

UNEXPECTED ENCOUNTERS WITH NATURE

How can green design be implemented into interior spaces in urban settings through typical home decor objects to improve the mental well-being of the inhabitants?

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ABSTRACT

Throughout history plants have been used as decorations by adding visual interest within interior spaces. An important aspect of this is to help people connect with nature. In recent years, the utilization of plants has been used to enhance mental well-being and to reduce stress through interaction with plants (Lucia Starbuck, NPR). This is important for residents in urban environments who may have limited access to outdoor green spaces. The way plants have been utilized in interior spaces has shifted from stand-alone houseplants to incorporating them within functional aspects of the home. This can be seen in interior green walls, the rise of biophilic design, and indoor gardening. The project expands how plants can be used within home decor items that maintain functionality and promote interaction with natural elements to promote well-being. The plants being used have been proven to help promote psychological well-being by being in proximity. The maintenance of this project helps stimulate well-being since interaction with plants or natural elements can enhance cognitive function, reduce stress, and promote relaxation. The target audience is residents living in urban environments, who have the means to maintain, or are wanting to better their well-being.



Photo: Alessia Restar/6sqftNewYorkCity

PROJECT JUSTIFICATION

Living in urban environments can lead to a negative psychological impact due to noise pollution, sensory overload, and limited access to green spaces. The integration of plants in interior spaces within urban environments can help combat these psychological stressors with the plant's innate calming nature. The accumulation of studies conducted over the past years have indicated that plants can improve mental health by reducing stress, reducing depression, and improving cognitive function. The integration of plants within interior spaces as decorations has seen an uptick of users in the past years due to the COVID-19 pandemic. In recent years, there has been an expansion of how plants are utilized in interior spaces. This is partly due to the rise in popularity of biophilic design where the main purpose is to connect users with nature in built environments. Some of the usage of plants within interior environments is due to their therapeutic properties and enhancement of emotional well-being.

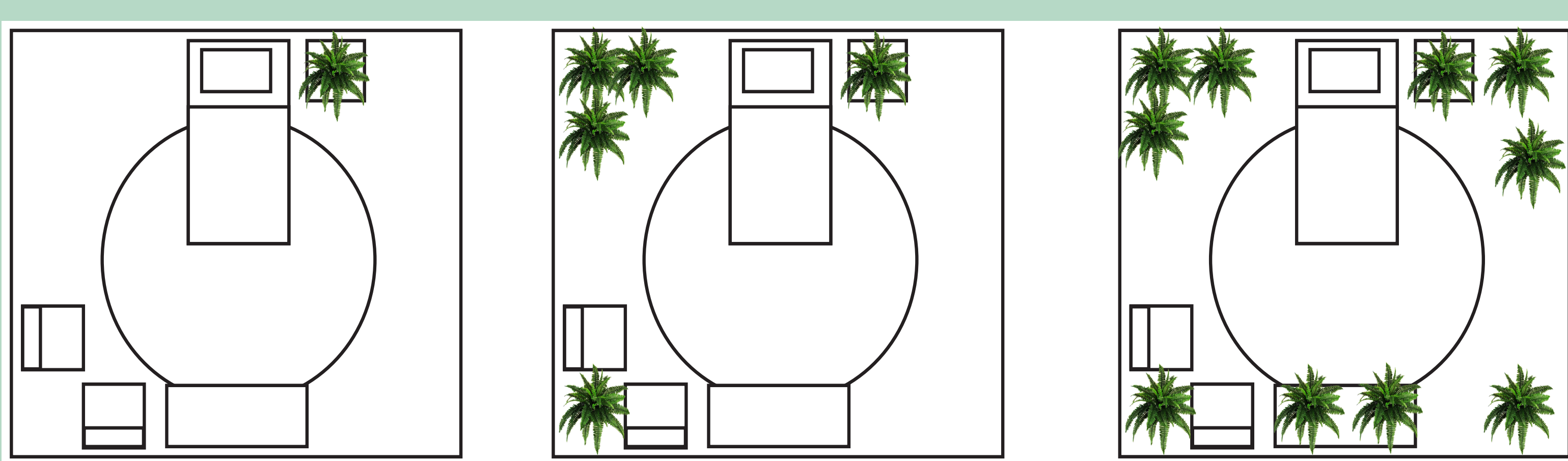
ADDITION OF PLANTS WITHIN INTERIOR SPACES & EFFECTS ON MENTAL WELL-BEING



Created by Lucinda Vandekieft, 2025.

