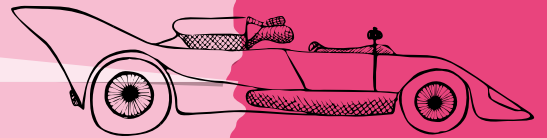


ACTIVITY 1

In this activity, you'll build four different prop racers. Can you guess how prop racers got their name? That's right, they are powered by the propeller at the back of the racer!

LET'S MAKE



GATHER YOUR SUPPLIES

INCLUDED

PROP RACER SET



NOT INCLUDED

SCISSORS



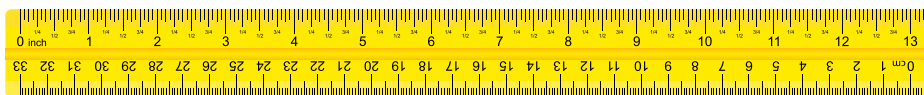
WHITE GLUE



MARKERS OR OTHER ART SUPPLIES (optional)



RULER



The Prop Racer Set provides you with enough materials to build four prop racers, each one a little different. The laser-cut wood is sturdy but can break if you push too hard, so be careful! If you break a piece, you might not be able to complete your build. However, you can still complete the activities as long as you have one working racer.

THE SET UP



STEP 1

Open the Prop Racer Set and separate the materials into four kits.



STEP 2

Find the long piece of rubber and cut off 24". Repeat three more times so you have four pieces each 24" long. (You'll have rubber left over.)



STEP 3

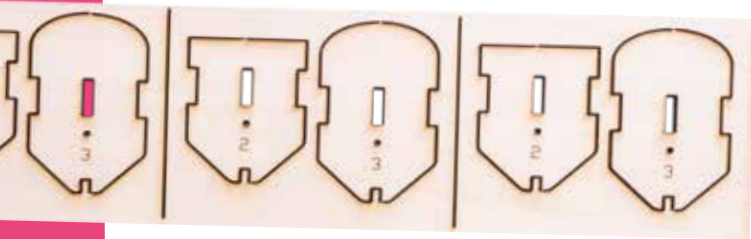
For this build, you'll be gluing pieces together. You'll need to glue all wooden joints together when noted in instructions.



BUILD THE WHEEL PLATFORMS

STEP 1

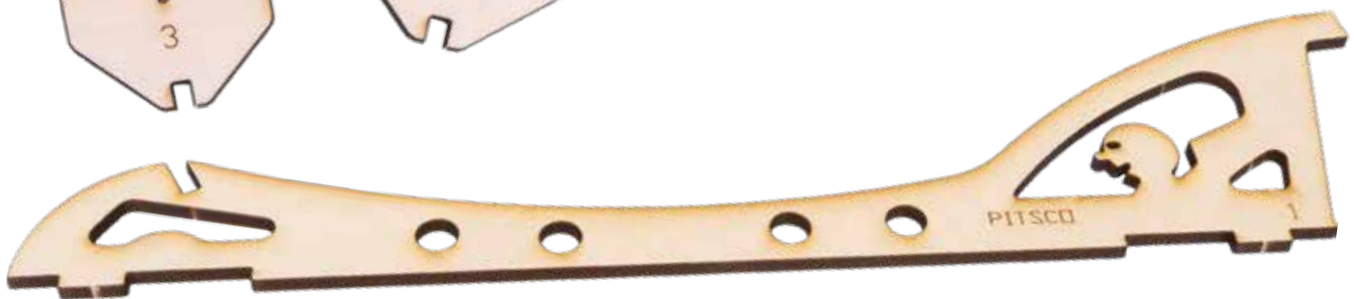
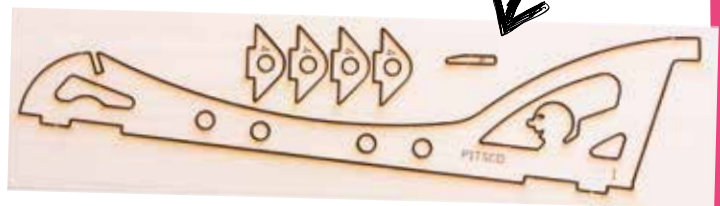
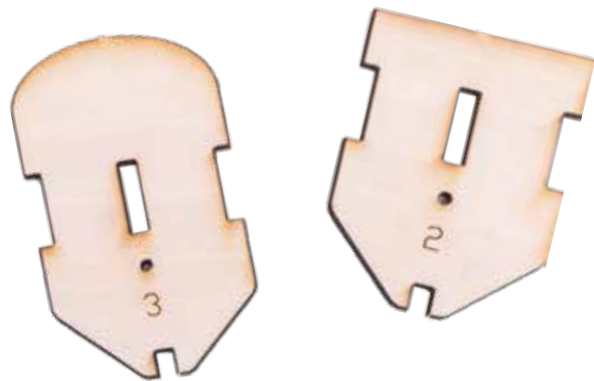
Locate the materials you need for ONE racer. Carefully pop out the laser-cut parts from each piece.



