

S.T.E.E.L. ACADEMY

SUSTAINABILITY TECHNOLOGY ECOLOGY ENTREPRENEURSHIP LANGUAGE

A black silhouette of a city skyline is positioned at the bottom of the image. It includes various building shapes, a prominent water tower on the right, and a bull standing in the foreground on the left. The background of the entire image is a dark grey with a repeating geometric pattern of interlocking cubes.

Seth Allen - Mikal Ali - Mackenzie Giattino - Irene Tamba




Building a strong foundation with community.

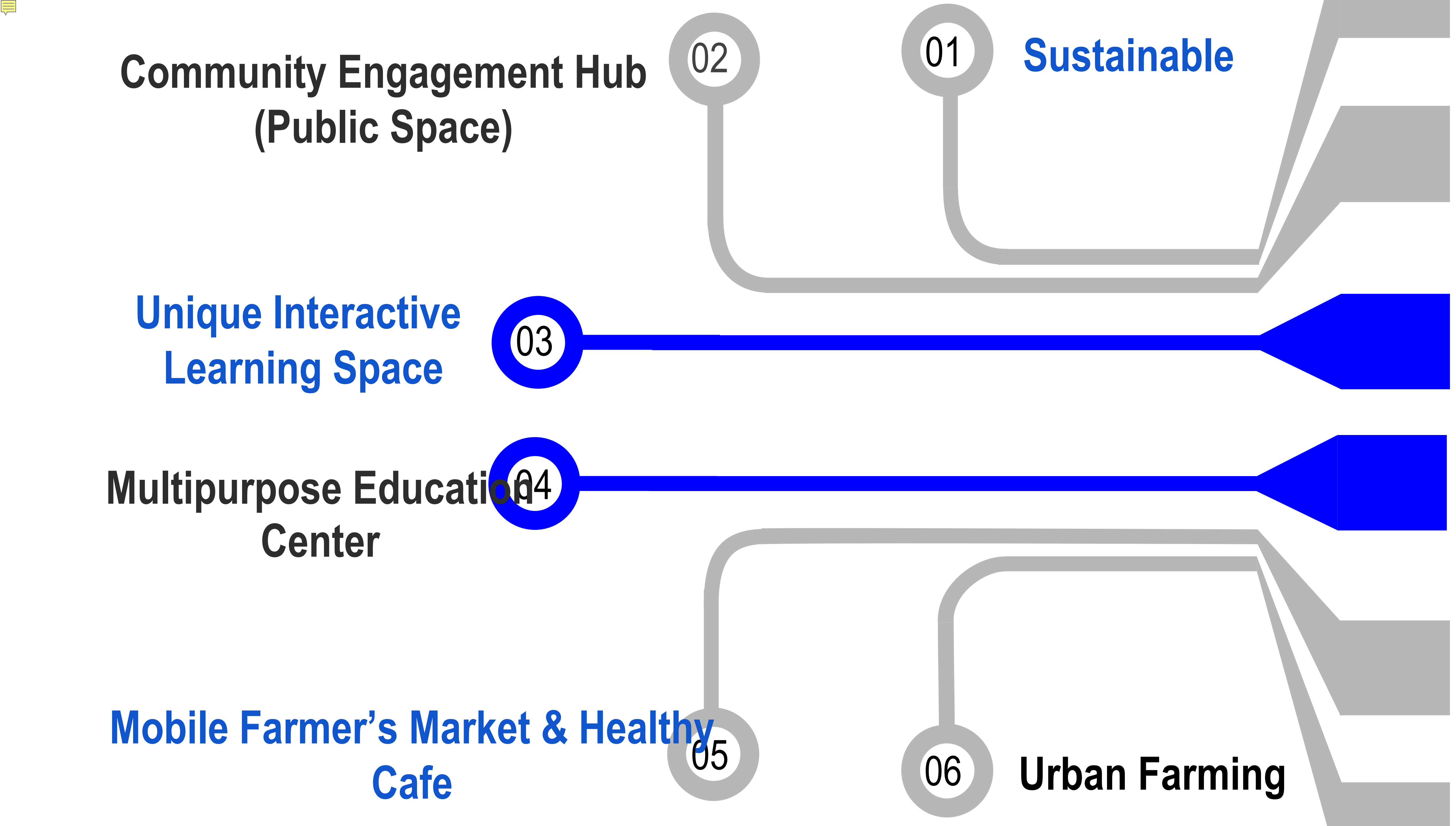
DREAM EXPLORE CREATE

EMPOWER

Motto

Our mission is to build a strong foundation for students to become change agents. We want to advance the right of every person to live in a socially, economically and environmentally healthy community. 

MISSION



ENGINEERING DESIGN PROCESS

DEFINE THE
PROBLEM

EXPLORED
IDEAS

APPLY A
SOLUTION

LOOK BACK
AND LEARN

PROBLEMS & SOLUTIONS

WHO DID WE TALK TO?

- COMMUNITY MEMBERS
- TEACHERS
- PARENTS
- STUDENTS
- UNIVERSITY SCHOLARS

WHAT WERE THE PROBLEMS?

- ACCESS TO HEALTHY FOOD
- ACCESS TO JOBS
- ACCESS TO COMMUNITY SPACE

WHAT ARE OUR SOLUTIONS?

- COMMUNITY SPACE
- FARMERS MARKET
- FOCUS ON ECOLOGY
- SHIPPING CONTAINERS
- ENTREPRENEURSHIP TRAINING

LOCATION



- An ALL LOCAL PRODUCER ONLY market
- Is passionate about local food and sustainability of the Durham Community
- Durham's Farmers Market is located in Durham Central Park
- Food Trucks and Art Market



LOCATION



STEEL Academy

Location Video

<https://youtu.be/b6UYWT9x0gw>



HOW DO WE LEARN

CURRICULUM & INSTRUCTION

Focus on critical thinking, creativity and innovation

- Real life experience
- Small class sizes
- Community engagement
- Community service
- Collaborative Groups





SMALL CLASS SIZES

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- No more than 12 students per class
- Learning Pods
- Research proven: Higher Achievement
- Individualized Attention
- Teachers have more opportunities to observe and assess
- Classes become a community
- Teachers can differentiate instruction
- Easier to collaborate
- Teachers can build better relationships with students and parents

CRITICAL THINKING & INNOVATION

- Project based learning
- Collaborative Groups and think tanks
- In Laboratories researching and coming up with new technology and innovative ways to help our community
- Graded on our creativity and innovation not by taking a test.





No1

Create Jobs & Wealth in our
community

No2

Innovation &
Social Change

ENTREPRENEURSHI

TECHNOLOGY



- Innovative Technology for Farming
- Digital Media Center
- Tablets
- Laptops
- Design Lab: 3D Printing
- Digital Art
- Virtual Reality Labs

ECOLOG Y

- The study of living things, their environment, and the relation between the two.
- Environmental Conservation
- Energy Conservation
- Limited Resources
- Eco Friendliness