Within a 10ft X 10ft Room

- One houseplant improves mental well-being by 45%
- Two houseplants improve mental well-being by 50%
- Five houseplants can achieve maximum benefits



Created by Lucinda Vandekieft, 2025.

Within a 13ft X 16.5ft Room (around the size of an average of a master bedroom or living room)

- One houseplant helps very little with improving mental well-being
- Five houseplants improve mental well-being by 60%
- Ten houseplants can achieve maximum benefits

Living Table

Created by Habitat Horticulture
Photo: Habitat Horticulture



This table was designed for interiors in urban spaces to bring nature indoors. The table has little maintenance needed due to the irrigation system. This showcases how plants can be implemented into a functional piece of

LITERATURE REVIEW

ParkHere

Created by Openhouse Gallery
Photo: ParkHere, Indoor Pop-Up Park, NYC.



The interior pop-up park, ParkHere located in New York City, brought a park indoors in the middle of winter of 2011. This quickly became a popular place to visit and promoted interaction with nature during a season it may have been limited. Even though the plants used were plastic it still had the same effect as natural elements.

SOLUTION

The goal for this project is to explore how plants can be added into residential spaces within urban environments to improve the user's mental well-being. The overall vision of the project is to explain how incorporating plants into interior spaces can promote mental well-being and expand how they can be added into these spaces for the benefit of the users. The design and build focus being a chair is to explore how different home décor objects can still be functional even with incorporating plants. The review of the case studies helped to shape the plant selection, focusing on incorporating plants that have a majority of green foliage. The maintenance of the chair and the plants is provided but will have to be done by the users of the space. Other pieces like couches, lights, and mirrors are explored on how to incorporate greenery and having the piece still be functional. Throughout the process different plant textures, colors, and growth are explored to make a green piece cohesive. There are two main goals set for this project. The first being to expand on how plants are incorporated into interior spaces and branch out from the typical plant in a pot. The second goal is to have the object maintain functionality within the space.

SITTING WITH GREEN



PLEXIGLASS BACKREST

BACKREST PLANTER

LED PLANT LIGHTS

SIDE PLANTER

PLANTER COVERING

Dieffenbachia hybrida 'Amy'

Amy Dieffenbachia



Photo: Pafe Plants Center

Echeveria/ Sedum

Succulent Mix Pack



Photo: Easy To Grow Bulbs

Gynura aurantiaca 'Purple Passion'

Purple Passion Plant



Photo: Aqueasabi

Spathiphyllum 'Pette'

