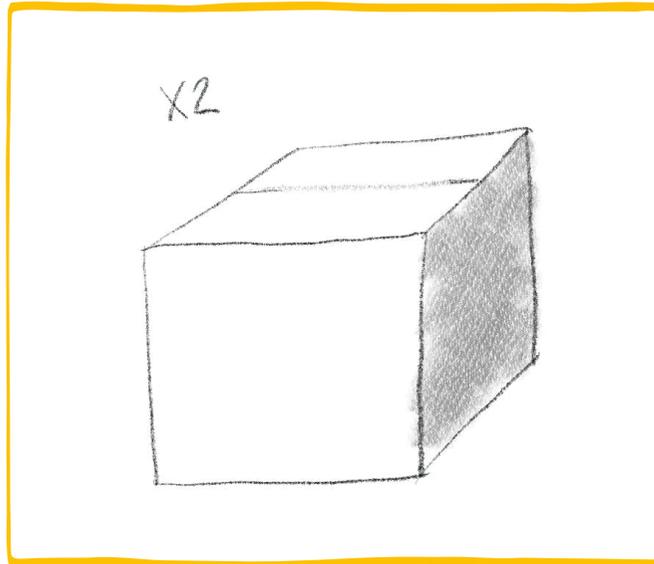
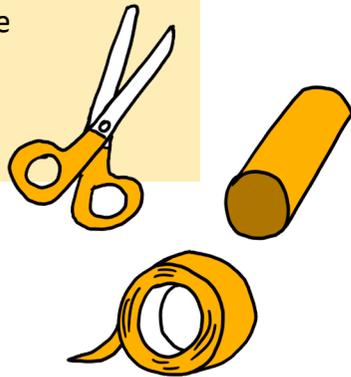


# Let's make a cardboard backpack!

With a few simple materials you can make your very own cardboard backpack. Follow these instructions and see what you can create!

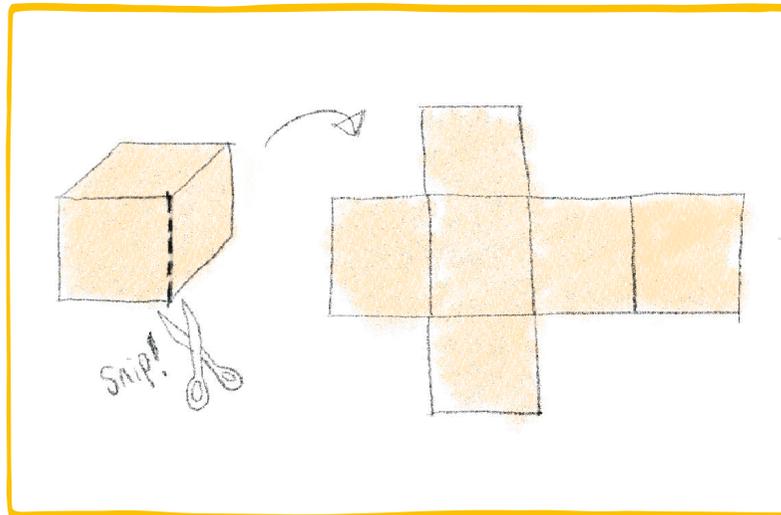
## You will need:

- Cardboard boxes
- Glue
- A brush
- A ruler
- Scissors
- A pen / pencil
- A screw / bolt (optional)
- Some rope / twine
- Tape



Start by raiding the recycling!

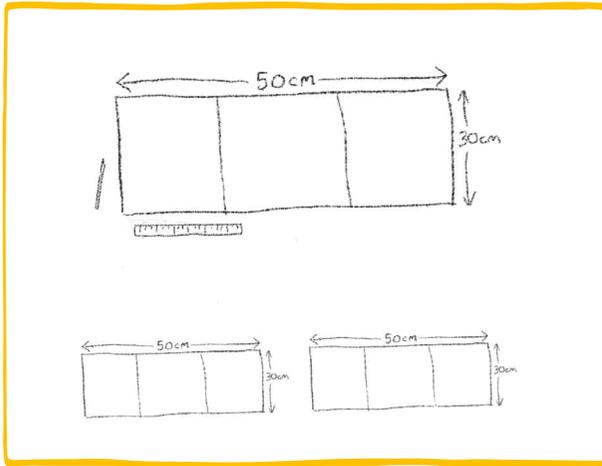
Grab two medium cardboard boxes if you have them. If not, an assortment of boxes and pieces of cardboard will do!



