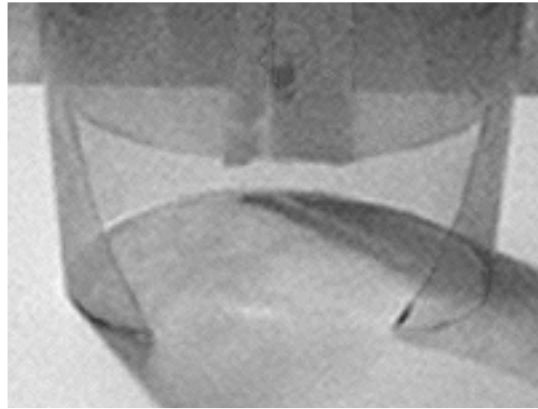
Step 3: Creating the feed bowl opening:

3-A: Cut out the included **feed bowl opening template** (**figure 3-a**) located below, and trace it onto the base of the bottle as shown in **figure 3-b**.



Figure 3-a

3-B: Cut out the feed bowl opening you traced and keep the scrap for later use.



Feed bowl opening

3-C: Rotate the feeder so the feed bowl opening is facing directly away from you. You are now looking at the back of the feeder. Measure 4 1/4 inches up from the base of the feeder and make a 1 inch wide, horizontal mark, **figure 3-c**. Cut along this line to create an opening for later use (**figure 3-cc**).

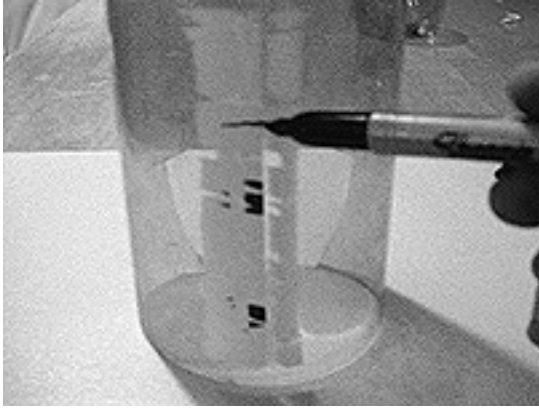


Figure 3-c

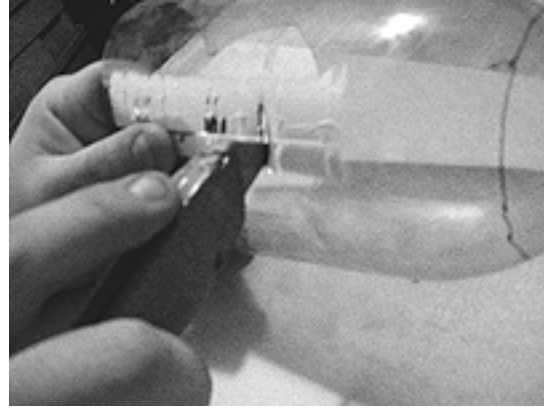


Figure 3-cc

Step 4: Fabricating the feed plate supports:

Retrieve the feed bowl opening scrap that we set aside earlier. Cut two strips, 3/4 inch wide by 3 inches long and label them "1" and "2". Set these aside for later use.

Step 4: Checking feed bowl clearance:

Place the bottle upright, on a flat surface (the bottle cap should be pointing upwards). Slide the feed bowl into the feed bowl opening; it should slide in freely with no resistance. If there is resistance, trim more material off the opening as needed and re-check (**figure 4-a & 4-b**).



Figure 4-a

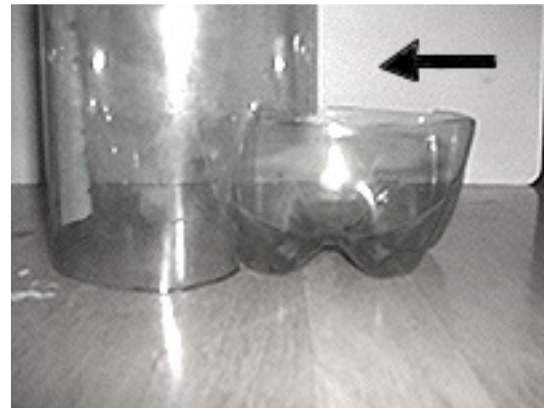


Figure 4-b

Step 5: Fabricating the "feed plate"

NOTE: This feeder may fail if thinner feed plate material is used. As an option, you could use several thinner pieces of cardboard glued together.

Notice the markings on the feed plate template, **figure 5-a**. Copy them onto the cardboard when tracing. These marks will serve as mounting guides for the support strips and help to properly align the feed plate inside the feeder.

The vertical line on the right side of **figure 5-a** will serve as a guide for bending the feed plate to create the "**feed opening**", explained later.

