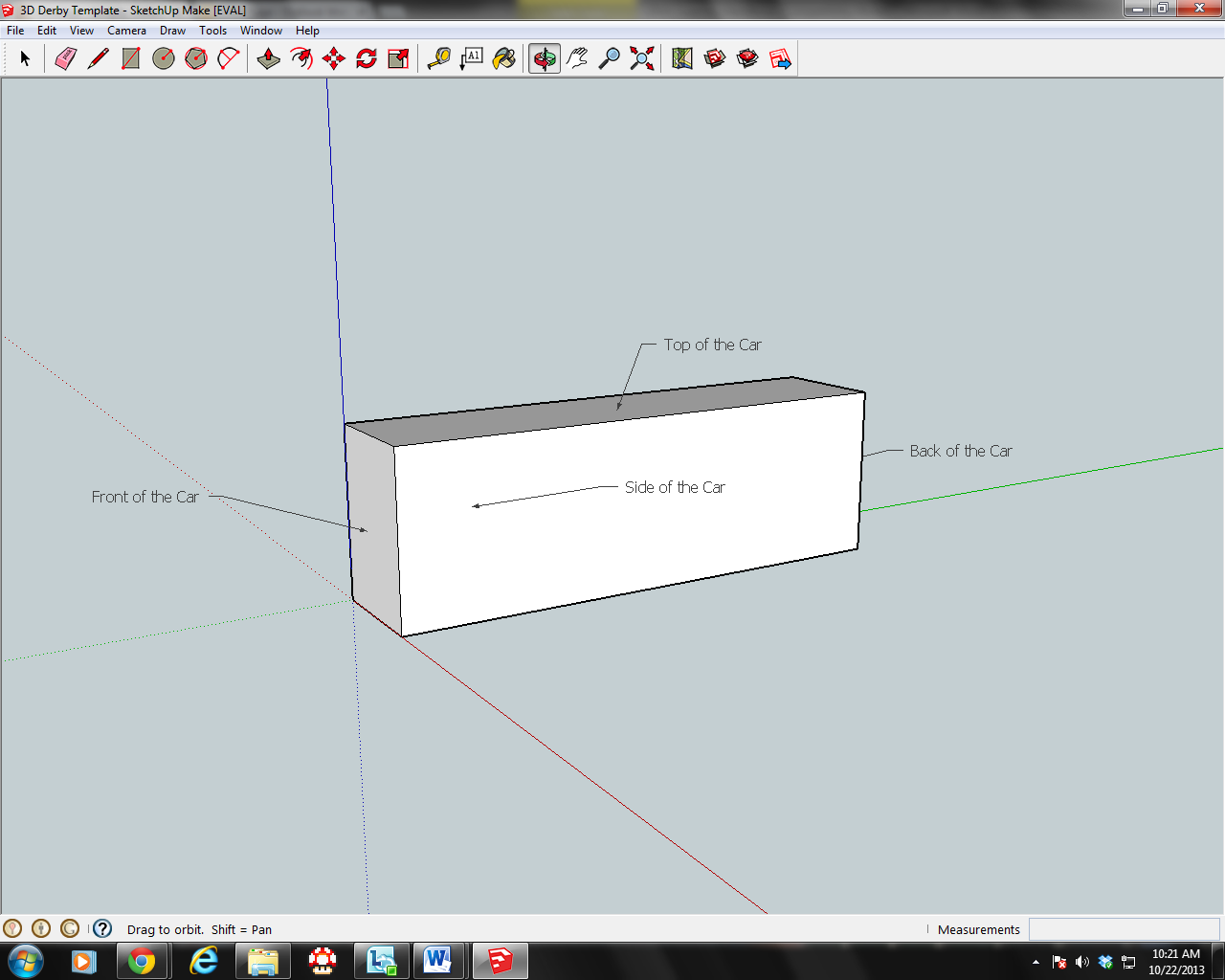
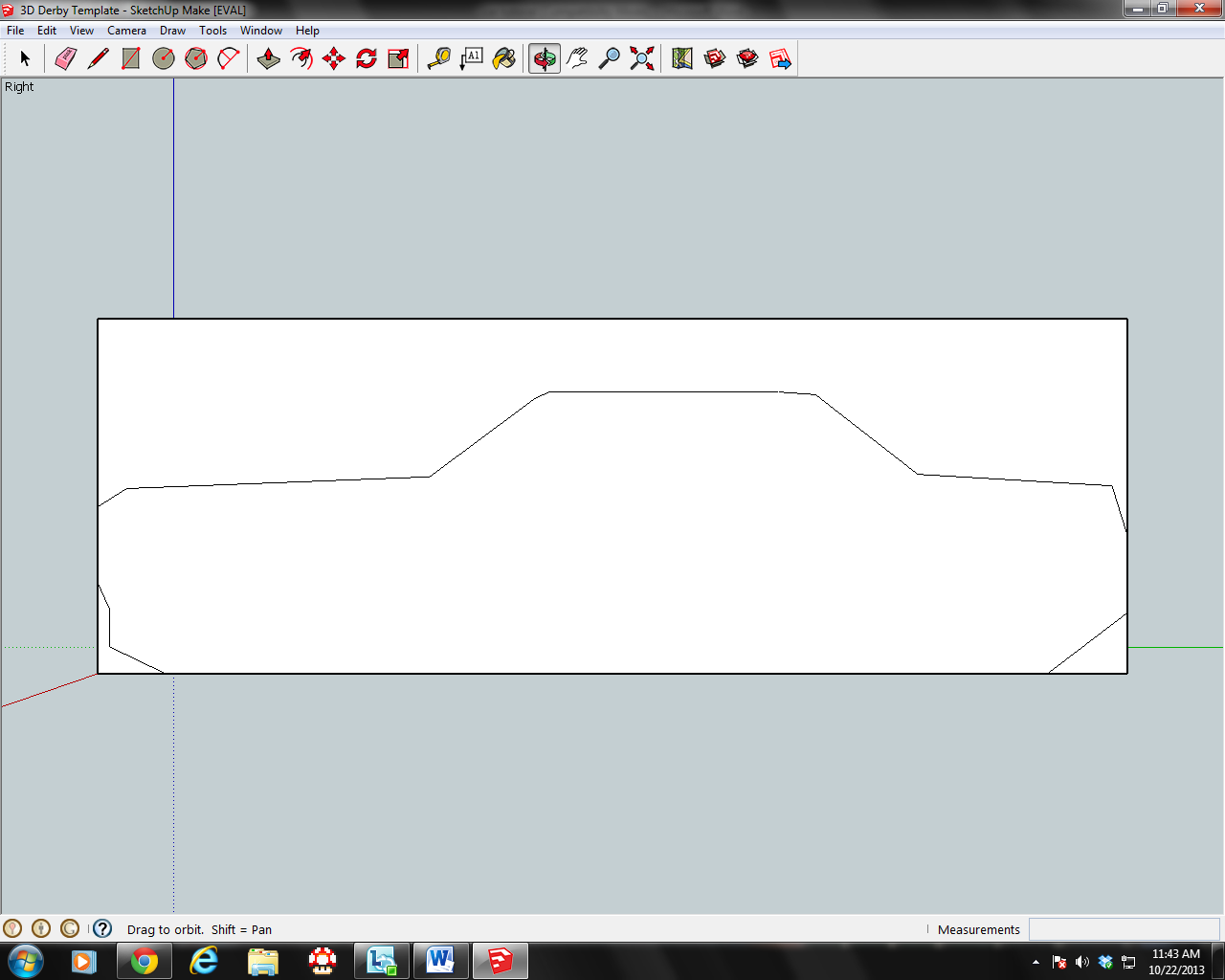
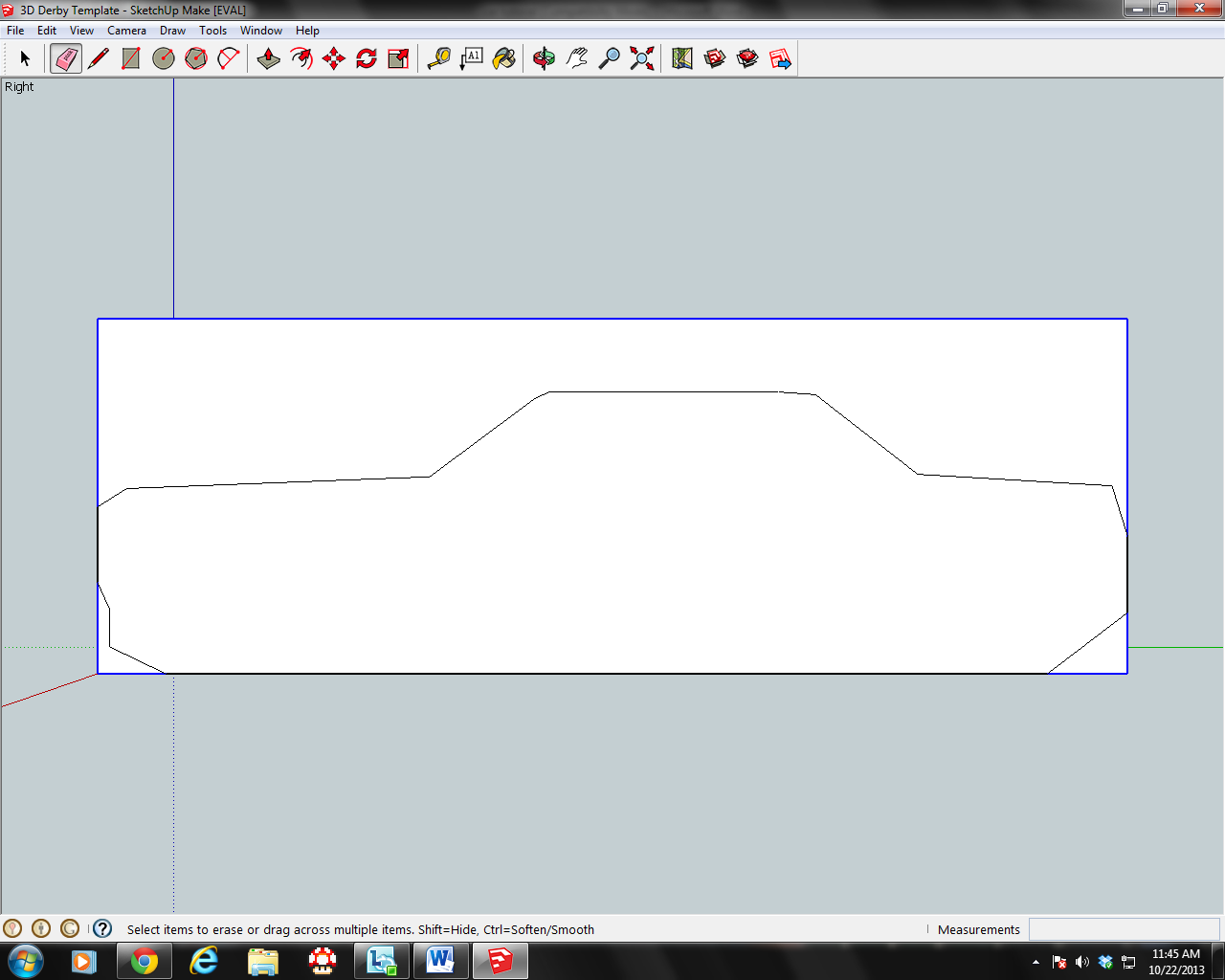
**Making a Car in Sketchup: Part 1**

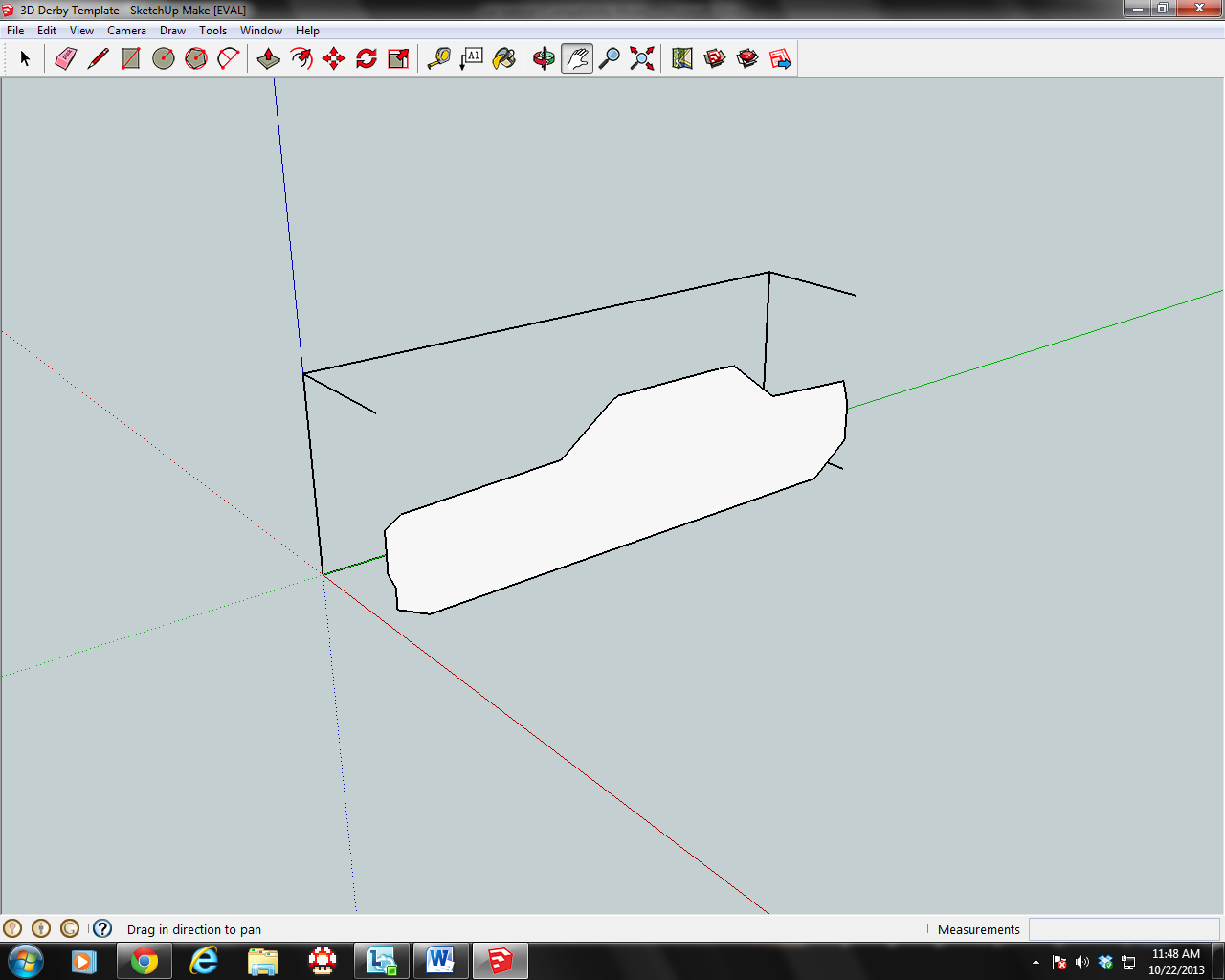
