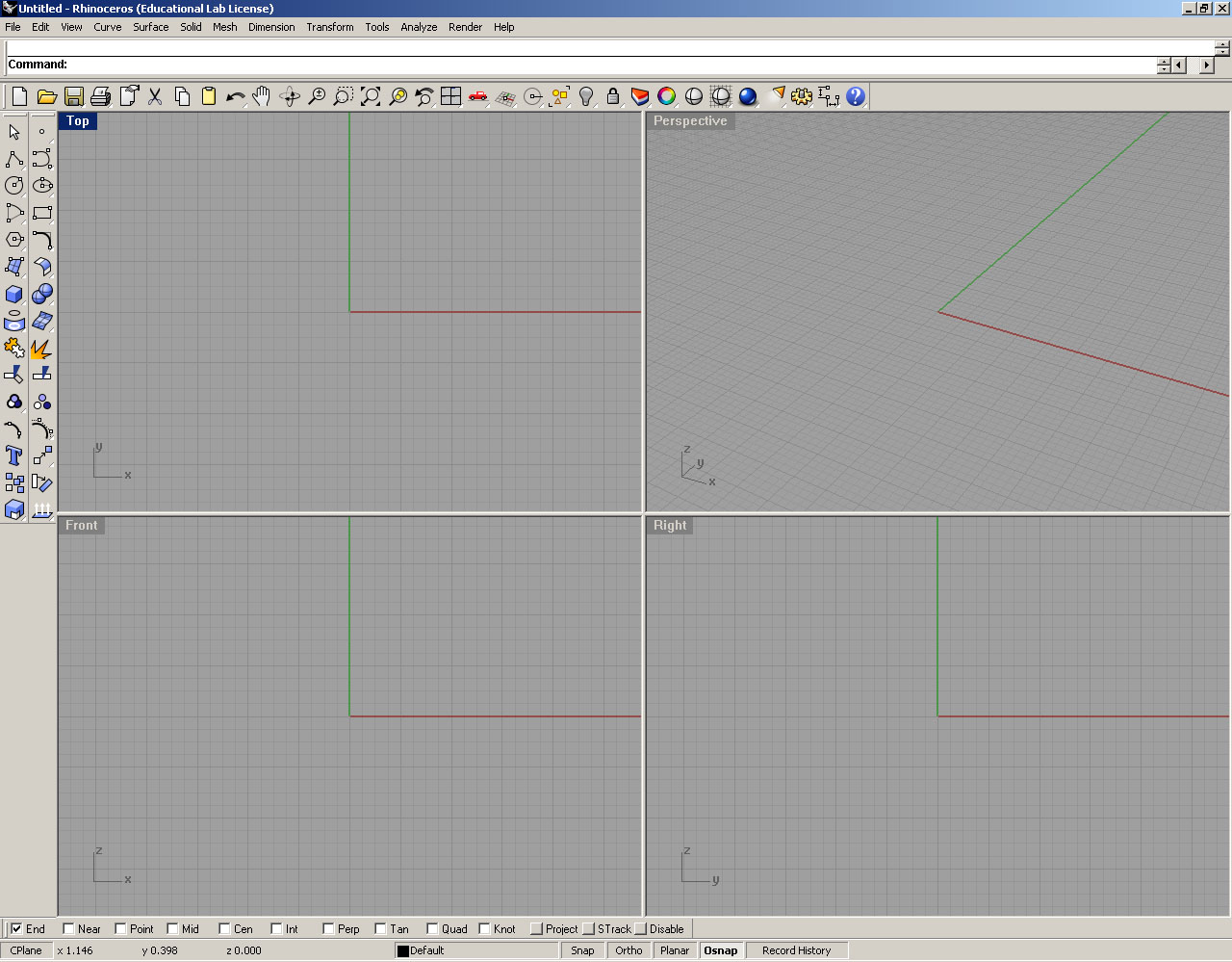
3D Printing Project: Keychain

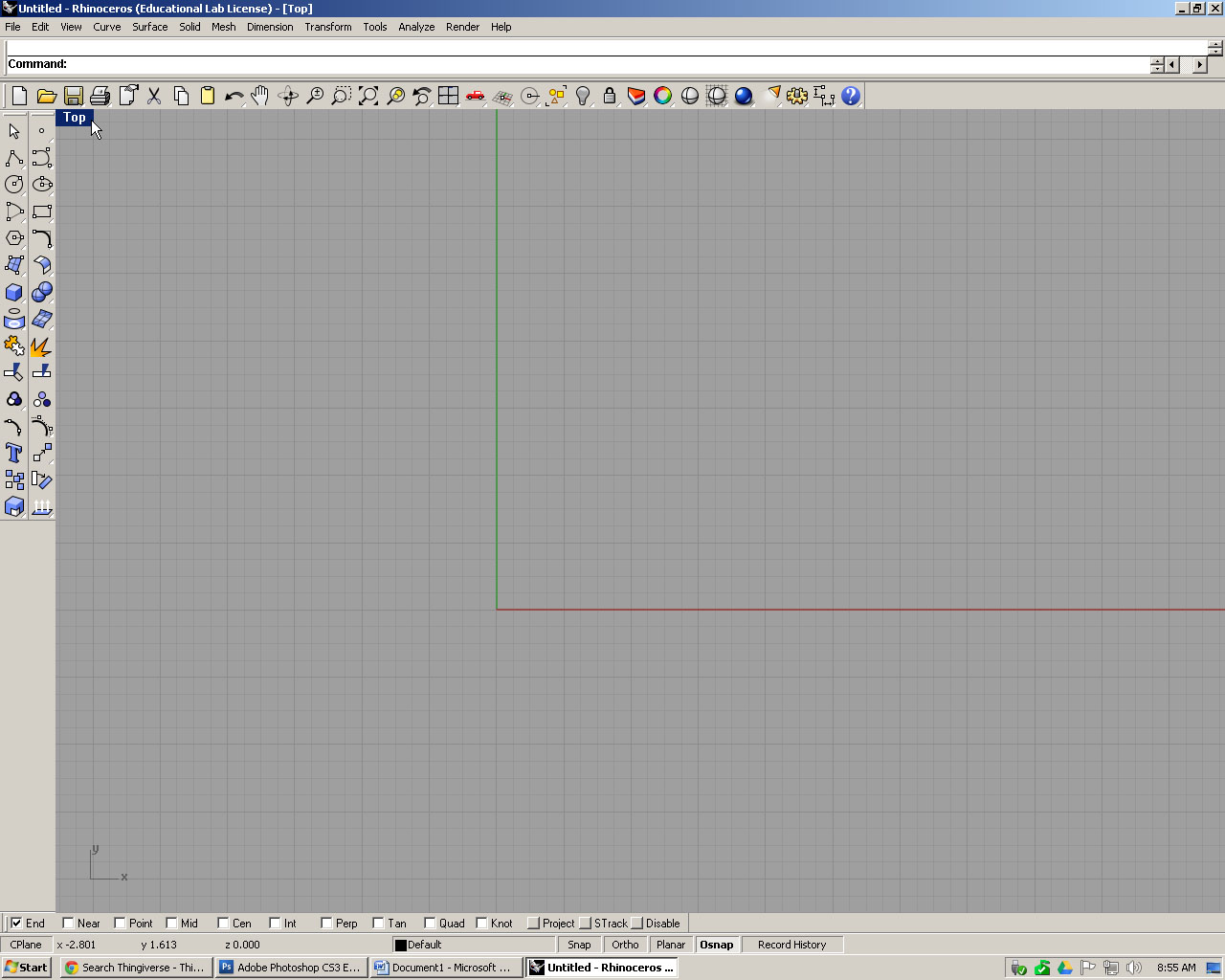
1. Go **to Shared Folder < Template < OOO CTE < ACHS < Rhino Tutorials.