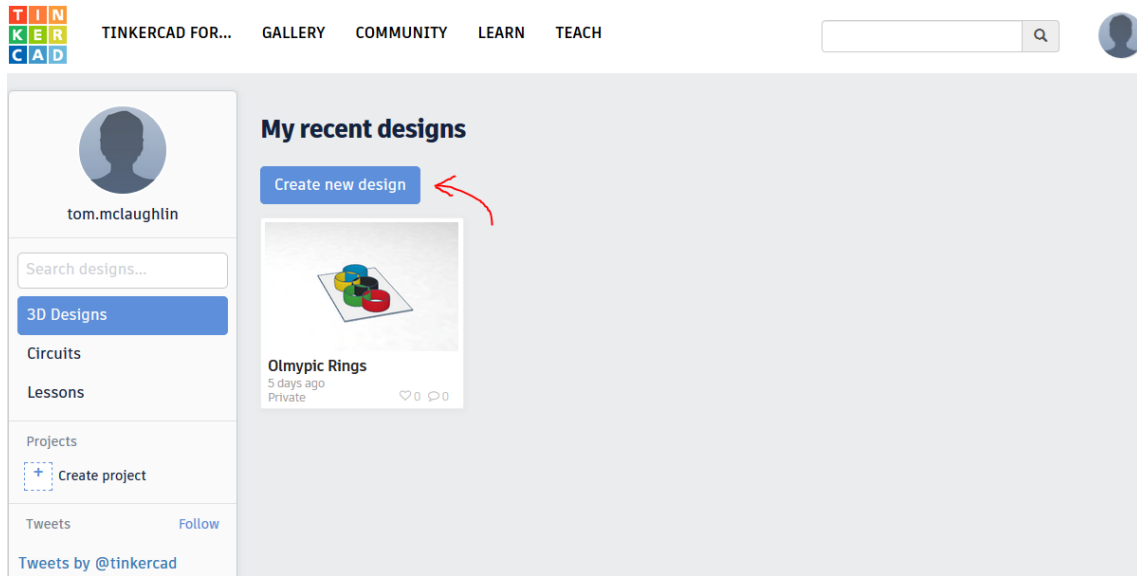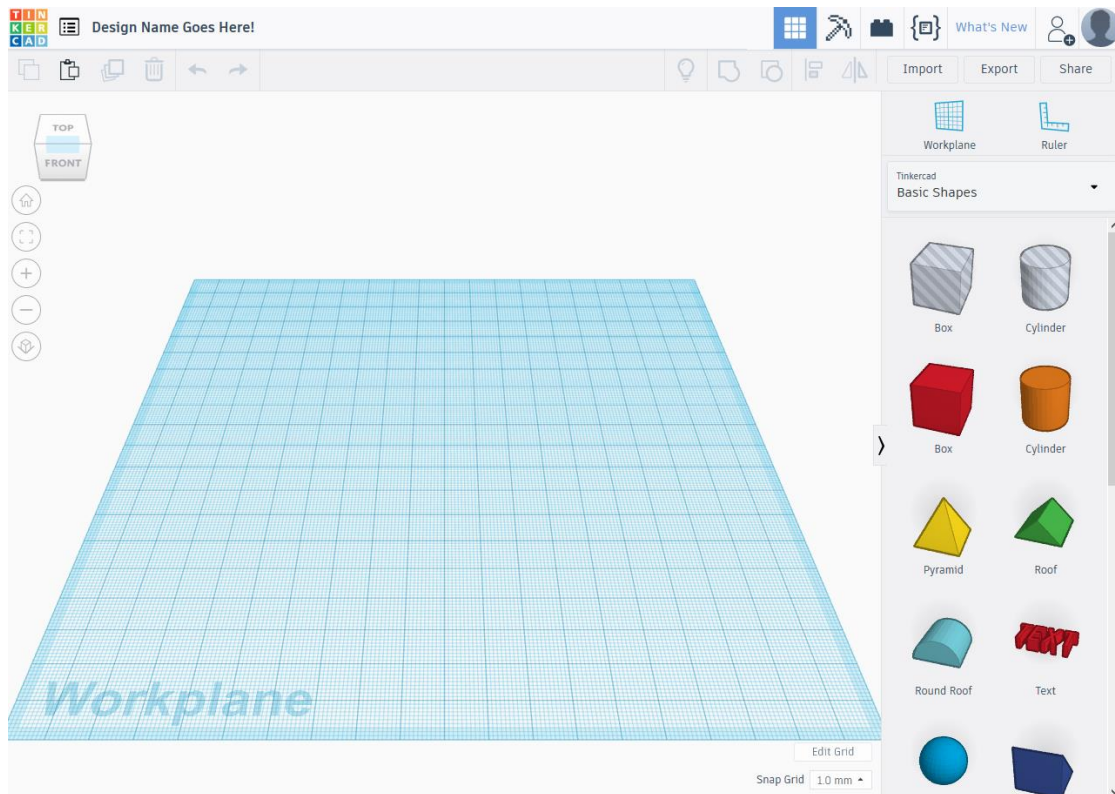# TinkerCAD Workshop