1) Begin by opening the 3D Derby Block file. Available on the [TOT Website](https://sp2013.fresnounified.org/sites/tot/2014/_layouts/15/start.aspx#/SitePages/Community%20Home.aspx?RootFolder=%2Fsites%2Ftot%2F2014%2FResources%2FEvent%20Tutorial%20Files%2F3D%20Printing%2FCar%20Tutorial%20Files&FolderCTID=0x01200064E28A7620E3544BA365FF82CB266D2C&View=%7BF81B5C59%2D7175%2D43E9%2DB58B%2D5CFDFAA21F4C%7D) online. If you are asked to choose a template, make sure to select: **Product Design and Woodworking: milimeters.** 

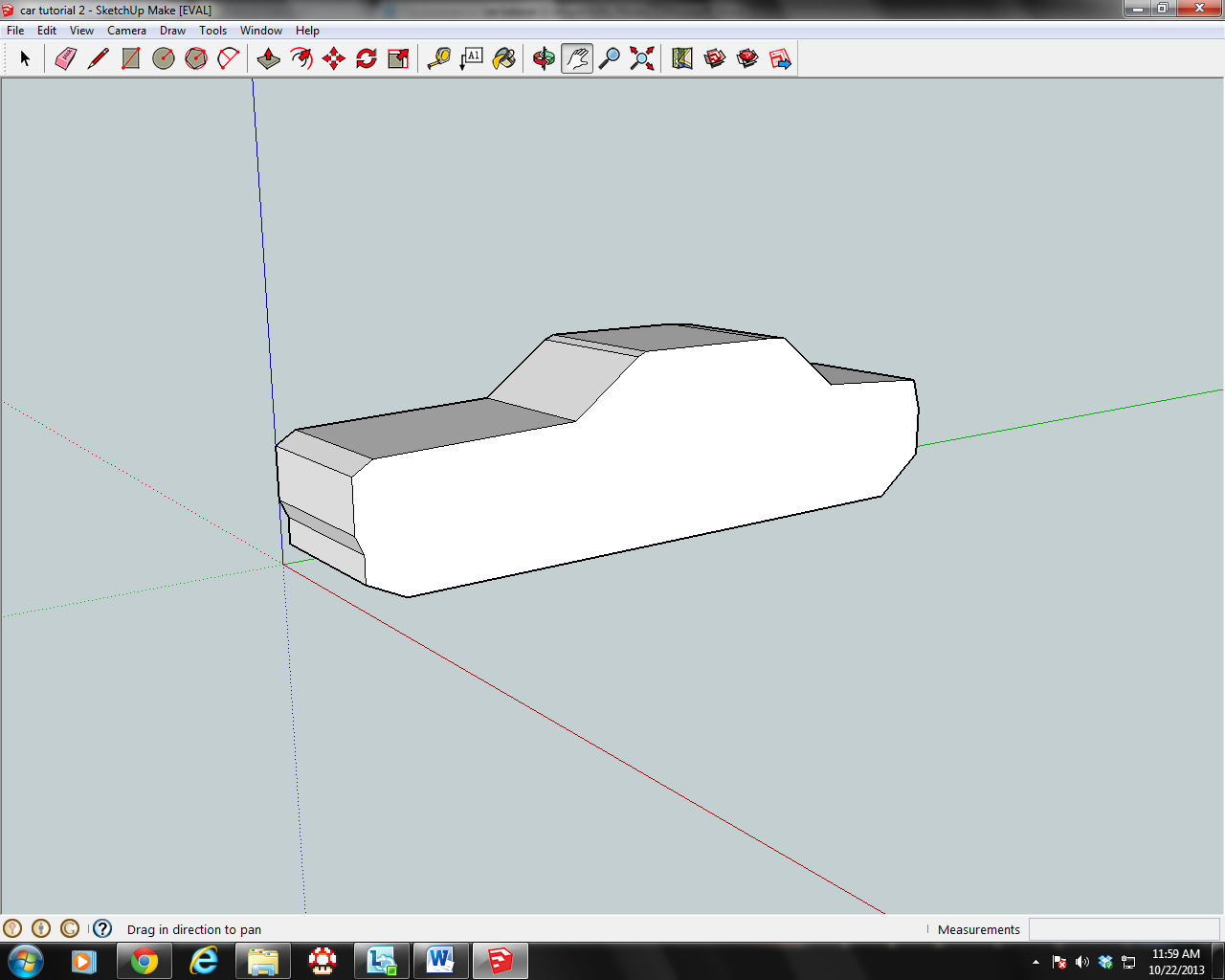
2) Review the labels and then erase them with the eraser tool.   
 Then click on the **Camera** tab at the top, select **Standard Views**, and then **Right**.