STEP 2

Notice that each piece has a part number on it. This will be helpful to know you're putting the right pieces in the right place. Make sure you pop out the tiny Part 5; you can find it on the piece above the body of the car. It's small, so be careful not to lose it!

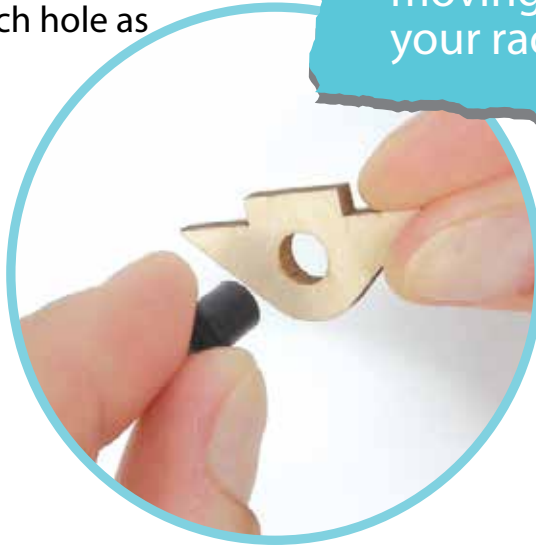
PART 5



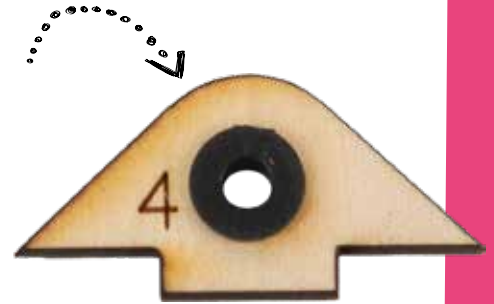


STEP 3

Find two Part 4's and push the **bushings** into each hole as shown. Be careful not to break the wood when you do this!



Bushings are important as they help keep your axle (the rod the tires attach to) from moving too much. This makes your racer roll straighter.

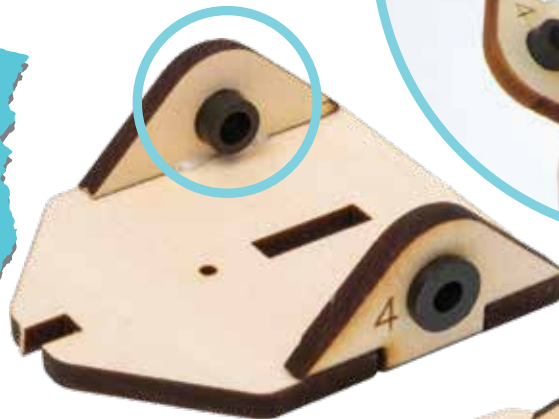


STEP 4

Glue two of the Part 4 pieces onto Part 2. The bushing has two ends. Find the end that is a little wider – it has a rim around it. That's the **flanged** end. That end of the bushing faces away from the middle of Part 2. Be sure this assembly looks like the image shown.



A flange is a rim that makes the piece stronger and more durable.



STEP 5

Repeat the process with two of the Part 4 pieces and Part 3. Again, make sure the flanged end is on the outside, away from the middle of Part 3.



STEP 6

Wait for the glue to dry. You can build this far on your other kits, have a dance party, or go play outside. Don't move on to the next section until the glue is dry!

ASSEMBLE THE BODY

STEP 1

Take Part 2 and glue it onto the back of the body of your racer. The flat end should be at the back of the racer and the notched end should point toward the front of your racer. Make sure the Part 4 pieces with the bushings are facing down. Glue the Part 2 and racer body pieces together.

Note: Be careful when you push these pieces in – they are a little tight and can break if you put too much force on them. Gently wiggle it back and forth to get it on.



STEP 2

Glue Part 3 onto the front of the racer. The curved end will be facing the front with the notched end pointing toward the back of the racer.