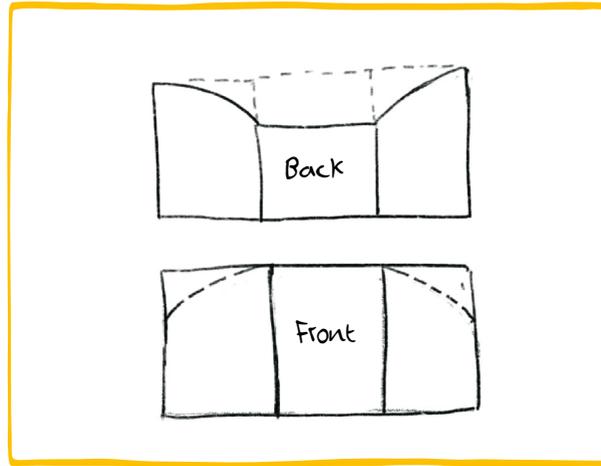
Cut open the cardboard boxes by cutting along the edge, so the box opens out like this.

You may need an adult to help start you off.

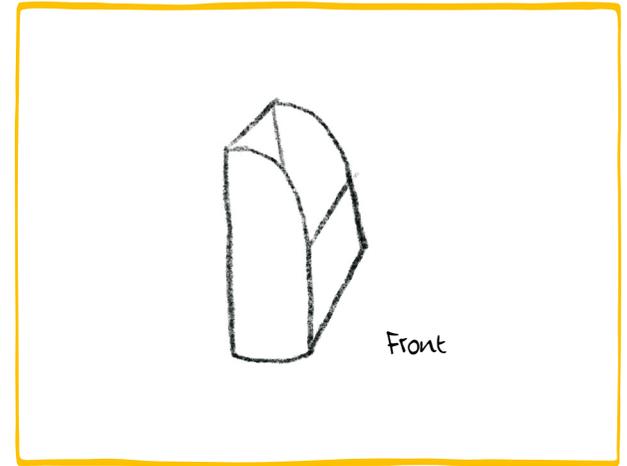




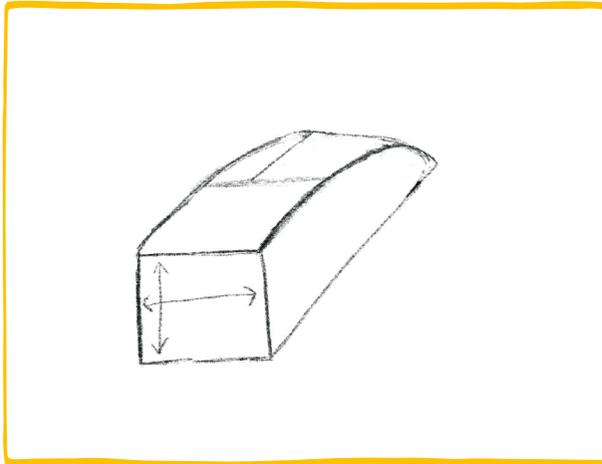
**1.** Make two pieces of cardboard. Measure 50cm x 30cm, then cut to size using scissors, get an adult to help.



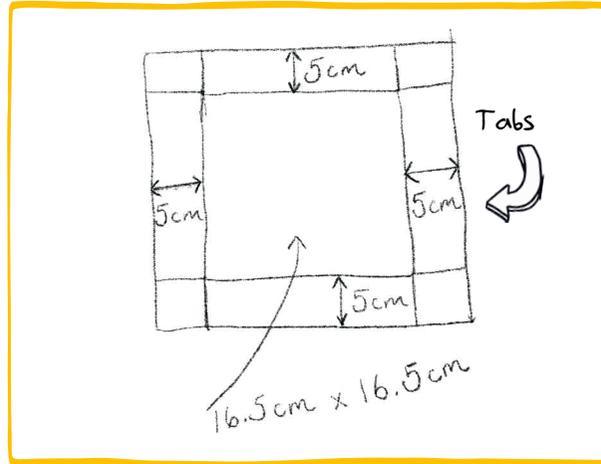
**2.** Sketch out the shapes above using a pencil. Then cut out. These pieces will form the main body of your backpack!