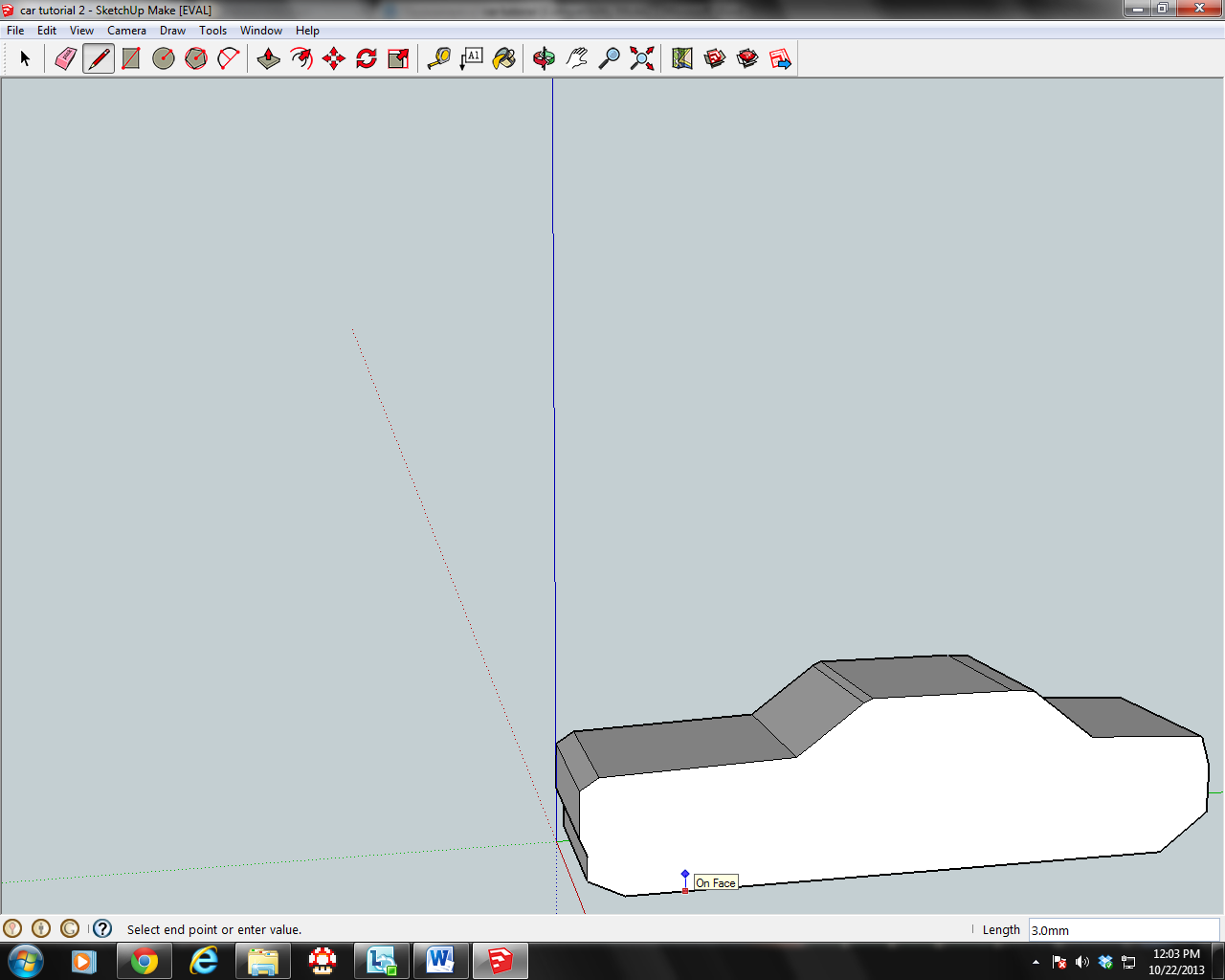
3) Sketch the profile of your car on the side of the box. Use the line tool for straight sections and the arc tool for curved sections. I recommend just the line tool for your first car.   
Make sure that all the sections are drawn “On Face”. Try to fill up most of the block. 

