# Making basic 3D models of rocket cars in TinkerCad

TinkerCad www.tinkercad.com is a powerful 3D design program that works in a web browser on a computer. Although the program is easy to use, you can practice may of the key ideas of 3D design.

Before you start making your own models.
The best way to learn the basics of TinkerCad is to try the **built-in beginner lessons** when you sign in for the first time. Once you have done those you should be ready.

Let see how we can make a model car in TinkerCad.
Choose **Create a New Design** and you should see a blank workspace with an empty blue workplane.
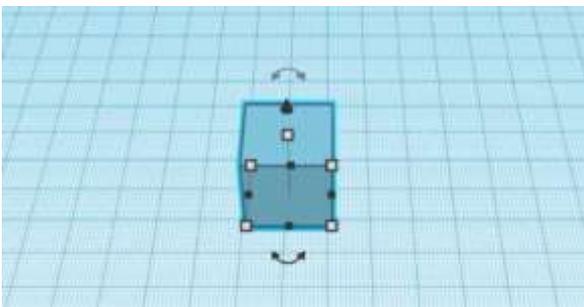

Look in the **basic shapes** area on the right and drag a cube onto the workplane. You can change its colour with the menu that pops up when you click it.

Make it light blue like the rocket car foam.

Now we need to make a long cuboid shape.

To change the shape of an object, **click and drag the small grey squares** at the bottom of the shape.
Now this looks more like the foam used to make a rocket car.

Next let's add some wheels!
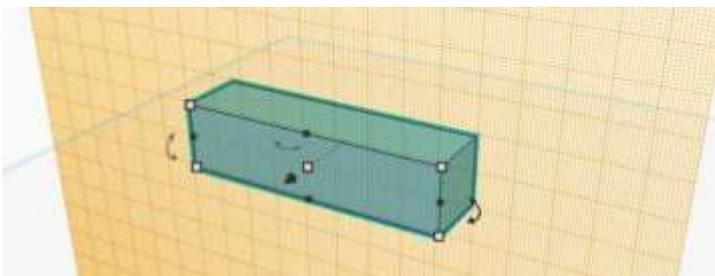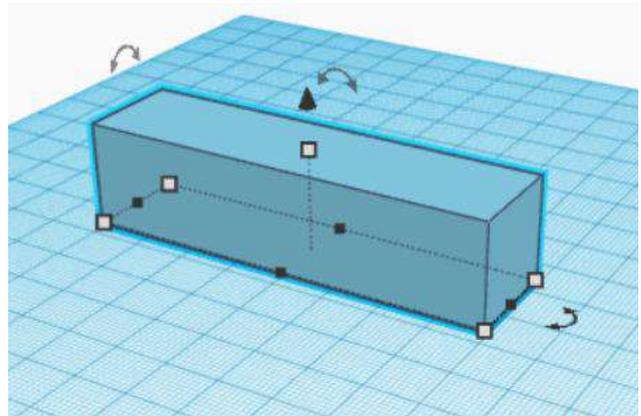
The first thing to do it put a **New Workplane** on the side of the cuboid that you want to add wheels to.

Just drag a **workplane** from the icon that looks like this.
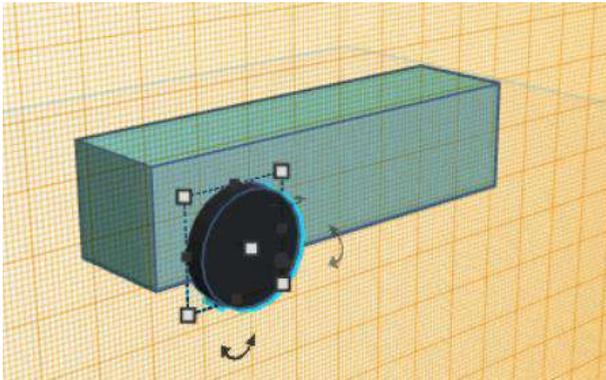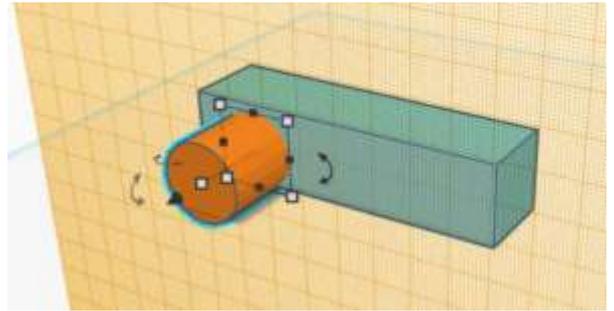

Workplane

Now we are ready to add our wheels….

Drag a cylinder onto your new workplane and position it on the side of your cuboid.

It's a bit big and might be the wrong colour.

Use the small grey squares to make the cylinder thinner and use the object menu to make it black.

That is looking better!