DUAL LANGUAGE

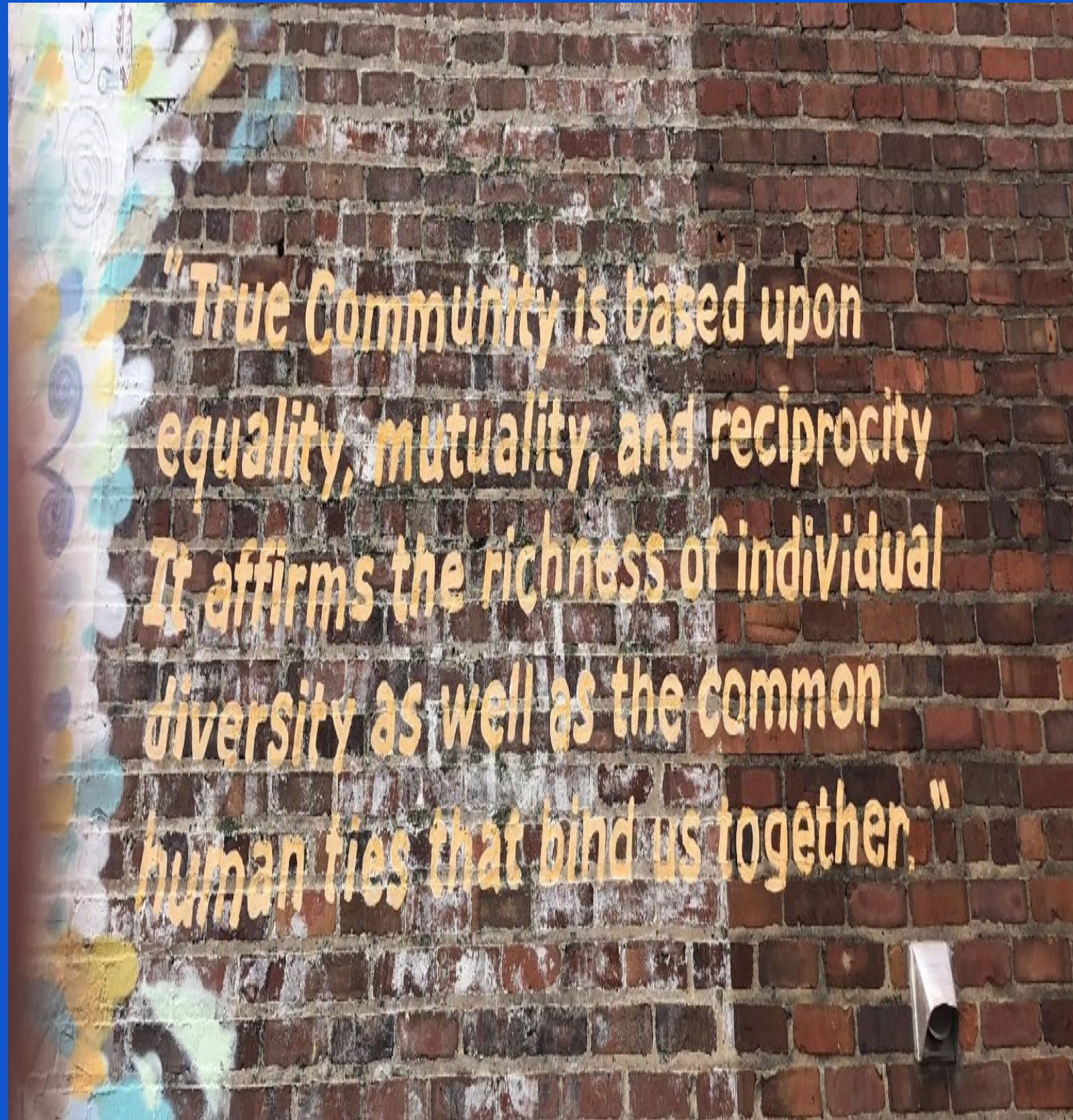
- To unify staff and students in creating a shared community
(NC ranked 11 in the country for hispanic population)
- To acquire a second language
- To have a greater capacity for listening
- To think more creatively and analytically
- To develop better communication skills
- To problem solving
- To have a greater awareness of self and others
- To gain insights into other cultures





COMMUNITY ENGAGEMENT

PUBLIC SPACE



- Open and accessible to the community
- Community Events
- Farmers Markets
- Food Truck Rodeos
- Sense of pride and belonging in the community

FARMERS MARKETS

- Every Saturday
- Provides healthy fresh food to our community
- Run by students and local community farmers and food trucks
- Affordable
- Durham Farmers market participates in the SNAP program which provides access to healthy food for families in need.



OPEN CAMPUS

- Meeting Spaces
- Community Dinners and Events
- Access to our Digital Media Center & Labs
- Access to Crops and Cafe 7 days a week
- Community Partnerships



CLASSES

- Student led classes
- Cooking
- Healthy Eating
- Community Gardens
- Sustainable & Energy Efficient





Brings healthy fresh food and crops into the community

MOBILE CAFE & GARDEN



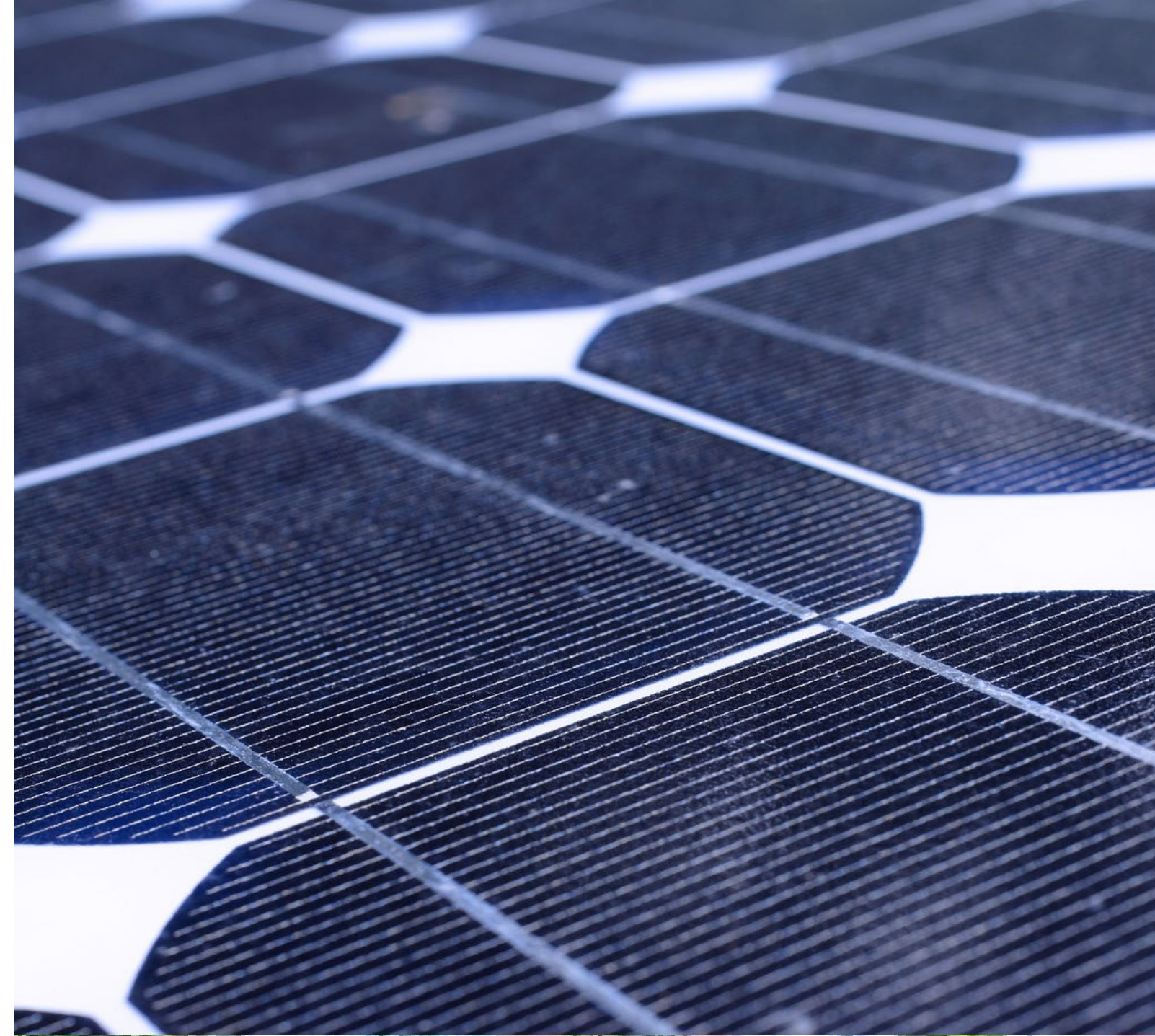
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SUSTAINABILITY

SUSTAINABLE AND ENERGY EFFICIENT



- Rainwater Harvesting
- High Energy Photons
- Rooftop Gardens
- Hydro Power
- Shipping Containers
- Wind Turbines
- Ecosystem & Biodiversity





URBAN FARMING

- Cutting edge of agriculture
- 40-foot shipping container farm can grow 5 acres of food with 97% less water
- Access to local produce means its fresh
- Mobile to bring food into our communities



HYDROPONICS



- Hydroponics are plants or crops that are grown without soil
- We use Hydroponics because we don't have enough space to start a farm.
- The method of Hydroponics is the fastest growing sector in agriculture.
- You can also plant up to 4 times as many crops in the same space.

