

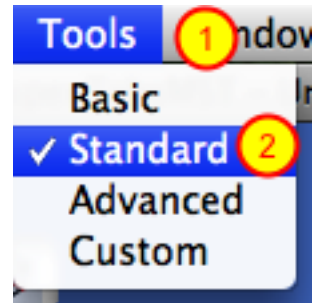
FabLab ModelMaker: Grouping, Moving, Cloning, & Duplicating Shapes

This tutorial covers shape grouping, moving, cloning and duplicating. This tutorial uses a Mac version of FabLab ModelMaker, but users will find few differences between the Mac and PC versions of ModelMaker.

Standard Tools

Before beginning this tutorial, please make sure that you have the standard tools display selected.

1. Select Tools from the menu bar.
2. Select Standard from the drop-down menu.



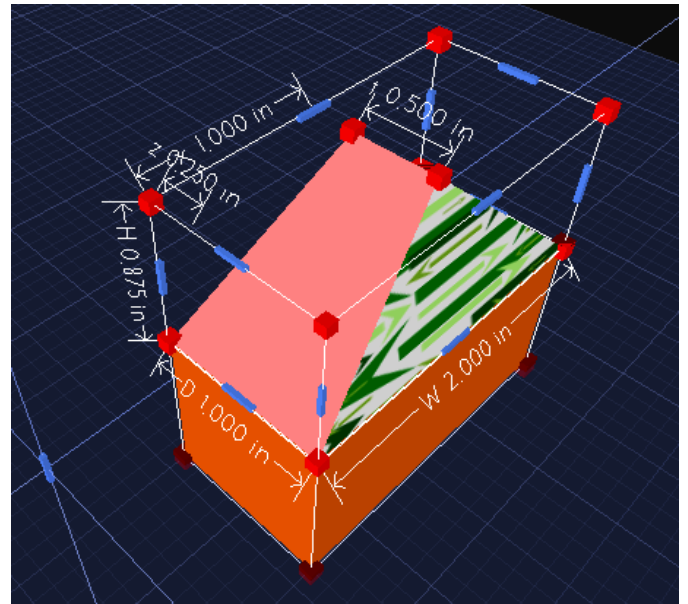
This tutorial requires users to have at least two shapes in the 3D area.

Grouping: Step 1

Grouping shapes is a process that involves two or more individual shapes. When you group shapes, you are combining selected shapes into one single object.

1. Click on one of the shapes in the 3D area.
2. Hold down the Shift key and select a second shape in the 3D area.

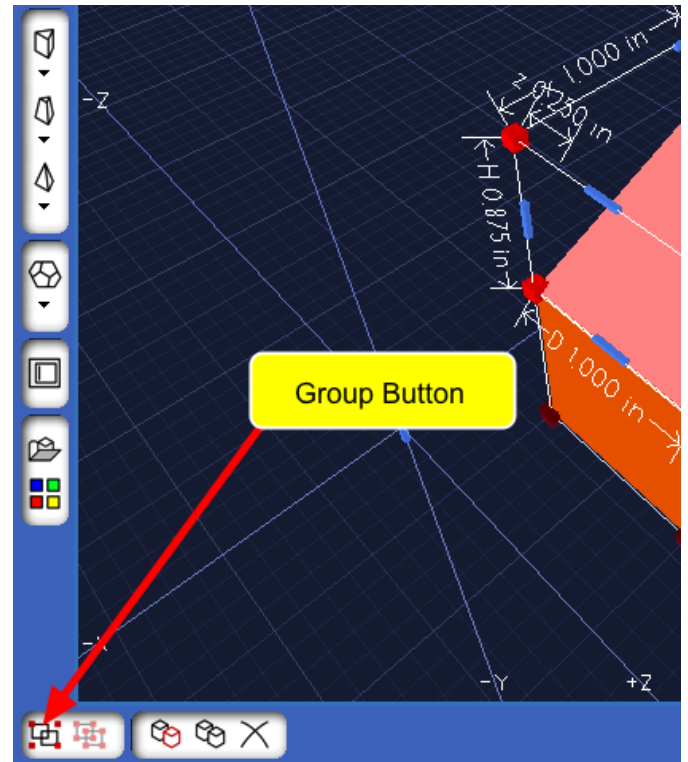
The image shows two selected shapes in the 3D area.