Now you could do that all again four times for the other wheels, but even easier is to **Copy and Paste** the thin black wheel.

You can use CTRL+C to copy a selected object and CTRL+V to paste or the icons at the top left.

Remember: After you have copied the wheel on one side you will need to put a workplane on the other side of your cuboid to make and copy the other wheels.

Well it looks like a simple rocket car now!

How about adding a rocket motor in the same place as the competition design sheet using another cylinder and a workplane placed on the back of the cuboid.
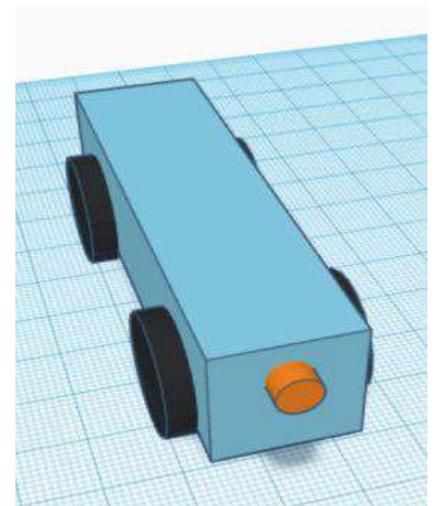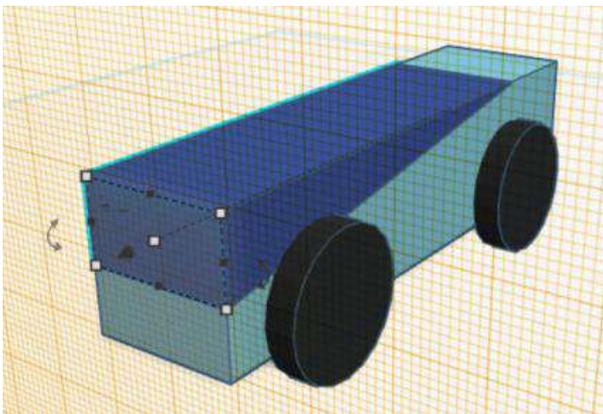
Shaping the body of your rocket car by cutting things away

Shapes that you add can be both solids or 'holes'. If you turn a shape into a hole, any other objects that overlap with that shape will be cut away.

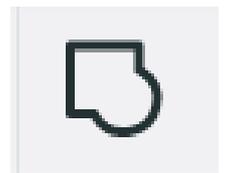To make our rocket car look mean and fast, let's make it wedge shaped!
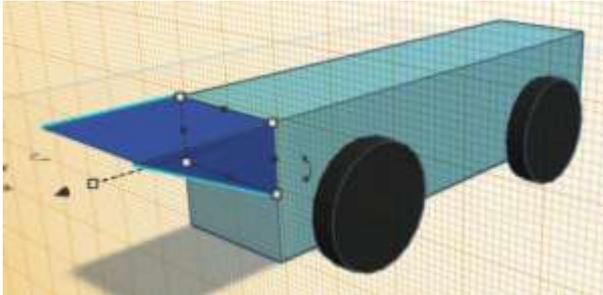
First add a **wedge** shape on the end and make it look like this.
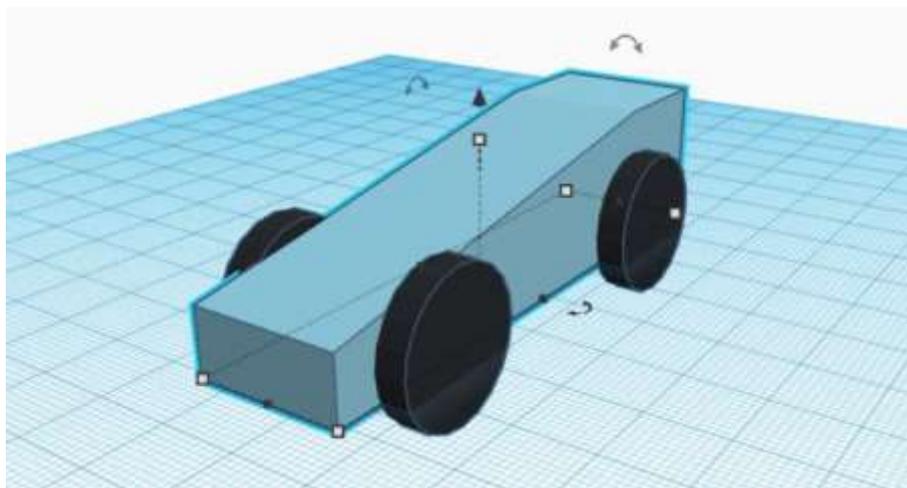
Now, drag the wedge shape behind the workplane so it shares the same space as the cuboid body.

Now for the cool bit!.