Peace Lily



Photo: Pafe Plants Center

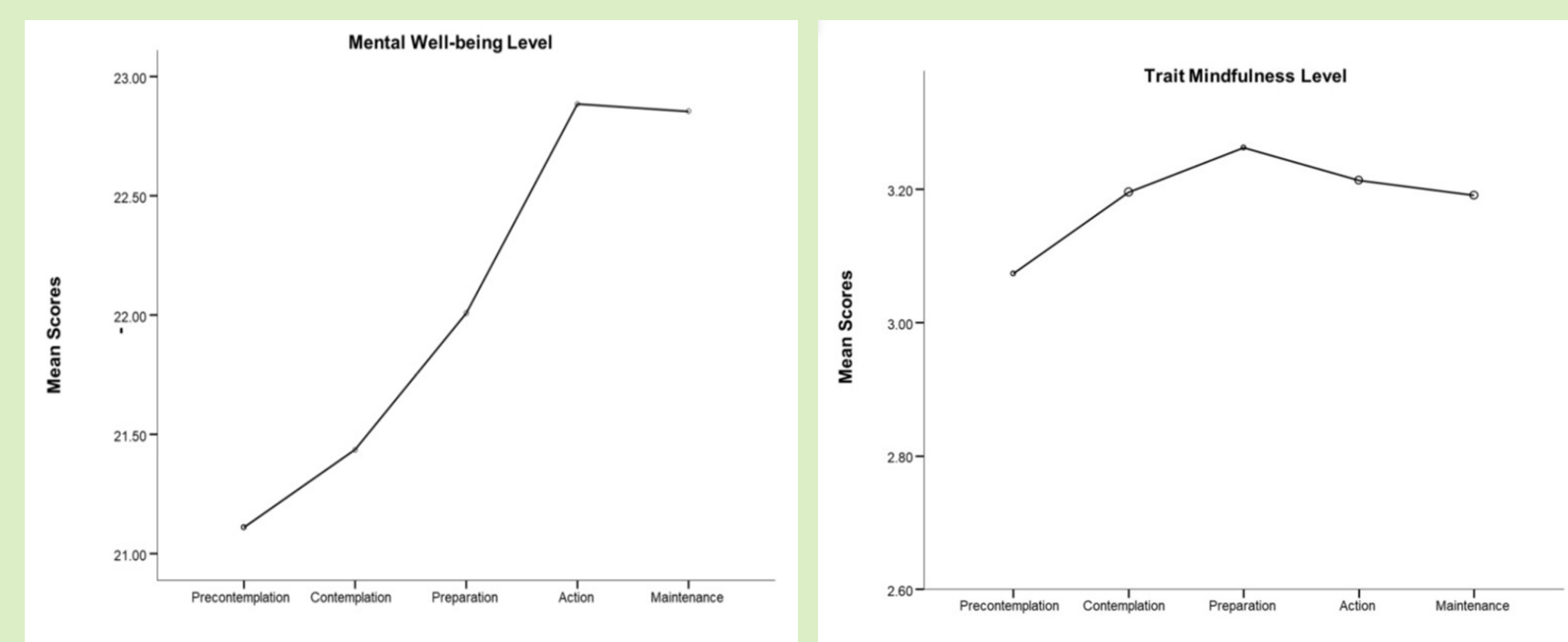
Fittonia albivenis 'Red Ruby'

