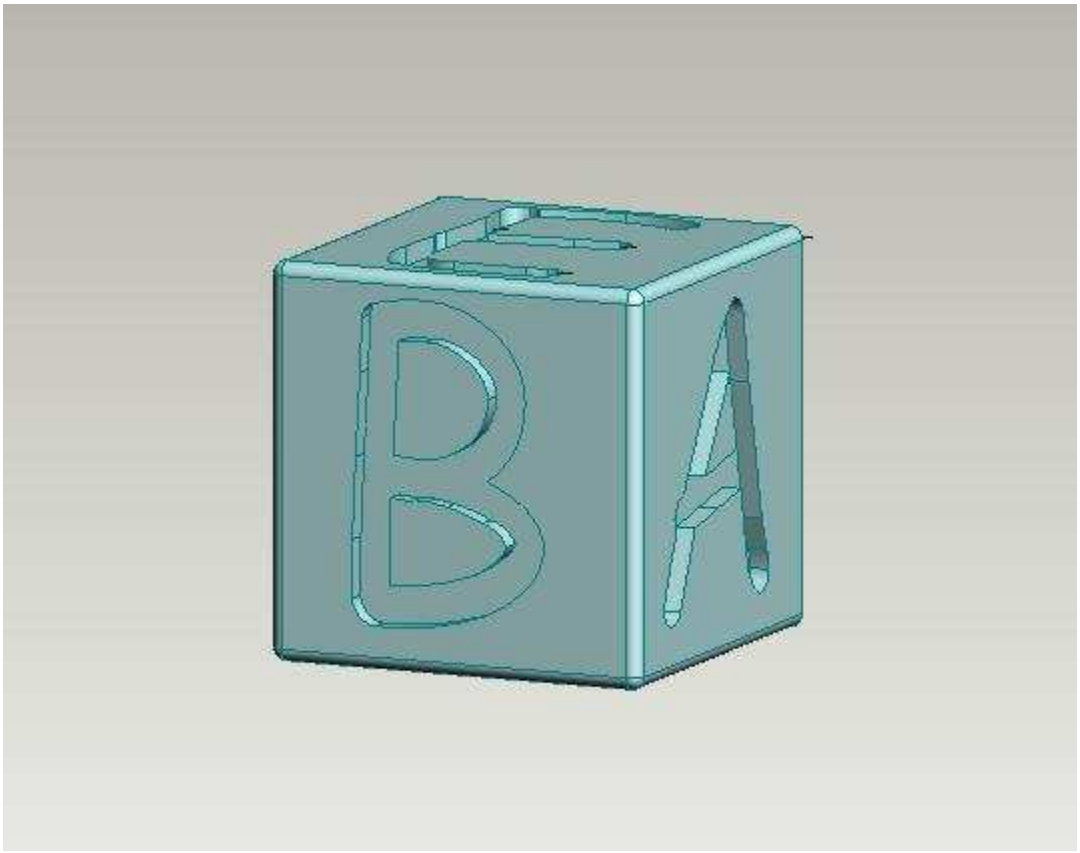
TOY BLOCK

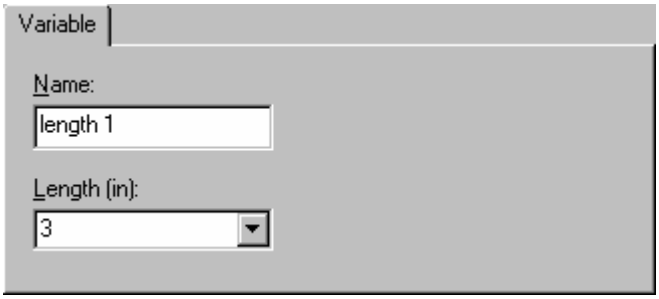


- Open a **New Design** using the new Design icon  , or go to **File > New > Design**. When you open any new design you automatically go to the **base** workplane. The sketch is automatically named **initial**.

