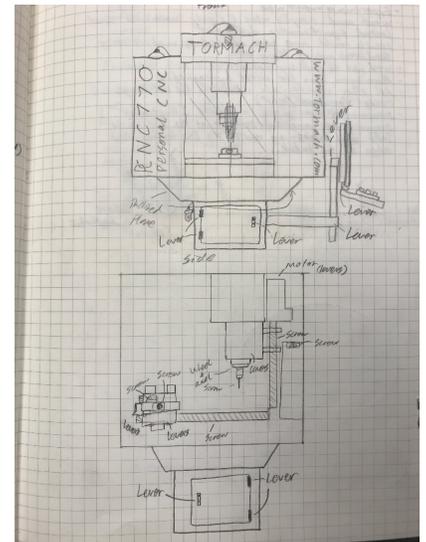


(40 pts) Approx. 2 days

The second part of this unit takes the ideas of simple machines and adds them together into larger complex machines. For the purpose of our work, a “complex machine” is a machine made up of many simple machine components. Most of our machines in the lab are complex machines. The 3D printer, laser engraver, CNC mill, band saws, and even the T-Shirt press are all combinations of many smaller simple machines. In this part of the unit, you’ll be asked to look at different complex machines and identify the simple machines contained within them. Look carefully and think about how you might use other simple machines in complex machines of your own!

- Complex Machine Notes:** Start by watching all three complex machine vides: *Gears*, *4-Bar Linkage*, and the *Tree Transplanter* videos. Take a full page of notes on the ideas presented here. In addition, draw a diagram of the 4-bar linkage and the tree transplanter. Identify as many simple machines in those complex machines as you can.
- Complex Machine Diagram:** Next, make a nice careful drawing of a complex machine here in the lab! Pick from one of the machines listed below, and then use your engineering notebook to make a nice careful diagram of the working parts in it.

- | | | |
|------------|-------------|------------|
| 3D Printer | Laser | CNC Router |
| Tormach | Drill Press | Band Saw |



On your diagram, label as many simple machines as you can. One example is given to the right.

- Complex Machine Assignment:** Talk to Mr. Benshoof about the complex machines assignment, and complete it!
- Unit 8 Quiz:** Take the Unit 8 Quiz by the due date!

Part 2: Tasks	10-8 points	7-5 points	4-0 points
Complex Machine Notes	+ You took a full page of notes on the different complex machine videos + Your notes include pictures of those machines and details about which simple machines make them possible!	- Your notes are missing important elements - Your notes do not include pictures of the complex machines	- Your notes are missing - Your notes are severely lacking
Complex Machine Assignment	+ You completed the Complex Machines Assignment	- You completed most of the Complex Machines Assignment	- You did not complete the complex machines assignment
Complex Machine Diagram	+ You made a nice careful diagram of a complex machine here in the lab. + Your drawing identifies as many simple machines as you can! + Your diagram identifies all 6 simple machines	- Your diagram is missing elements - You did not label all the simple machines - Your diagram is quick or sloppy	- Your diagram is missing - Your labels are missing
Take Unit 8 Quiz	+ You took the Unit 8 Quiz on the website by the Quiz Due Date + Grade is based on number correct	N/A	(0 pts) You did not take the Unit 8 Quiz