** Double-click on the Keychain icon.



1. Your screen should look like below.

**3**

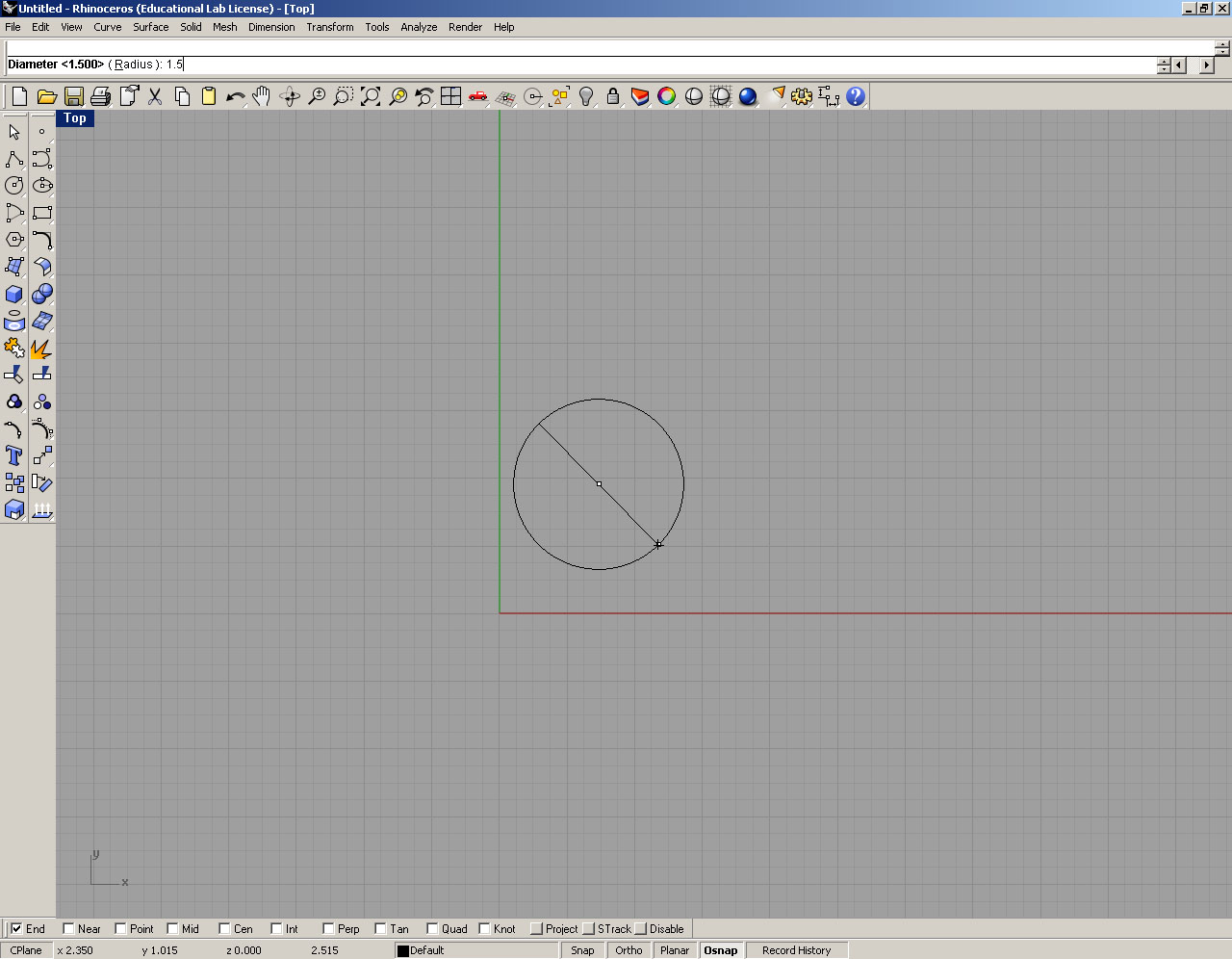
1. Double-click on the text **Top**. Your screen should look like below.