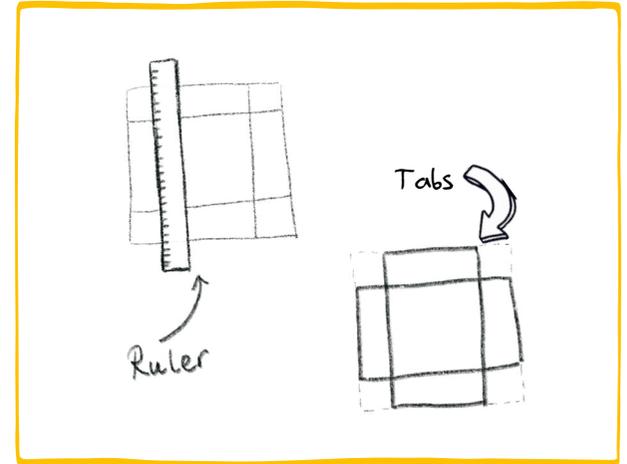
**3.** Slot the two pieces together. The curved side pieces will overlap. Then glue the side pieces together. Your bag should stand up unaided.



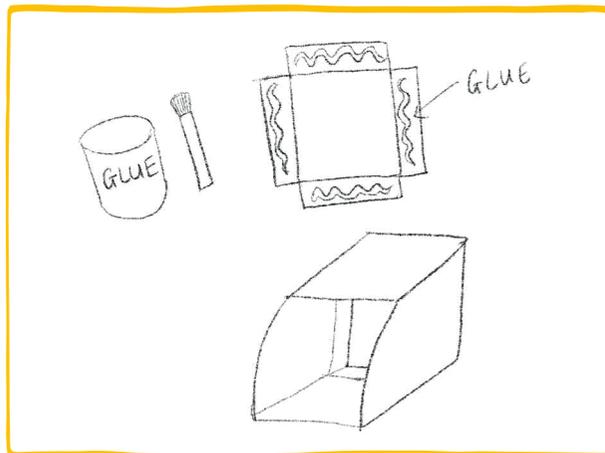
**4.** Flip the bag over onto its back, then measure the square hole in the bottom. It should measure 16.5cm x 16.5cm. Don't worry if it's not exact.



**5.** On a new piece of cardboard measure a square that fits the measurements of the bottom of your bag. Add 5cm tabs around every side. Then cut out.

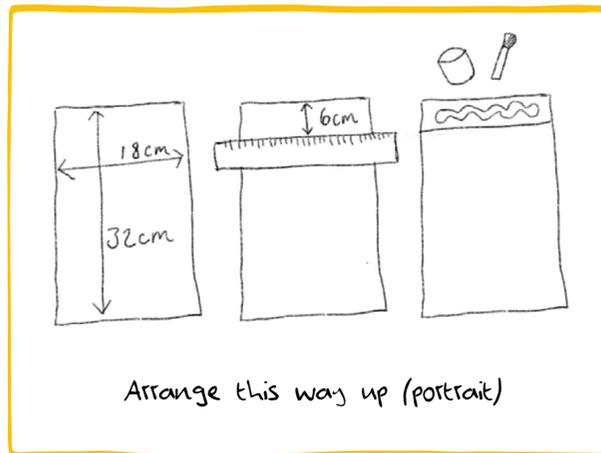


**6.** Using a ruler, fold over the tabs and cut out the corners leaving you with the shape as above.



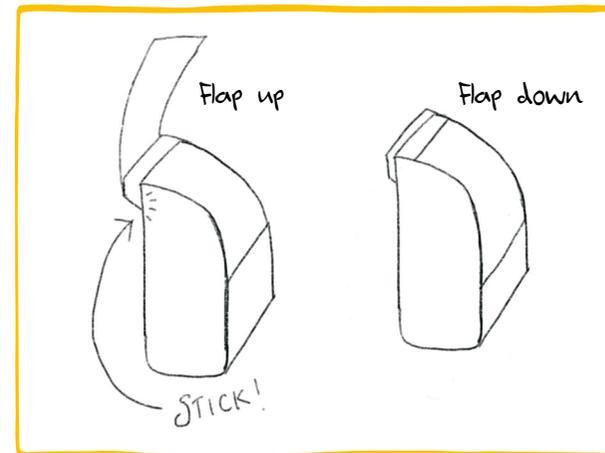
**7.** Put glue onto all four tabs and insert the piece into the bag to form the base.

