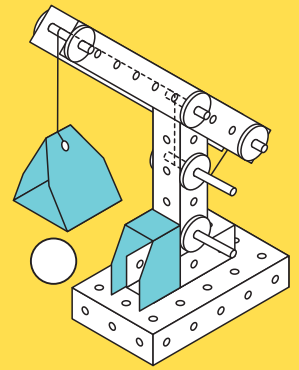




Visit TechCard at techcard.co.uk & Instagram & YouTube

Lever Crane

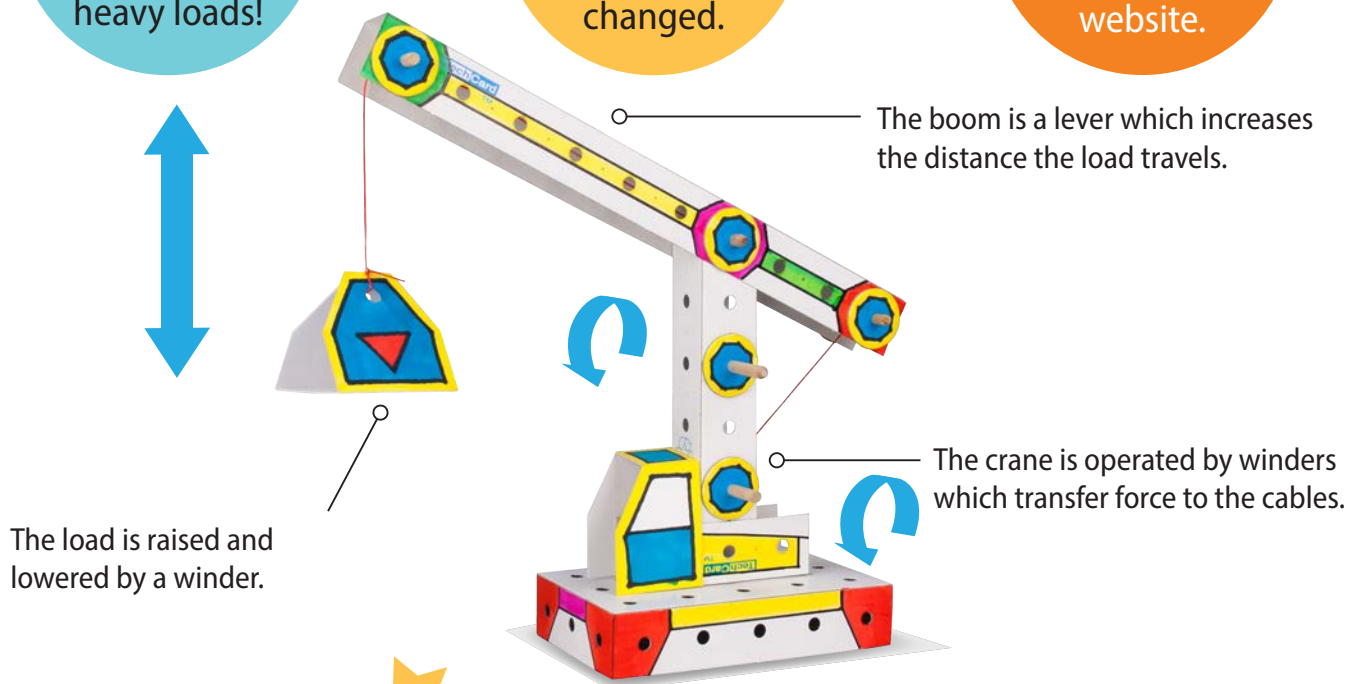
Build-it Kit Skill Level ● ● ● ○ ○



Build a working crane & see how simple machines raise heavy loads!

Explore winders & levers & how forces can be controlled and changed.

See how to make with TechCard on our website.



Assembly videos on YouTube!

Parts to make 1 model

Structural Parts

TechCard Beam	2
TechCard Base	1

Mechanical Parts

25mm Disc	12
300mm Dowel Axle	1

Additional Materials

700mm String
A5 Size Thin Card

You will have parts left over towards other models.

Parts to make 10 models

Structural Parts

TechCard Beam	20
TechCard Base	10

Mechanical Parts

25mm Disc	120
300mm Dowel Axle	7

Additional Materials

7M String
A5 Size Thin Card x 10

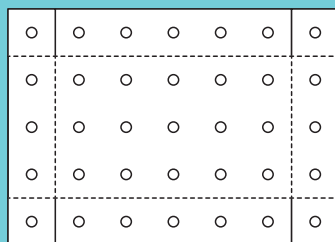
Based on pupils sharing off-cuts between them.