**CAD** stands for **C**omputer **A**ided **D**esign, which is exactly what it sounds like – using a computer to design things!  In this workshop, you will be using an online application called **TinkerCAD** to make some designs of your own!
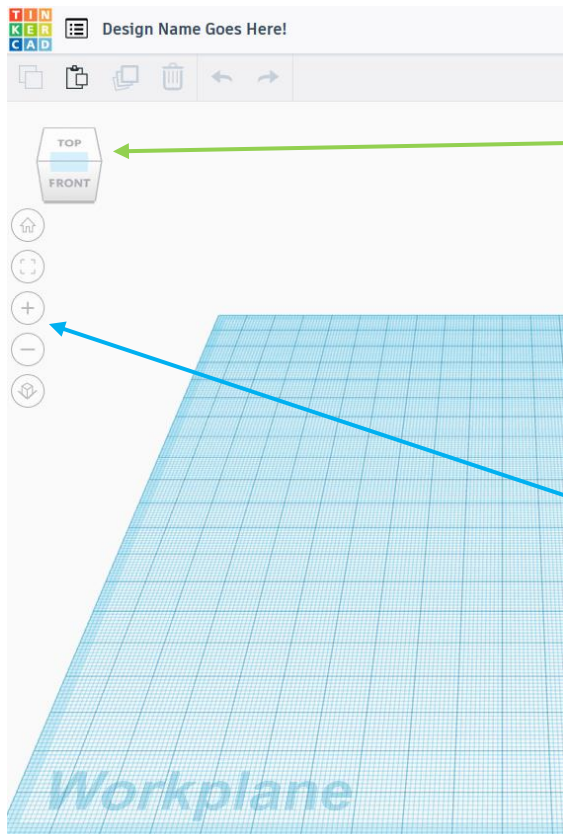
Firstly, click on **"Create new design"**



Once you've done that, your screen should look like this.  The large blue area is where you will make your design – it's called the **Workplane**.

Now that you've opened the TinkerCAD application, let's take a quick look at what everything does:



At the top left of the screen, you'll see a cube with the words "TOP" and "FRONT" written on it. This is called the **ViewCube**.

Try clicking on the **ViewCube** and dragging it around – you'll notice that moving it lets you look around the Workplane.