Support strip 1 will be mounted on the left side of the feed plate; support strip 2 will be mounted on the right side (the side with the vertical **feed opening** line).

5-A: Cut out **figure 5-a** below and use it to trace an outline of the feed plate onto the cardboard. Next, cut out the cardboard feed plate.

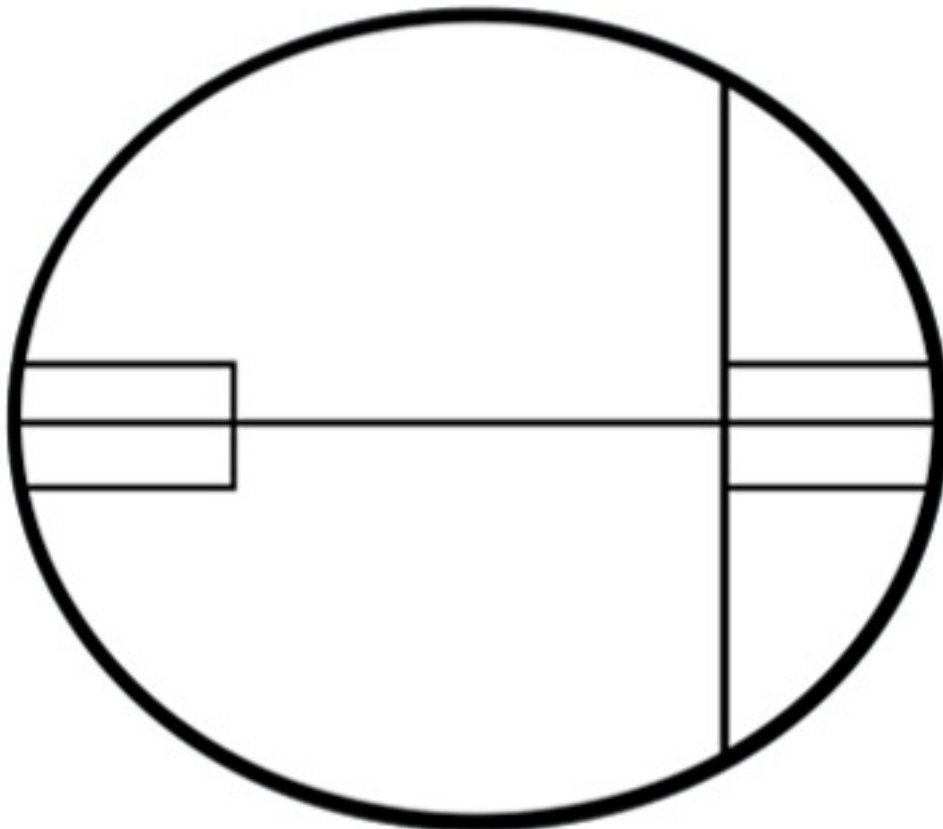


Figure 5-a

Notice in **figure 5-a**, the vertical line on the right side of the template above. This is the "**plate opening**" line. We will use it later to bend the feed plate along this line which will create an opening for the cat food to flow into the bowl from the feeder.

ASSEMBLY:

Step 7: Attaching the feed plate support strips

7-A: Attach the strips as shown in **figure 7-a**. The strips must be attached one at the front and one at the rear of the feed plate. Using the feed plate markings as a guide, glue the strips onto the feed plate.

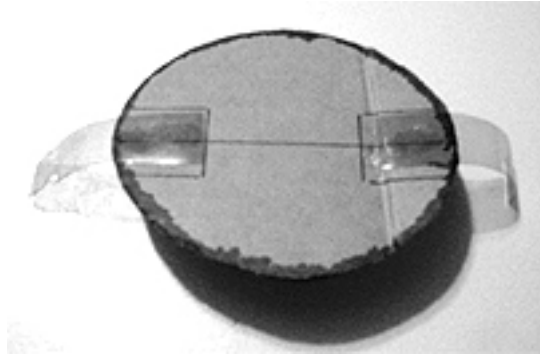


Figure 7-a

7-B: After attaching the support strips, bend the cardboard upward, along the vertical "**plate opening**" line to create the "**feed flap**".

Step 8: Installing the feed plate:

8-A: Insert the feed plate as shown in **figure 8-a**, with the bent feed opening pointing downward. While pushing it up into position, insert support strip "**1**" through the small opening we made earlier in the back of the feeder. To secure the support strip, glue it in place.