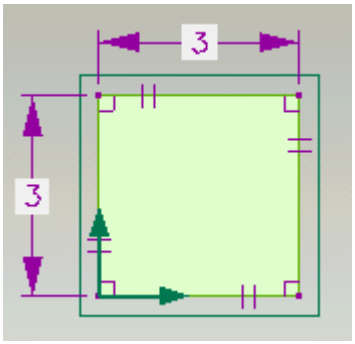
- Make sure you are in inches. Go to **Tool>Options>Units** and change the paper and model to **inches**.
- View onto workplane using  icon or use the keyboard shortcut Shift+W.
- Using the rectangle tool icon in the design Toolbar  Draw a rectangle any size in the design window. Do not worry about drawing outside the green rectangle. Your rectangle will shade in.

- Now using the Sketch Dimension Tool icon  dimension the Rectangle. To dimensions lines in the horizontal position, left click on the horizontal line, holding the left button, drag up or down and release where you want the dimension line located. Now do the same thing for one of the vertical lines, but drag out to the left or right. Watch Video

- Now using the Select Constraints icon  in the design window, double click on each line, when the dialogue box opens, change the dimensions in each to 3 inches. Watch Video.



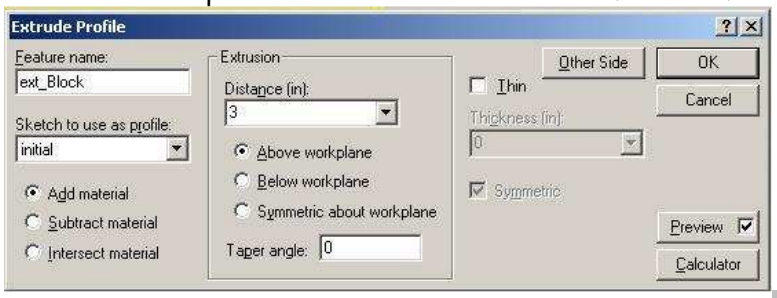
Your design should appear as below.



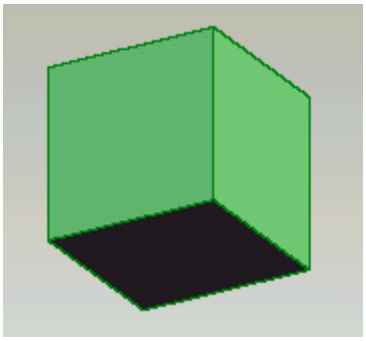
NOTE: You can click and drag the rectangle to exact dimension you want using the dimensions on the screen as you move the cursor horizontal and vertical.

- We will now change the 2 dimensional box to a 3 dimensional cube.
- Select the Extrude Icon  or go to Features and select Extrude Profile.

- Fill in the dialogue Box so it matches below. Feature Name – **ext_Block**, Add Material, Above Workplane and in the distance enter **3**. Click OK Watch Video

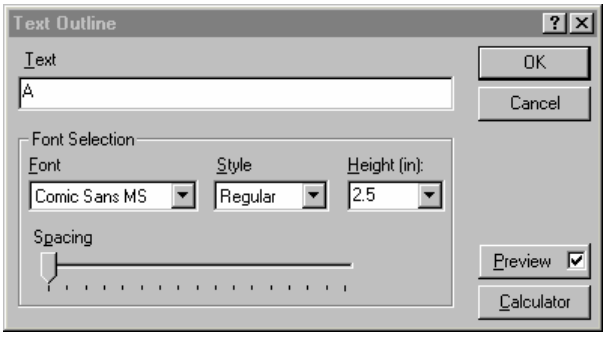


- Using the arrow keys on the keyboard or the Tumble icon  rotate the cube.

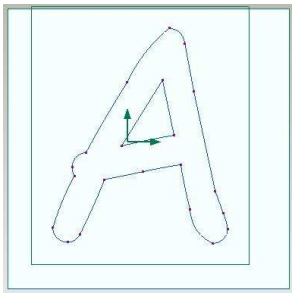


- Choose the **Select Faces (F)** icon  in the design toolbar.
- Select one of the 6 faces on the cube. When one of the faces is selected, it will turn light blue. Left click and the face will turn red. After it turns red, right click and select New Sketch. When the dialogue box opens, under **Name** type in **A Cut**. In the **Create Workplane** box, type **A Cut** then OK.