STEP 3

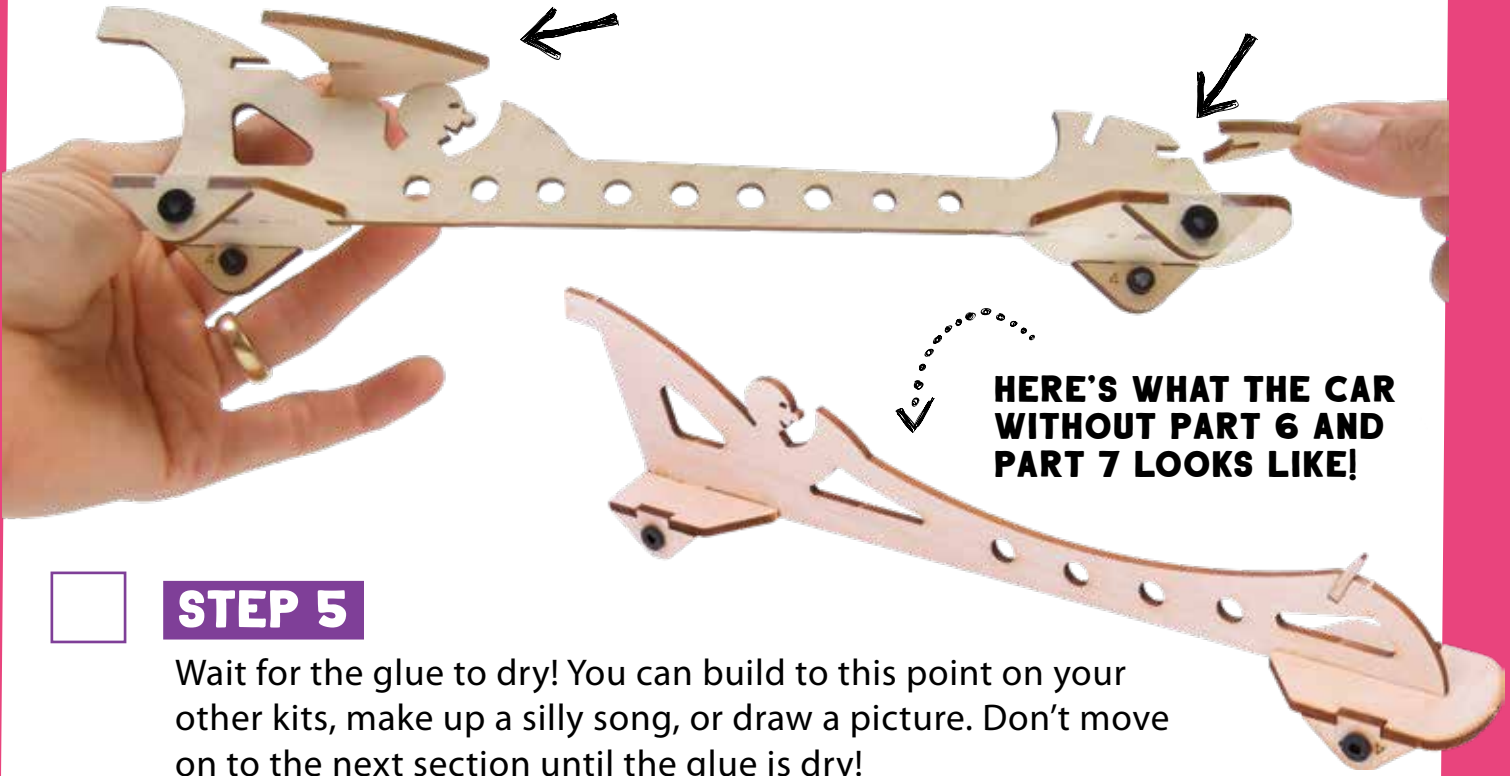
Look above the spot where you glued Part 3. You'll see a notch on the top of the body of the racer. Glue the tiny Part 5 piece here.





STEP 4

One racer has two additional pieces, two triangle-like shapes – Part 6 and Part 7. Part 7 is glued on the back of the racer in the notch above the driver. Part 6 is glued into the notch at the very front of the racer.



STEP 5

Wait for the glue to dry! You can build to this point on your other kits, make up a silly song, or draw a picture. Don't move on to the next section until the glue is dry!

FINAL ASSEMBLY



STEP 1

Insert an axle (the metal rod) through the bushings in the front and back of your racer.