Underneath the ViewCube, you'll see some circular buttons – you can use the **+** plus and **−** minus buttons to zoom in and out. Try it now!
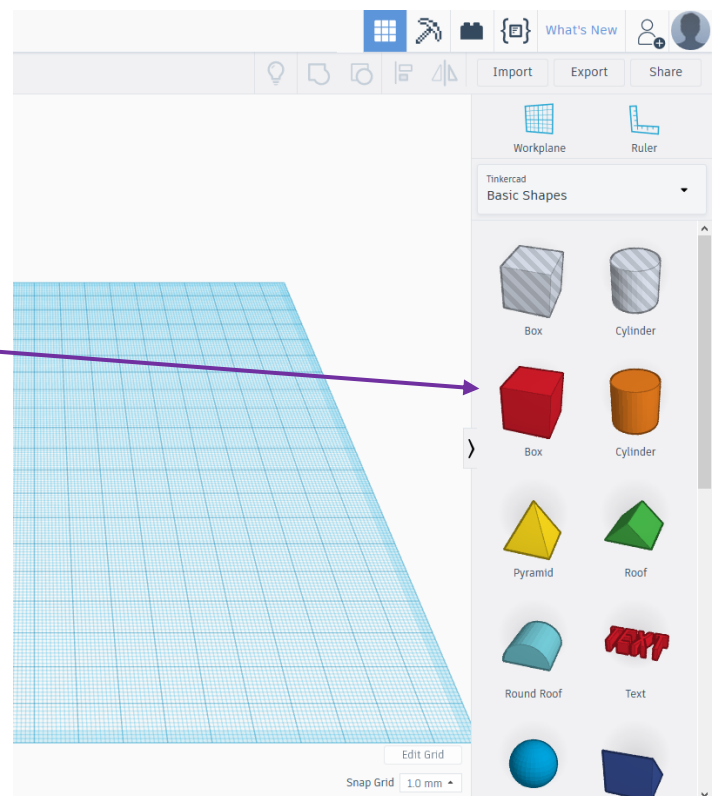
You can also pinch the touchpad on a laptop to zoom in and out, or use the scroll wheel on a mouse.
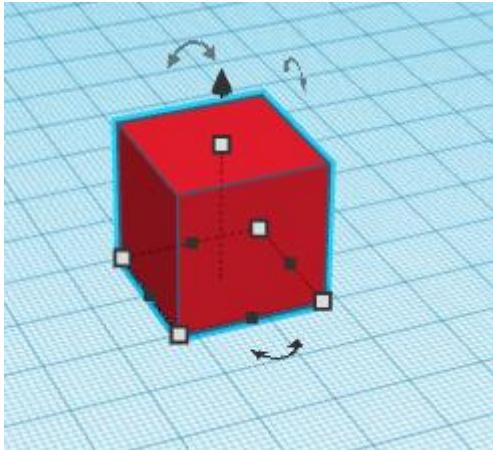
**Now let's get building!**

On the right hand side of the screen, you'll see lots of shapes.

Choose the **Box** shape and drag it onto the Workplane.

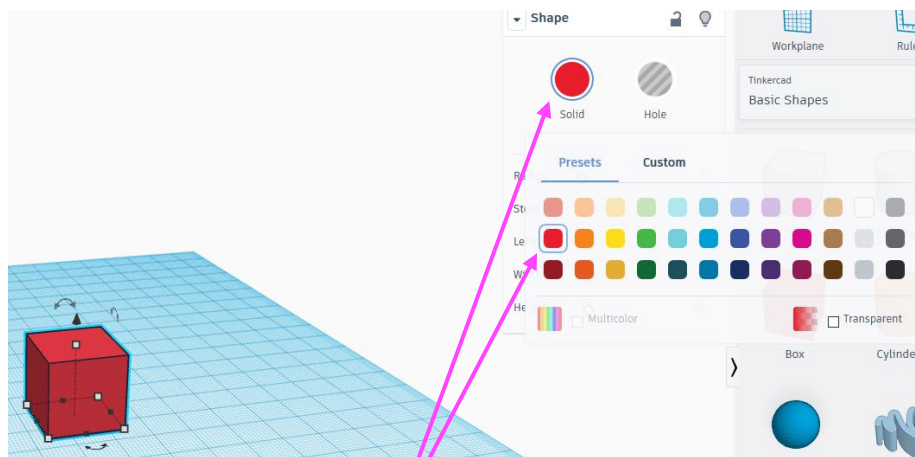**Tip:** You can find even more shapes (and text!) by clicking on the "Basic Shapes" drop-down menu.

**Once you've added a shape, there are several things you can do with it.**

Drag the large black arrow to move the shape **up** and **down**.

Drag the curved arrows to **rotate** the shape.

Drag the white squares to **resize** the shape.

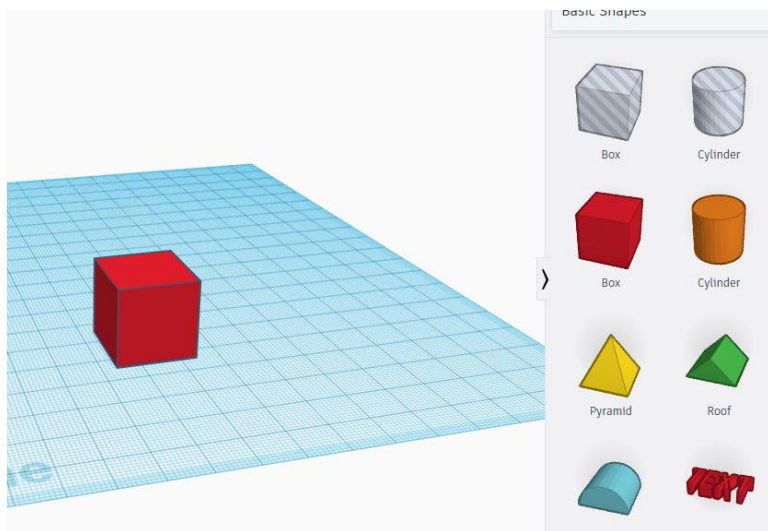Drag anywhere else on the shape to **move** the shape around.

