Worksheet Name: A Proposal To Make Something Cool  
Worksheet Code: MSCWOW  
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Q1. What cool thing are you proposing to make (please explain in detail)?

SMART SOIL CONTROL

The main idea of this project is to create an easy control environment for any type of system that manages soil moisture, such as a plant pot or concrete poured on elevated or pre-cast slabs.

To achieve this, we will use the following components:  
• Arduino UNO – As the microcontroller  
• Soil moisture sensor model – To control the soil water level (Soil Moisture Sensor - Complete Guide | Arduino Project Hub)  
• Photoresistor – To identify the light levels of the location  
• Water level sensor module – To control a water reservoir for automatic soil humidification  
• 9G Servo – For automatic soil humidification  
• Temperature and Humidity sensor DHT-11 – To create predictions about soil behavior  
• I2C LCD – For communication with the end user via text (PUMP SIMULATOR)  
• LED – RED, YELLOW, GREEN, WHITE, BLUE – For communication with the end user through visual alerts  
• 3D Printed Vase

The process workflow will be:

A diagram of sensors and sensors

AI-generated content may be incorrect.

Q2. What part(s) does it use from the course kit?

* Arduino UNO – Como microcontrolador
* Photoresistor – Para identificar a luminosidade do local;
* Water level sensor module – Para controlar um reservatório de água para humidificação automática do solo;
* 9G Servo – Para humidificação automática do solo.
* Temperature and Humidity sensor DHT-11 – Para criar previsão de comportamento do solo;
* I2C LCD – Para comunicação com o usuário final através de texto (PUMP SIMULATOR)
* LED – RED, YELLOW, GREEN, WHITE, BLUE – Para comunicação com usuário final atreavés de alertas visuais

Q3. What extra part(s) will you require, if any?

* Soil moisture sensor model - Para controlar o nível de água do solo ([Soil Moisture Sensor - Comple Guide | Arduino Project Hub](https://projecthub.arduino.cc/lucasfernando/soil-moisture-sensor-comple-guide-b9c82b));
  + [Capacitive Moisture Soil Humidity Sensor Module Corrosion Resistant for Arduino UNO R3 DIY Electronic Automatic Watering System 2pcs : Amazon.ca: Industrial & Scientific](https://www.amazon.ca/Capacitive-Corrosion-Resistant-Electronic-Automatic/dp/B089RQF371?asc_source=01HHJ06AG61V3KY0FNRG3RNN42&tag=snxca85-20)
* 3D Printed Vase

Q4. What part(s) will you 3D print? (optional)

* 3D Printed Vase