TIP: The easiest way to attach the piece is to hold it glue side down and push it up into the bottom of the bag.

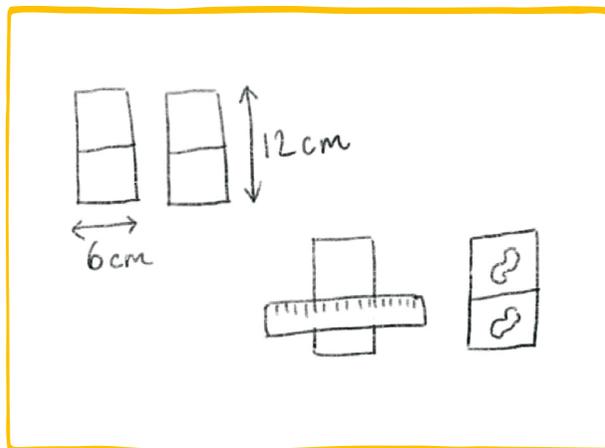


**8.** We're now going to make the top of the backpack. Take a new piece of cardboard measuring 18cm x 32cm.

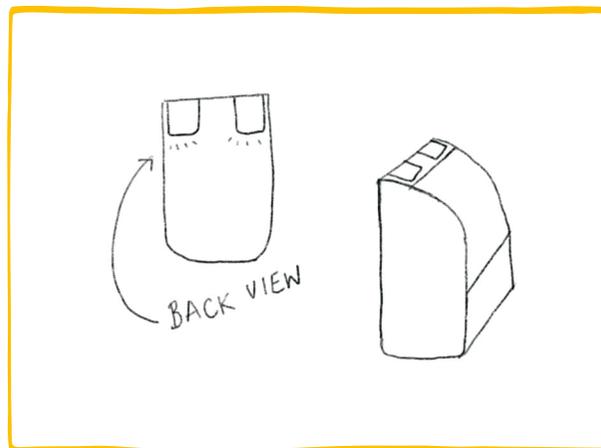
Measure 6cm from the top then fold using ruler. Add glue to this tab.



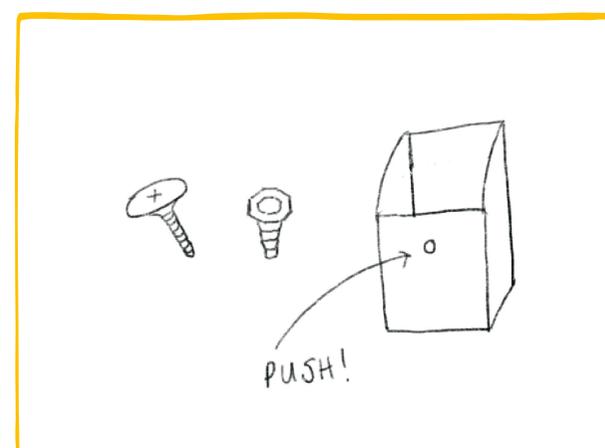
**9.** Now stick the tab to the back of the bag as shown above!



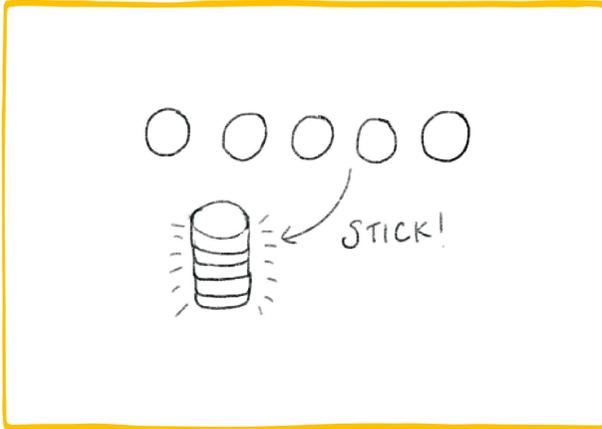
**10.** Now to make the reinforcement tabs. Take two pieces of cardboard measuring 6cm x 12cm. Then fold both tabs in half using a ruler. Add glue on both sides of the fold.