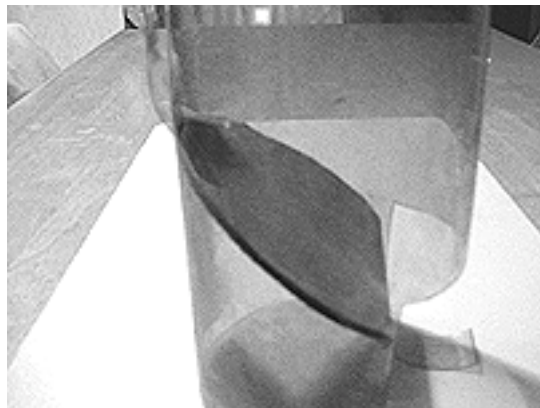


Figure 8-a

Step 9: Installing the feed bowl:

9-A: Lift up the feeder and slide the feed bowl into position, making sure the **feed flap** is INSIDE the feed bowl as illustrated in **figure 9-a**. Apply glue to the underside of **support strip "2"** and glue it to the inside bottom of the feed bowl, as shown in **figures 9-a** and **9-b**.

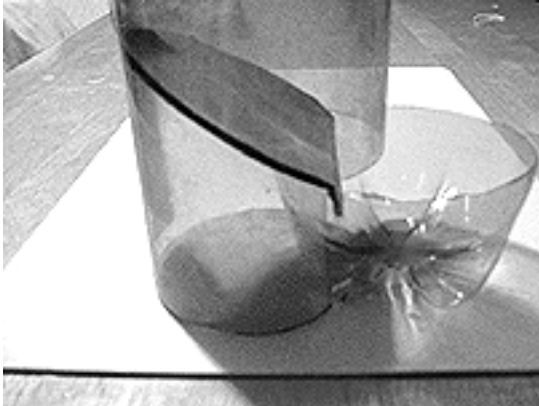


Figure 9-a

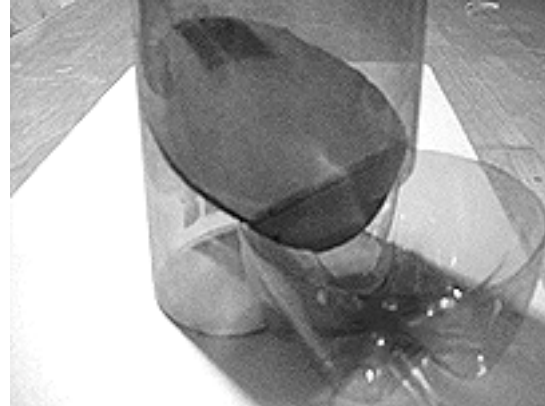


Figure 9-b

9-B: With the feeder standing upright, and the feed bowl in place, apply a generous amount of hot glue at the base of the feeder where the **feed** bowl comes into contact with the **feeder body**. Repeat this step for both sides of the **feed bowl**. This will secure the feed bowl to the body of the feeder.

Step 10: Making the "feeder cap":

10-A: Brace your arm on a table or work bench and hold a marker to the upper half of the feeder body, roughly 3 1/2 inches down from the bottle cap.

Keeping your arm, hand and marker stationary, rotate the bottle in order to create a straight cutting line around its circumference. This will create a cutting guide for removal of the bottle top.

10-B: Cut around your designated marked line, and remove the upper portion of the bottle.

10-C: Using a piece of scrap plastic, cut a 1/2 inch by 3 inch strip and attach it to the **feeder cap** as shown below in **figure 10-c**.



Figure 10-c

10-D: Replace the bottle cap back onto the top of the feeder and glue the plastic strip onto the feeder body as shown in **figure 10-d**.

Note: Before you finish the feeder, you may want to add additional weight to the base of the feeder to help stabilization and prevent accidental spills.

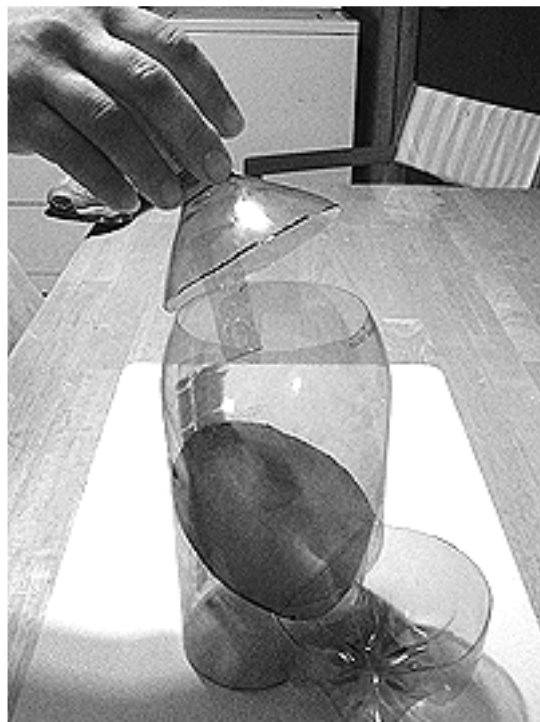


Figure 10-d

You have now created an automatic cat feeder that can be used for several cats in the home! In addition you have also saved another plastic bottle from being used for land fill or thrown out as litter!

