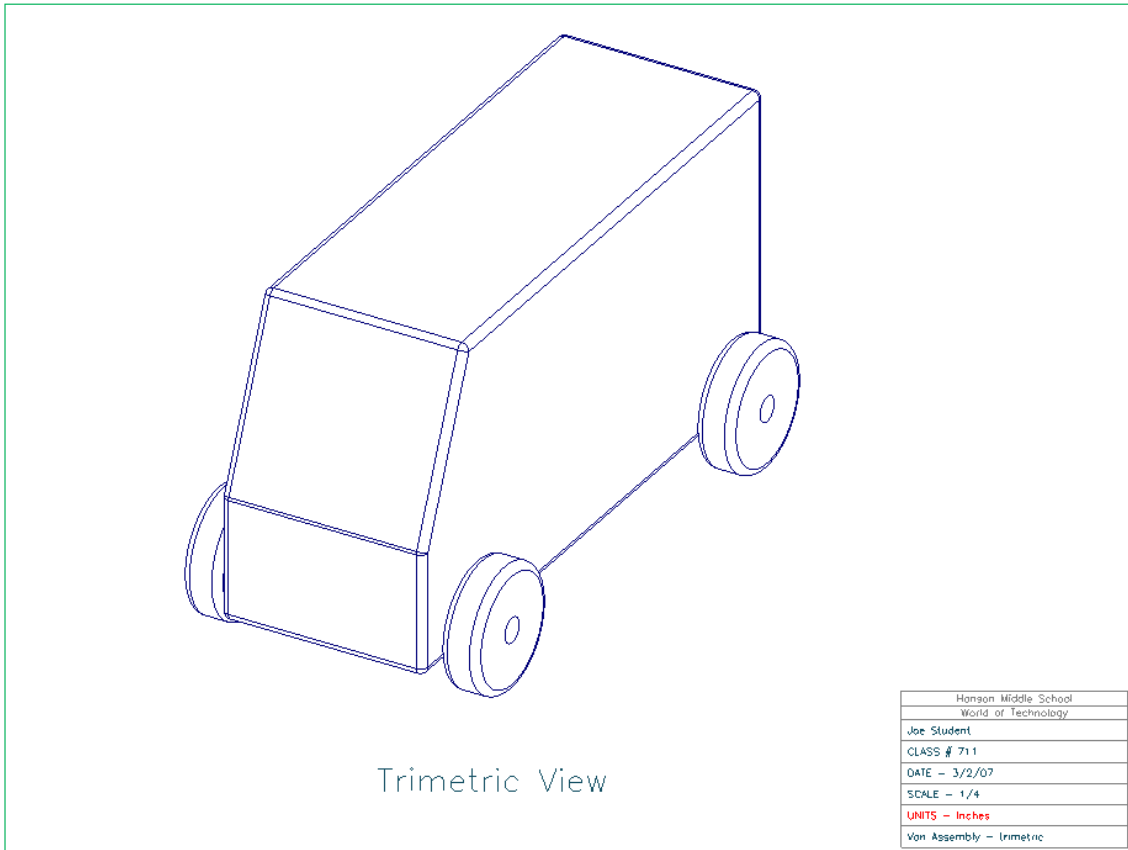


Creating Van Drawings



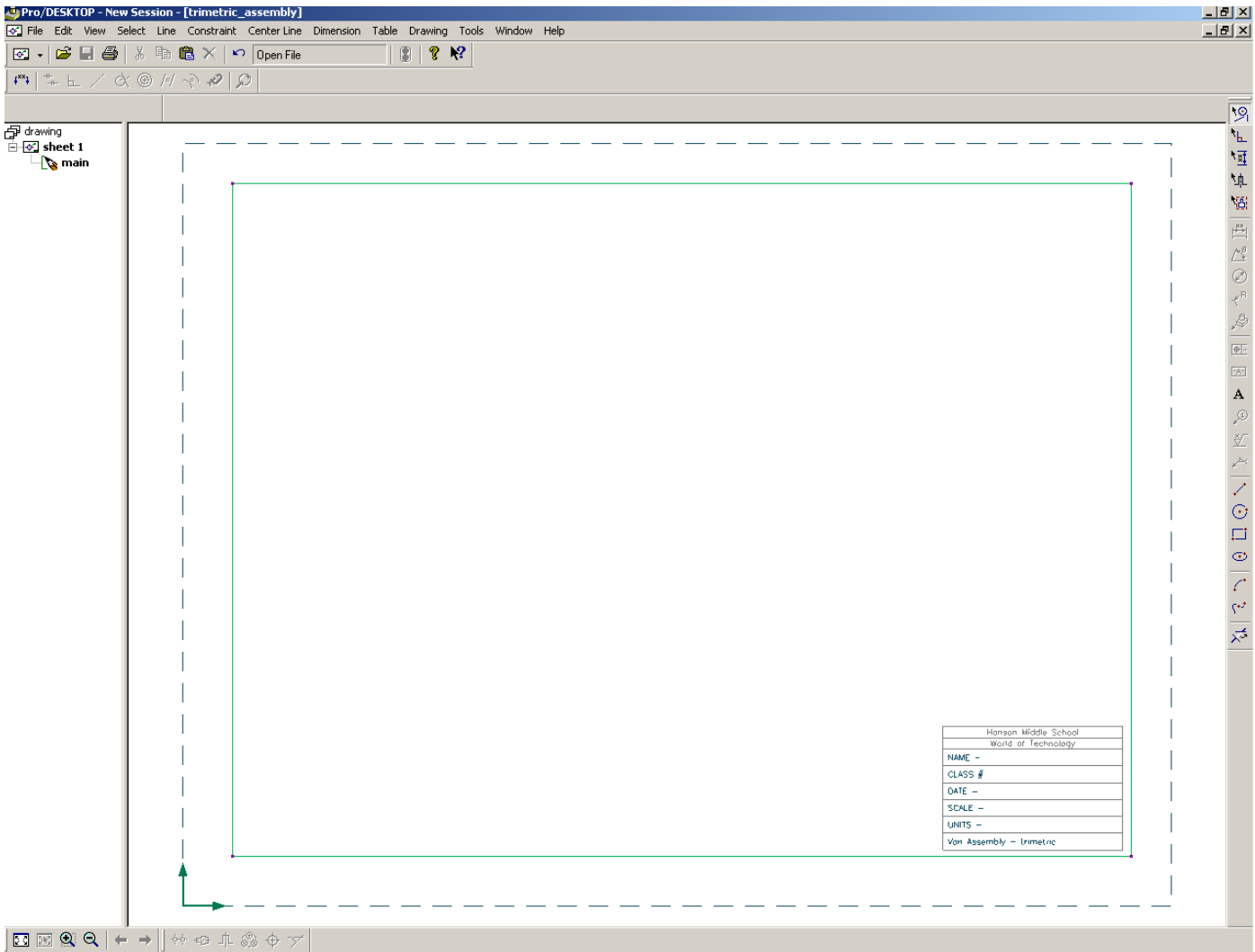
Engineers create ***Drawings*** that manufacturers (and assemblers) use to make products. You are going to create ***Drawings*** in ProDESKTOP much like real engineers would for a product like our Van.