Red Ruby Nerve Plant



Photo: My Planty My Taste

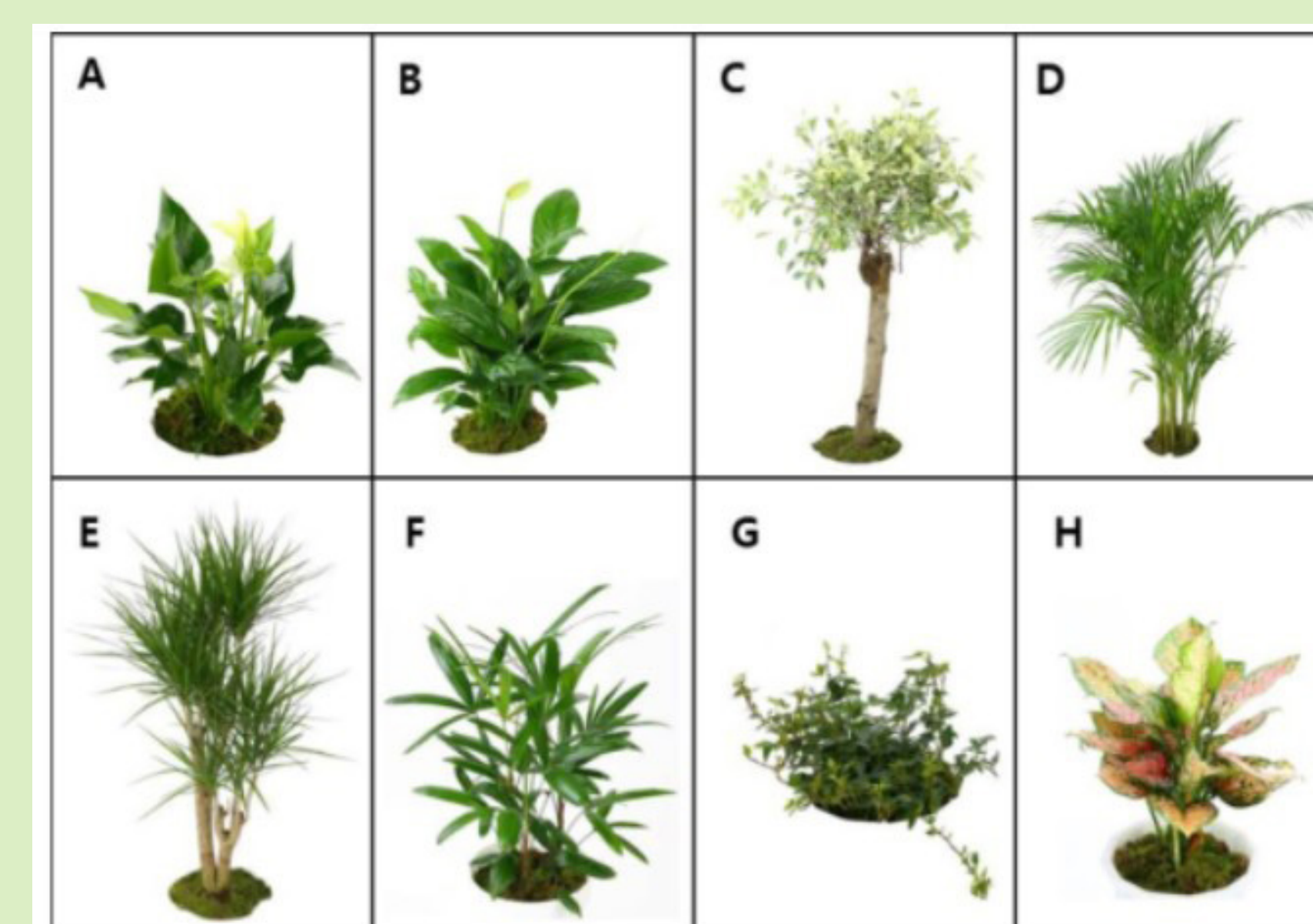
CASE STUDIES



"Houseplants care behaviour and mental well-being" Created by Jingni Ma.
"Houseplants care behaviour and mindfulness" Created by Jingni Ma.

Interaction with Nature Indoor: Psychological Impacts of Houseplant Care Behavior on Mental Well-Being and Mindfulness in Chinese Adults
Author: Jingni Ma
Published: November, 2022

The study goes into depth to explore the association of interacting with houseplants to impacts on mental well-being. The model of the study was heavily influenced by the 'green prescription' and previous research conducted on the interaction with nature and the correlation to well-being. The results showed the different levels of mindfulness and well-being at the multiple stages of the study. It was shown that keeping and maintaining houseplants can help mental well-being by providing an outlet to destress and connect with nature in heavily urbanized areas. Since the participants of this study were Chinese urban residents, the author calls for more research to be done on how this can transfer over to other cultures or countries. Jingni Ma highlights how keeping houseplants within urbanized areas in China can provide advantages to improve mental health of the residents.