1. Left-click to activate the circle tool. Then, click in the center of the screen. Enter a value of 1.5 diameter and press **Enter.** Your screen should look like below.

tools.jpg

Left-click here

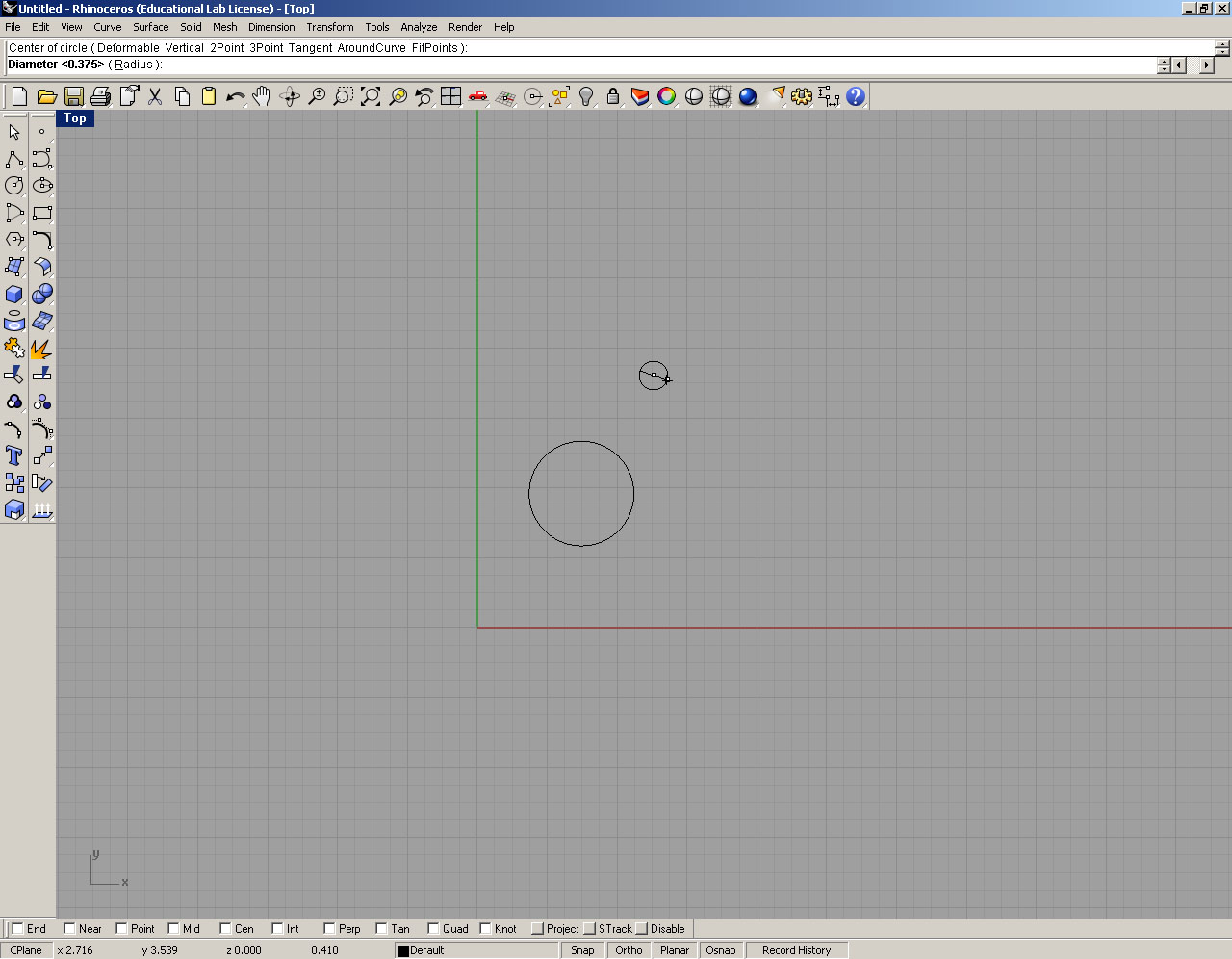


Enter 1.5 here.

1. Left-click to activate the circle tool again. Then, click anywhere on the screen. Enter a value of .375 diameter and press **Enter.**

