PART I: Functional Classification and Analysis

Describe and sketch the function of the different parts of your assigned product in the table provided below. Provide as much detail as you can on how you think the product works with respect to the following categories:

Category	Visual Representation	Functional Description
Power supply	Sketch and label all components in the system	How is power supplied to the device?
Mechanism that provides primary motion	Sketch and label all components in the system	How is mechanical motion (rotation, translation, etc.) achieved in the device?

Describe and sketch the function of the different parts of your assigned product in the table provided below. Provide as much detail as you can on how you think the product works with respect to the following categories:

Category	Visual Representation	Functional Description
Energy flow of the device	Sketch and label all components in the system	How is power transferred to create motion in the device?
Form and outer body	Sketch and label all components in the system	How does the user interact with the outer components of the device?

Name:

Engineering Self-Efficacy for Electromechanical Devices.

Using the provided scale, rate how confident you are that you can perform the following engineering related activities on an electromechanical device. An electromechanical device is one that has physical moving parts in addition to electrical parts that require electrical power to function. An example of an electromechanical device is an electric drill.

Judge your operative capabilities as of *now*, not your potential capabilities or your expected future capabilities.

	Cannot do at all			Moderately certain can do						Highly certai can do		
	0	10	20	30	40	50	60	70	80	90	100	
1. Take apart an electromechanical device without damaging the internal structures.												
2. Identify the physical connections and structures of an electromechanical device (i.e., how the internal components are laid out).												
3. Identify exactly how the mechanical components of an electromechanical device provide motion to the device.												
4. Identify the flow of power (electrical connectivity) through an electromechanical device.												
5. Identify if an electromechanical device is functioning properly or optimally.												
6. Troubleshoot a malfunctioning electromechanical device (i.e., identify malfunctioning areas or components).												
7. Repair a malfunctioning electromechanical device of (i.e., completely restore to working condition).												
8. Communicate the details of an electromechanical device's internals and components through sketches.												
9. Identify the strengths and weaknesses of a particular electromechanical device.												
10. Redesign an electromechanical device for increased efficiency and usability.												
11. I am good at coming up with new ideas.												
12. I have a lot of good ideas.												
13. I have a good imagination.												