The following Drawings will be created:

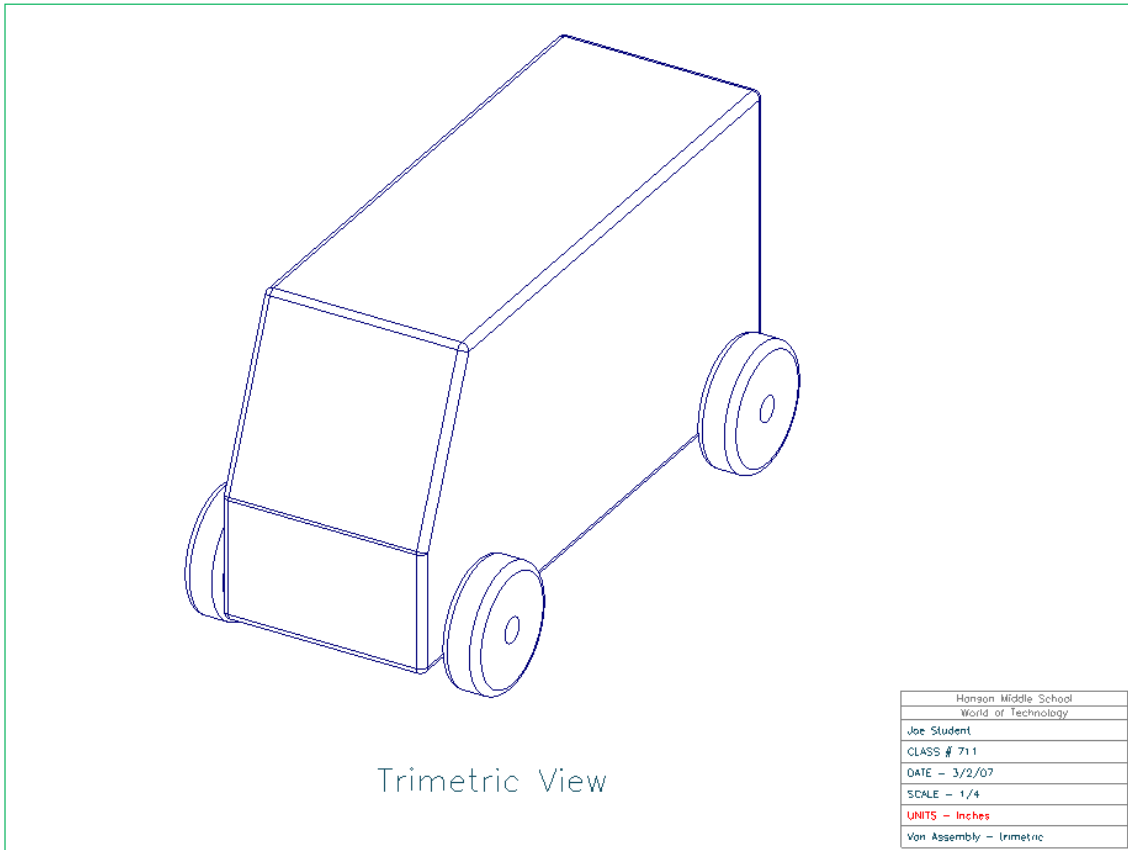
- Trimetric Assembly
- Assembly Orthographic
- Body Orthographic
- Wheel and Axle Orthographic

Part 1 – Trimetric Assembly

1. Open the following *design* files: *axleINL711*, *wheelINL711*, *bodyINL711* and *assembly_vanINL711*.
2. Open the following *drawing* files: *trimetric_assembly*, *assembly_orthographic*, *body_orthographic* and *wheel_axle_orthographic*. [Watch Video](#)
3. Maximize *trimetric_assembly* – you will work with this drawing first.



Creating Van Drawings



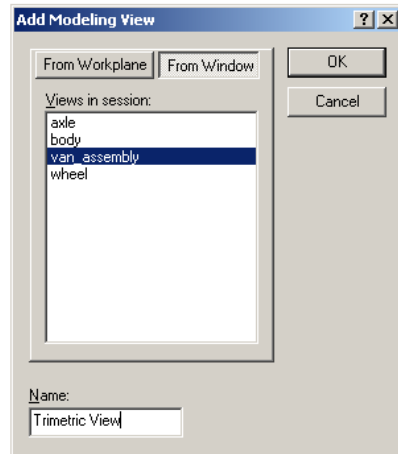
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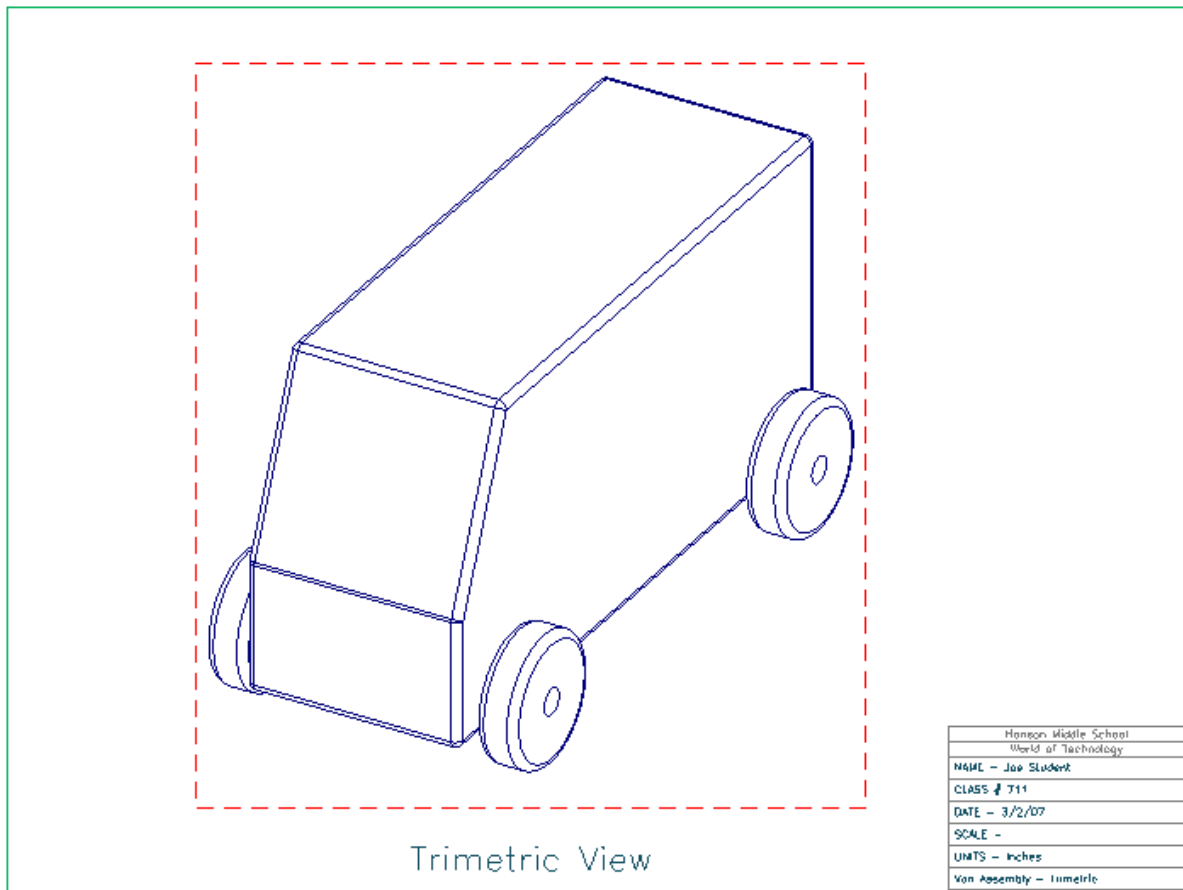
- Trimetric Assembly
- Assembly Orthographic
- Body Orthographic
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8. Autoscale [Shift – A].