BEE HIVES

- Bees and other insects help pollinate flowers.
- Used for non-process honey
- They pollinate almost one third of everything you eat.
- Fresh products
- Most plants need the service of the pollinators



SHIPPING CONTAINER FOOD TRUCKS

- Overhead costs is less
- It's A Great Way To Break Into The Industry And Learn.
- You Can Tap Into Many Streams Of Income.
- Mobile way to bring crops and healthy food into our community.
- Shipping containers are a way to reuse and reduce waste





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DESIGNING OUR SCHOOL



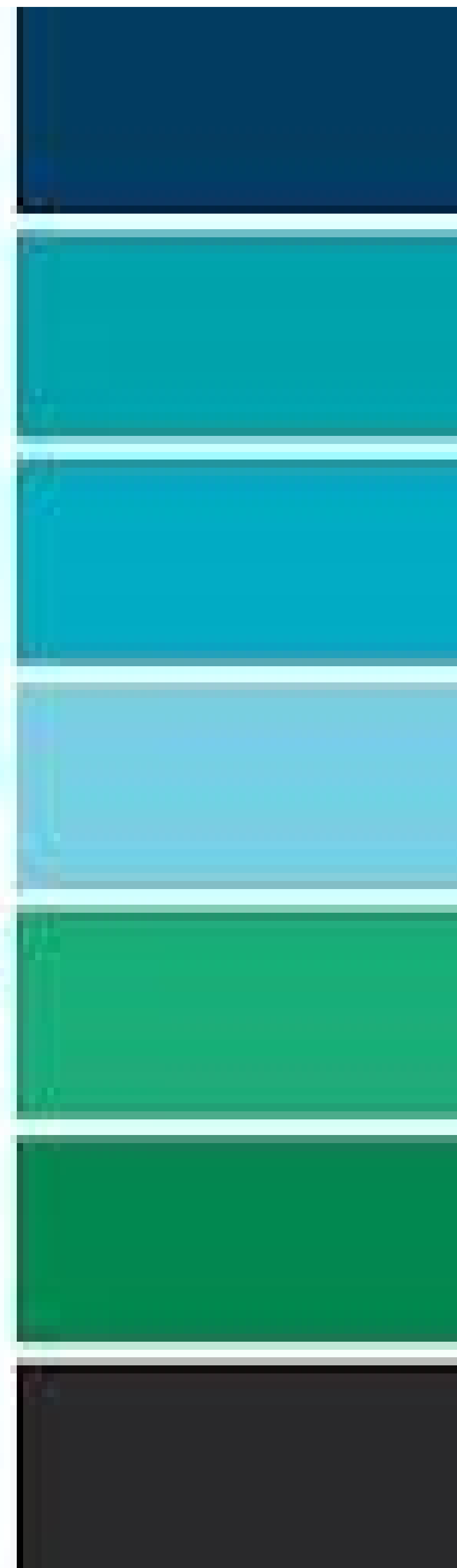
inspiration

Inspiration



Rustic Modern

COLOR THEORY



- One of the strongest materials on Earth.
- Shipping containers are made from weatherproof steel.
- Would give our school a strong foundation

STEEL



Water



- Restorative, Calming and Balancing
- The presence of water is vital to our bodies, our lives, and our entire well-being
- humans love to see, hear, smell, and feel water
- Creates a relaxing environment where people enjoy being

PLANTS



- NATURAL BEAUTIFUL AESTHETIC
- PLANTS REDUCE STRESS
- CLEAN THE AIR
- REDUCE NOISE LEVELS
- BIOPHILIA
- SPIDER PLANT, LEMON BALM, PHILODENDRON, PEACE LILY, GOLDEN POTHOS