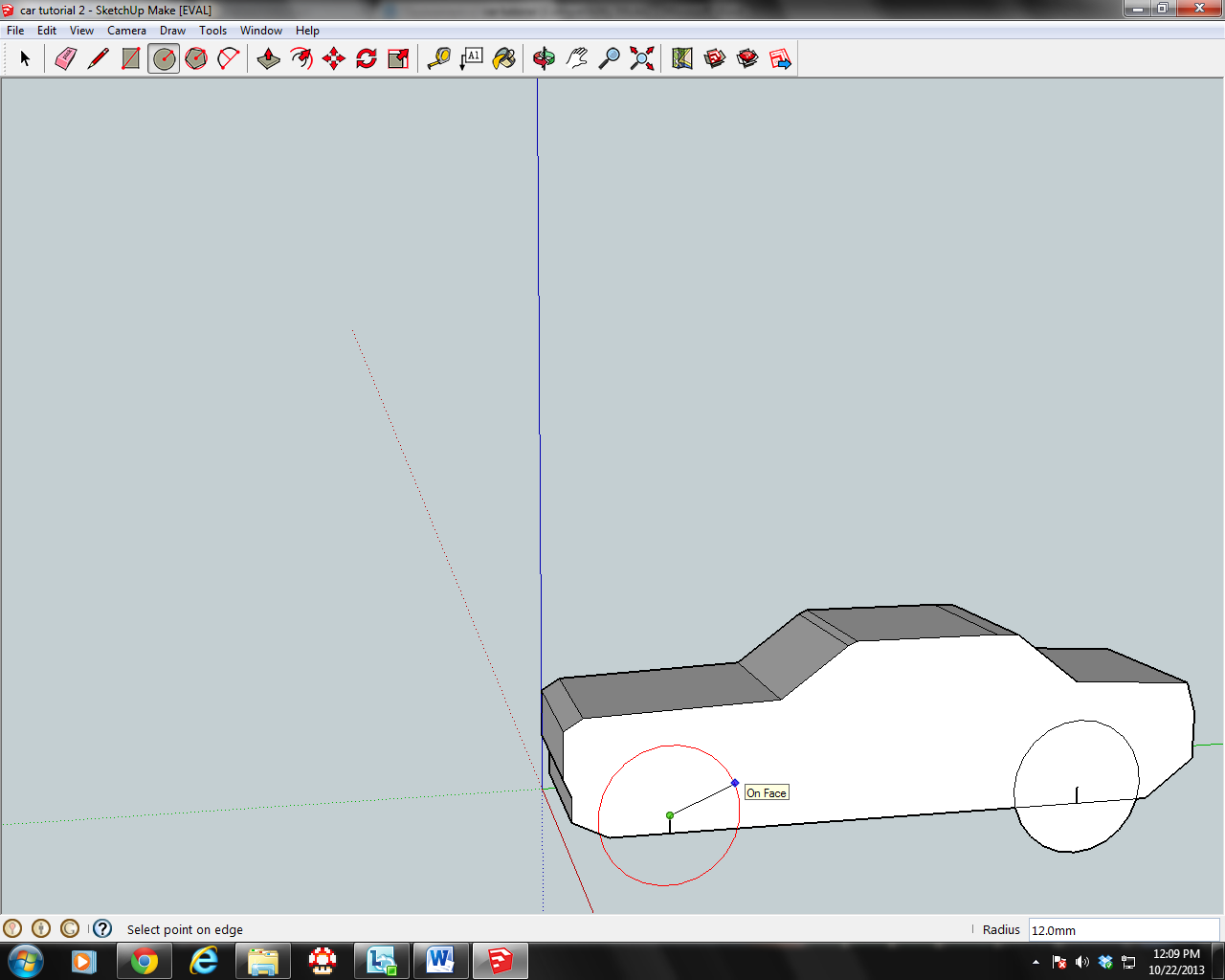
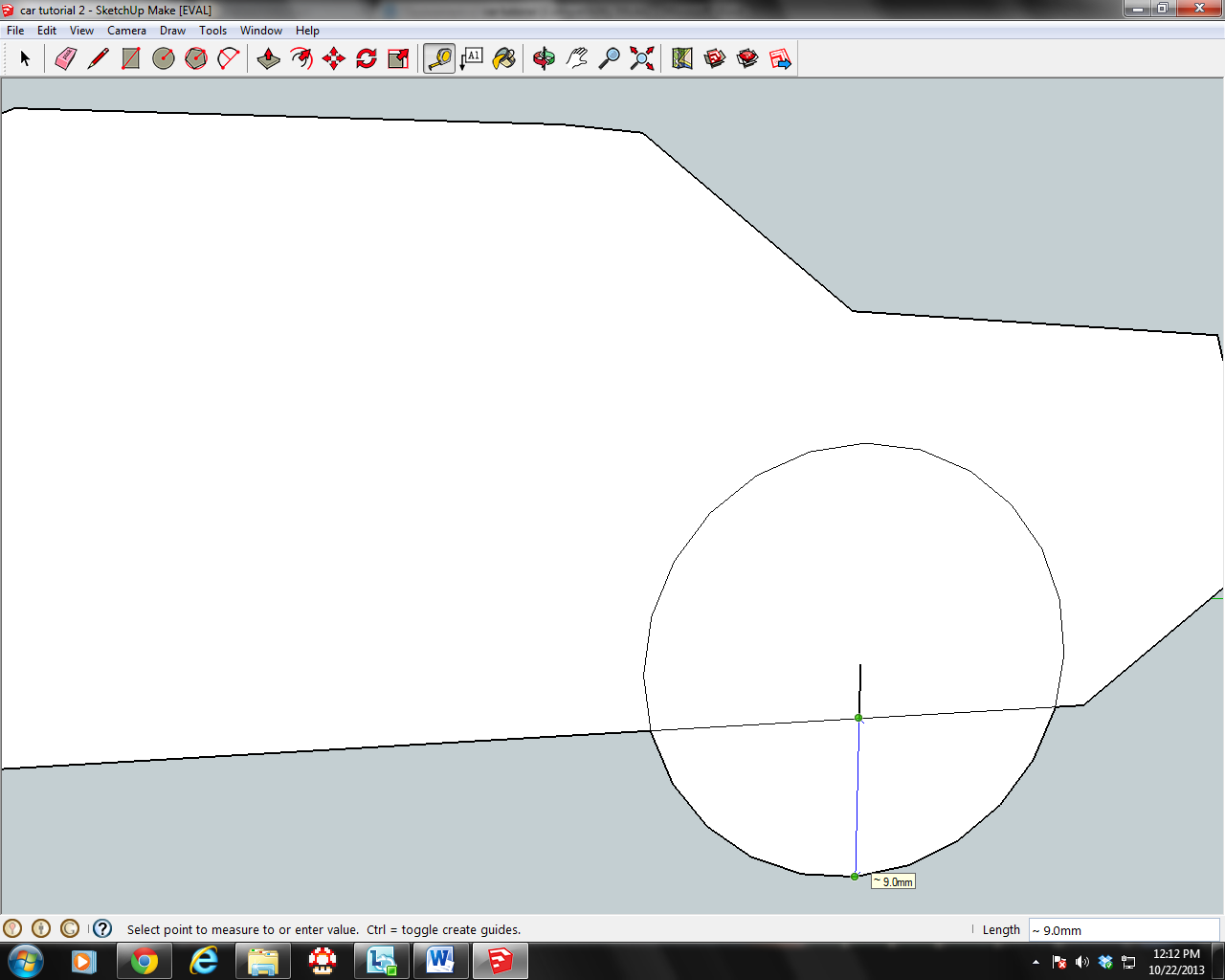
4) Then erase the rest of the box with the eraser tool You can drag it over multiple lines at once. 