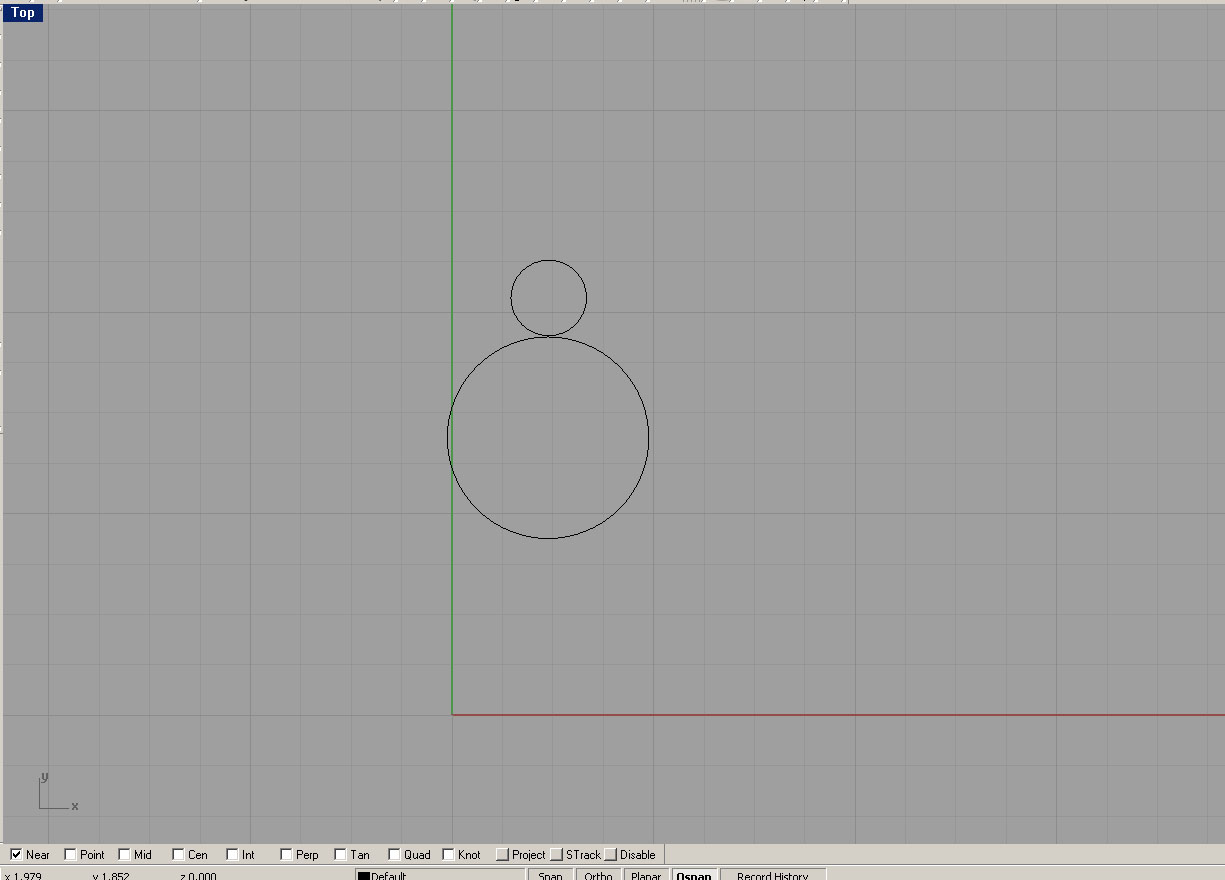
**tools.jpg**

Left-click here.

****

Enter .375 here.

1. Click-and-hold on the smaller circle. Move the small circle so it rests just about the larger circle. See below.



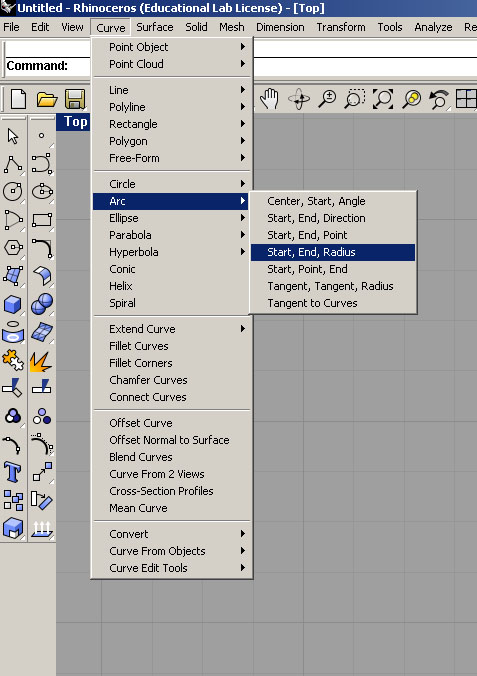
Move the smaller circle on top of the larger circle.

1. Next, make sure Near is checked in the options at the bottom of the screen.

8.jpg

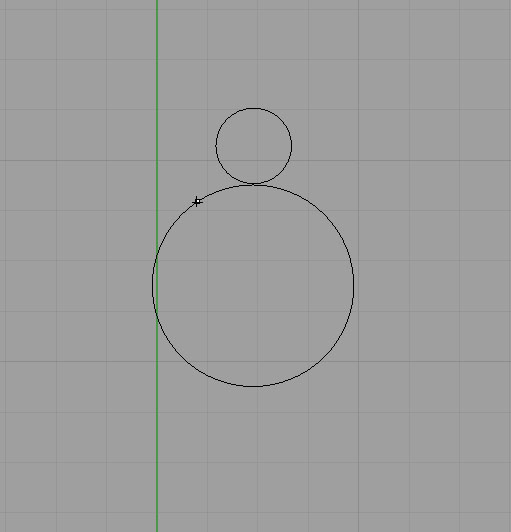
Make sure **Near** is checked.

1. From the menu bar, left-click on **Curve** < **Arc** < **Start, End, Radius.**

****

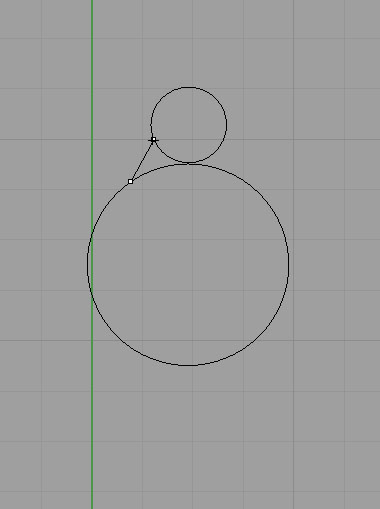
1. Click on the upper half of the large circle. See below

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****

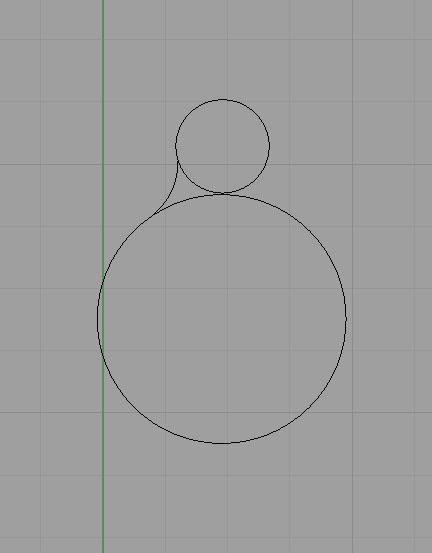
Left-click here.