9. Go to **Drawing > Add Modeling View**. Click on the *From Window* tab and choose the *van_assembly* file from the **Views in Session** window. In the **Name box**, type in **Trimetric View**. Click **OK**. *Note: Your filenames will be slightly different – they will have your initials and class number.*

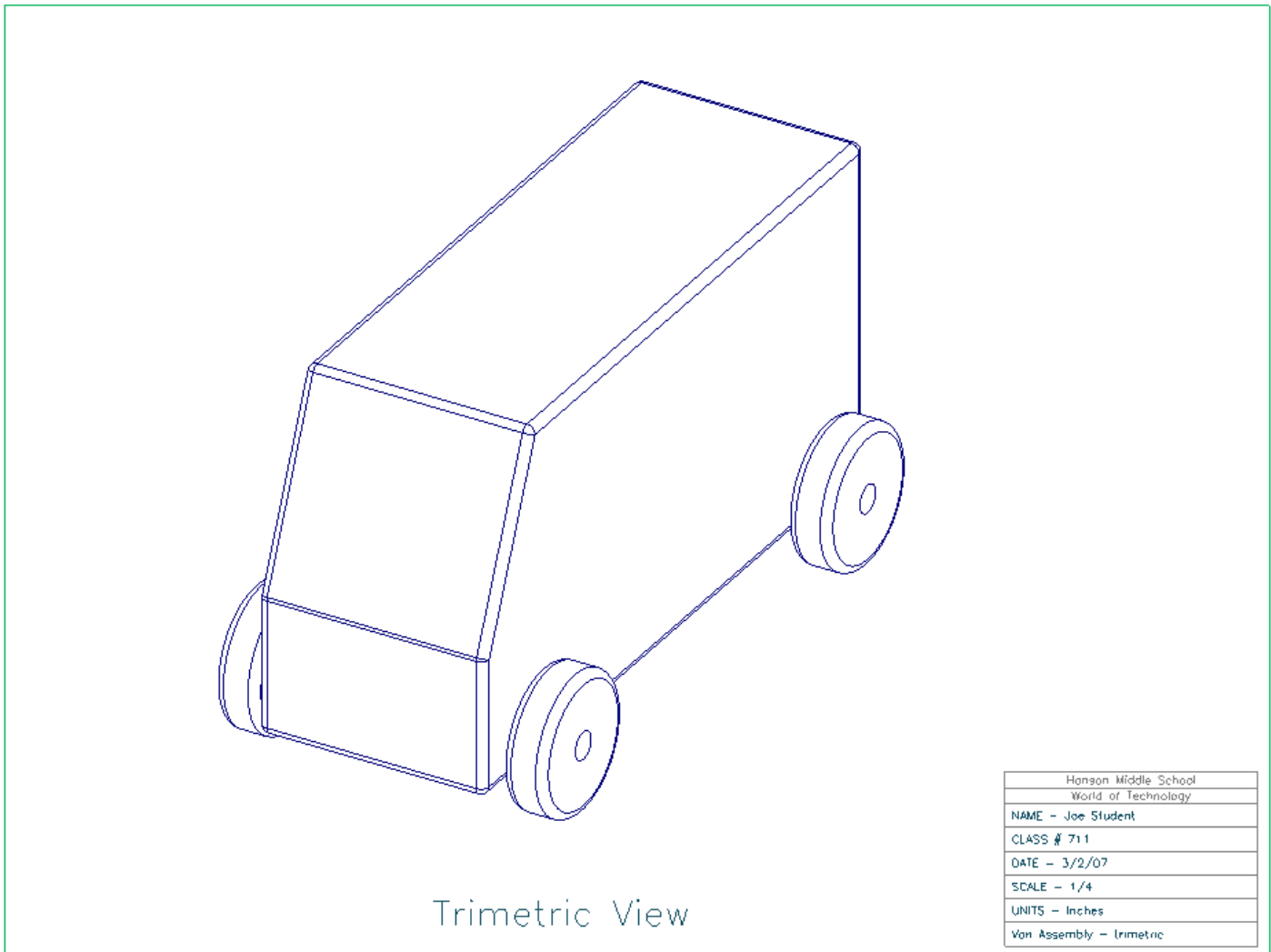


10. Your **van_assembly** will be placed on the drawing similar to the example below. You may have to move the view by using the *Select Views* tool .




11. **Right Click** on the dotted line and select “**Add View Label**”. *Trimetric View* will appear below the Drawing.

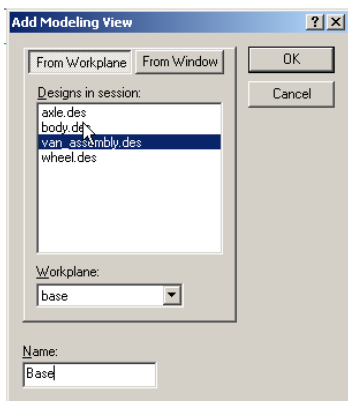
13. Change the “Scale” in the table to “1/4” using the Select Annotations tool. *Save your Drawing!!* Minimize the *trimetric_assembly* window. [Watch Video](#)



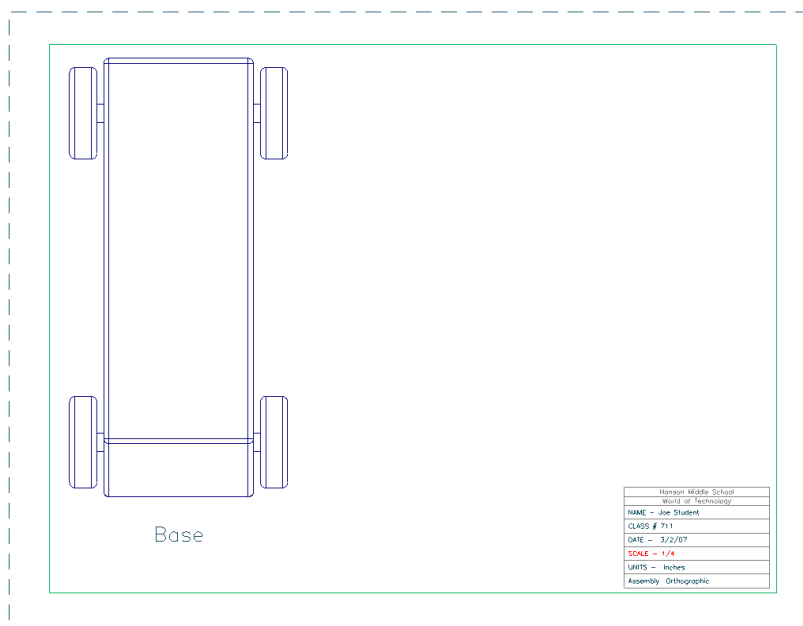
Part 2 – Assembly Orthographic

Note: *Be sure ALL of your Van Designs are open.*

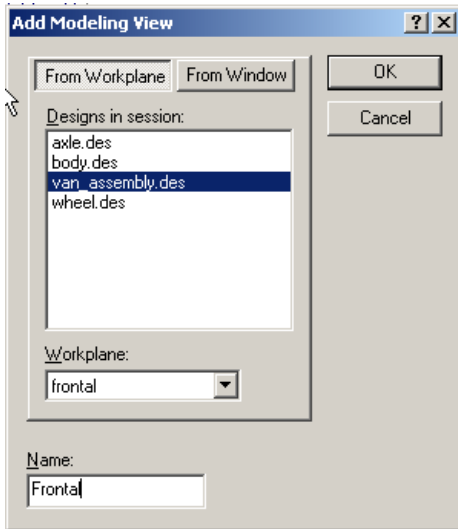
1. Maximize the *assembly_orthographic* drawing. Change the *table* as you did for the previous drawing. Use the **Select Annotations**  tool to make changes to the table. Do not fill in the *scale* until you have finished adding views.
2. Go to **Drawing > Add Modeling View**. Click on the *From Workplane* tab, and fill out the box as it is below. Be sure to change the Name to *Base*.



