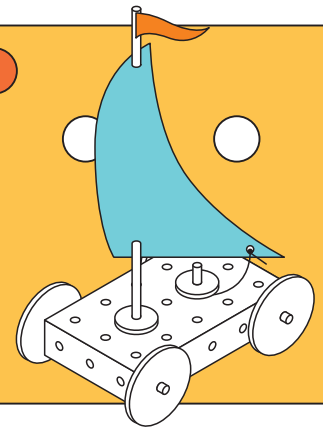




Visit TechCard at techcard.co.uk & Instagram & YouTube

Land Yacht

Make and Create: Skill Level ● ○ ○ ○ ○ ○



Build a yacht that moves forward even when air blows from the side!

Explore how air is a substance that can transmit force.

See how to make with TechCard on our website.

Adjust the sail and the yacht can race forward even when the wind is blowing from the side!

The model illustrates that although invisible, air is a substance that takes up space and can transfer force.

Wheels reduce the force of friction by reducing the contact with the ground.



Assembly videos on YouTube!

Parts to make 1 model

Structural Parts

TechCard Base 1

Mechanical Parts

25mm Disc 4
50mm Wheel 4
100mm Dowel Axle 2
200mm Dowel Axle 1
50mm Dowel Axle 1

Additional Materials

150mm String
A4 Size Thin Card

You will have parts left over towards other models.

Parts to make 10 models

Structural Parts

TechCard Base 10

Mechanical Parts

25mm Disc 40
50mm Wheel 40
300mm Dowel Axle 25

Additional Materials

1.5M String
A4 Size Thin Card x 10

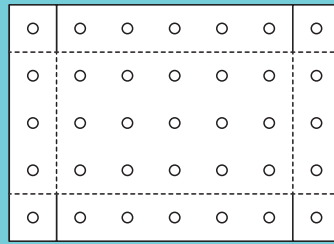
Based on pupils sharing off-cuts between them.

Make the Land Yacht

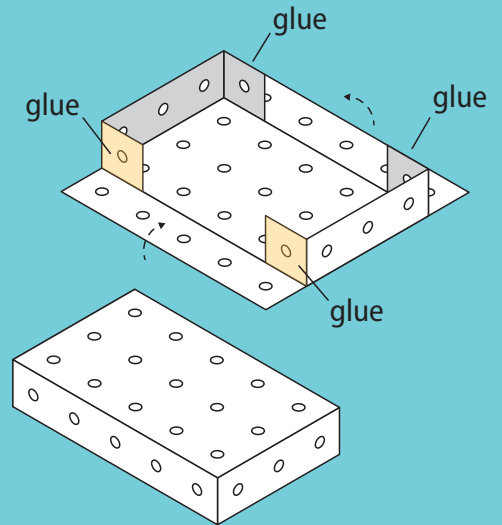


Before you start see
'Make with TechCard'
on our website.

1 Make the chassis.

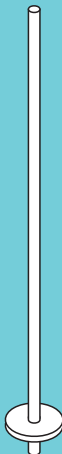


Fold and glue a TechCard
base to make the chassis.



2 Make the mast.

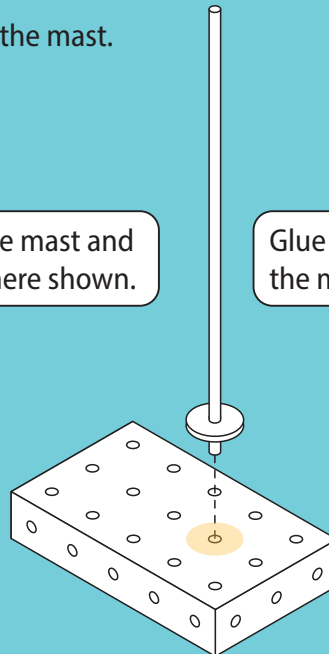
Use a 200mm axle.