Grouping: Step 2

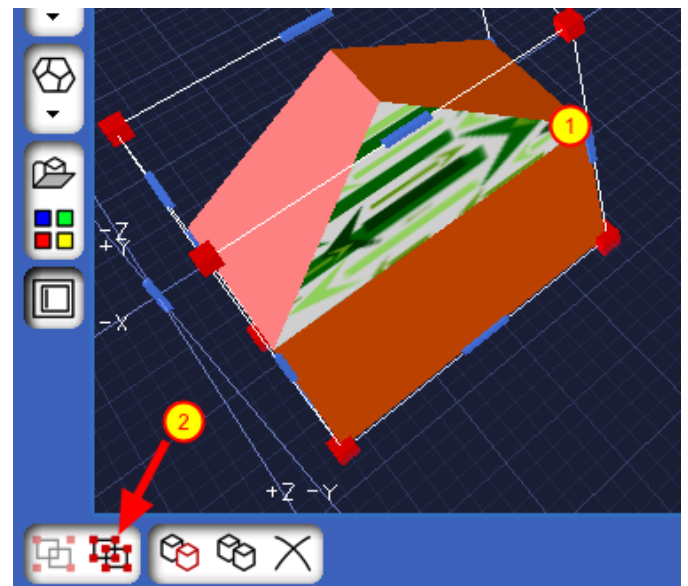
Click on the Group button in the bottom left corner of the FabLab ModelMaker interface.*

*Grouping shapes together makes it easier to move finished objects in the 3D area. Grouping also provides opportunities to universally scale and resize finished objects.



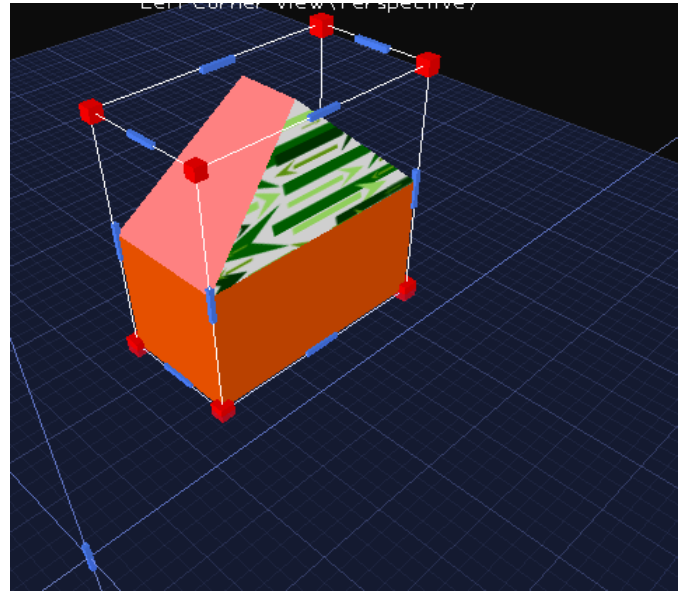
Ungrouping

1. Click on one of the grouped objects in the 3D area.
2. Click on the **Ungroup** button.



Moving: Step 1

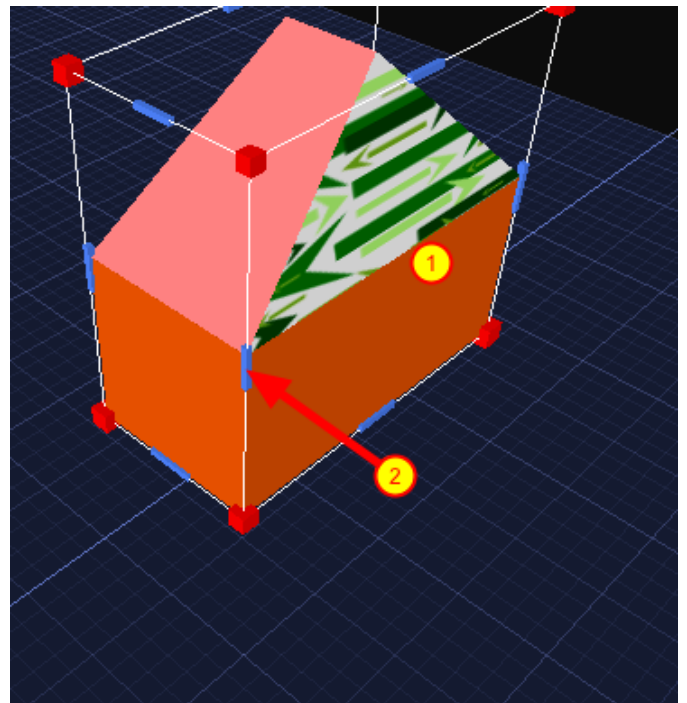
If you click on a grouped object, hold down the mouse button, and move your mouse in the 3D area, the grouped object will move.



Moving: Step 2

You can move a grouped object (or individual shapes) along the X, Y, and Z coordinate planes by following these steps:

1. Select a grouped object (or individual shape).
2. Click on one of the blue rectangles, hold down the mouse button, and drag the mouse button to reposition on a specific coordinate plane.



Cloning & Duplicating

You can create an exact replica of a shape or grouped object by cloning or duplication.

1. Select a grouped object (or individual shape).
2. Click the Duplicate button if you want to make a replica at a new position.
3. Click the Clone button if you want to make a replica at the current position. **You need to click, hold down the mouse button, and move the object to a new position to see the replica in the 3D area.**