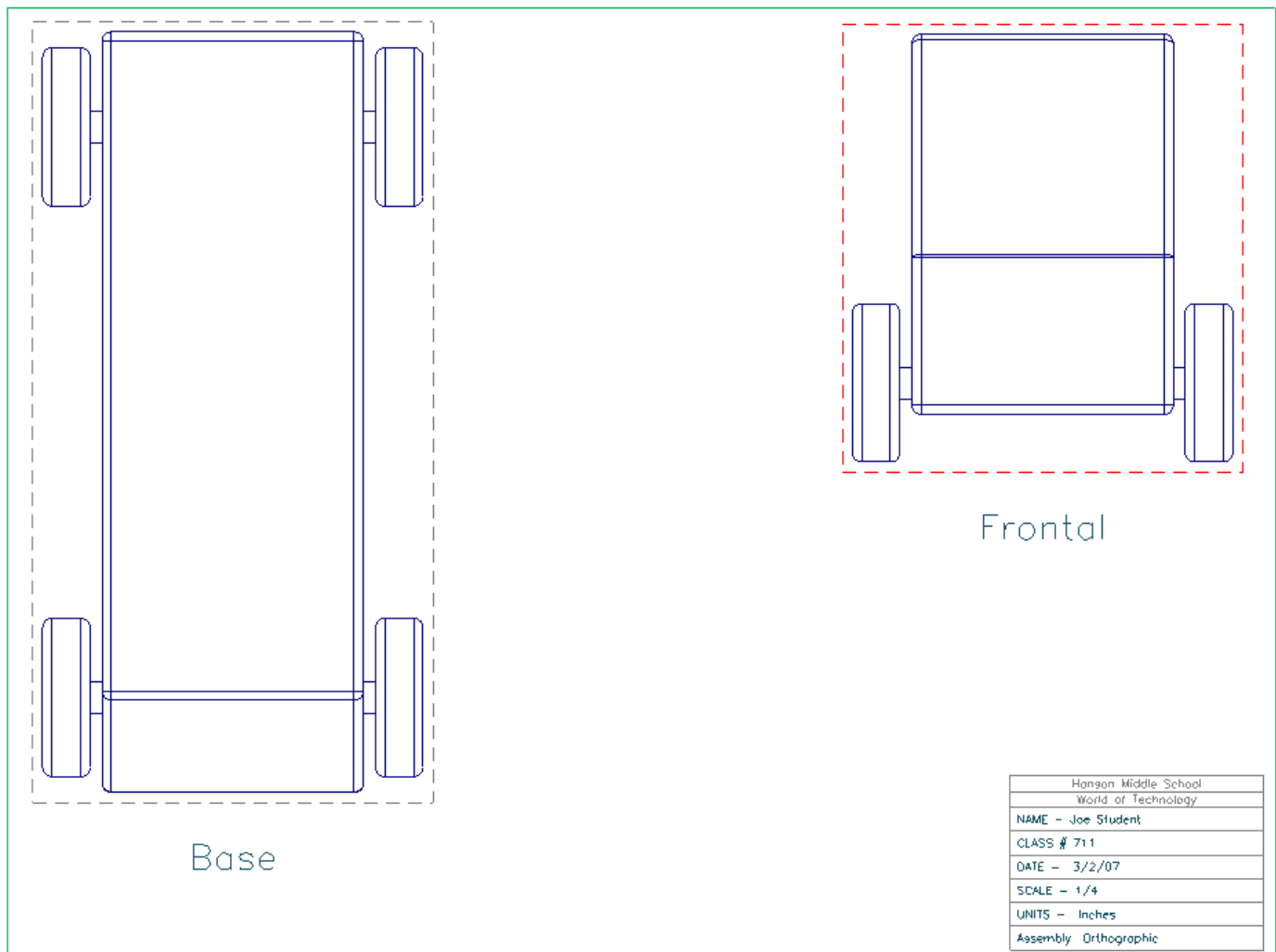
3. **Right Click** on the dotted line and select “Add View Label”. *Base* will appear below the Drawing. [Watch Video](#)



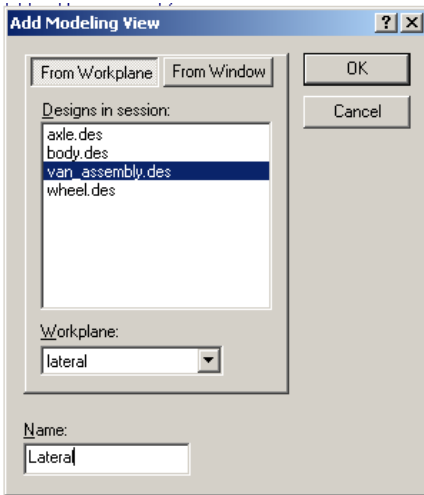
4. Go to **Drawing > Add Modeling View**. Click on the *From Workplane* tab, and fill out the box as it is below. Be sure to change the Name to *Frontal*.



5. **Right Click** on the dotted line and select “**Add View Label**”. *Frontal* will appear below the Drawing. See below: [Watch Video](#)