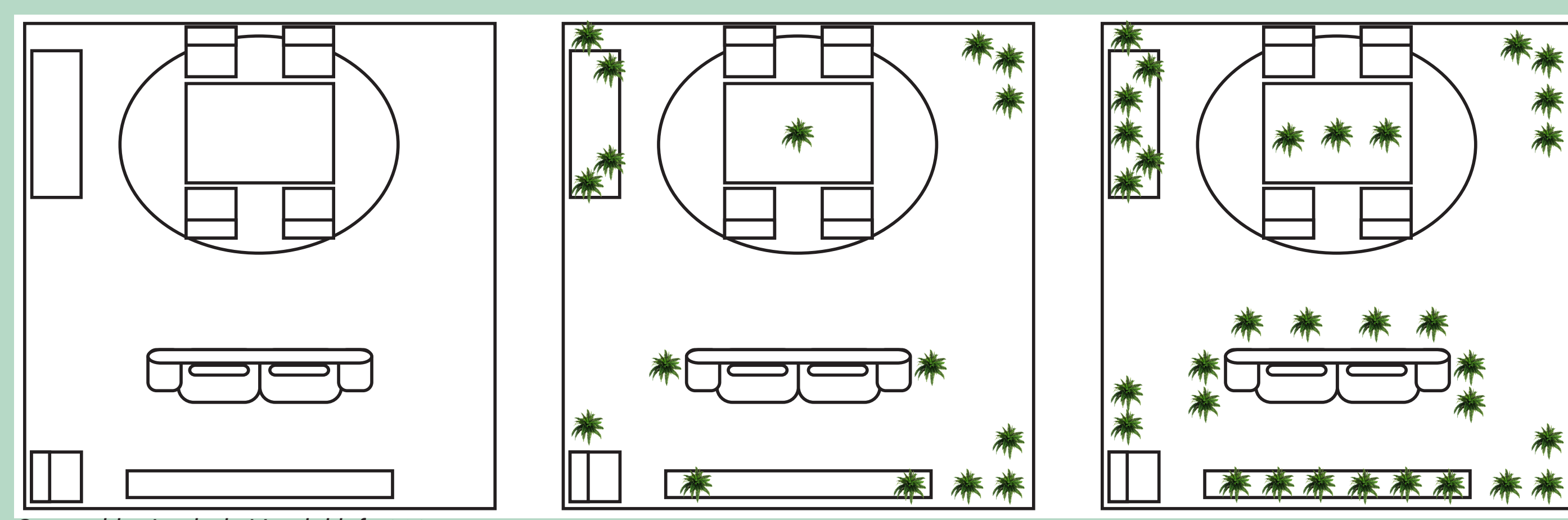
LEFT: Eight indoor foliage plants for the survey. A=Anthurium andraeanum cv.; B=Spathiphyllum spp.; C=Ficus benjamina 'Variegata'; D=Dypsis lutescens; E=Dracaena marginata; F=Rhapis excelsa; G=Hedera helix; H=Aplaconema commutatum 'Lady Valentine'. Created by Jang, Gim, Jeong, Kim.

The Importance of Indoor Foliage Plants and Human Emotions to Indoor Foliage Plants
Authors: Hye Sook Jang, Gyung Mee Gim, Sun-Jin Jeong, Jae Soon Kim

There were eight different foliage plants ranging in color (greens, pinks, variegation) selected for this study. Part of the selection was based on the plant's air purifying qualities and the general habit of the plant (Jang, Gim, Jeong, Kim). To gather a basis for the study a questionnaire about general awareness of indoor plants was given to 216 workers and visitors of public buildings. The first questionnaire found that 48.7% of the participants were aware of the environmental factors and 44.9% of the participants focused on the aesthetic of the plants (Jang, Gim, Jeong, Kim). Similarly to the first questionnaire, to gauge the emotions of the participants when viewing the eight foliage plants they answered the questions of how the plant made them feel through adjectives associated with basic emotions (Jang, Gim, Jeong, Kim). The results from the second questionnaire showed most participants felt "calm" or "comfortable" when viewing many of the plants. Their study did show a correlation between the overall aesthetic of the plant and what emotions it sparked.

Indoor foliage plant	Emotional reaction (ranked in order)			
	1	2	3	4
Anthurium andraeanum cv.	comfortable	simple	luxurious	pleasant
Spathiphyllum spp.	sharp	comfortable	sophisticated	pleasant
Ficus benjamina 'Variegata'	bright	soft	warm	unique
Dypsis lutescens	bright	sharp	light	sophisticated
Dracaena marginata	sharp	warm	unique	sophisticated
Rhapis excelsa	sharp	calm	comfortable	pleasant
Hedera helix	sharp	pleasant	light	sophisticated
Aplaconema commutatum 'Lady Valentine'	warm	unique	fancy	sharp

Representative emotional reactions to eight indoor foliage plants Created by Jang, Gim, Jeong, Kim.



Created by Lucinda Vandekieft, 2025.

