Breathing Life onto Campus: Living Walls

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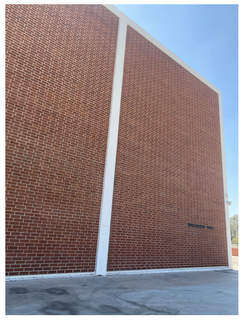
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Introduction

Living walls, also called green walls, are vertical vegetated wall systems that make use of hydroponics.

They can improve biodiversity and urban sustainability while making use of unused space and not affecting foot traffic. They can house urban plants and native wildlife as an alternative habitat.





There are many blank, window-less walls on campus, most notably on Salazar Hall, King Hall, Music, and Fine Arts. The space could be used for living walls to brighten up these bleak spots.

Methods

1. Identify suitable areas along walls or spaces that are available for partitions.
2. Develop a construction and planting plan for each decided location.
3. Examples of organizations:
   - Urbanstrong for Columbia University.
   - Urban Blooms for the University of Cincinnati.
4. Requires a group for upkeep and ensuring the system is in good health, whether this be students interested in environmental science or volunteers.

New York University





Western Michigan University

Suitable plants include urban and native plants:

- Catalina Island live-forever
- Trailing indigo bush
- California fuchsia
- Native grapes

Effects

Living walls can be placed both outdoors and indoors.

Indoors:

- help regulate indoor air temperature and humidity (Liu et al.)
- remove most air pollutants (i.e. VOC's, CO_2, CO, NO_2, particulate matter) (Pettit et al.)
- take a portion of the workload off of air conditioning systems (Torpy et al.)

These would have a major effect on urban sustainability and indoor environmental quality.

Outdoors:

- improve insulation (keeping cool during summer) relating to Urban Heat Island (Sheweka et al.)
- control water runoff from roofs (Wang et al.)
- enhancing biodiversity in urban landscapes (Mayrand et al.)

Both:

- boost mental wellness (Gunn et al.)
- dampen noise levels by absorbing sound (Azkorra et al.)

Additional Functions!

- treating wastewater with removing pollutants (Wang et al.)
- urban garden for produce
- art piece

Conclusion

Living walls can improve our campus biodiversity and help with urban sustainability, with a variety of other benefits like being a potential garden for the food pantry and making campus more green.



Citations

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