SHIPPING CONTAINERS

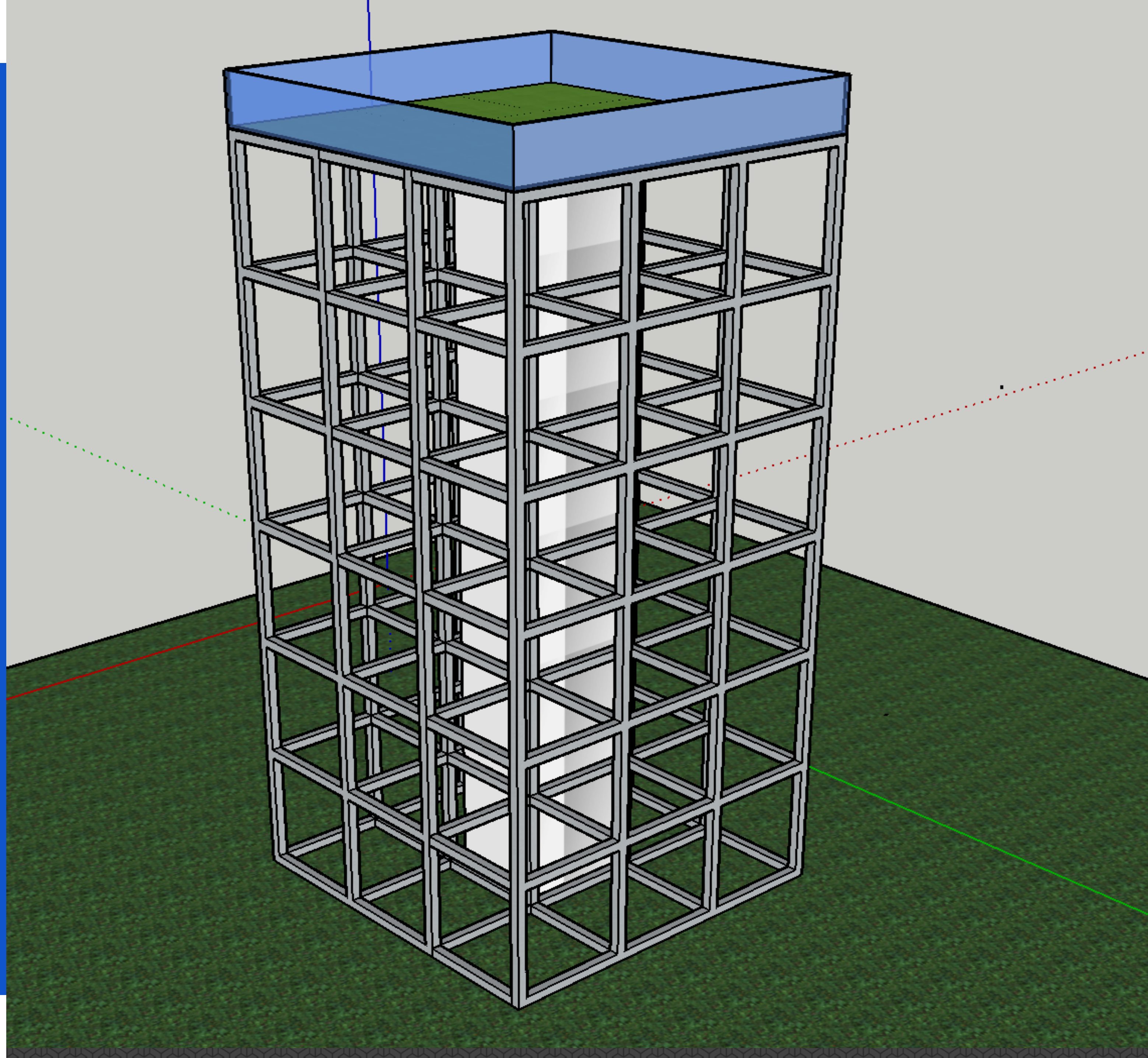


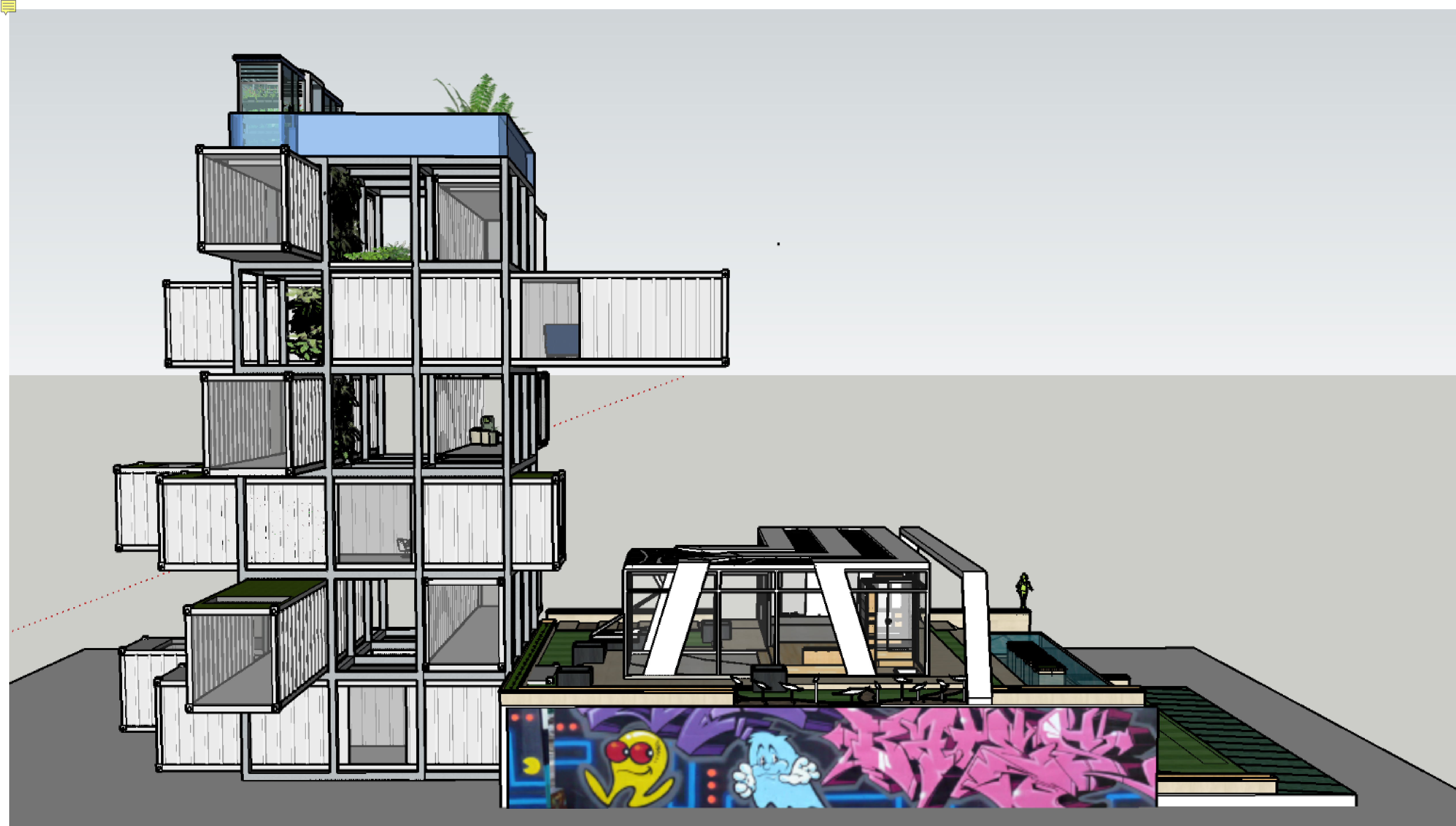
- Cost Efficient
- Eco Friendly
- Fast to Build
- Building can be done off site
- Sleek Modern Design

