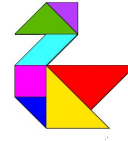




Tangram in SketchUp



The objective of this activity is to draw the tangram, its box and at least two figures using a 3D design software called SKETCHUP

The program is free in your Make version and can be downloaded at <http://www.sketchup.com/is>

Recommended tools: large set of tools, Standard, View, Camera, styles and sizes










Three different ways to select an object:

- Click, double click or triple click with the mouse.
- Generating a window with the mouse from left to right. Elements inside the window are selected.
- Generating a window with the mouse from right to left. All elements touching the window generated are selected.





Instructions for the Tangram

1. Open the  program, select the top view and  start drawing tangram pieces inside a square of 120x120 mm. To do this you have to select:
 - a. Order **rectangle**  Remember to write the measure of the two sides of the rectangle separately per **mm**; (example: 120x120 mm square of 120write; 120 ENTER)
 - b. using command line  drawn inside the rectangle parts Tangram. Remember to use the benchmarks (midpoint, endpoint) to make your job easier.
2. Separate the pieces as you can see in the picture below. Selects  each piece by double click and uses the command **Copy** (M and CRTL key)
3. Give volume (height 5mm) using the tool (pushing). If now select the 3D view  you look better.
4. Select each piece with three mouse clicks and give color 
5. You should create a group for each piece so working with them will be easier. Select the piece (3 clicks) and click the right mouse button. Select "Make Group"
6. Let's start the tangram box. We start making the base (box 140 x 140 mm) and giving the height of 5 mm as we have done before in steps 1) and 3)
7. As the box is made of wood, instead of color will give wood look. Look this possibility in the dropdown order 
8. Then draw a 140x10 mm side and the other of 120x10 mm. We will give a height of 10 mm
9. Using command **COPY** (M key and CRTL) put three sides of the box. For this, we turn the bar 120x10 mm.
to turn any piece use order **ROTATE**
 1. Select the piece by clicking on it
 2. Click on 
 3. Click on two points of the drawing are the axis of rotation
 4. Move the mouse and see how the piece turns. Click when you reach the desired position.
10. Place each piece on the box making copies.
11. Put the bar remaining to close the box.
12. Now is the time to play with the tangram. Make two figures and place them on the same screen.