1. Then, click on the lower half of the smaller circle. See below.

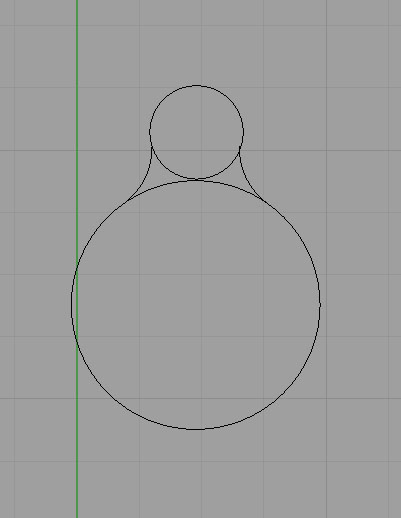


Left-click here.

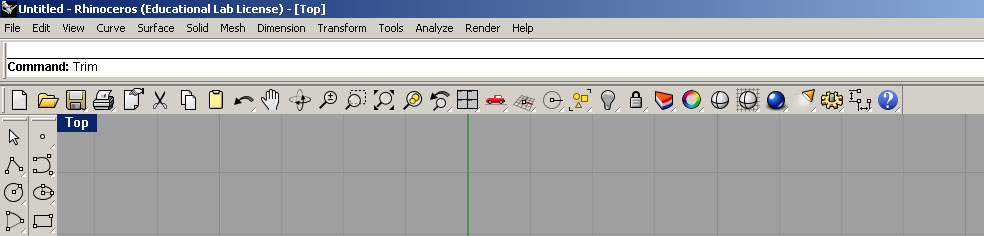
1. Move your mouse on the screen so you get an arc between the large and small circle. See below.



1. Repeat Steps 8-11 so you have an arc on the other side of the circles. Your screen should look like below.

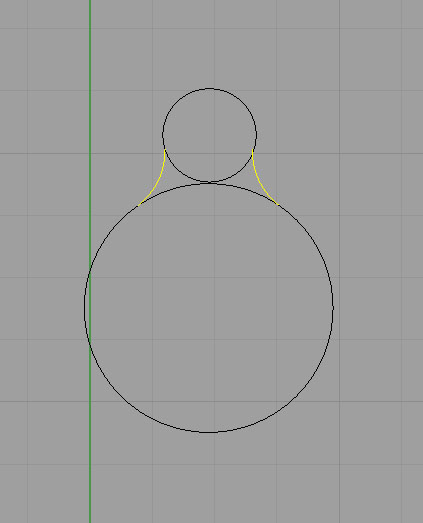


1. Type **Trim** to activate the Trim command. See below.



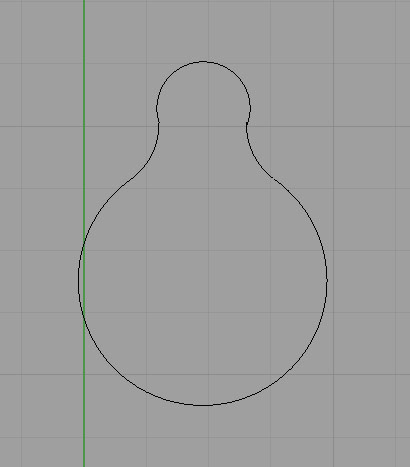
Type **Trim** here and press **Enter.**

1. Click on both the arcs. They should turn yellow in color. Then, press **Enter.** See below.

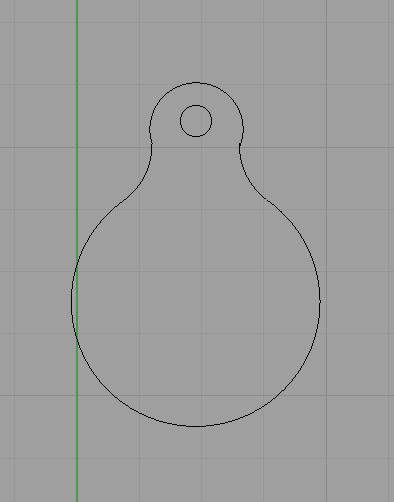


Click on the arcs, then press **Enter.**

1. Then, click on the lower half of the small circle and the upper half of the large circle. The circles will be trimmed. Your screen should look like below.