If you want to change a shape's colour, you can do so by clicking on it and changing its colour in the "Shape" box.
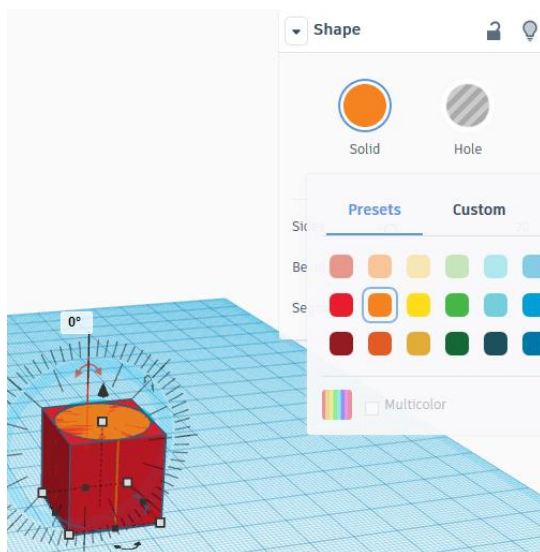
**Lastly…**

The last thing you need to know about TinkerCAD is how to make holes in shapes.  Let's say we want to make a circular hole in the middle of our box.
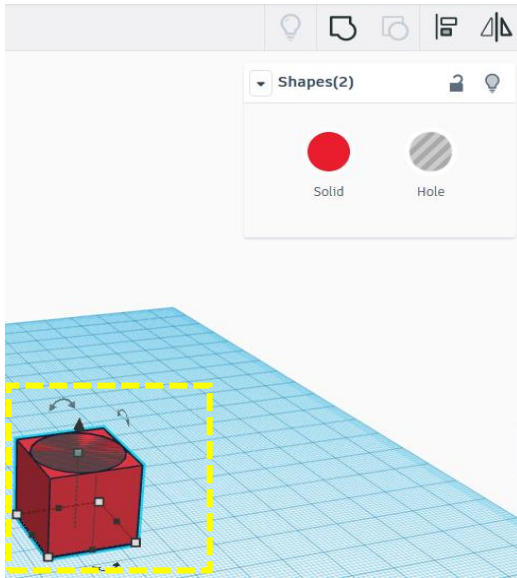
Here's how we'd do that:

Grab the orange **Cylinder** from the shapes and **drag** it into the middle of your box.

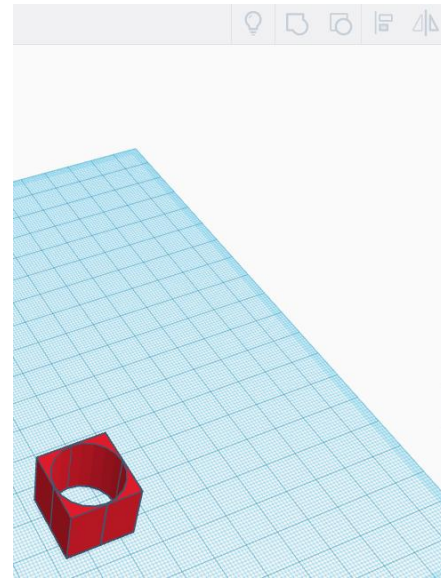Now look at the **Shape** box and click on **Hole**.

You'll notice that the cylinder now looks different.

Click and drag a box over your **Cylinder** and **Box** to select them both together.

The yellow dotted line shows how you should drag your mouse to select both shapes.



While you have both shapes selected, click the **Group** button.

After you click **Group**, the hole will be made in the shape of the cylinder you selected earlier.

And that's all the basics of TinkerCAD – have a look around and see what else you can find, and see what kinds of 3D models you can make!