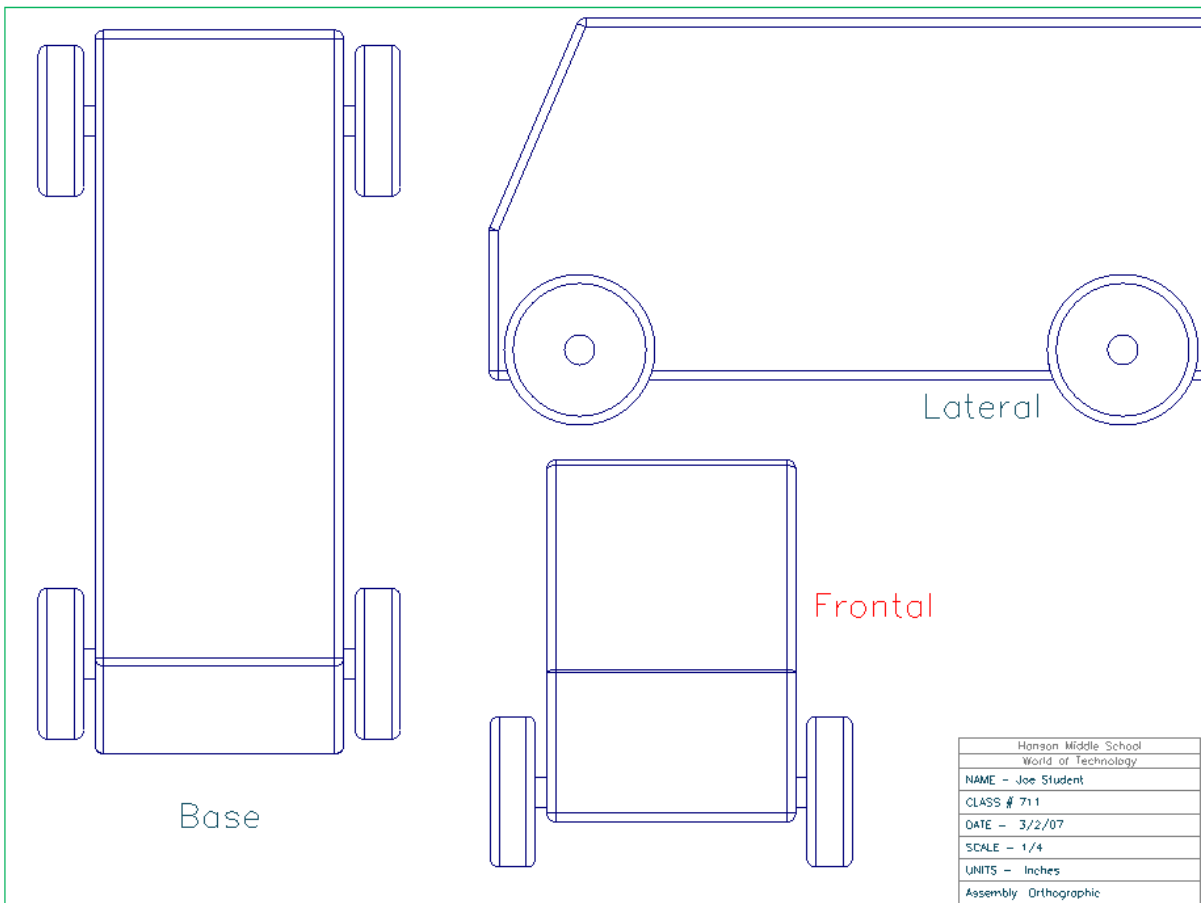


6. Go to **Drawing > Add Modeling View**. Click on the *From Workplane* tab, and fill out the box as it is below. Be sure to change the Name to *Lateral*.



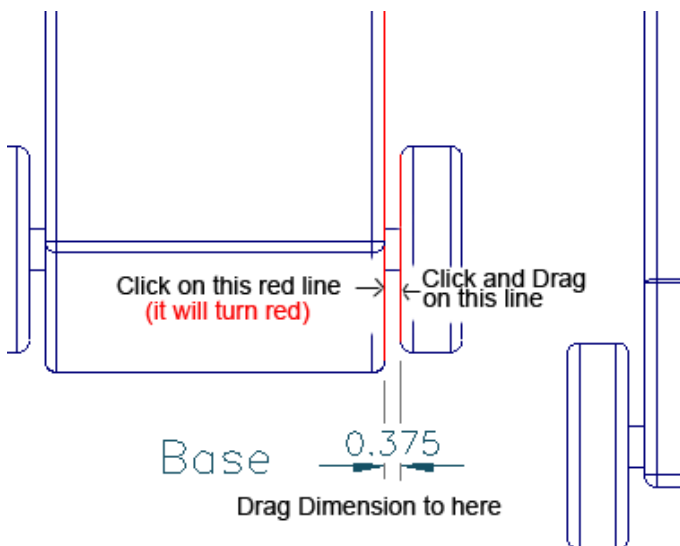
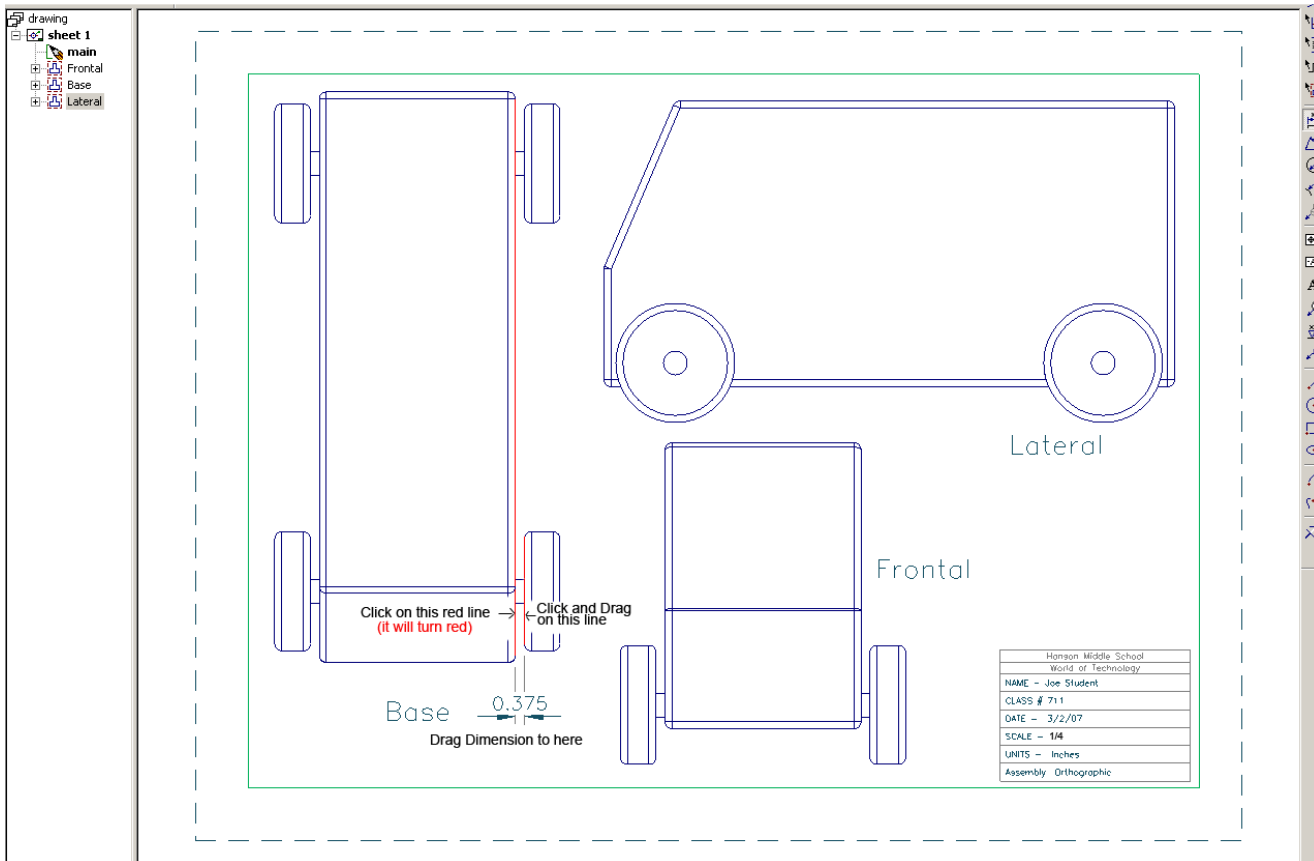
7. **Right Click** on the dotted line and select “**Add View Label**”. *Lateral* will appear below the Drawing.