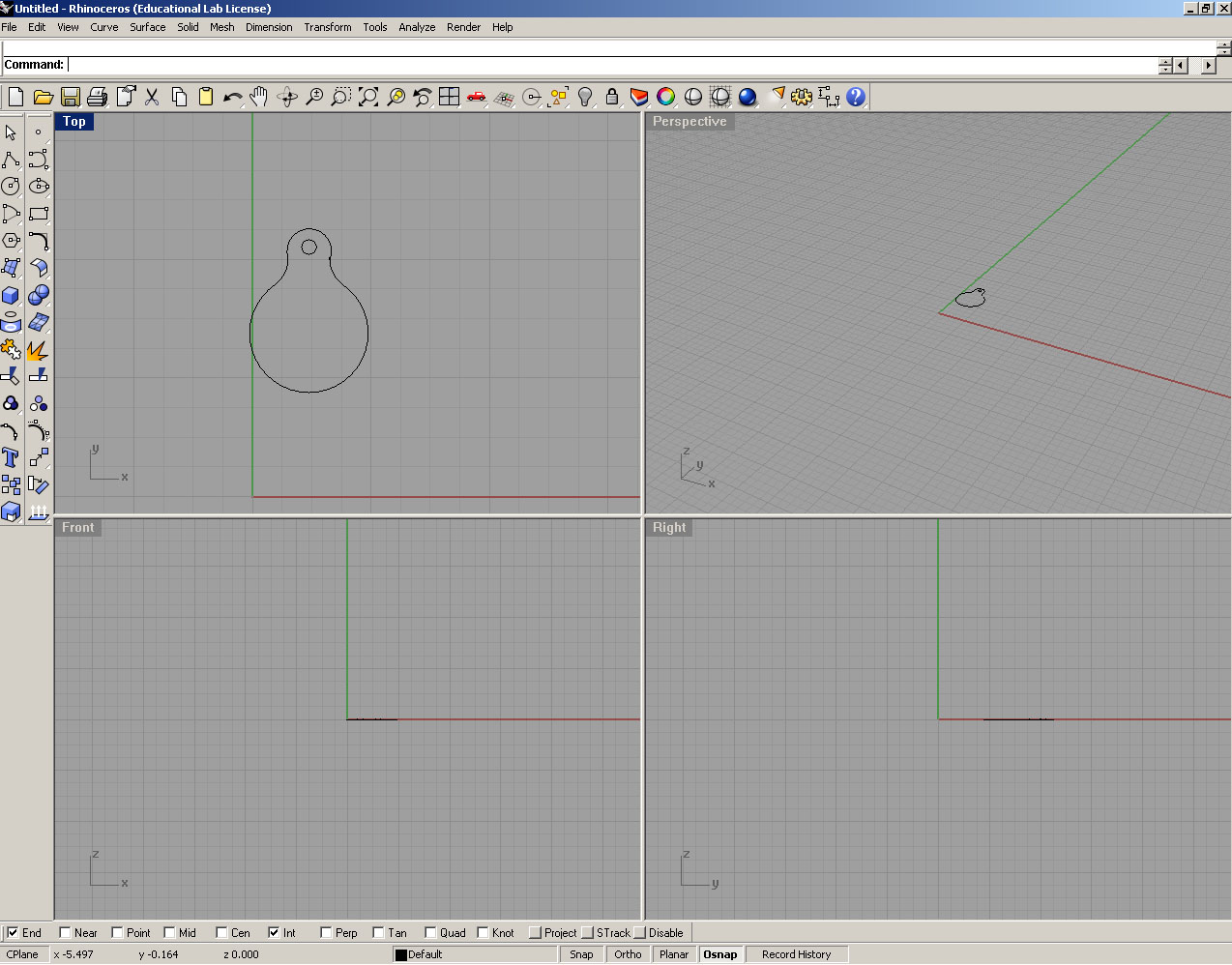


1. Activate the circle too again. Then, click in the center of the small circle. Enter a value of .125 diameter and press **Enter.** Your screen should look like below.



Circle .125 diameter.

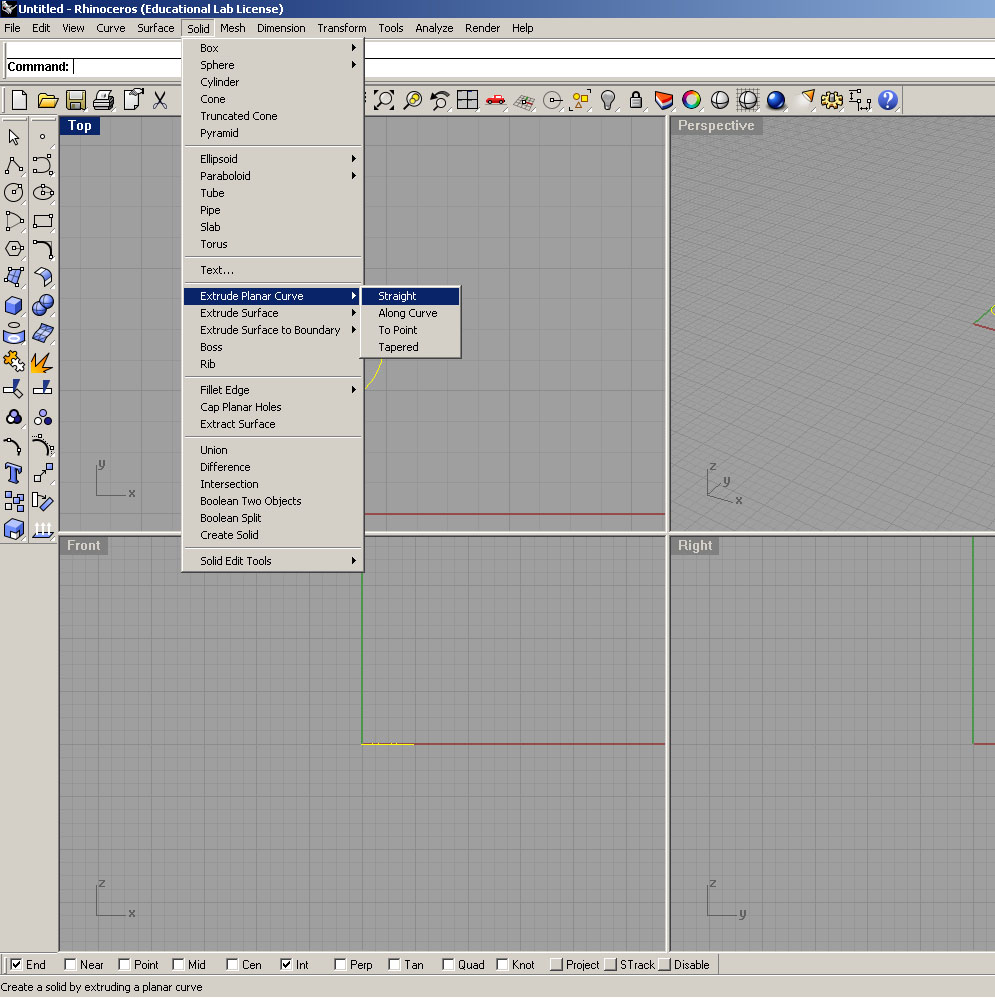
1. Double-click on the text **Top.** Your screen should look like below.