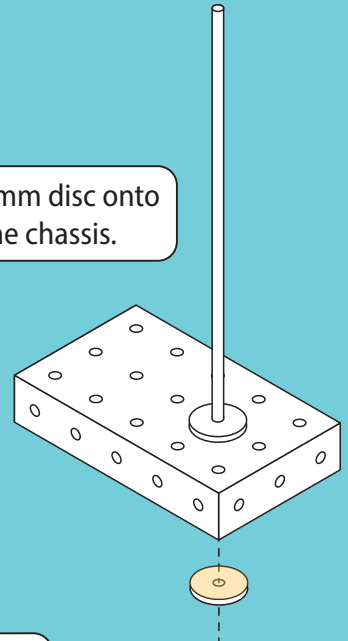
Fit a 25mm disc near
the end of the axle.

3 Fit the mast.

Glue the mast and
disc where shown.



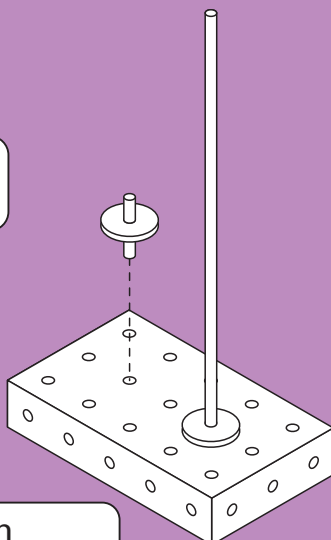
Glue a second 25mm disc onto
the mast under the chassis.



Check the mast
is straight.

4 Fit the small axle.

Use a 50mm axle and
fit a 25mm disc.

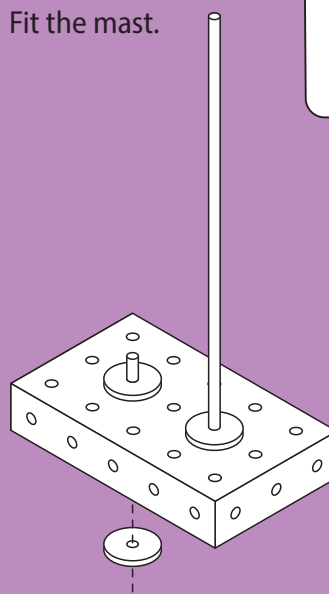


Fit the axle through
the chassis where shown.

5 Fit the mast.

Fit a second
25mm disc.

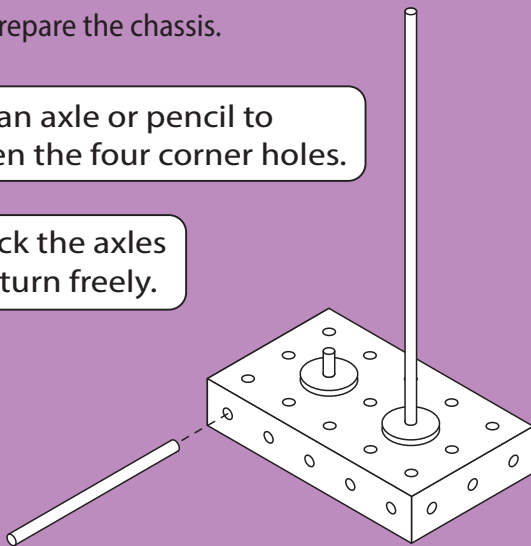
Do not glue the
post and discs.



6 Prepare the chassis.

Use an axle or pencil to widen the four corner holes.