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OUR DESIGN

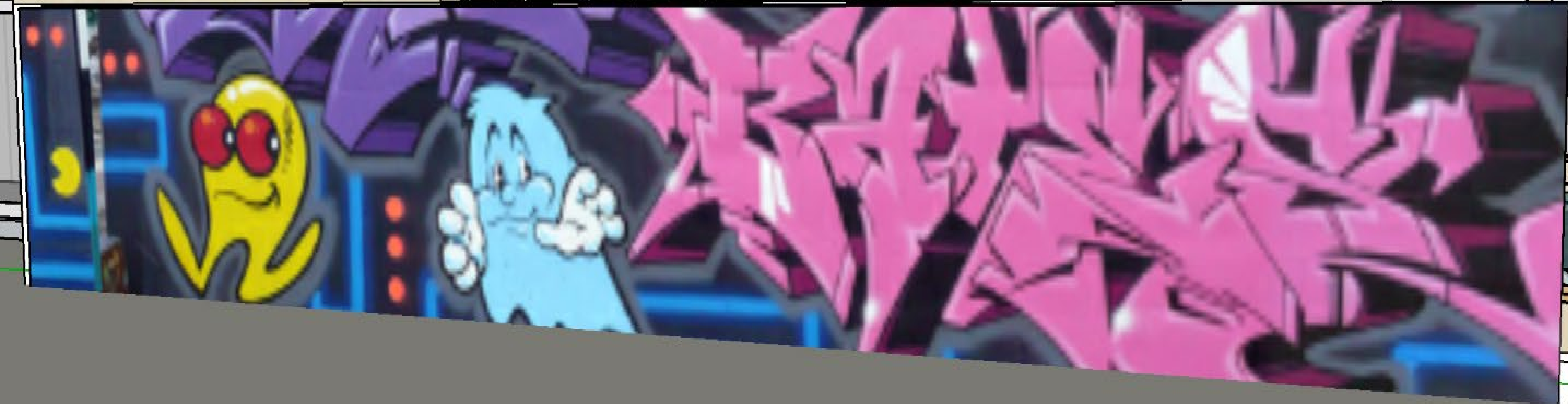
Steel Foundation

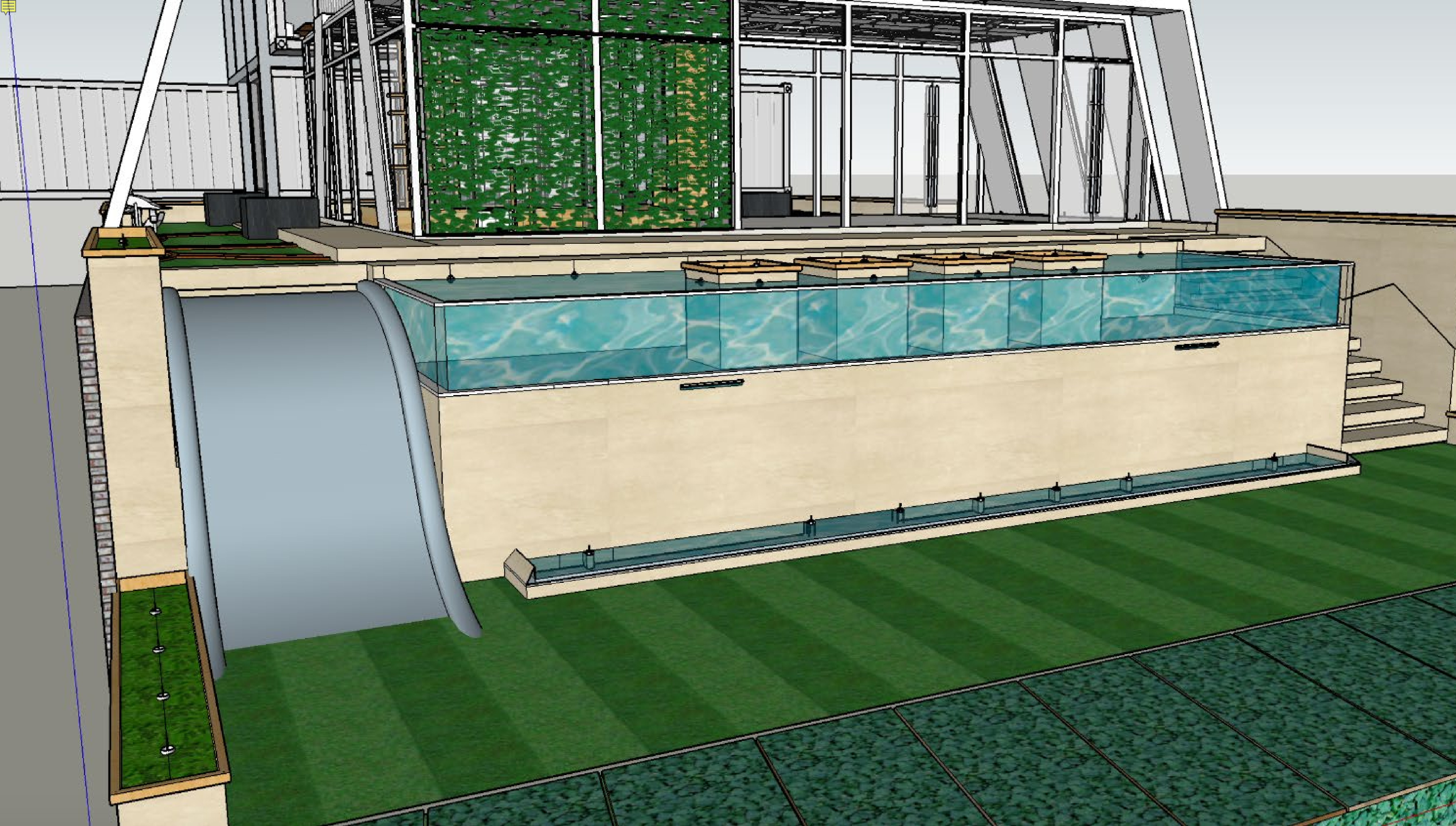


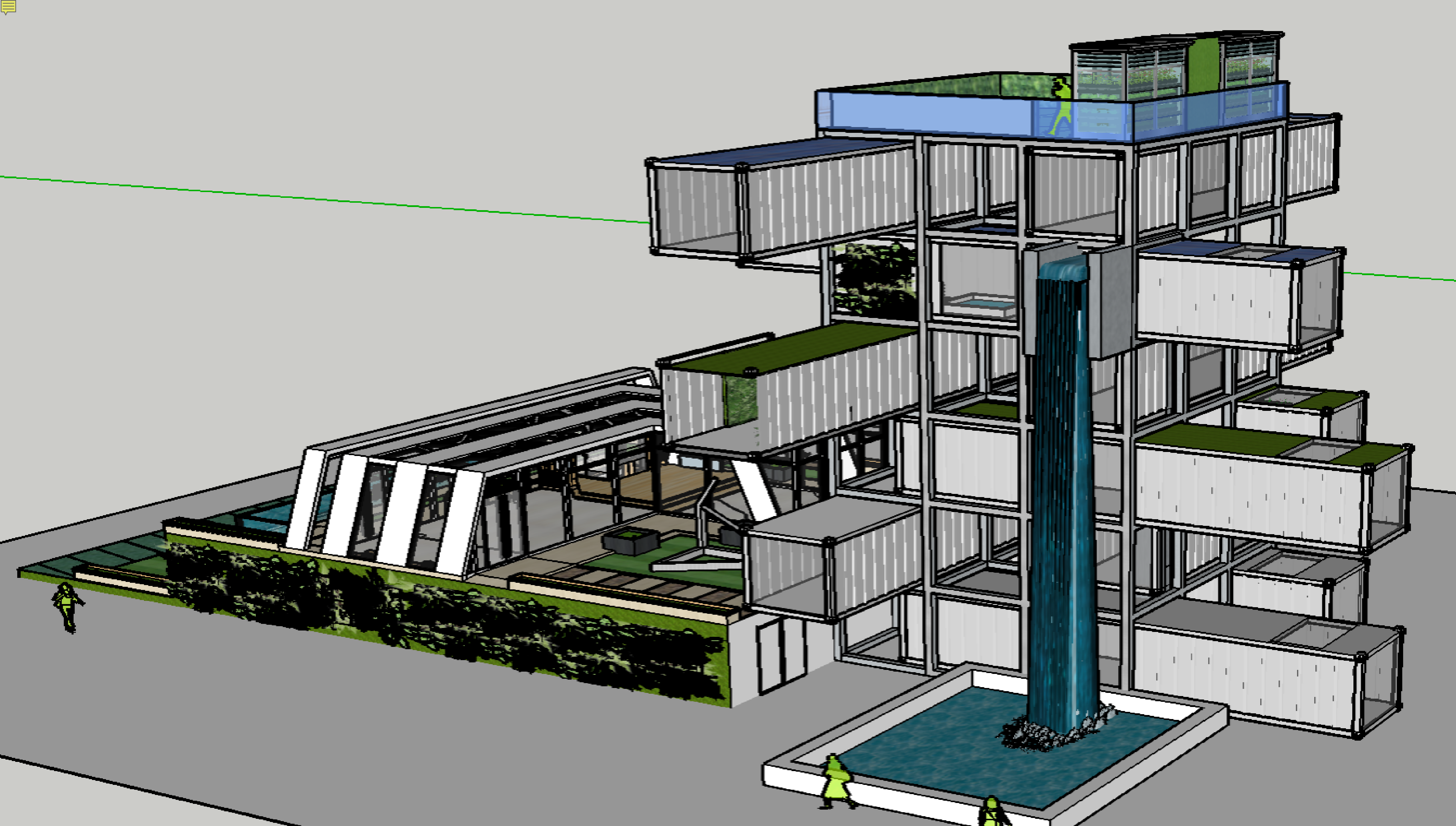


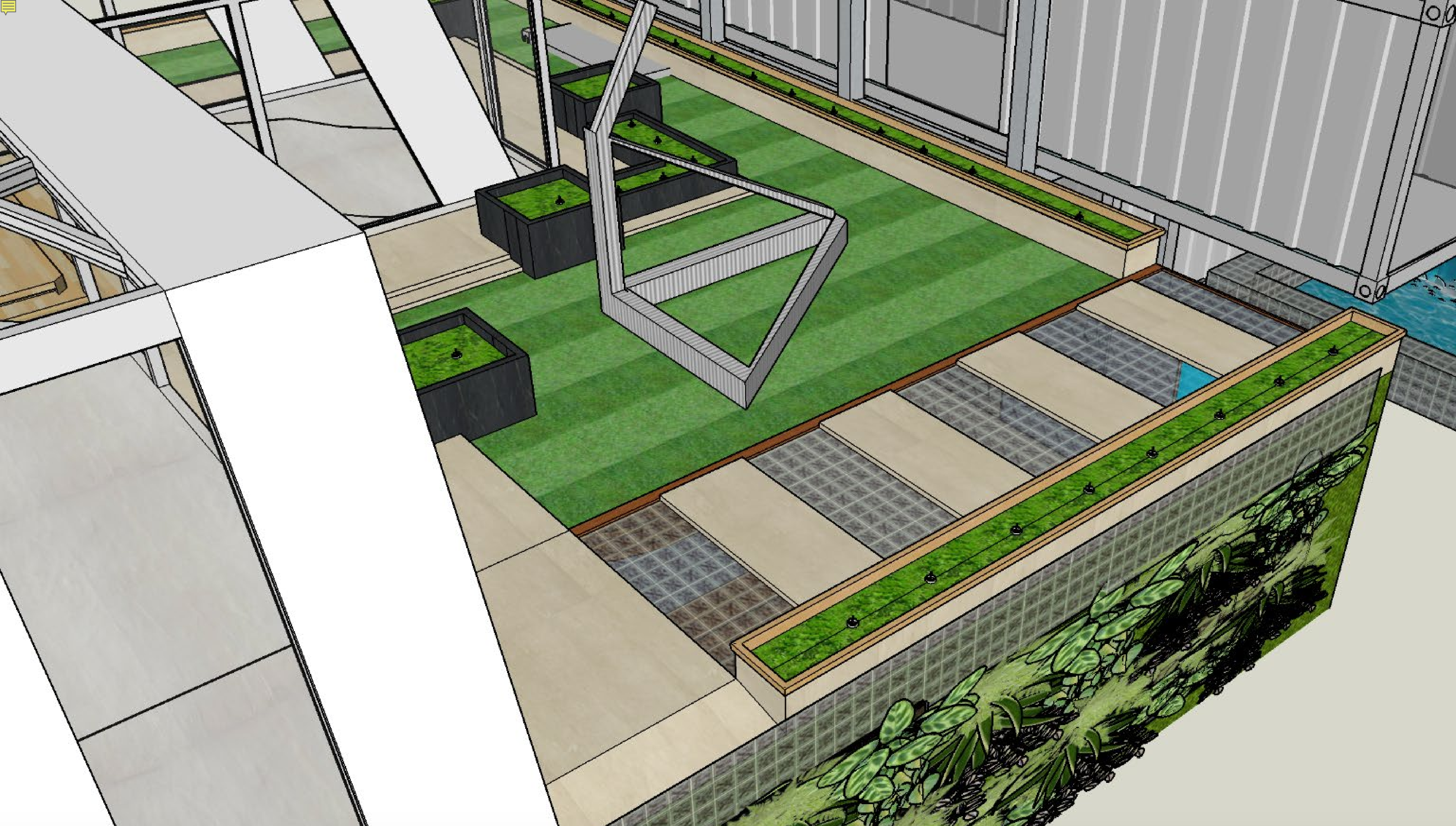