Within a 26ft X 26ft Room (around the size of two large box trucks side by side)

- 16 houseplants can improve mental well-being by 60%
- 32 houseplants can achieve maximum benefits

Pasona Urban Farms

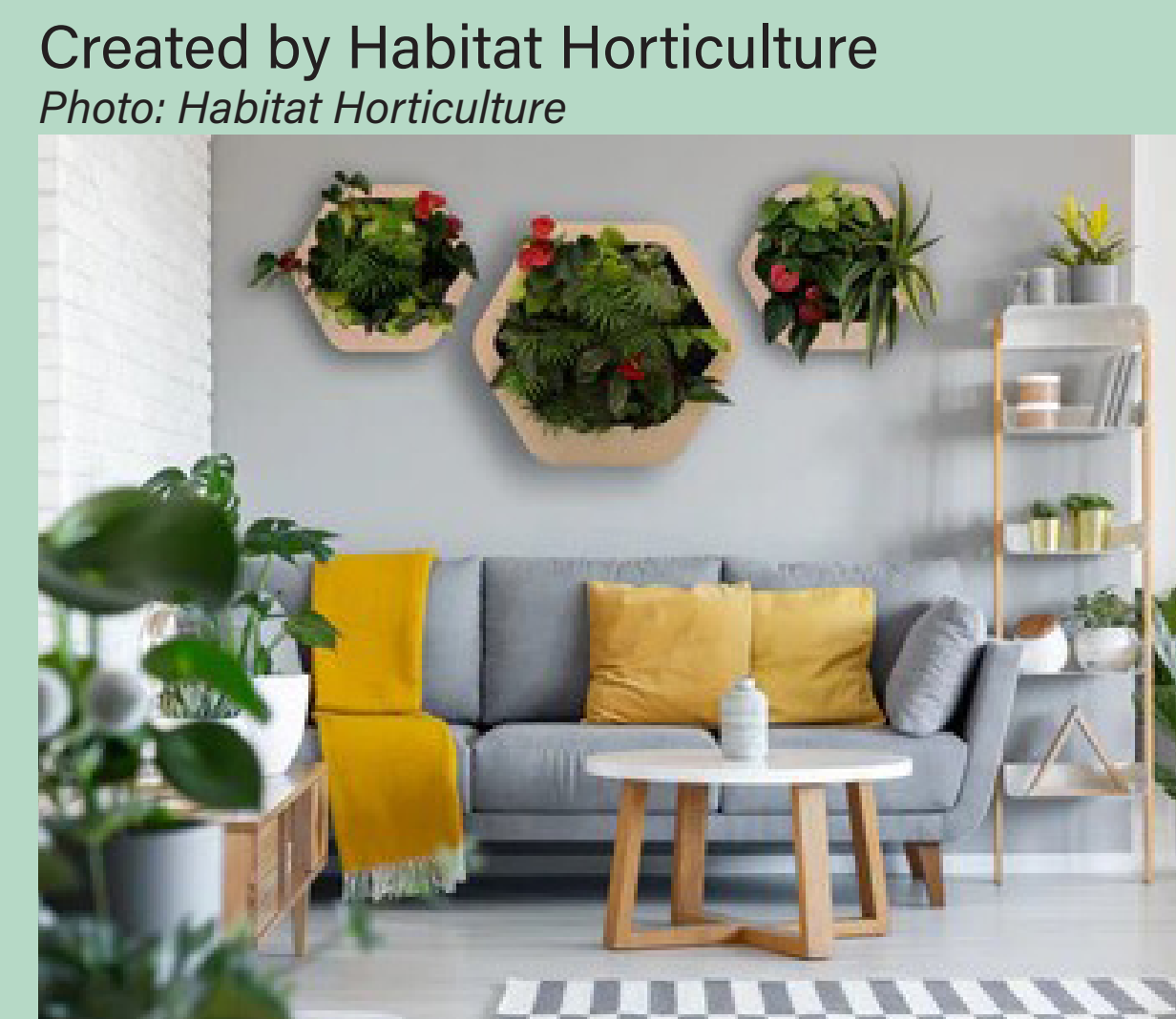
Created by KonoDesigns
Photo: Pasona Urban Farms, Dining Area with Overhead Planters.



Pasona Urban Farms is an urban farming facility that was integrated into an office building in downtown Tokyo. The design of integrating plants within most aspects of the building have led to a promotion of social interaction and higher work efficiency.

GROWMEO

Created by Habitat Horticulture
Photo: Habitat Horticulture



The GROWMEO brings in a small form of a green wall for homes and offices. It was designed to promote people's connection to nature and enrich spaces for inhabitants.