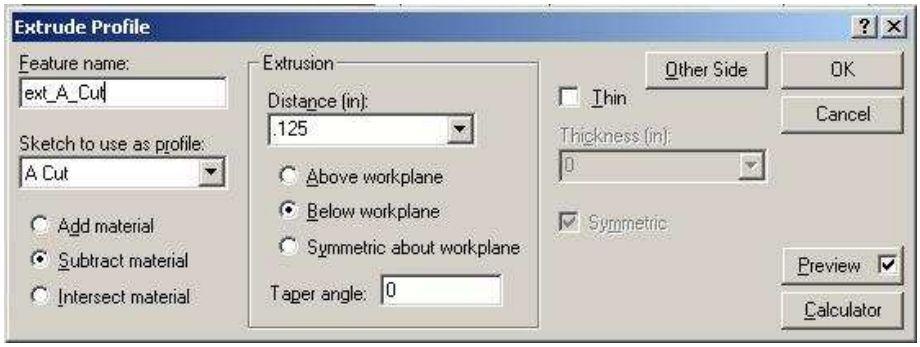
- Now View onto workplane using **Shift+W** or  . Right click on the design and select **View > Autoscale**.
- From the top Toolbar select **Line > Add Text Outline >** Under Text type in A, Font Comic Sans, Style Regular, Height 2.5 inches. OK.



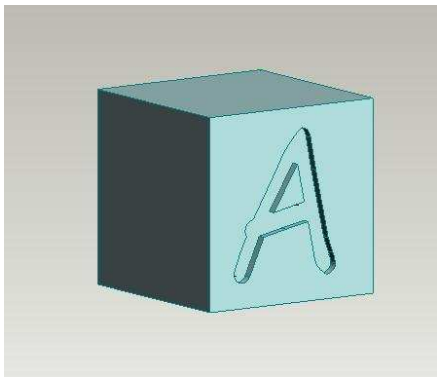
- Move the cursor onto the letter until you see the cross-hair arrows. Holding the left mouse, move the Letter A until it is in the center of the sketch area and release.



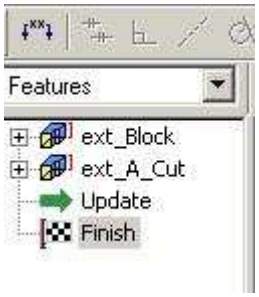
- Select the Extrude Icon  or go to Features and select Extrude Profile. Feature name – ext_A_Cut, Subtract Material, Below Workplane, Distance .125 inches. OK.



- Your cube should look like the design below Watch Video.

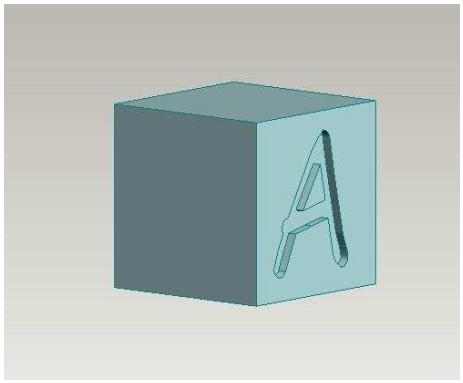


- Now go to **the browser window** and change your selection to **Features**.



- Right click on **ext_A_Cut** and select **redefine**. The extrusion box will open; change the distance to .15 inches. OK. If the green update light on the top of the screen is lit, you will click it. This will update the design Watch Video.

- Your new design should now look like the design below. Notice the letter A has decreased in thickness.



- Now complete the other 5 sides using letters B, C, D, E and F.

- Make this toy SAFE by rounding the edges. Click on **Select Edges (E)**  and click on an edge so that the edge highlights. Right Click, then click **Round Edges**. Experiment with different radii (radius box) Watch Video.