STEP 2

Attach a wheel on each side of the axle. Firmly press the wheels onto the axle.





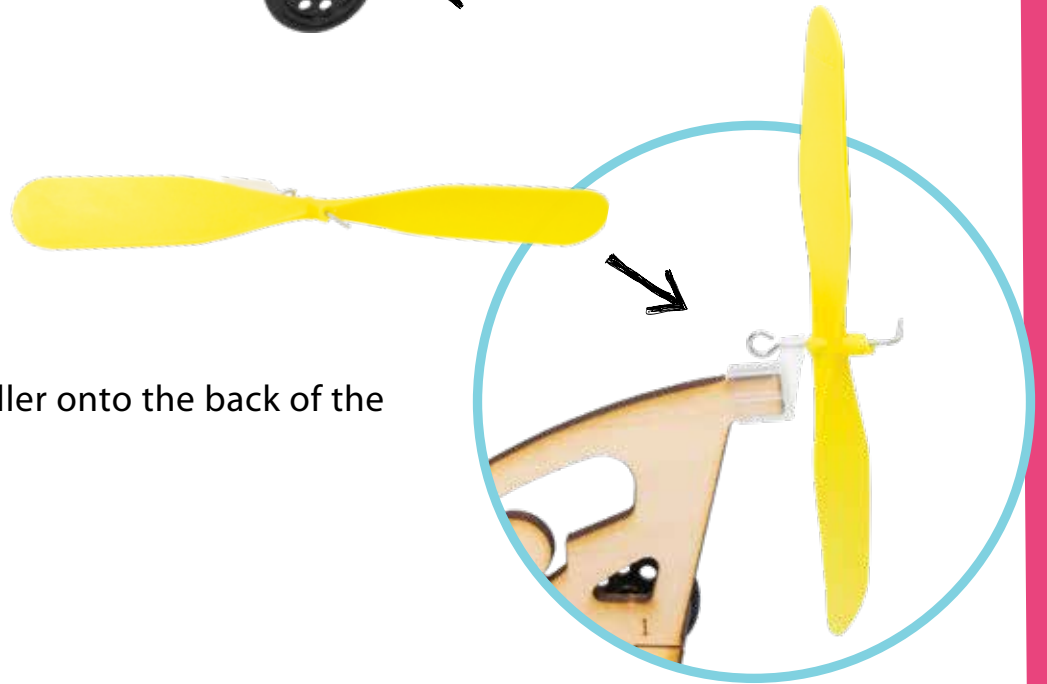
STEP 3

Make sure the wheels spin easily. If they do not, pull the wheels apart from each other slightly.



STEP 4

Push the propeller onto the back of the racer as shown.



STEP 5

Take your rubber piece by the two ends and tie a knot connecting the two ends – this should make a giant rubber band!



STEP 6

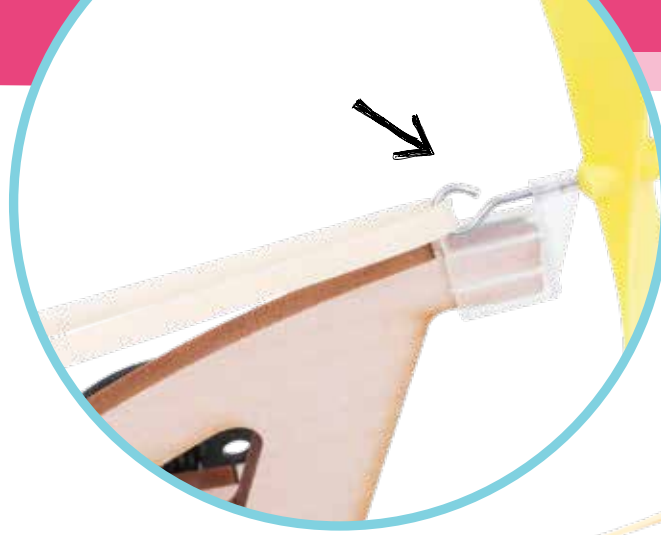
Slide the knot over Part 5 at the front of your racer.





STEP 7

Hook the unknotted end of the rubber in the small metal loop on the propeller.



STEP 8

You're done! Decorate your prop racer using markers or other art supplies and give it a name!



Note: After you've assembled all four racers, you might have a few wooden pieces and small metal screw eyes left. These pieces are not needed for the activities in this booklet.

THINK ABOUT IT

Write a story about one of your prop racer drivers.

Look at each of the racers in the kit. How are they different? How do you think these differences will affect the racer?