8. Use the **Select Annotations** tool  to move the **View Labels** to more convenient locations. See below: [Watch Video](#)



9. Next, you are going to **Add Dimensions** to your drawing. Click on the **Linear Dimension** tool .

10. Click on the outside of the Van **body** and then **click and drag** on the inside of the **wheel**. See below:




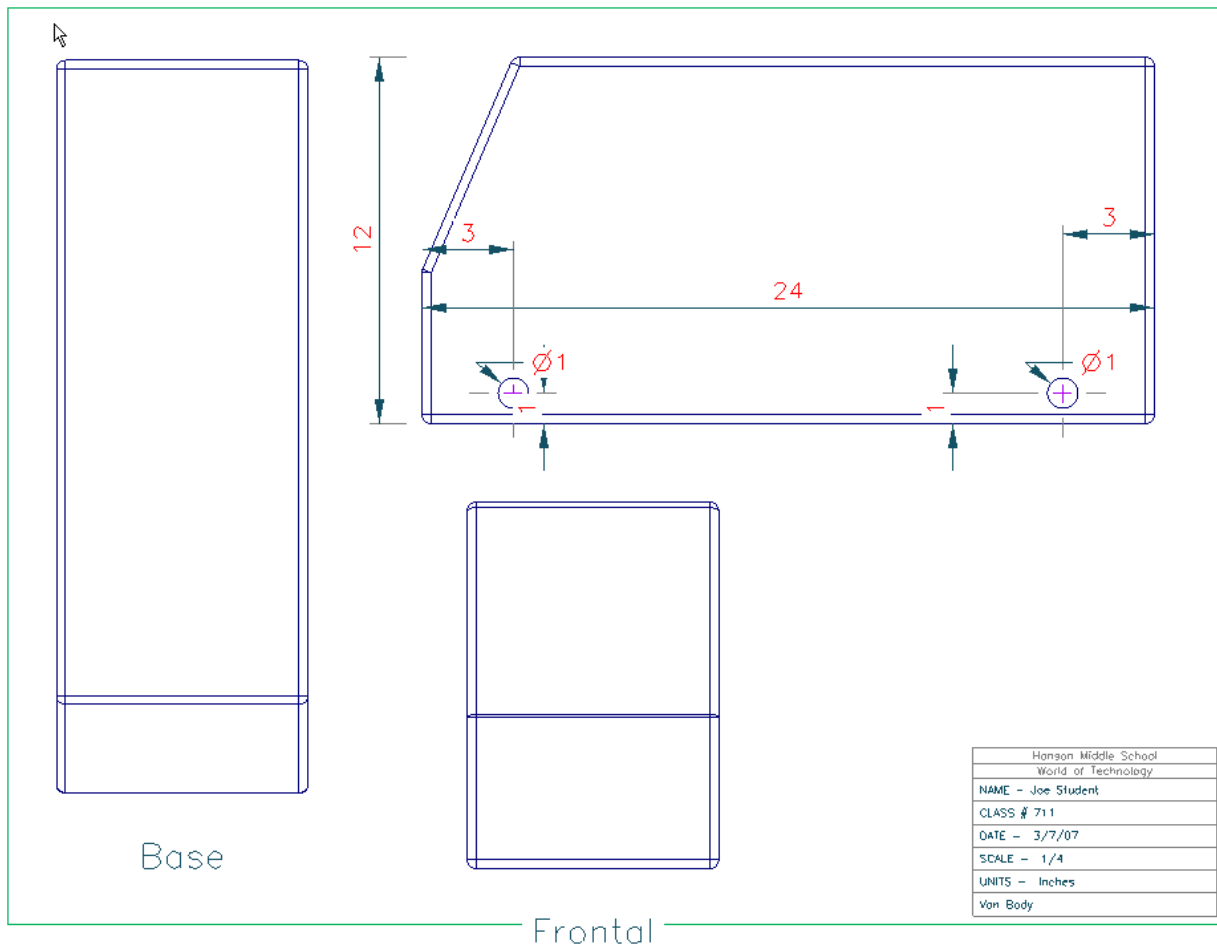
(Enlarged view) [Watch Video](#)


11. **Save your work!!**

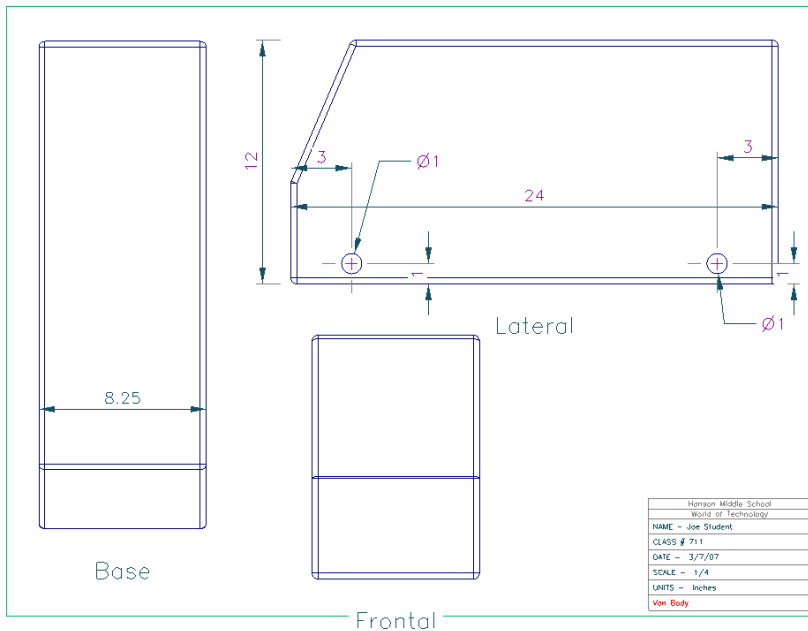
Part 3 – Body Orthographic


Note: *Be sure ALL of your Van Designs are open.*

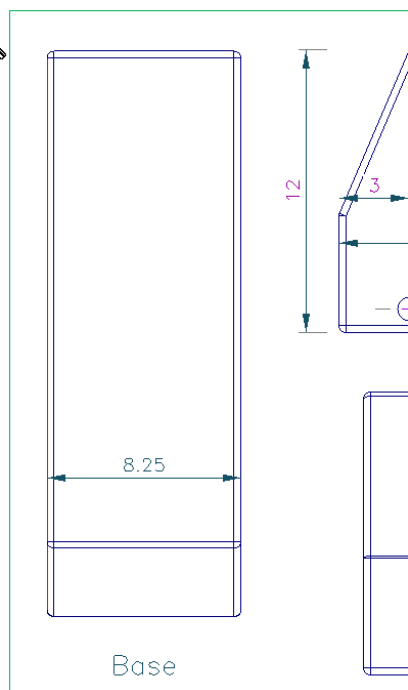
1. Maximize the *body_orthographic* drawing. Change the *table* as you did for the previous drawing. Use the **Select Annotations**  tool to make changes to the table. Do not fill in the *scale* until you have finished adding views.
2. Add the *Base*, *Frontal* and *Lateral* views of the *Body*. Use the same method as you did on the *assembly_orthographic* drawing when you added the Assembly. Be sure to **Add Modeling View** for each view. [Watch Video](#)
3. Go to **Drawing > Sheet setup > Scale**. Paper = 1, Model = 4.
4. Because you created your initial sketch on the *Lateral Workplane*, you can easily **import** those dimensions into your drawing. **Right Click** on the dotted line and select **Import Sketch Dimensions**. Your dimensions should import, as in the example below:




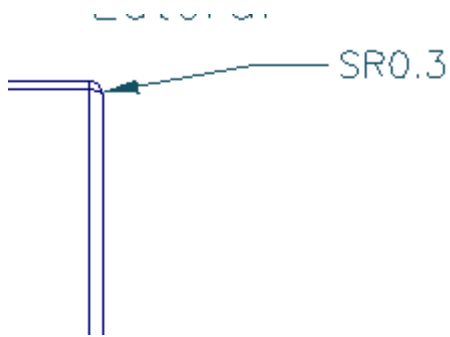
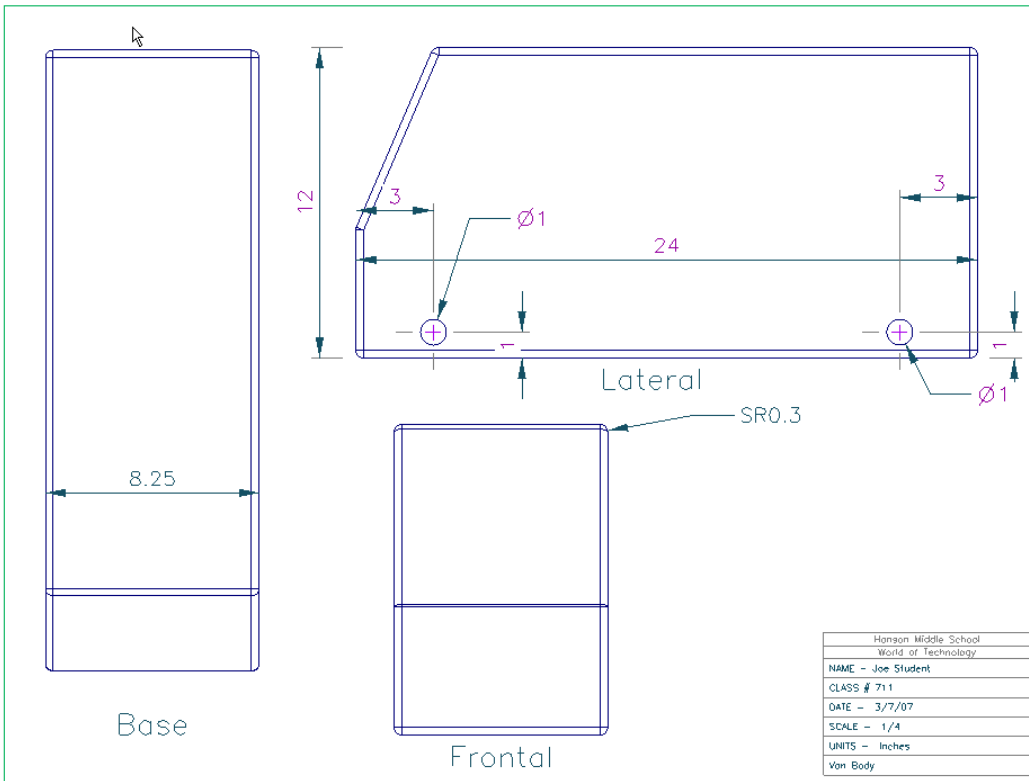
5. Use the **Select Annotations** tool  to move the dimensions to more convenient locations. Click on an annotation, then click and drag to move the annotation. See below: [Watch Video](#)



6. Add the linear dimension of 8.25" to the **Base** view, using the **Linear Dimension**  tool and the technique you learned in **Step 9 of Part 2**. See below: [Watch Video](#)



7. Dimension the **Rounded Edge** on the **Frontal** view using the **Radial Dimension** tool . See below: [Watch Video](#)




