

(30 pts) Approx. 3 days

This unit starts with a careful look at various topics about measurement and units. We start by taking some notes and doing some math to explore how quantities with different units relate. When that’s done, we practice using calipers to get measurements and dimensions on the parts and pieces from some toy cars. In the end, you’ll have gained a lot of practice working with different units and using them to dimension diagrams.

1. Start by watching the presentation *Measurement & Units* and taking careful notes.
2. Get a copy of the *Measurement Activity* from Benshoof and work through it. Feel free to work with a partner and collect all the needed measurements for that activity.
3. Now, watch the presentation on *Unit Conversion* and add to your notes from this unit. You should have at least a full page by now.
4. Get the *Unit Conversion Assignment* and work through those problems. Take your time and show your work!
5. When you’ve completed this assignment, take a look at the answer key and double check that you did your conversions correctly. Make any corrections to your work so that your assignment is correct and can be used as a reference later!
6. Now, select an Automoblox car from the choices. Pick a cool one, because you’ll use it for a few days.
7. Choose at least 3 of the parts/pieces from your Automoblox car and sketch them carefully using Multiview sketching. These should be really good, clean sketches that each include at least three views of the object (top, front, side).
8. Now, use a dial caliper to measure the sizes of all the dimensions on each of your 3 Automoblox parts. Use those numbers to dimension your Multiview drawings.
9. Make sure that your drawings are **“FULLY DIMENSIONED”** which means that every possible dimension is available on the drawing, that each dimension is only listed once, and that the numbers are included neatly.
10. Take some time to clean up your dimensioned Multiview sketches and make them super nice.

Part 1: Tasks	5 points	4-3 points	2-1-0 points
 Notes on Measurement & Units	+ You took a full page of notes on measurement and units + Your notes include information on converting units!	- Notes are missing important parts - Notes are less than a page	- No notes - Notes are significantly lacking
 Measurement Activity	+ You completed the <i>Measurement Activity</i> + Your work includes all the requested measurements	- You only did part of the <i>Measurement Activity</i>	- You did not do the <i>Measurement Activity</i>
	10 points	9-4 points	3-0 points
 Unit Conversion Assignment	+ You completed the <i>Unit Conversion Assignment</i> + You checked your work with the key and made any necessary corrections	- Your assignment is not fully complete - Parts are blank or missing	- You did not do the <i>Unit Conversion Assignment</i>
 Automoblox Dimensioning	+ You carefully drew at least 3 Automoblox parts using Multiview Sketching + You fully dimensioned your drawings with measurements from calipers	- You only completed work on 2 Automoblox parts - Your dimensioning is not complete	- You only completed work on 1 Automoblox part - You did not dimension your drawings