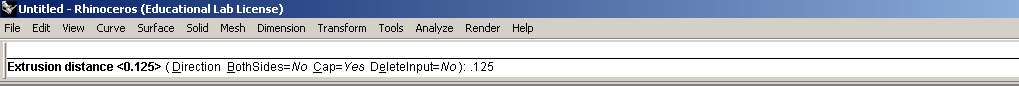
Double click here.

1. From the menu bar, left-click on **Edit < Select Objects < All Objects.** Your circles should turn yellow in color.

1. From the menu bar, left-click on **Solid < Extrude Planar Curve < Straight.**

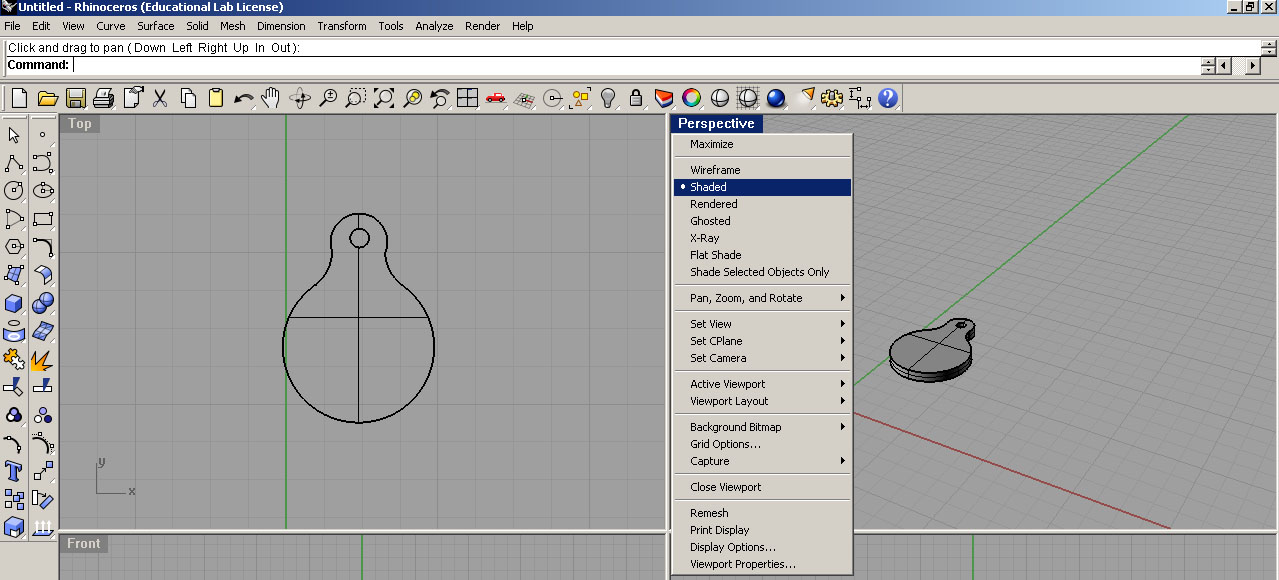
****

1. Enter a value of **.125** for the Extrusion distance. Press **Enter.**

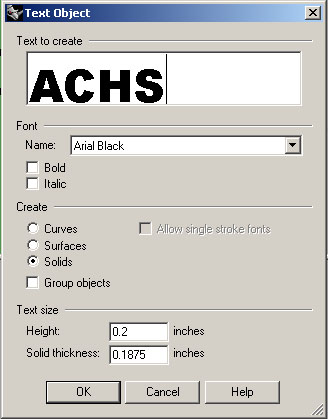
****

Enter .125 here and press enter.

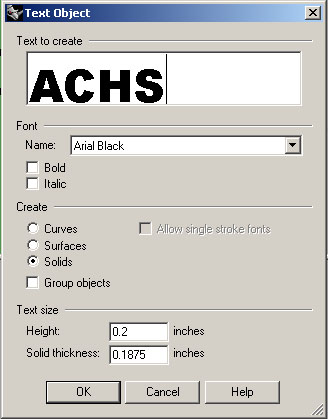
1. Right-click on the text **Perspective** and choose **Shaded.** Your screen should look like below.