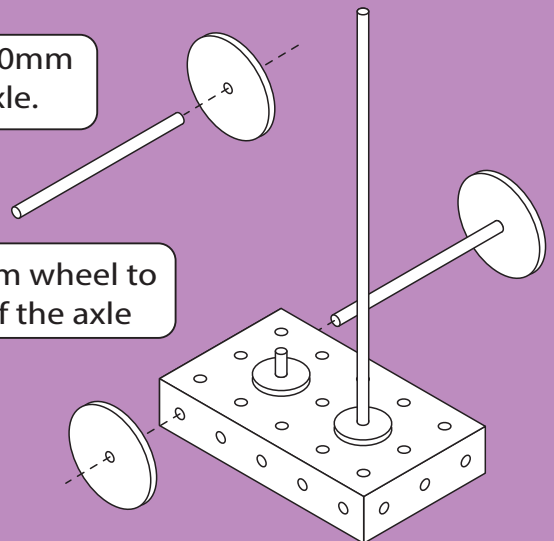
Check the axles will turn freely.



7 Fit the rear axle and wheels.

Use a 100mm dowel axle.

Fit a 50mm wheel to the end of the axle

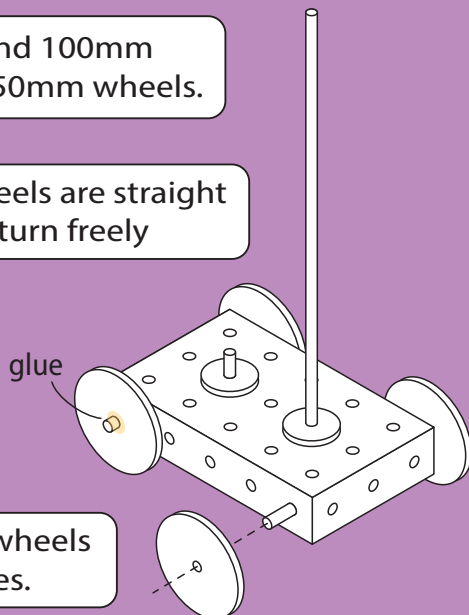


Pass the axle through the chassis and fit a 50mm wheel.

8 Fit the front axle and wheels.

Fit a second 100mm axle and 50mm wheels.

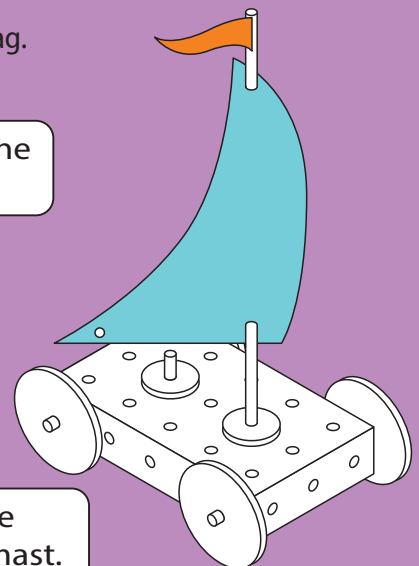
Check wheels are straight and axles turn freely



Glue the wheels to the axles.

9 Fit the sail and flag.

Print or copy the sail and flag.



Fit the sail and glue the flag onto the mast.

10 Fit the string.

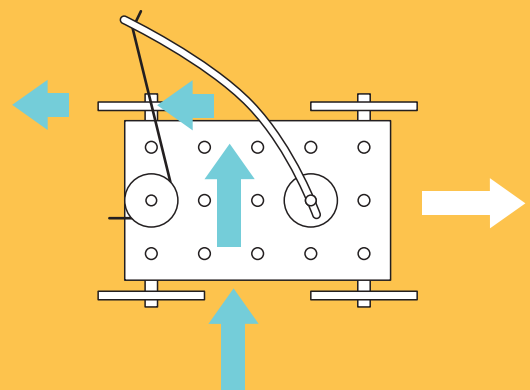
Cut a 150mm length of string.

Tie the string to the corner of the sail.



Tuck the string under the disc to hold the sail in position.

11 Sail your yacht!



Use a hair dryer or small fan. Set the sail at an angle and your yacht will move forward with wind blowing from the side. The moving air bounces backwards off the sail and causes the yacht to go forward.

Card Panels



Print and cut along the solid lines.

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