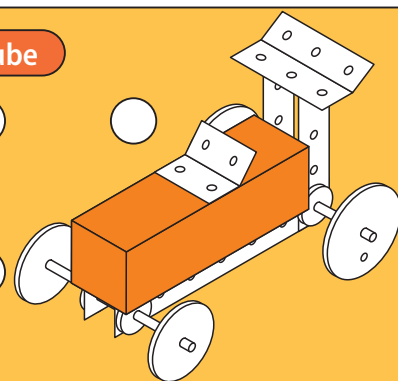




Visit TechCard at techcard.co.uk & Instagram & YouTube

Box Racer

Make and Create: Skill Level ● ● ○ ○ ○



Build a speedy racer with an empty toothpaste box!

See how wheels make things move easily by reducing friction.

See how to make with TechCard on our website.

The wheels make the car move easily.



The box sits on a sturdy TechCard chassis.

Wheels reduce the force of friction.

Assembly videos on YouTube!

Parts to make 1 model

Structural Parts

TechCard Strip	1
TechCard Girder	1
TechCard Beam	1

Mechanical Parts

25mm Disc	4
50mm Wheel	2
60mm Wheel	2
100mm axle	2

Additional Materials

Toothpaste box or similar.

You will have parts left over towards other models.

Parts to make 10 models

Structural Parts

TechCard Strip	10
TechCard Girder	5
TechCard Beam	10

Mechanical Parts

25mm Disc	40
50mm Wheel	20
60mm Wheel	20
300mm Dowel Axle	8

Additional Materials

Toothpaste boxes or similar.

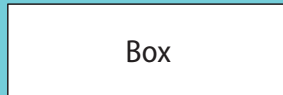
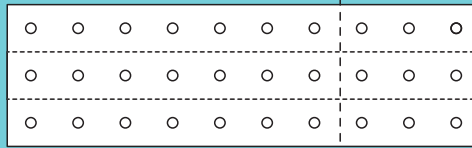
Based on pupils sharing off-cuts between them.

Make the Box Racer



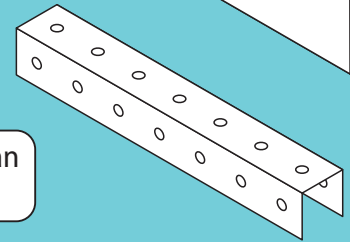
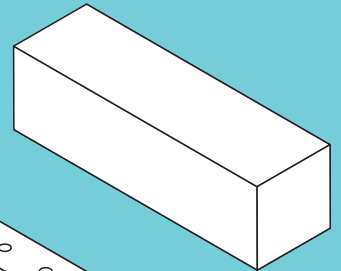
Before you start see
'Make with TechCard'
on our website.

1 Make the chassis.

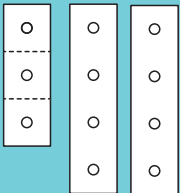


Cut a beam so it is 25mm longer than
your box. Fold the beam to shape.

Use an empty toothpaste
tube box or similar.

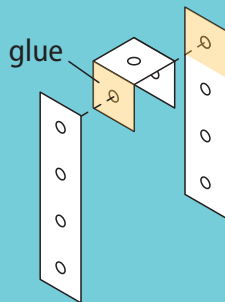


2 Make the support.

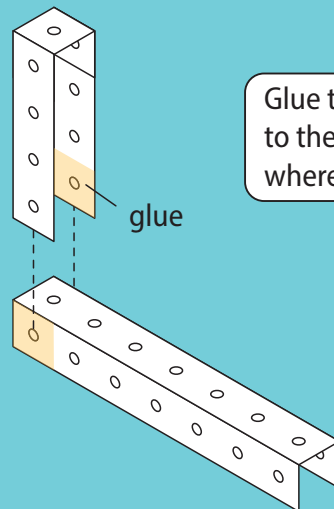


Cut a 25mm beam and
two 100mm strips.

Fold the beam and
glue the two strips
where shown.



3 Fit the support.



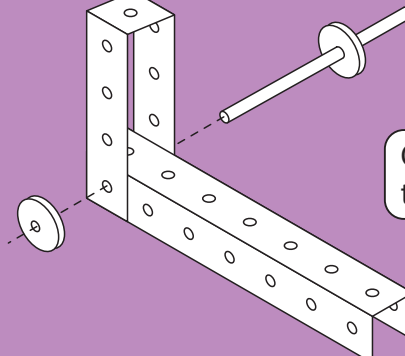
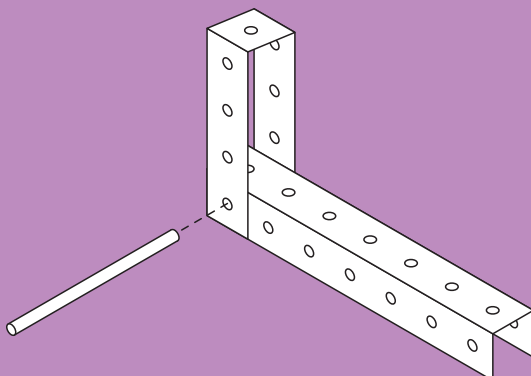
Glue the support
to the beam
where shown.

4 Fit the rear axle.

Use a 100mm axle to
check the holes are clear.