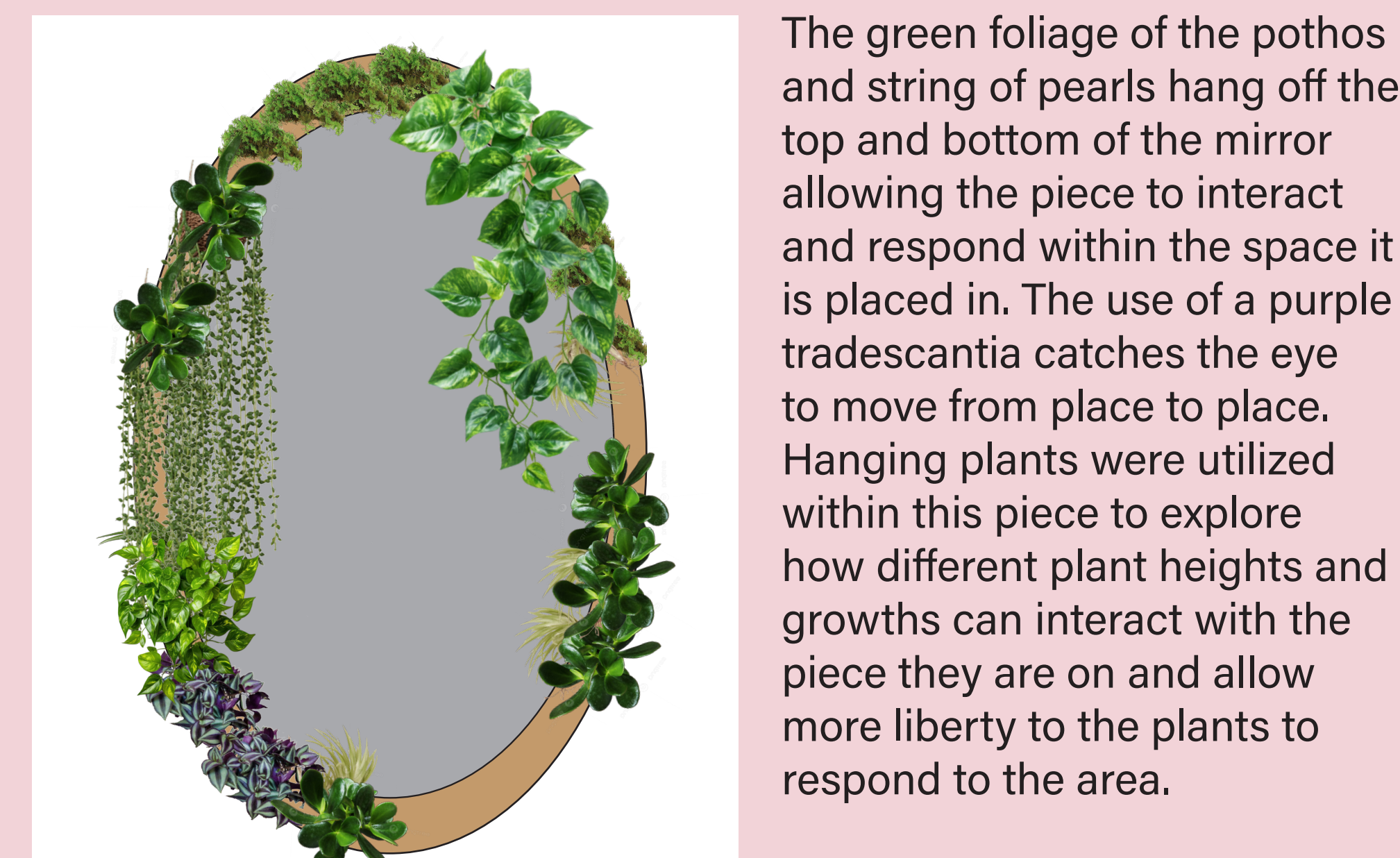
OVERGROWN VEDURE LIGHTING



Created by Lucinda Vandekieft, 2025.