COMMUNITY SPACE

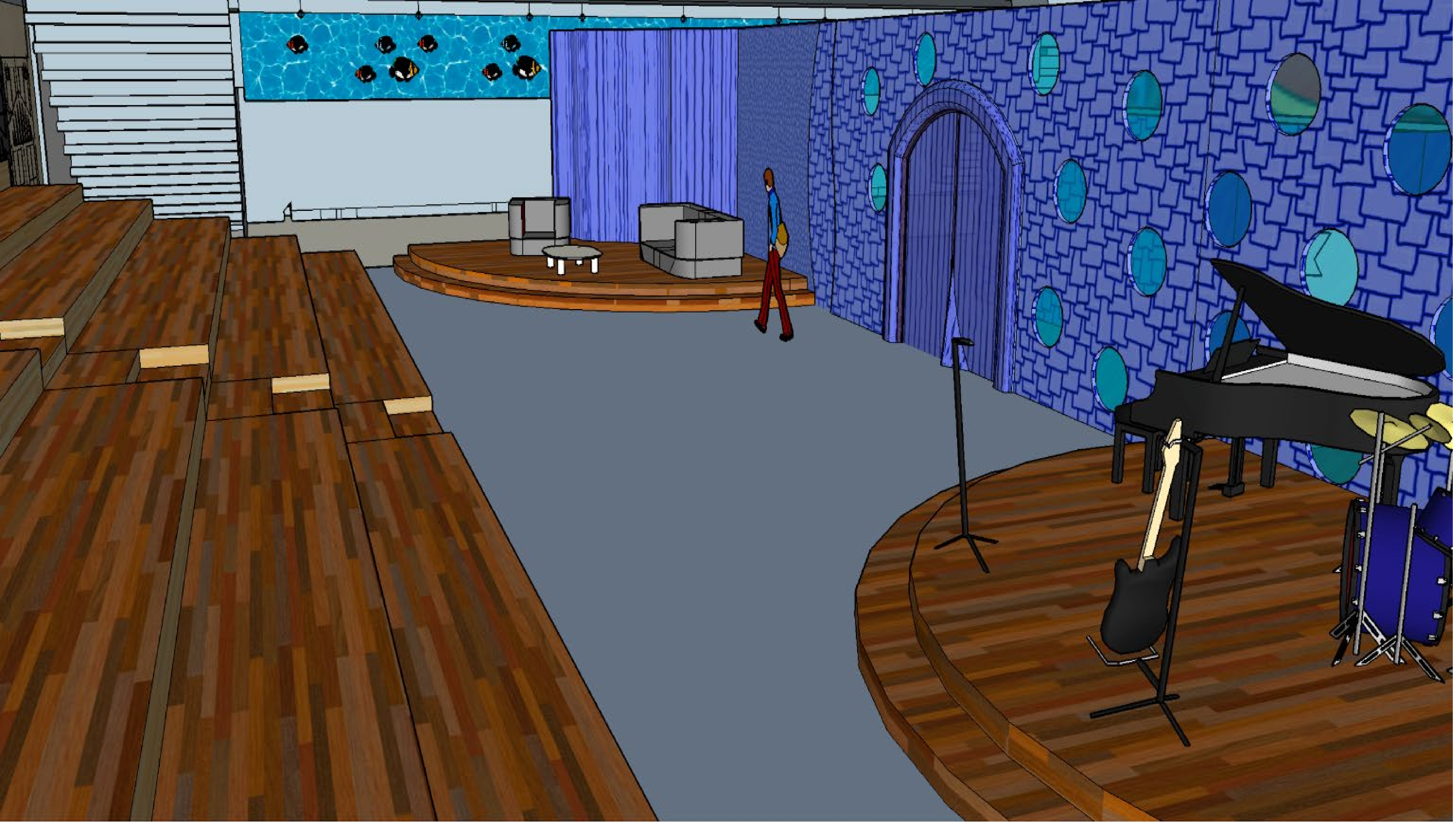


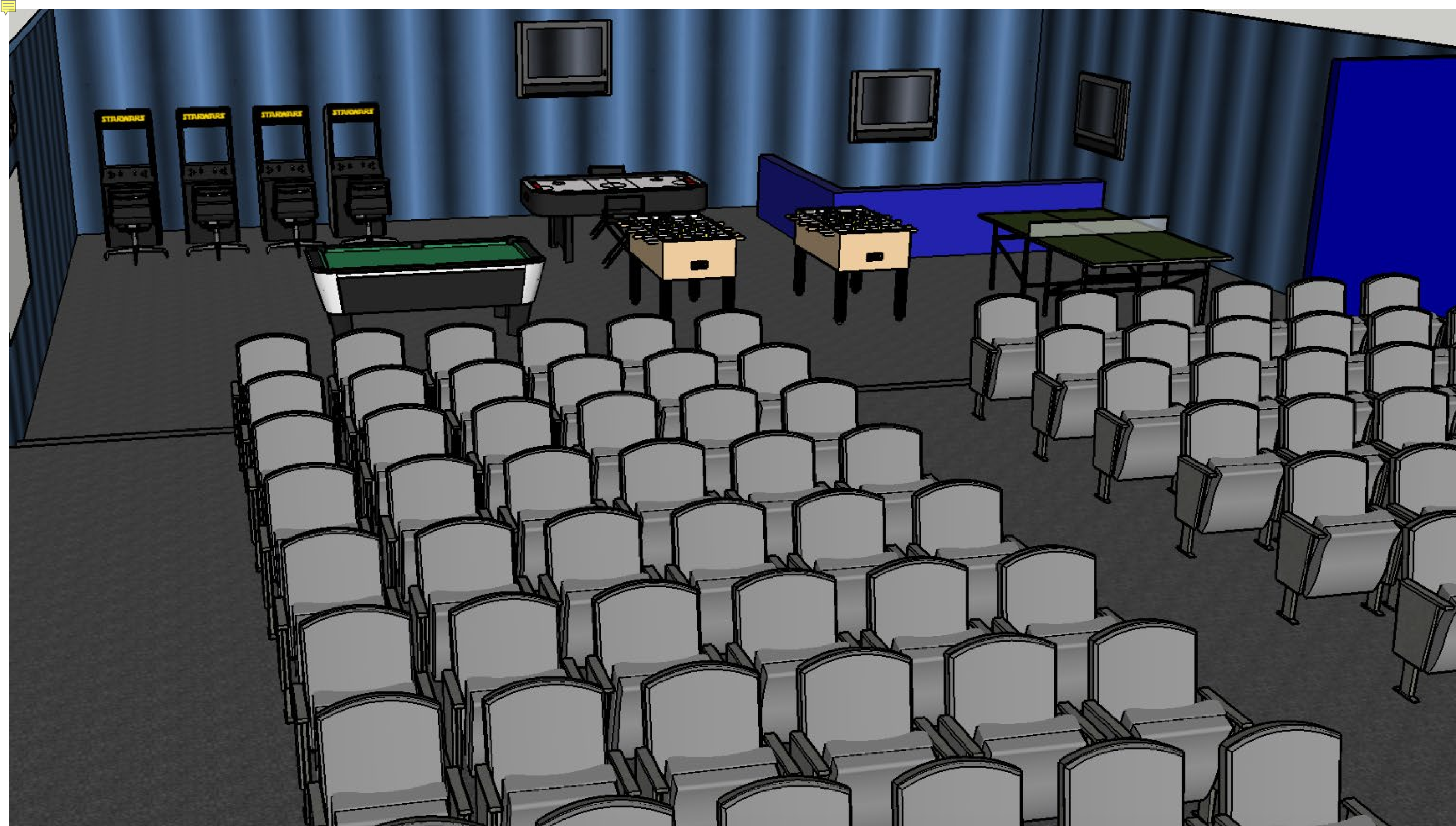














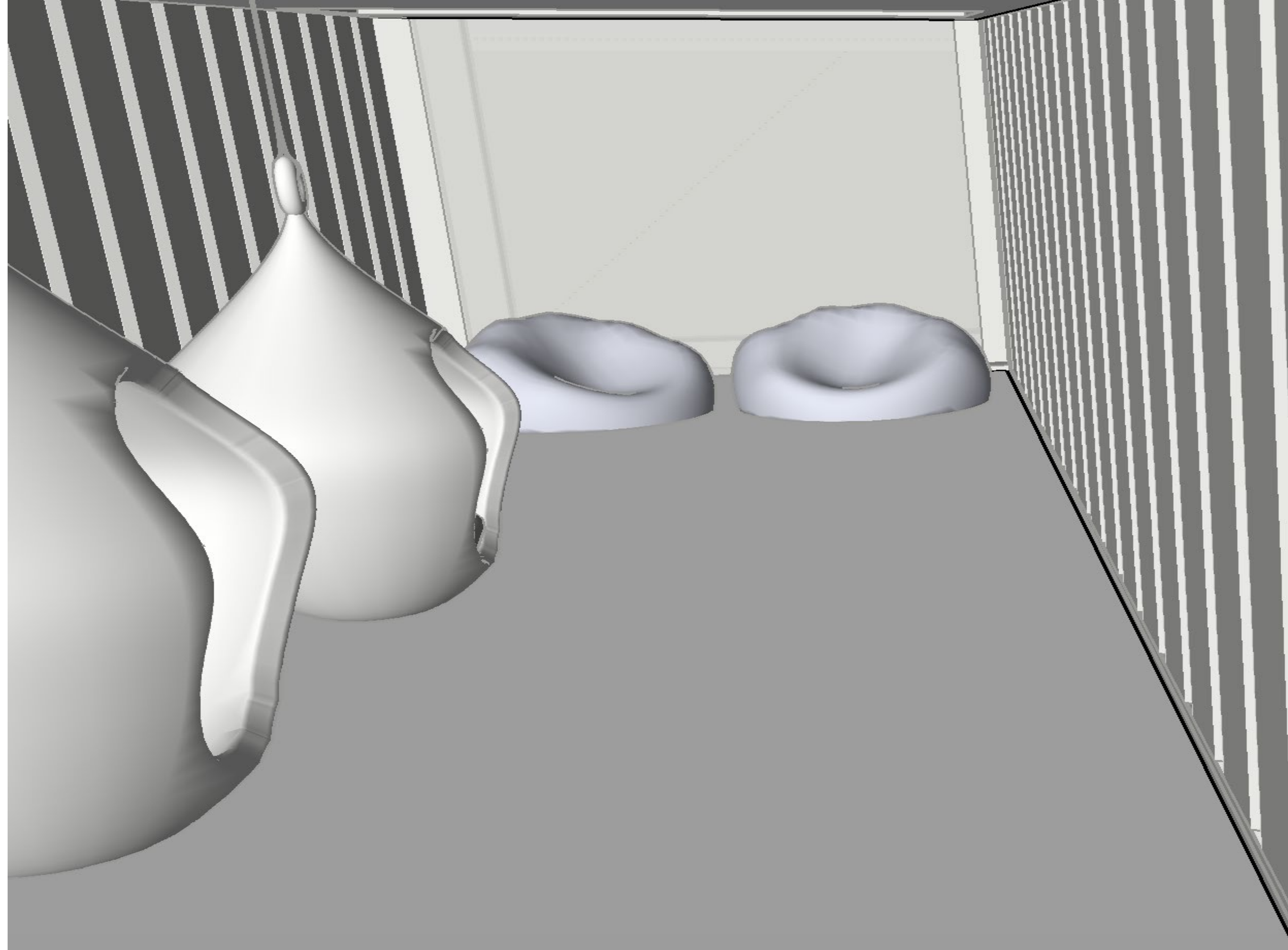


LEARNING PODS







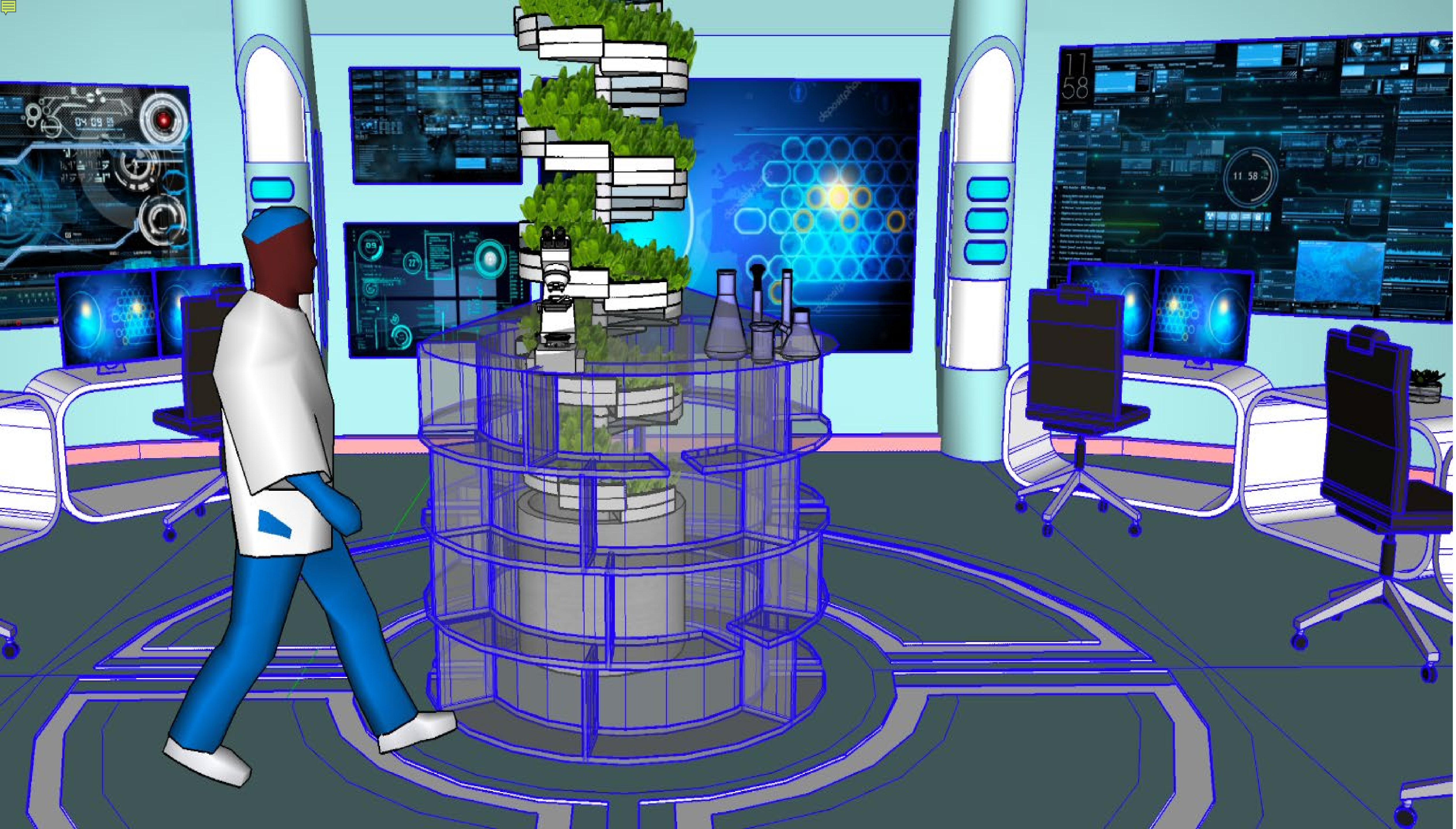


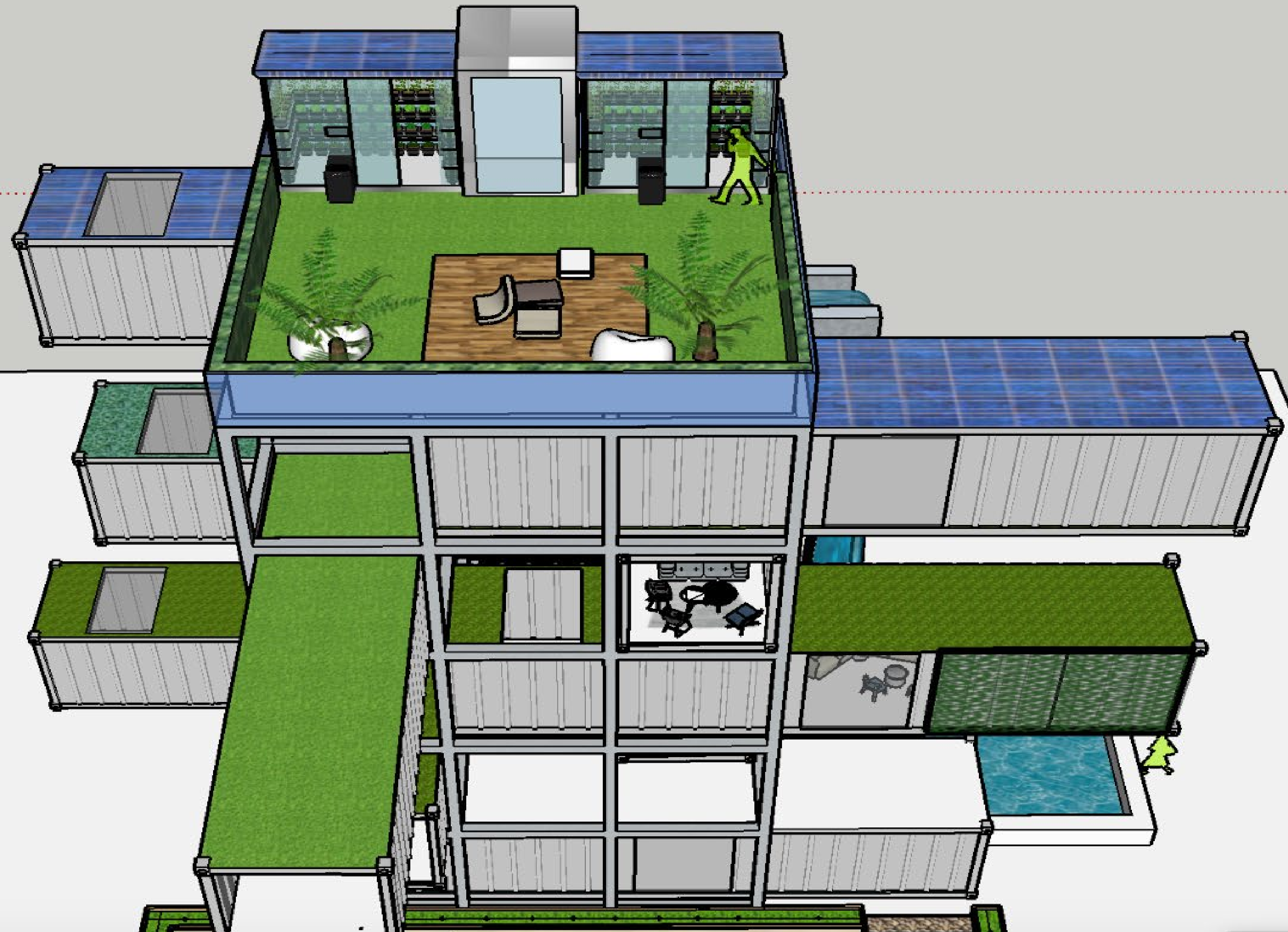