You may need to use the orbit tool to see lines that are directly behind the car, erase them too.

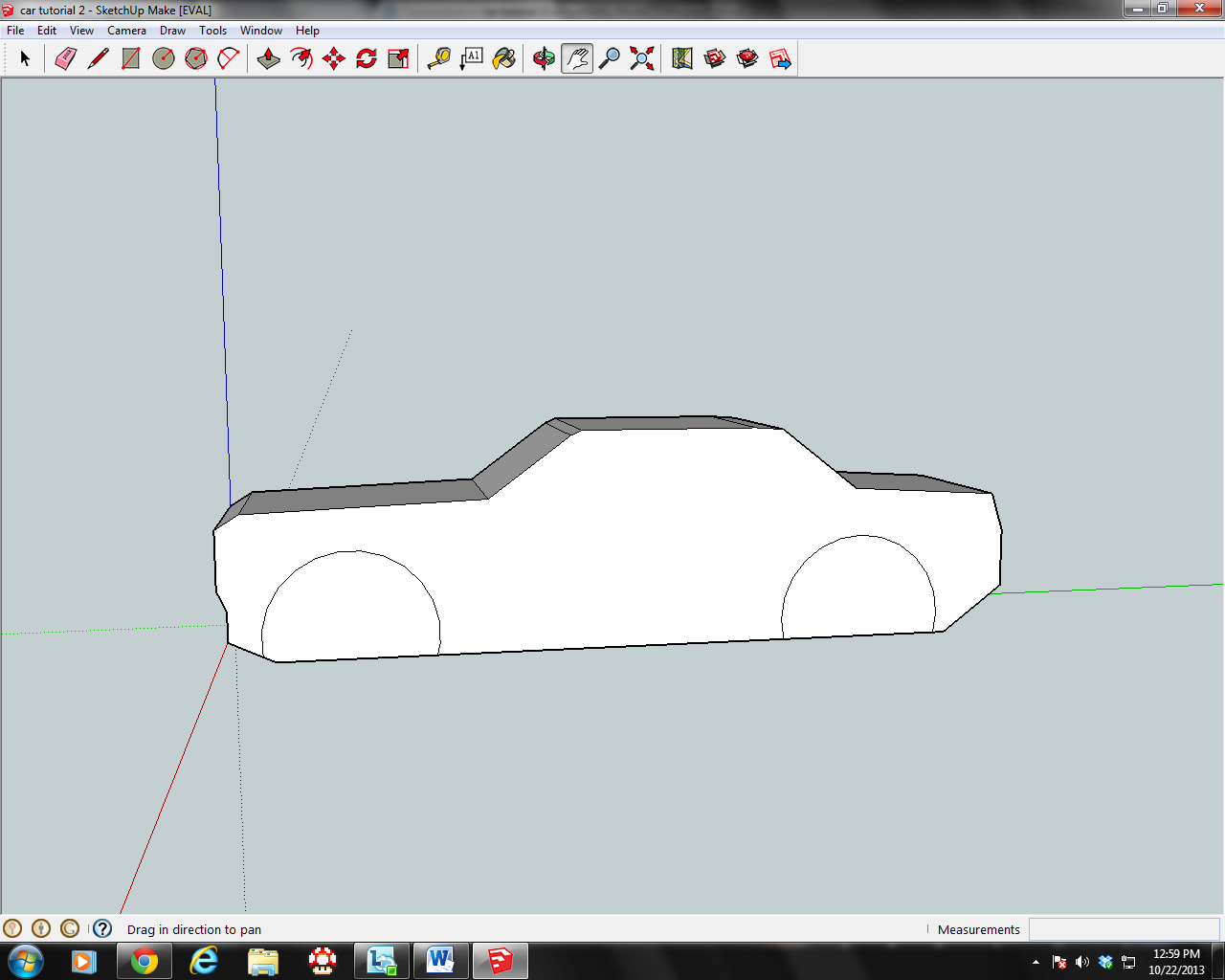


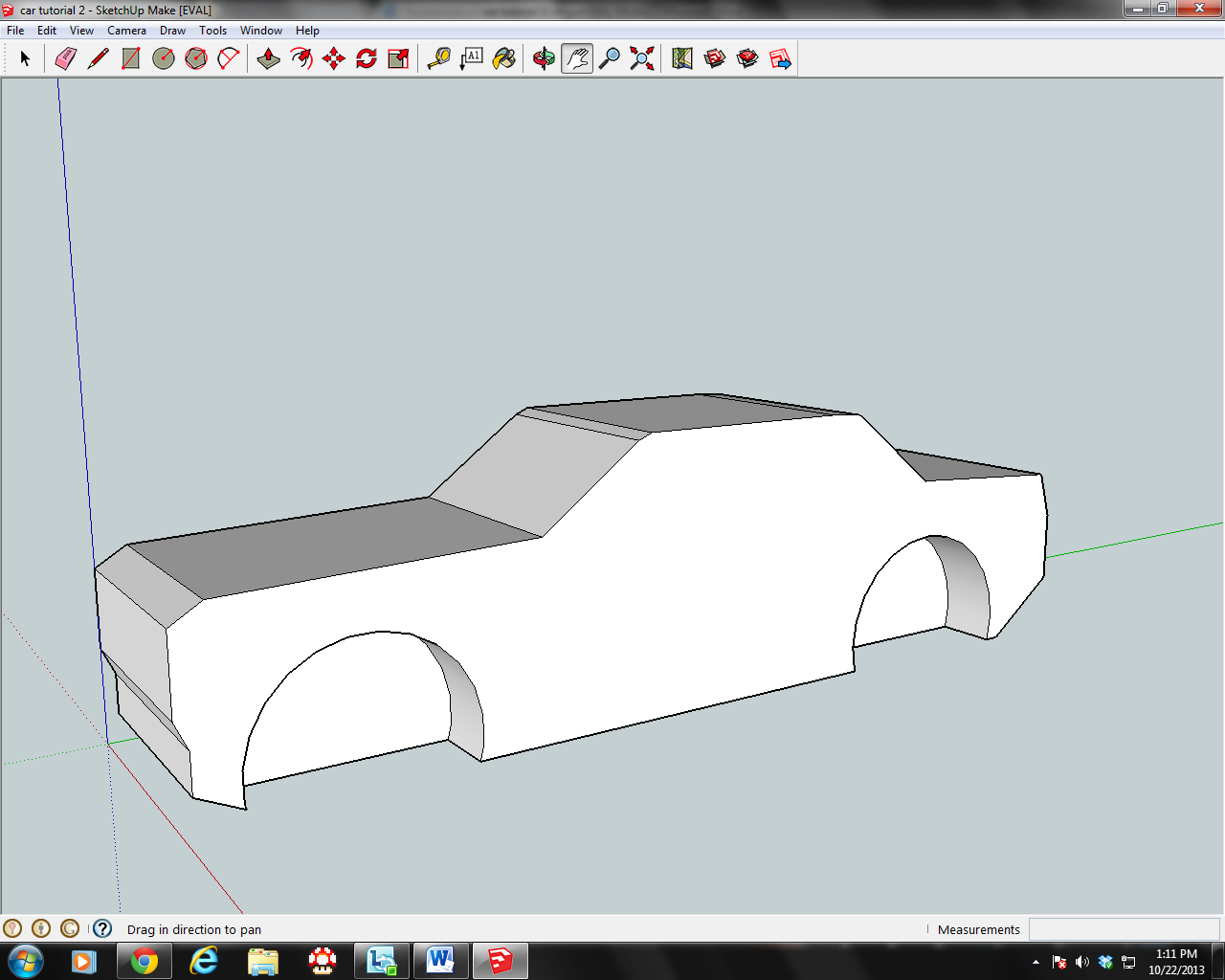
5) Push the side of the car back **exactly 30mm**. We will make one half of the car for now, and then copy and paste it later.  


6) Add wheel wells on the side of the car. Use the dimension box at the bottom right to make sure they are the same size and start at the same height.  
Draw a line 3mm up from the bottom edge of the car where you want your wheels to start.

Then start your circle from the end of that line. I would recommend a **radius of at least 12mm**.   
  
Use the tape measure tool to check that the circle extends **more than** 7.5mm below the car to allow for the track to fit under the car.  
 



7) Then erase the edges of the circle underneath the car and the line inside. Remember, it needs to have a flat surface to print well.  
 

8) Push in the wheel well openings about 5mm to make room for the wheels. Use the measurement box at the bottom right to make sure they are both the same. 

**Then orbit your car to check the bottom, there should be more 21mm between the inside of the wheel well and the edge of the car.**