****

1. From the menu bar, left-click on **Solid < Text.** Match the following settings and click **OK.**

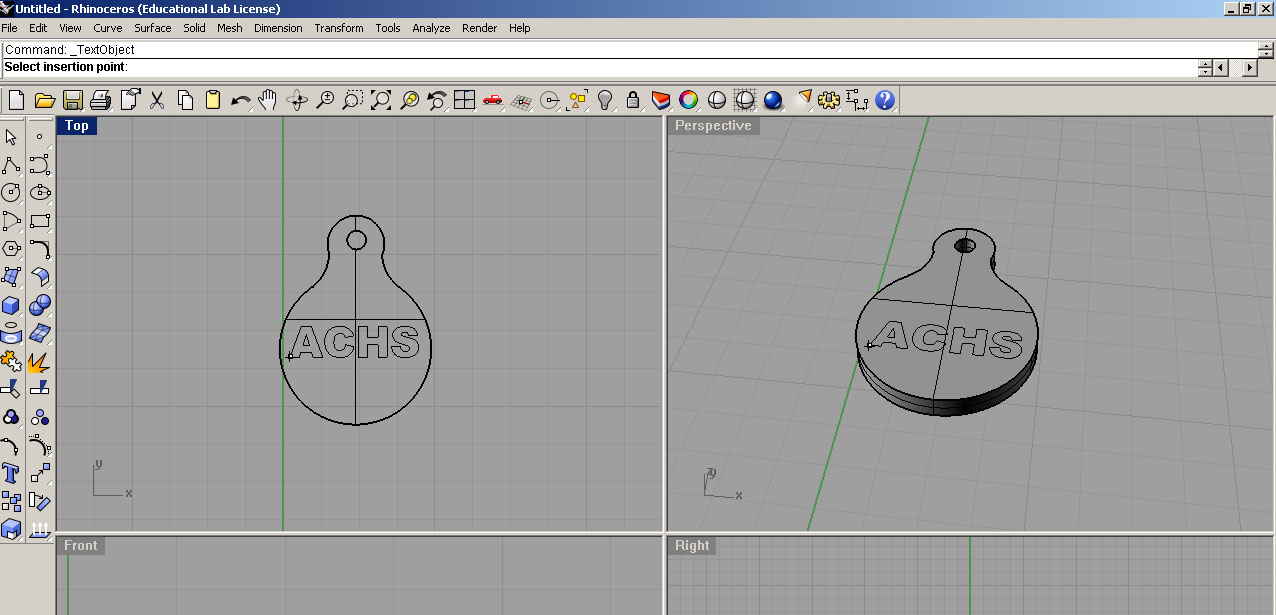
****

1. **\*\***You may type different letters than ACHS. However, you may have to adjust the text Height value.   
    For instance, a smaller number results in smaller text. See below.

****

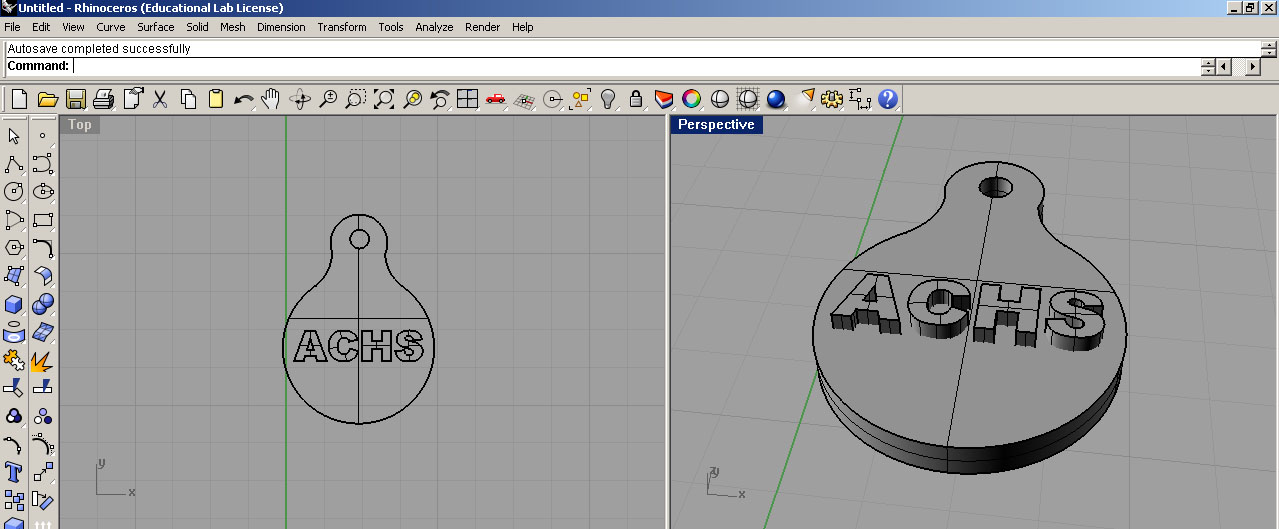
Smaller number here makes the text smaller.

1. Move your mouse on the screen to center the text in the large circle. Left-click to commit. See below.

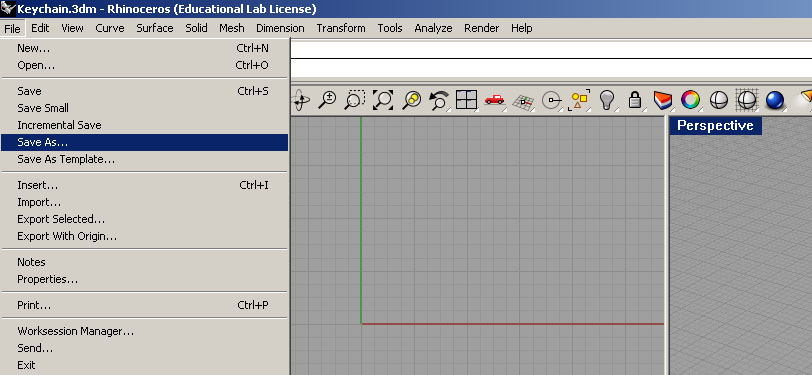
****

Center text, then left-click.

1. Your screen should look like below.



1. Click **File < Save As…** to save your file. You **must navigate and save to your Z:\ Drive!**

****

1. Log onto your Gmail. Email (file attachment) your saved file to [jon.salaban@chsd117.org](mailto:jon.salaban@chsd117.org)