Angeles City Science High School

ESP 10

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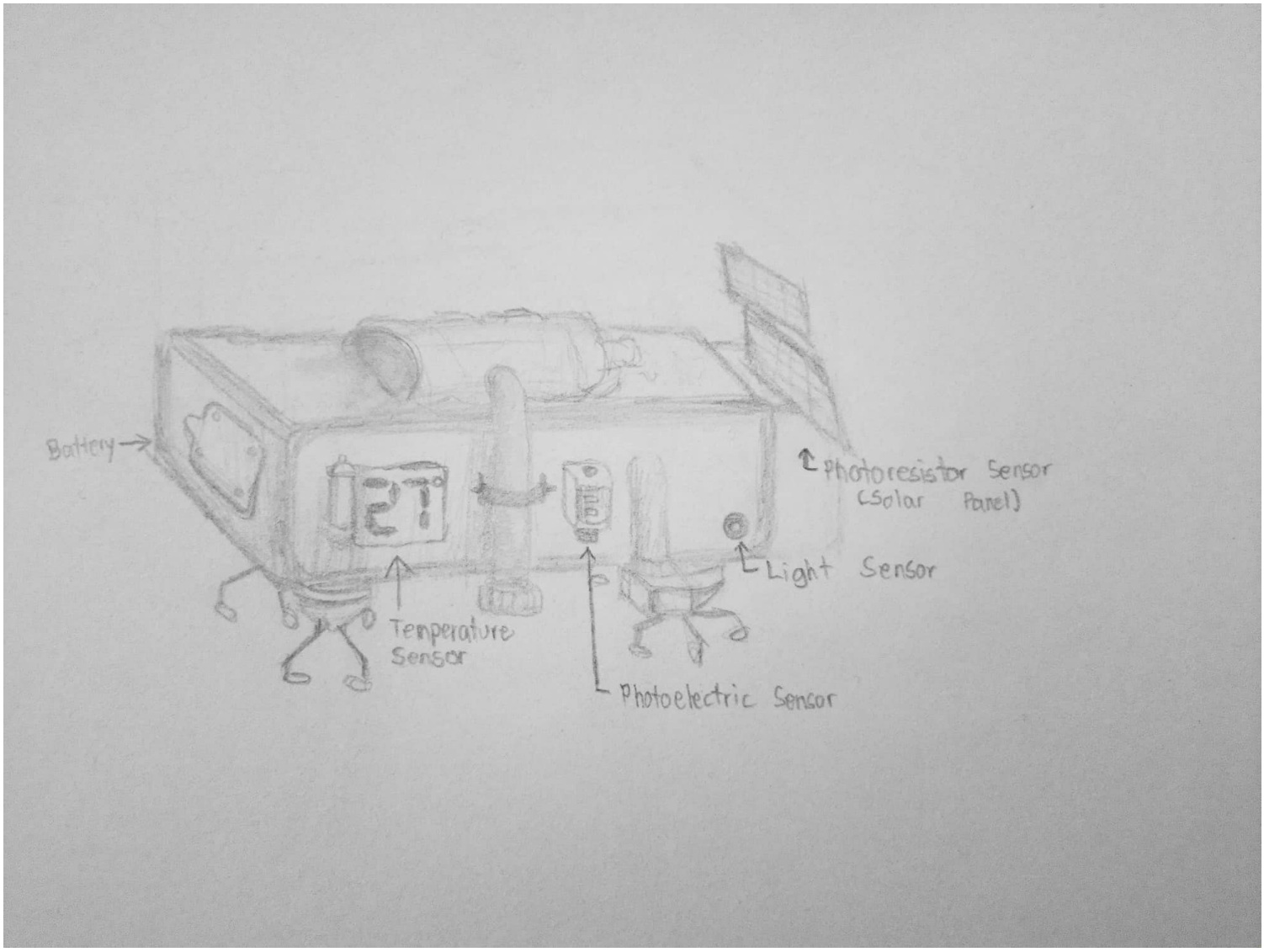
What I can Do

Activity 1: Draw a Robot!

Direction: Draw your own design robot. In your design, the rebot must have atleast five (5) sensors attached to it. Decide which sensors you are going to install in your robot. Keep in mind that your design is based on the robot's function and purpose.



Guide Questions:

1. What is your reason of using this design to your robot? Explain further.

The function of my robot is to mainly clean the windows on the side of tall buildings. It can be quite dangerous to do that by a human. This robot is powered by both solar panels and battery, whenever it is nighttime or raining, the battery will be used, otherwise it will be the solar panel.

2. What are the five (5) sensors you attached to your robot? Why did you chose these sensors?

Those are the light, photoresistor, photoelectric, tactile and temperature sensor. Light sensor to detect if it's a solid wall or something with light. Photoresistor to be able to use solar panels as power source instead of batteries during daytime. Photoelectric sensor to detect if I am interacting with glass instead of just a wall. Tactile sensor to be able to actually clean up and wipe the dirt in glass. Temperature sensor to be able to detect the humidity and weather to be able to know whether the robot should use batteries and hide the solar panels.

3. What is the importance of sensors to a robot?

They are important components not just in robots but generally in electronics as they are modular, stable, and decentralized components that can easily be fixed, debug, or replace when necessary. If you were to build a robot with different functionality, instead of building a completely new design, you could just hot swap or swap the parts with another even while the robot is turned on. It makes it easier to prototype, mass produce, and most importantly, provide a functional robot that is useful to humans.