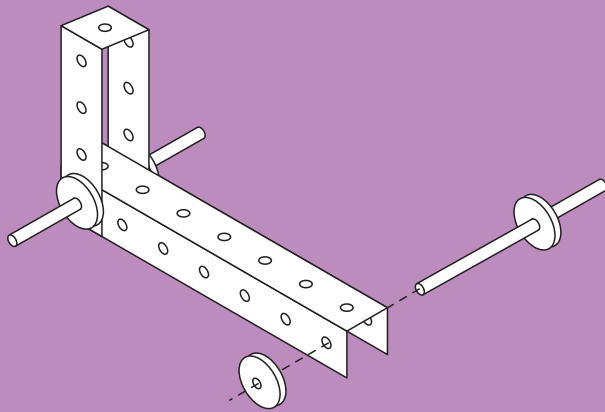
Fit a 25mm disc onto
a 100mm axle.

Pass the axle through the beam
and fit a second 25mm disc.



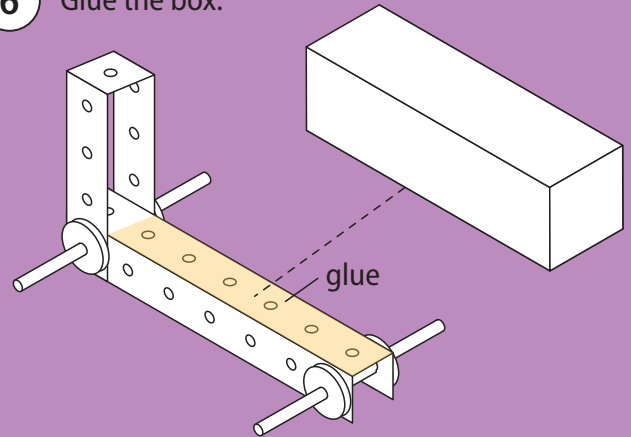
Check the beam is in
the middle of the axle.

5 Fit the front axle.



Pass a 100mm axle through the beam and fit a second 25mm disc.

6 Glue the box.

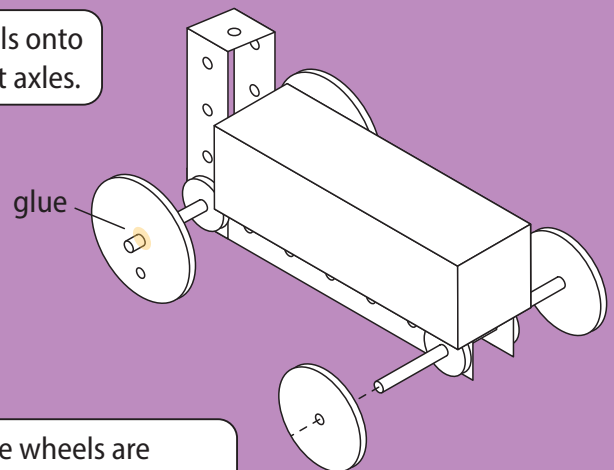
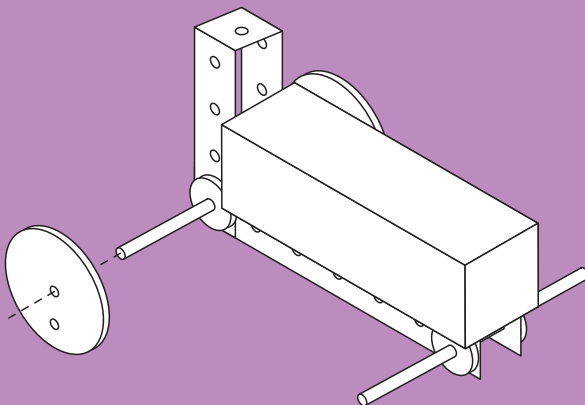


Glue the box to the beam. Scratch the surface of the box if it is shiny to help the glue stick.

7 Fit the wheels.

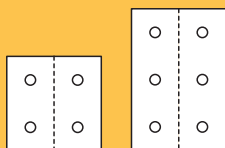
Fit two 60mm wheels onto the ends of the rear axles.

Fit two 50mm wheels onto the ends of the front axles.

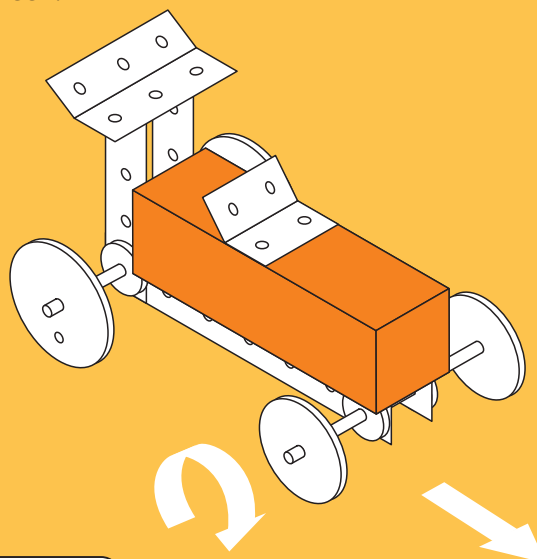


Check the wheels are straight and glue in place.

8 Fit the wing and windscreen.



Cut a 50mm girder and a 75mm girder.



Fold the girders and glue them to form a rear wing and windscreen.

Wheels and axles reduce 'friction'. Friction is an invisible force that is created between surfaces that move past each other. Friction can cause moving things to slow down so we try to reduce friction in machines.

Using wheels means only a small part of the vehicle is in contact with the ground as the vehicle moves and the wheels turn. This greatly reduces friction and means the vehicle can move easily.