(30 pts) Approx. 3 days

The last part of this unit asks you to work to develop a solution to a real-world problem. For this part, you can choose to either work by yourself or you can work with a partner. If you choose to work with a partner, it's important to remember that you *both* need to record your ideas in your own notebooks and make your own sketches of your final solution.

For this part, we'll walk through the first few steps of the engineering design process. To do this, you'll start by identifying a small real-world problem that you see in your daily life. It can be something simple like:

Feeding the dog is tedious	Taking out the trash is messy	*Cleaning dishes is messy*
Shoelaces coming untied	*Backpack straps jam lockers*	Pencils break in backpacks

Whatever problem you choose, it should be relatively small in scope and should be able to be solved with a physical object. Once you've chosen your problem, you'll write a clear description of the problem in your engineering notebook and then start brainstorming solutions! Once you've generated at least 10 possible solutions you need to pick one and start sketching. Start with a concept sketch of your idea, and then make two more diagrams using techniques of your choice to illustrate your solution further. When you're done, you'll have at least 3 good pictures of your new idea!

1. Watch the "Sketching Solutions Overview" video and think about different problem/solution ideas.
2. Work by yourself OR with a partner to come up with a problem you want to tackle. Write a clear 1-2 sentence description of the problem and why it's a problem.
3. Work by yourself OR with a partner to brainstorm at least 10 possible solutions to the problem you selected. Make sure that you write down your ideas in your engineering notebook!
4. Decide which of your 10+ ideas you want to focus on. Your chosen solution could be a combination of multiple ideas.
5. Make a careful Concept Sketch of your final idea in your engineering notebook. Be sure to use shading and label important parts.
6. Make 2 more sketches of your idea using any two of the other techniques we discussed in this unit:

   Oblique *Isometric* *1-Point Perspective* *2-Point Perspective* *Multiview*

   Be sure to make your sketches in your engineering notebook!

Part 3: Tasks	*10-7 points*	*6-4 points*	*3-2-1-0 points*
Define the Problem	+ You wrote a clear 1-2 sentence description of your chosen problem.	- Your description is vague or incomplete.	- Your problem description is missing.
Brainstorm Solutions	+ You brainstormed and recorded at least 10 possible solutions.	- You only brainstormed 6-9 ideas	- You brainstormed and recorded fewer than 6 ideas.
Solution Sketches	+ You made a good concept sketch of your idea. + You made 2 more sketches using different techniques.	- You only made 2 sketches of your idea.	- You made 1 or 0 sketches of your idea.
Achievement	+ Choose a problem that relates to the Arctic or to Alaska and create a good solution to that problem for your work in Part 3		