

Final Submission

Team Number: 12

First Names of Team Members: Clarissa, Hannah, Isha, Katarina, and Sylvia

Task #1: Discovery (maximum 100 words)

We were inspired to utilize the core principles of McMaster Engineering in order to create a stimulating multi-purpose collaborative room that is sustainable and innovative. By using solar paneled windows, a green wall, and a power generating entrance platform, we've included alternate energy sources. To make portables more welcoming and exciting for students, we added virtual reality headsets and located the portable outside the Engineering Technology Building, making it accessible for engineering students. The green walls provide a source of energy while also providing fresh air to increase productivity.

Task #2: Innovation (maximum 100 words)

Green Wall (\$30,000): The green wall is used to generate electricity. Bacteria live with moss, which breaks down organic compounds. The soil acts as an anode to harvest electrons to make this electricity.

Transparent Solar Powered Windows: \$30,000

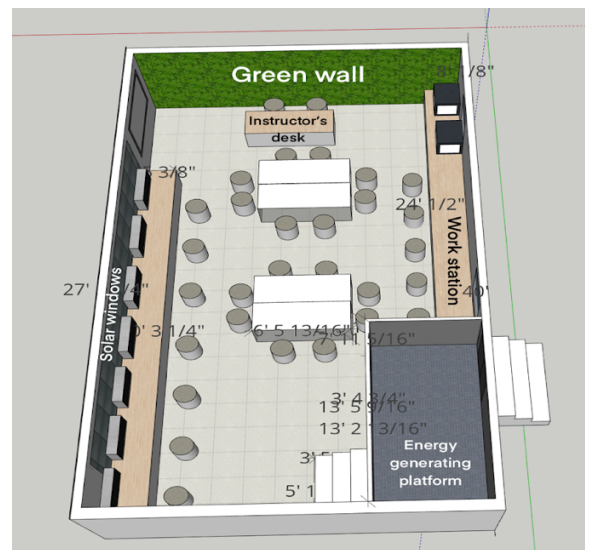
Energy Generating Platform (\$5,000): When people enter and leave the classroom, they step onto a platform that lowers and rises on springs. This rotates multiple generators, which harvest enough power to keep the classroom lights running for hours.

Virtual Reality Headsets (\$1,200): Gives students the opportunity to visualize ideas

Furniture: \$16,500

Technology: \$14,000

Equipment and Tools: \$730



Task #3: Sustainability (maximum 100 words)

We have made steps to decrease our usage, by having our own energy sources (green wall, solar windows, and an energy generating platform). The green wall powers LED lights since it produces energy. Long term it will promote a happier workplace and reduce stress, which are important social factors. The transparent solar panel windows consist of organic salts that absorb light, where photovoltaic solar cells convert it into 2400 watts per day for electricity. Taking into consideration the 3 R's, we went paperless by using whiteboard tables.