Turn the wedge into a hole, select both the body and the wedge and the click the ungroup button
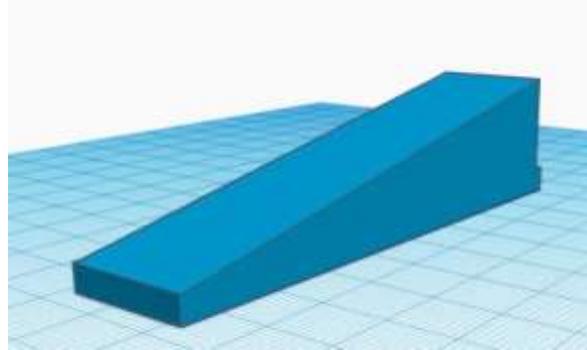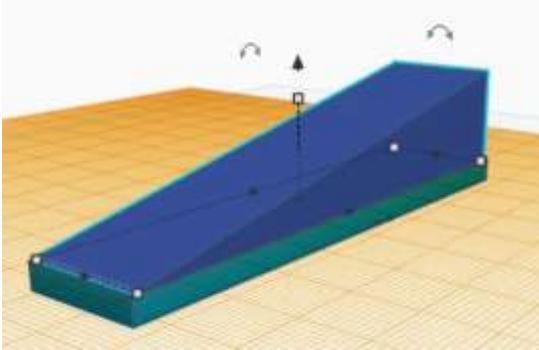
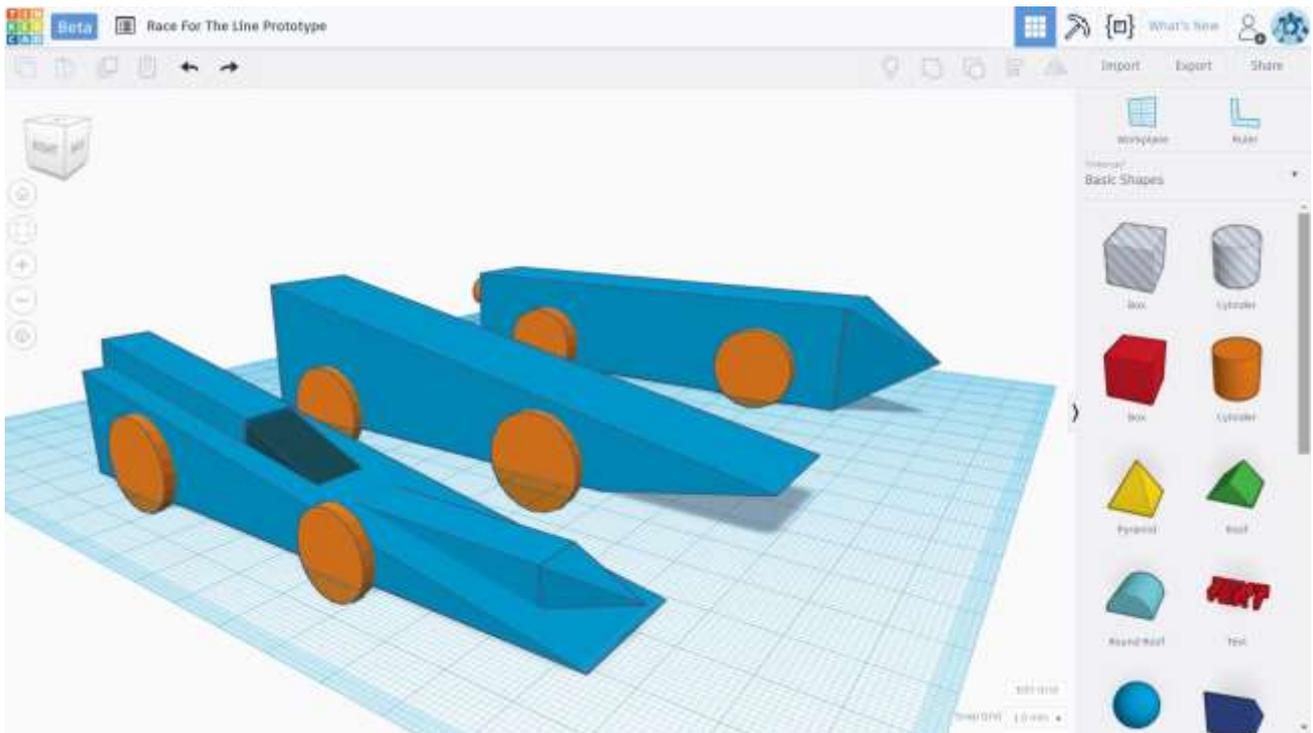That is a pretty mean looking rocket car!

Shaping the body of your rocket car by adding shapes and grouping them together.

You could also build a body by putting a wedge on top of a long low cuboid and grouping them together.

Well that should be enough to get you started.

You can now make a whole fleet of model rocket car designs!

www.tinkercad.com