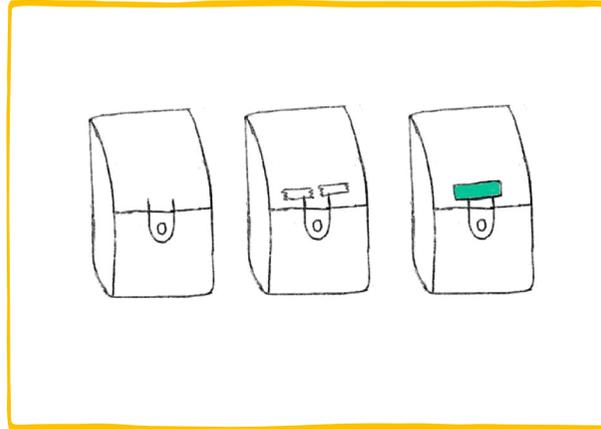
**11.** Stick both tabs onto the back and top of the backpack.



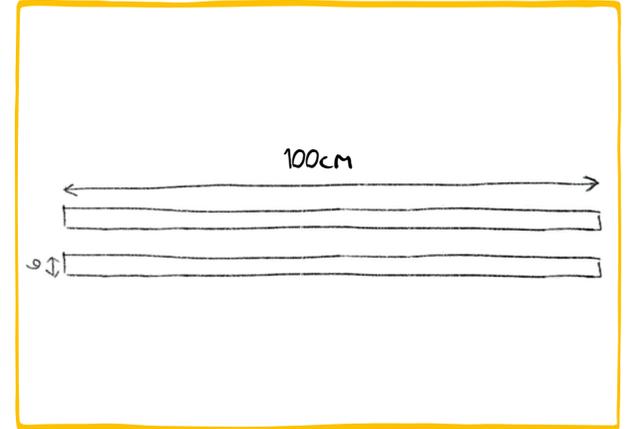
**12.** Make the fastening. Take a screw/bolt and push into the front panel of the backpack. If the screw pokes through onto the inside of your backpack, use some cardboard and tape to cover it up.



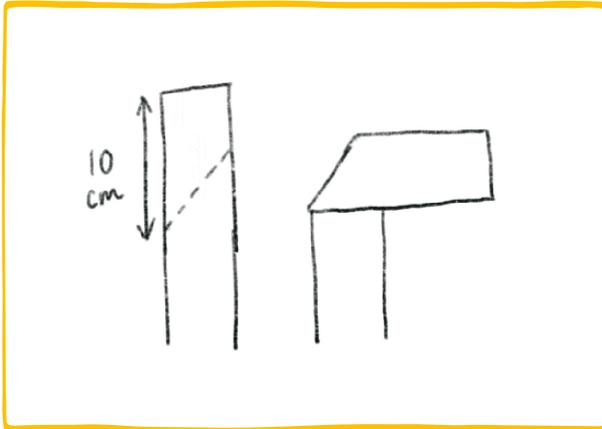
**13.** If you don't have a screw/bolt you can make your own fastening using cardboard. Cut some small circles and stick together with glue to form a column. Wait for it to dry then attach to the bag where the screw would have been placed.



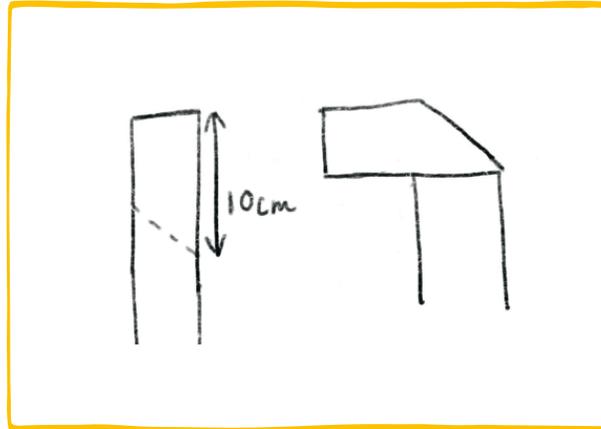
**14.** Add string to the front flap. Check the length is correct by hooking the string around the screw. Adjust if too long or short. Stick down the string with tape then cover over with a small piece of cardboard.