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URBAN FARMING



















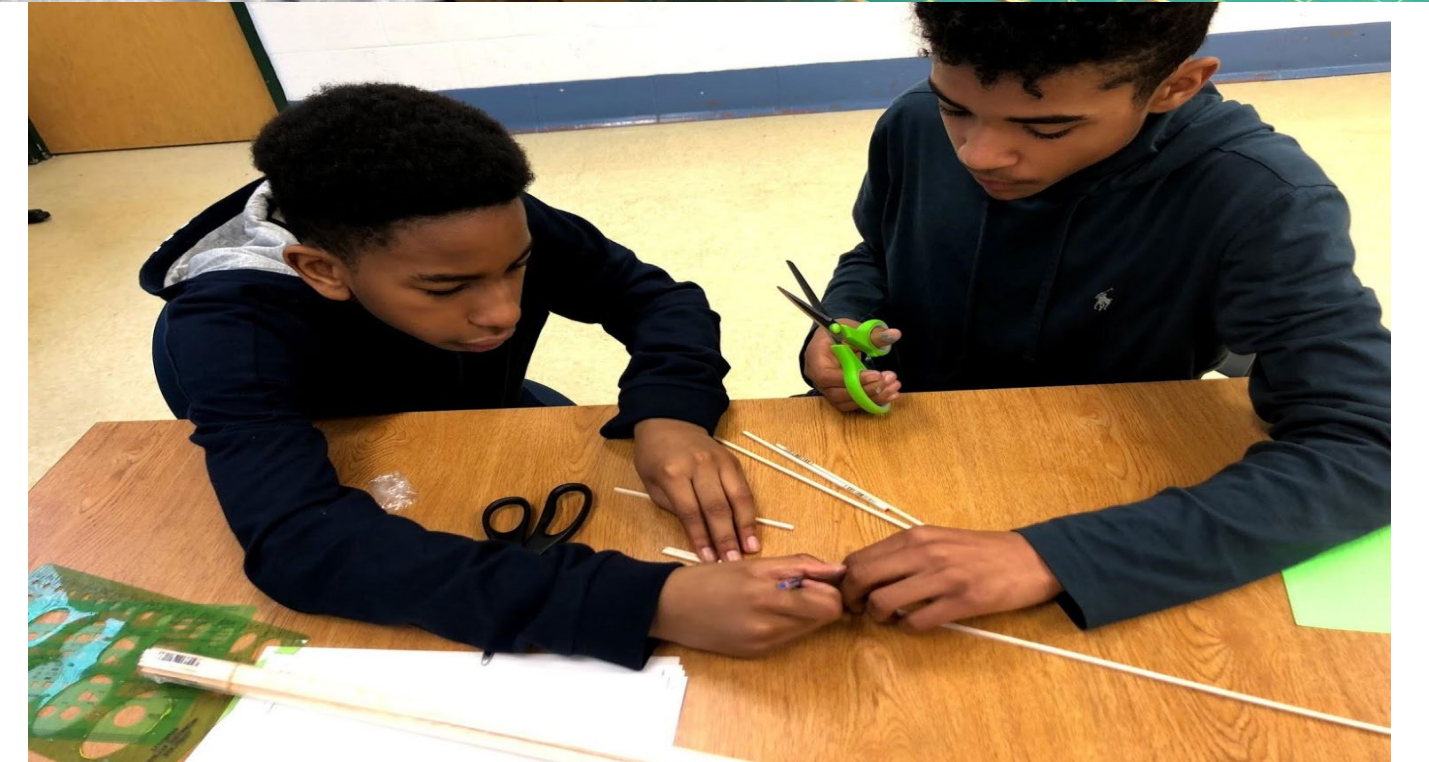
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LOOKING BACK

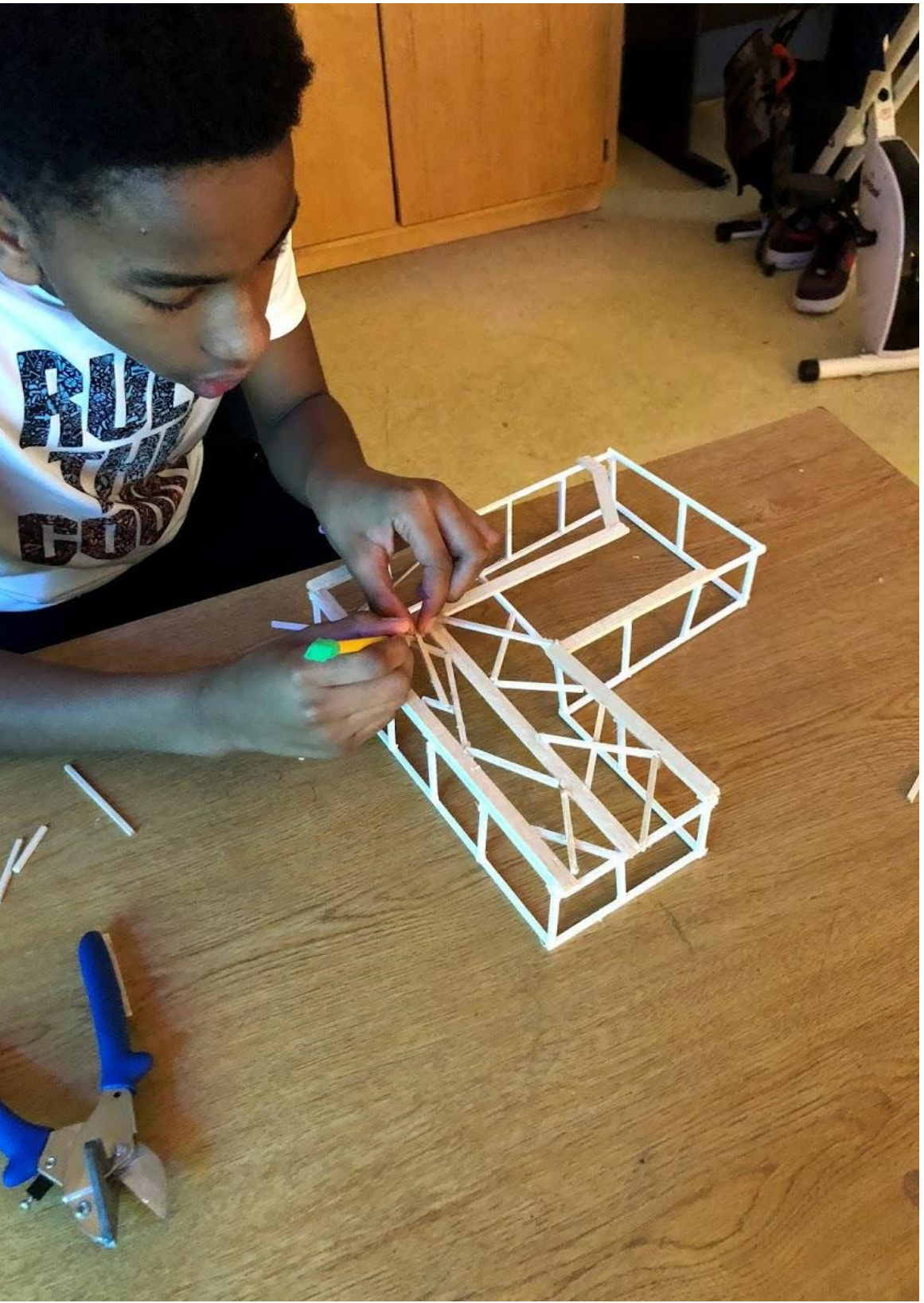


















The Team



Mackenzie Giotinno
Architect & Designer



Irene Tamba
Engineer & Designer



Seth Allen
Research & Agriculture



Mikal Ali
Project Manager

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DREAM EXPLORE
CREATE
EMPOWER

+

QUESTIONS?