The lights above utilize bushy and large foliage plants to hang down with the lights. The different hanging plants used allow for different colors of green and foliage to interact. The spider plants at the top and the tradescantia on the sides help make the lights feel lush and add a pop of color amongst all the greens present.

LUXURIANT LIVING MIRROR



Created by Lucinda Vandekieft, 2025.

The green foliage of the pothos and string of pearls hang off the top and bottom of the mirror allowing the piece to interact and respond within the space it is placed in. The use of a purple tradescantia catches the eye to move from place to place. Hanging plants were utilized within this piece to explore how different plant heights and growths can interact with the piece they are on and allow more liberty to the plants to respond to the area.

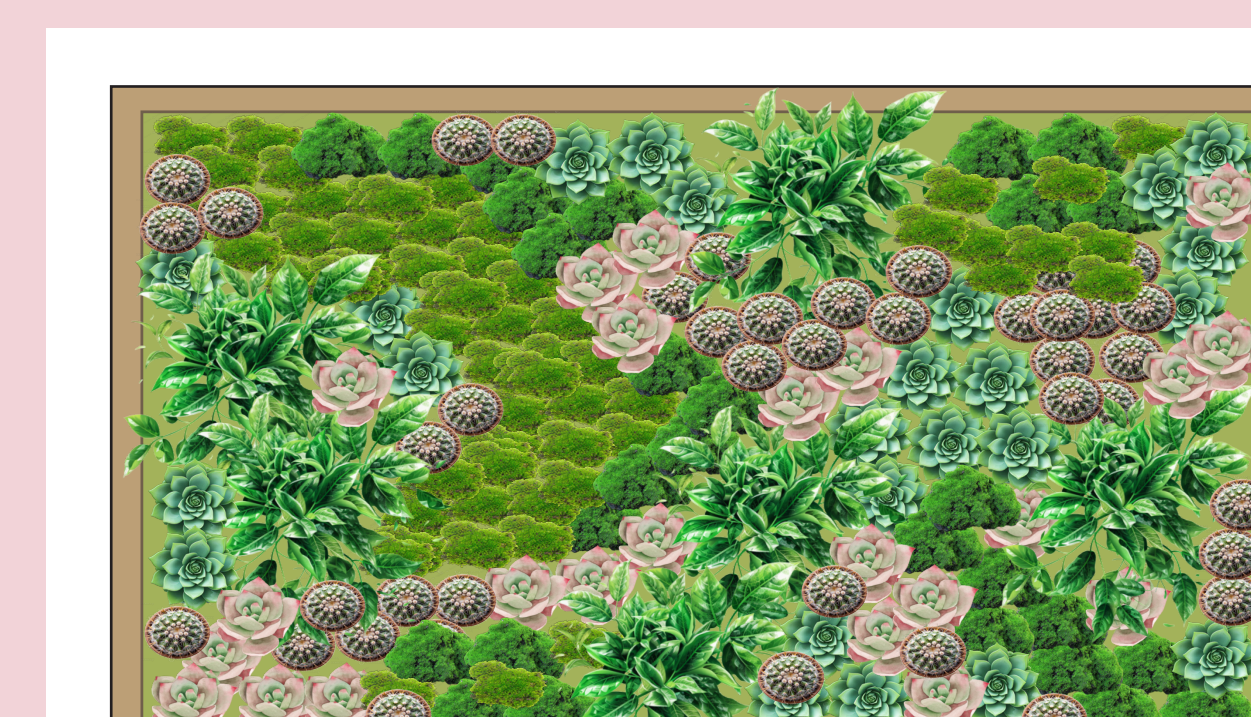
VIBRANT FLORA COUCH



Created by Lucinda Vandekieft, 2025.

The couch above explores how different plant textures and foliage color interact with each other in a piece typically used for seating. Ferns and bright caladiums are a constant presence throughout the couch creating a colorful look to catch the eye.

LUSH TABLE



Created by Lucinda Vandekieft, 2025.

The overgrown foliage of the table falls off the side of the table. The plant life is protected by the glass covering that allows light to penetrate through. The different succulents and moss placed throughout gives the user's eyes something to follow and focus on. The use of the green plants makes the table feel lush and alive.