Make the Lever Crane

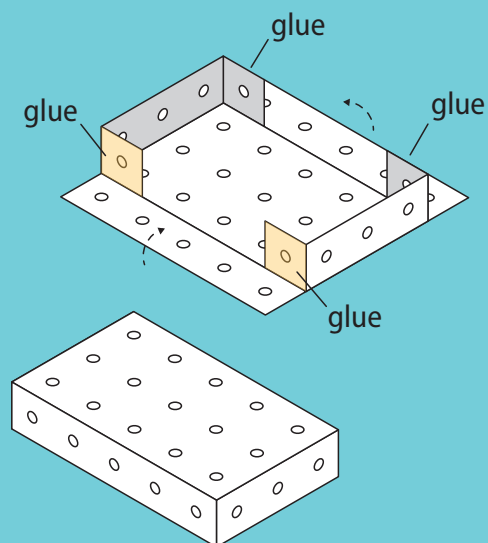


Before you start see
'Make with TechCard'
on our website.

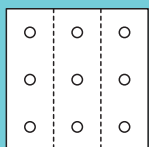
1 Make the base.



Fold and glue a
TechCard base.



2 Begin the tower.

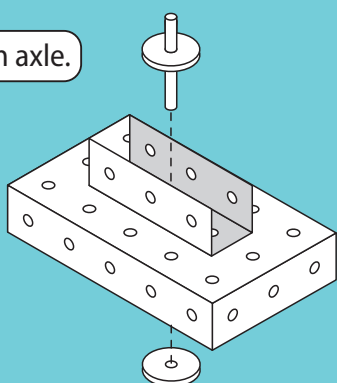


Cut a 50mm axle.

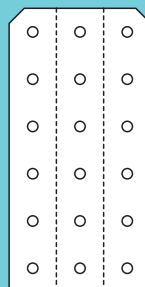
Cut a 75mm beam.

Fold the beam
to shape.

Fit a disc onto the axle and pass through
the base and beam and fit a 25mm disc.

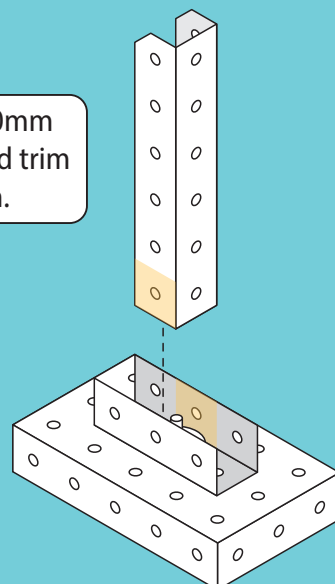


3 Finish the tower.



Cut a 150mm
beam and trim
as shown.

Fold the beam and
glue as shown.



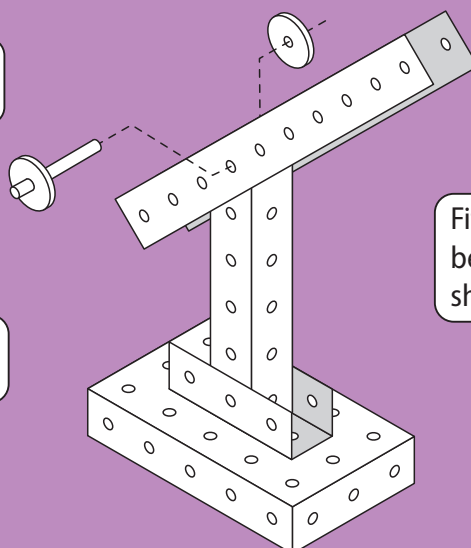
4 Assemble the boom.

Cut a 50mm axle.

Fold a 250mm
beam to shape.

Fit a 25mm disc
onto a 50mm axle.

Fit the axle through the
beam and tower where
shown and fit a 25mm disc.



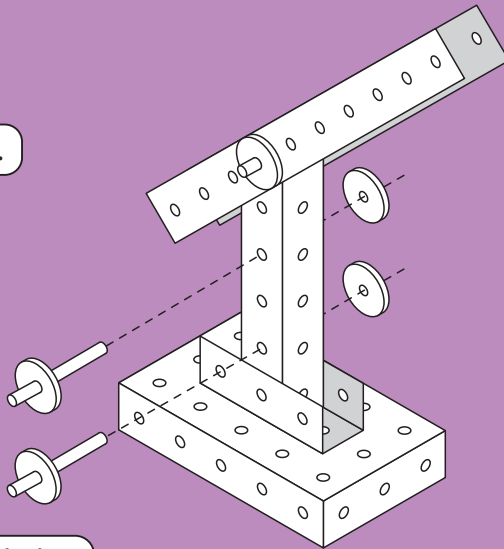
5 Fit the axles.



