

# Do it yourself



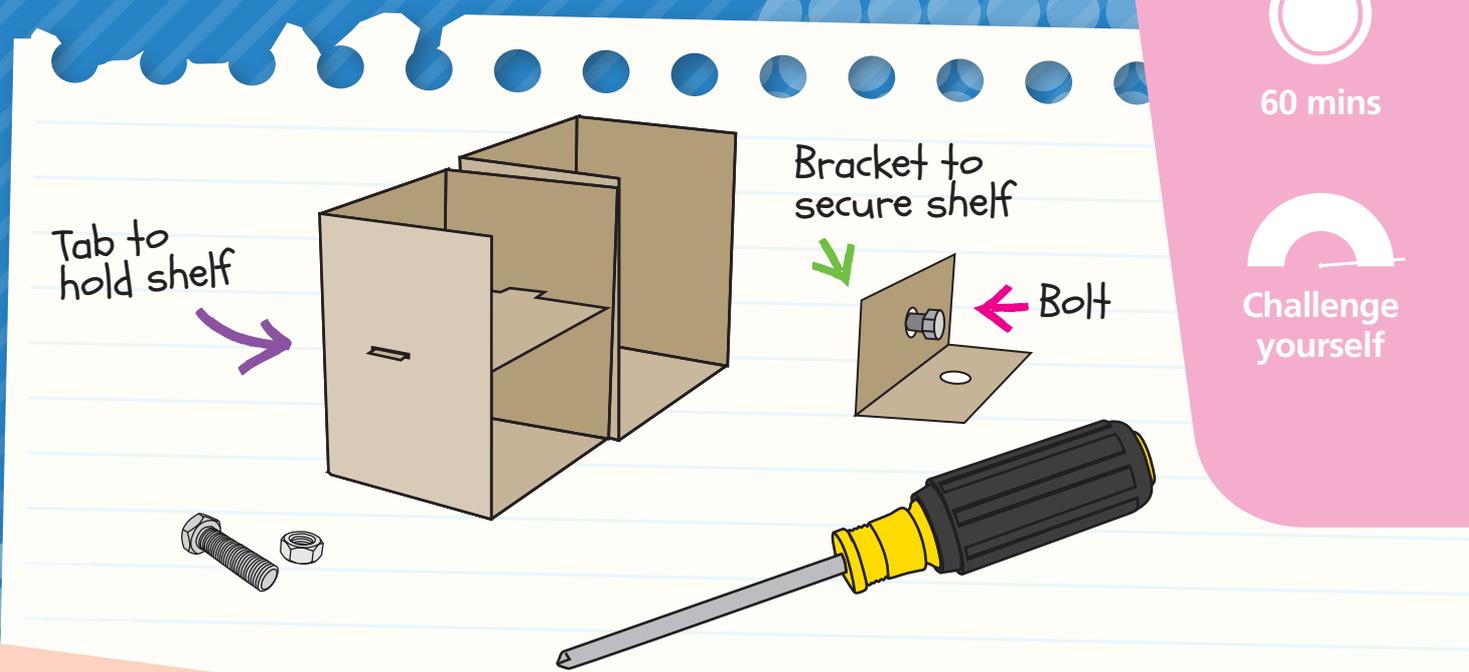
DIY



60 mins



Challenge yourself



## Aim of activity

Do you have what it takes to be a brilliant carpenter? Have a go at designing and constructing your own cardboard bookshelf to find out.

## What you'll get out of it

- Construct furniture.
- Measure and make adjustments.
- Solve problems.
- Work as a team.

## What you'll need

### For each group of 3 or 4:

- A medium-sized, stiff cardboard box
- Scissors
- A ruler
- 10 nails
- 10 screws
- 8 nuts and bolts

The quantities are a suggestion: the less you have, the harder it is; the more you have, the easier it is.

### For the unit:

- A selection of other cardboard boxes or pieces of cardboard, the stiffer the better
- 2 screwdrivers
- 1 hammer
- Sticky tape
- A few books

Guides could bring in cardboard boxes from home, or try asking at local shops.



WE DISCOVER, WE GROW

Girlguiding



## Stay safe



Take your time when you're using tools, don't get distracted and make sure there's plenty of space around you.

When carrying tools, walk, and point them downwards.

Don't hammer too hard, and make sure you're not in danger of hitting your supporting hand that's holding the nail.

Use the right size and shape of screwdriver for your screws.

## What to do

**1** Your challenge, in teams, is to turn a box into a bookshelf, competing against the rest of your unit. Before you start, decide as a unit on some scoring criteria. How about:

- + one point for every shelf
- + one for every four screws or four bolts used
- + one for extra decoration
- one if sticky tape is used
- + one for every book it can hold.

**2** Get into teams of three or four, grab a box and find a clear space to work in.

**3** Spend ten minutes as a team deciding how you'll transform your box. Which parts will you need to cut out or keep? How will you join or slot parts together - perhaps use brackets? Will you make one or two shelves? Will you add any decorative details?

**4** Now you have 35 minutes to transform your box into a bookshelf. Be careful when you're pushing any screws or nails through it - keep hands clear and make sure there's no one behind.

**5** Time's up! Stand back and admire everyone's handiwork. Swap places with another team and use the judging criteria you came up with to give their shelf a score. Your leader can check each team is scoring fairly. Use the real books to test the shelves' strength.

**6** How did everyone score? Congratulate the winning team!

**7** Come together as a unit and talk about what you've learned. What were the best ways of solving problems? If you were making the shelf with real wood, would you do anything differently?

## Top tip

Keep this bit covered unless you need some extra help!

To join pieces of card together at a right angle, try cutting tabs and holes to slot pieces together.  
Another option is to bend a piece of card into an L shape, and bolt one piece to either side.