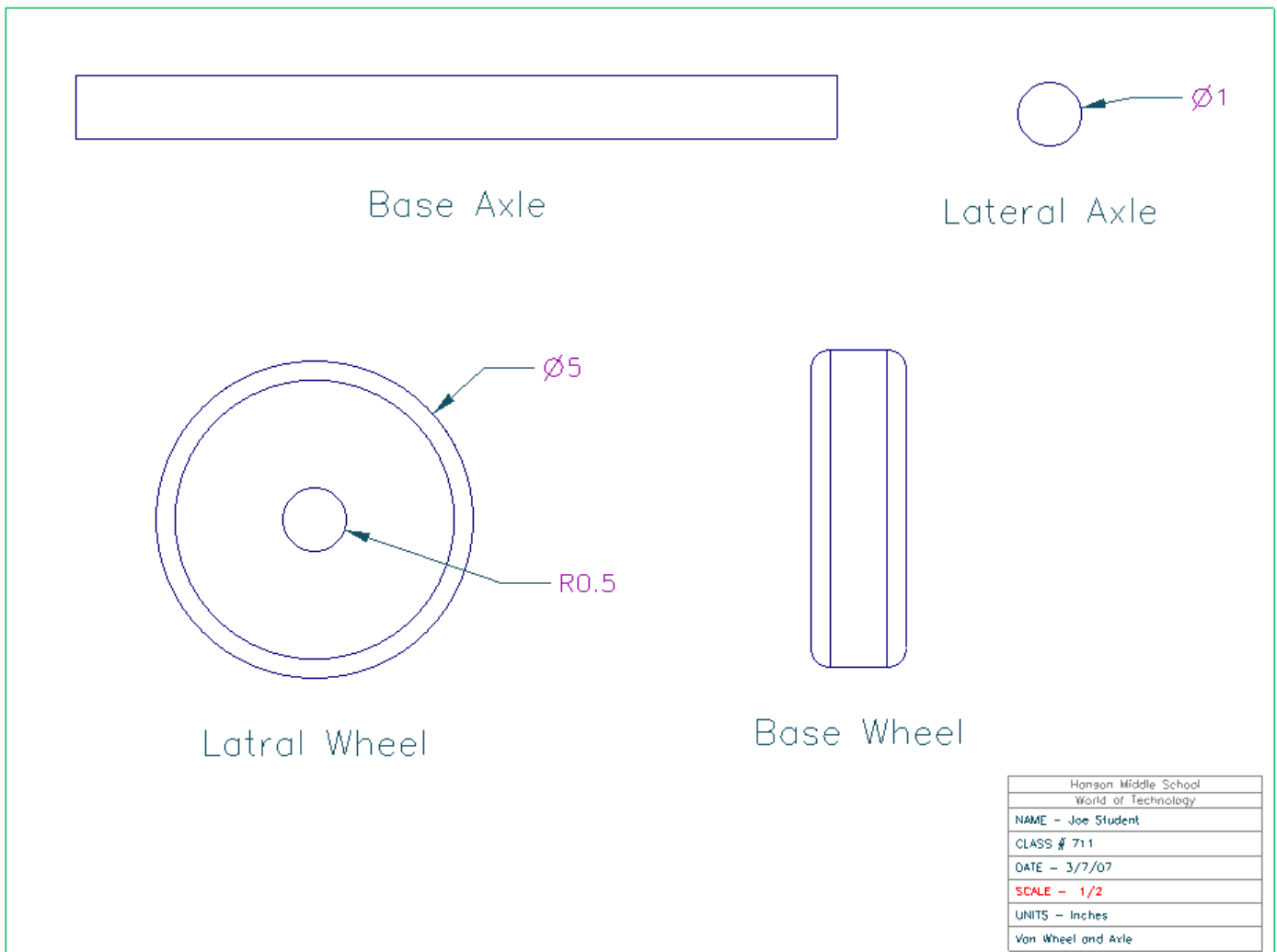
Enlarged view



8. **Save your Work!!**

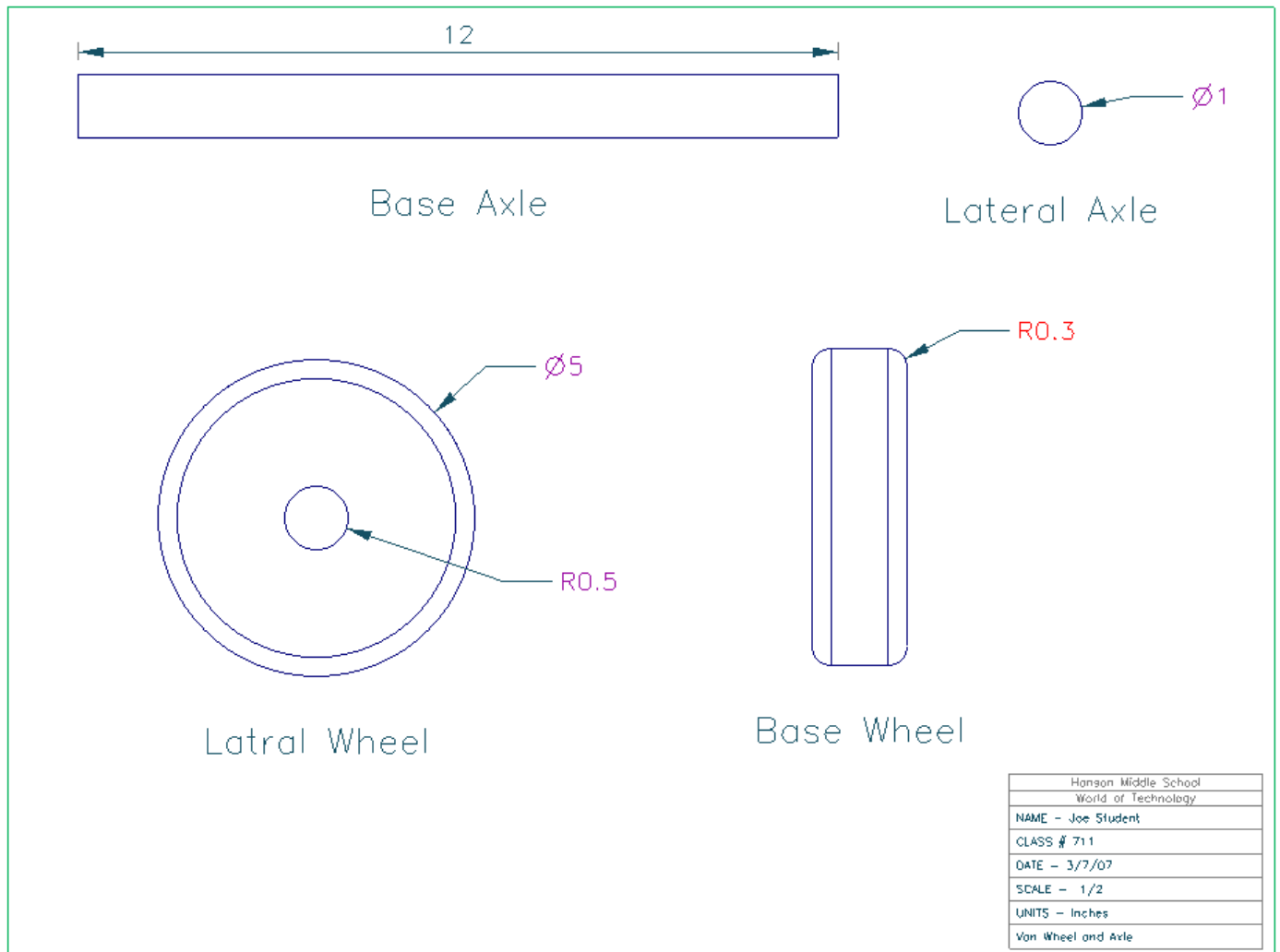
Part 4 – Wheel and Axle Orthographic

Note: *Be sure ALL of your Van Designs are open.*

1. Maximize the *wheel_axle_orthographic* drawing. Change the *table* as you did for the previous drawings. Use the **Select Annotations**  tool to make changes to the table.
2. Change the **Scale** to $\frac{1}{2}$ on both the **Table** and the **Drawing (Drawing > Sheet Setup > Scale)**. [Watch Video](#)
3. Add the *Base* and *Lateral* views of the *Axle* and the *Wheel*. Use the same method as you did on the *body_orthographic* drawing. [Watch Video](#)
4. Name the views as they are below. **Import Sketch Dimensions** and **Add View Label** by **Right Clicking** on the dotted line and selecting.



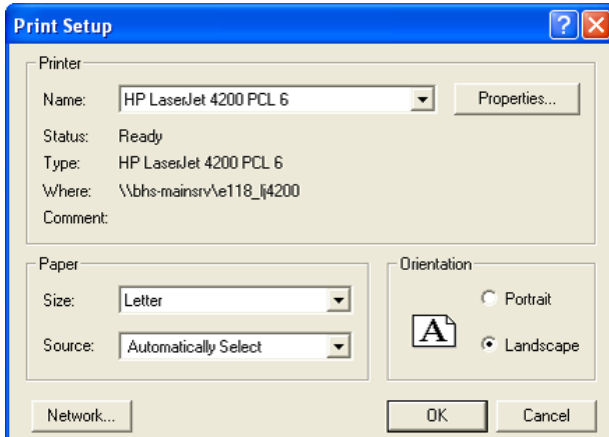
5. Use the **Linear Dimension** tool  and the **Radial Dimension** tool  to complete your drawing. See below: [Watch Video](#)



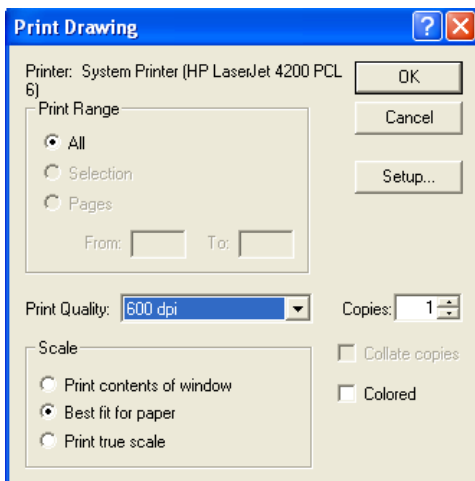
6. ***Save your Work!!***

Part 5 – Printing your Drawings

1. Be sure to follow these instructions for each drawing so that they print correctly and you do not waste paper.
2. Go to **File > Print Setup**. Be sure to choose the **HP LaserJet 4200** printer. Orientation should be *Landscape*.



3. Go to **File > Print**. Choose *Best fit for paper* and *600 dpi*. See below:



4. Staple your Drawings together in this order:
 - i. (top) **assembly_trimetric**
 - ii. **assembly trimetric**
 - iii. **body_orthographic**
 - iv. **wheel_axle_orthographic (bottom)**