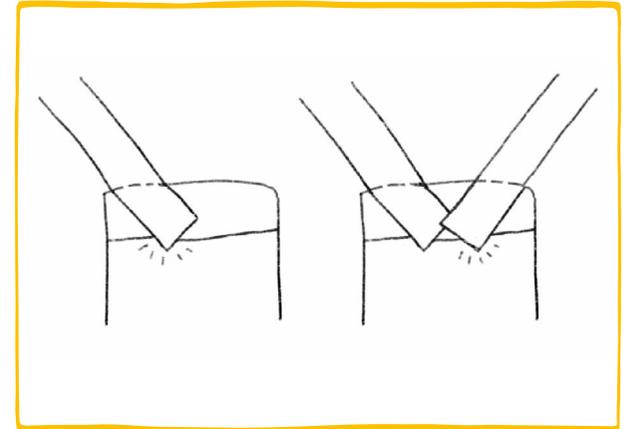
**15.** Time for the straps! You will need long strips of cardboard measuring 6cm x 100cm. You can attach multiple cardboard strips together.



**16.** Measure 10cm from the top of one strip and make a mark on the left side. Using a ruler, fold over to create the fold above.

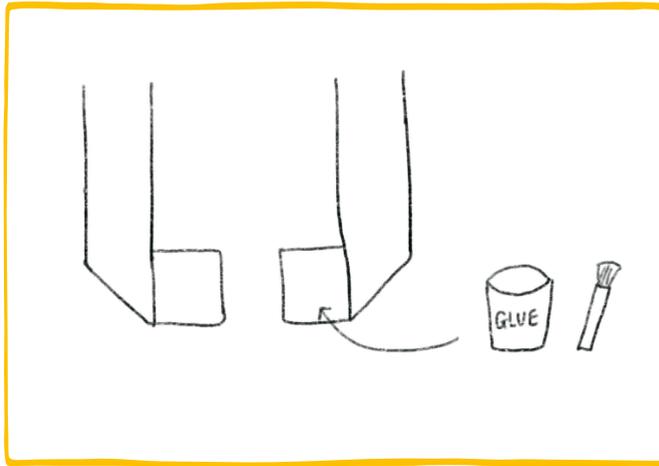


**17.** Measure 10cm on the opposite (right) side of the other strip and make a mark. Using a ruler, fold over to create the fold above.

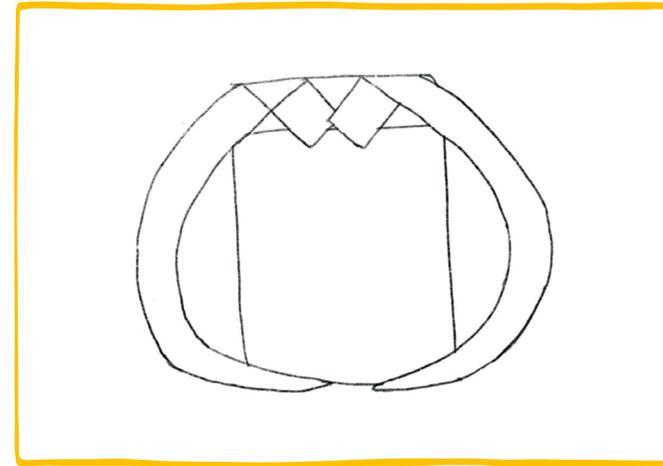


**18.** Using glue, stick down the straps to the top of the backpack. The fold will run parallel with the top edge of the back of the backpack.

Check the strap length by putting the bag on your back and popping the loose straps over your shoulders.



**19.** Once you are happy with the length of the straps, fold the loose ends at a rough 45 degree angle (as above) using a ruler, then add glue to the tabs.



**20.** Final step! Attach the gluey tabs underneath the bag so that the fold on the straps runs parallel with the bottom back edge of the backpack. Leave to dry then pop on your backpack and you're good to go! Woohoo!