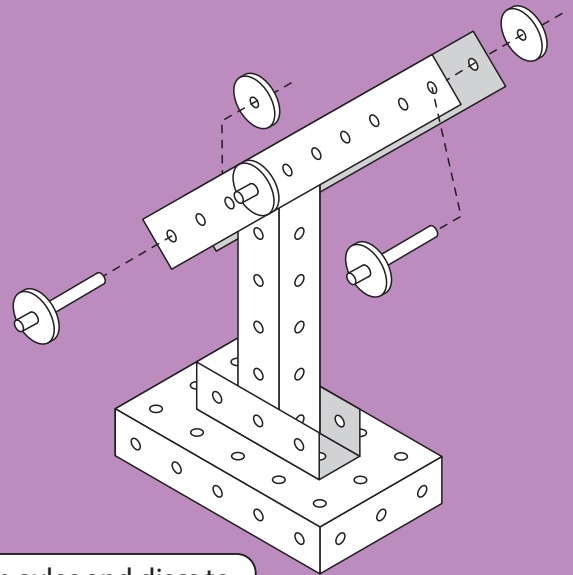
Cut two 50mm axles.

Fit a 25mm disc onto the axles.

Fit the axles through the tower where shown.



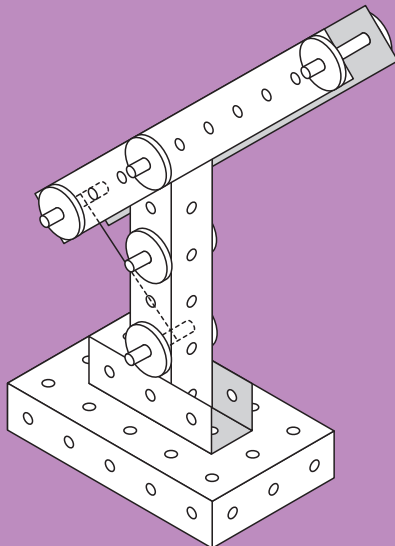
Fit two 50mm axles and discs to the ends of the boom as shown.



6 Fit the string.

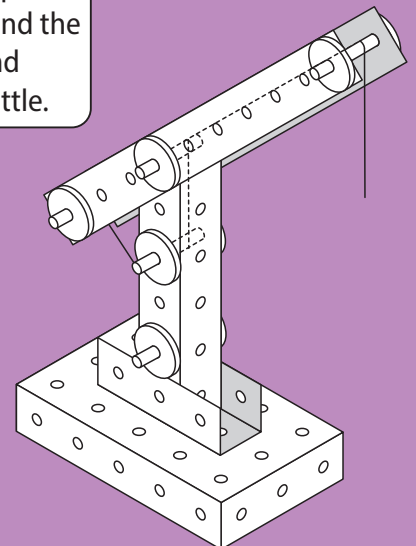
Tie a 300mm piece of string around the bottom axle and wind it on a little.

Tie the other end to the axle on the boom as shown.



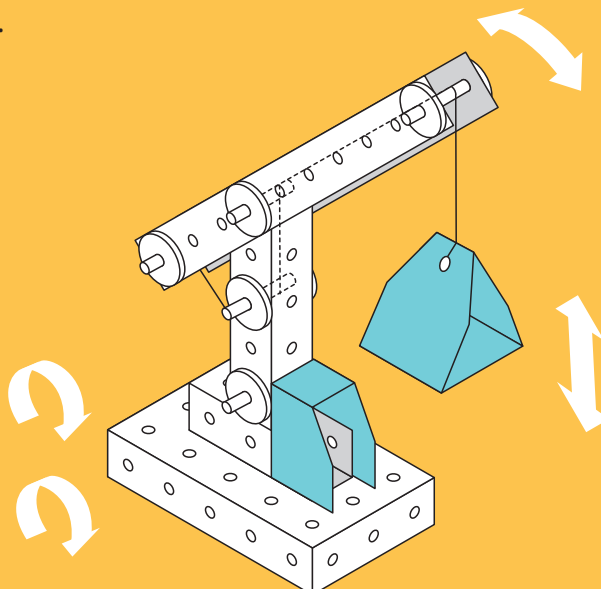
Tie a 400mm piece of string around the upper axle and wind it on a little.

Pass the string up and over the axles on the boom as shown.



7 Finish the model.

Fold and fit the panels as shown.



Turn the lower axle and the boom will move up and down. Because of the position of the middle axle, the upper end of the boom travels further than the lower end. The boom is acting like a lever.

Turn the upper axle and the load moves up and down.

Card Panels

Print and cut along the solid lines and fold along the dotted lines of the two panels.

Alternatively, copy the panels onto thin card and cut and fold in the same way. Or you can design and make your own body panels!

25mm

25mm