

## How to make your own model lift<sup>1</sup>

Note this project requires a hot glue gun.

You will need:

- Cardboard cereal box
- Scissors
- Corrugated cardboard
- Wire coat hanger

- A small jar lid
- Hot glue gun
- Twine (or dental floss)
- Aluminum foil, decorative paper and craft glue (optional)

### Instructions

Cut a cereal box in a line 7 cm in from one side, going parallel to the side of the box, all the way around (except the back panel). This will make the elevator shaft.

Leave a flap on the back panel to serve as the front of the elevator shaft. Cut holes in the flap to make the elevator doorways; bend the flap so that it can cover the front. Glue the top of the box closed, if needed.

Cut the remaining scraps from the cereal box to make an elevator car. Make this box 7 cm tall and slightly smaller, side to side and front to back, than the elevator shaft.

Twist the coat hanger back and forth with the pliers until a 18 cm piece breaks off. Break off a 7 cm section and a 20 cm section from the remaining coat hanger.

Press the jar lid onto a sheet of cardboard to make eight round impressions. Cut out the resulting circles. Glue these circles together to form a wide cardboard wheel. Poke the coat hanger through the centre of this wheel.

Make two more cardboard circles half a cm wider than the jar lid. Poke holes in the centre of these two new wheels with the coat hanger. Glue these on either side of the thick wheel. Keep the holes lined up.

Poke a hole, using the coat hanger, on either side of the elevator shaft, 5 cm from the top and 5 cm in from the back of the shaft. Bend a 90-degree angle in the 20 cm wire, 2 cm from the end. Make a 90-degree angle facing the opposite way.

Slip the coat hanger through a hole in the side of the cereal box. Slip on the cardboard wheel and then slip the hanger out the other hole in the elevator shaft.

Use a dab of glue to keep the hanger from going back through the hole, but do not get the glue on the box. Do the same thing on the other side of the box on the hanger. Move the cardboard wheel toward the middle of the axle. Make a glue bead on either side, but, again, do not glue the cardboard.

Bend the 7 cm section of hanger to make it straight and flat with a sharp bump in the middle. Glue the two flat sides on top of the elevator car so that the bump sticks straight up.

---

<sup>1</sup> See <https://www.youtube.com/watch?v=Ey-wDZHm-WM> for a simpler version. I recommend watching with sound off.

Measure the distance between the top of the pulley and the top of the elevator car. Multiply this distance times three. Cut a piece of twine this length.

Glue one end of the twine to the top of the elevator car. Run the twine up around the cardboard wheel (pulley) and down through the bump in the wire on the elevator car. Run the twine back up to the axle, gluing it directly onto the hanger wire.

Run the elevator by using the crank to raise and lower the elevator car once the glue is cool.

Balance your elevator car and make it as square as possible for best results. Aluminum foil will give the interior of your elevator a more authentic metallic look, if the foil is smoothed and glued on with craft glue. Decorative paper or paint can hide the fact that you used a cereal box. If the elevator car gets stuck, clear away any extra glue off the sides that may be gripping the shaft. Balance the elevator car by adding weight to the bottom if it has trouble descending. Add sliding doors, made from aluminum-foil-coated cardboard to your elevator.