





### Introduction to the Orchard

## **Welcome to the Garden Project**

Learning, playing, and connecting with nature

A space designed to connect children with the soil, understand food production, and care for the environment.

A learning-by-playing approach treats play as a primary vehicle for development rather than just a break from learning. In non-formal education settings for children, this means creating spaces where curiosity and experimentation are encouraged and where lessons are embedded within games, role-plays and collaborative projects.

By working with everyday materials, outdoor environments and group activities, young learners practise problem-solving, social interaction and language skills at their own pace.

The educators acts as a facilitators, offering prompts and guidance while allowing children to construct their own understanding through trial and error. This makes learning more engaging and inclusive for a wide range of abilities and helps children develop confidence, creativity and a love of discovery.

Immersive Planet brings its extensive expertise in edutainment and learning-through-play design to MADC with this orchard-playground concept. The project is built around shared positive experiences that instil core values—respect, teamwork, self-esteem, responsibility, environmental care and divergent thinking. Our aim is to create a space where children will develop projects that can truly make their own.

- https://www.michiganafricadevelopmentcouncil.org/
- https://oyizaorphanageng.org/about.php
- https://www.immersiveplanet.com/



"Tell me and I forget. Teach me and I remember. Involve me and I learn."

Benjamin Franklin.









### Creative Architecture

# **Urban definition and implementation**

Site Study Plan

Oyiza Orphanage and Foster Foundation have been renting a house and an apartment to shelter the children since 2007. The financial challenges year after year to meet the rent while taking care of the needs of our children have been a constant struggle. In 2021, with the help of good Samaritans, Oyiza Orphanage was able to obtain a house and adjacent land in its name. Little by little, we have been able to work on making the improvements needed to support the move to the new facility in December 2025.

Our goal, with the support of MADC in Michigan and MADC Foundation in Nigeria and all of you, the new house facility will have a playground and a market garden helping our children to develop fully and provide for our food needs. Your help with materials, financial support or volunteering is very much needed and appreciated. Please contact MADC at <a href="https://www.michiganafricadevelopmentcouncil.org">www.michiganafricadevelopmentcouncil.org</a> or our website at <a href="https://oyizaorphanageng.org/about.php">https://oyizaorphanageng.org/about.php</a>

OYIZA Orphanage

Currently, the children at the orphanage do not have a place of their own to play freely, run, and explore. Often, they must rely on outside spaces that are not always accessible, limiting their chance to fully enjoy the childhood they deserve.

Right across from the home lies a spacious and safe plot of land, full of possibilities. There, we envision a dedicated space where every game, every laugh, and every step becomes an opportunity for growth and learning.

Through this project, that empty lot will be transformed into a playground that not only offers joy, but also nurtures the children's physical, social, and emotional development. It will be a place where creativity blossoms, friendships deepen, and the children feel a true sense of belonging.

ORPHANAGE AND FOSTER FOUNDATION







Adjacent land

Olusoji Cres.

156m<sup>2</sup>

466,9m<sup>2</sup>

285,3m<sup>2</sup>

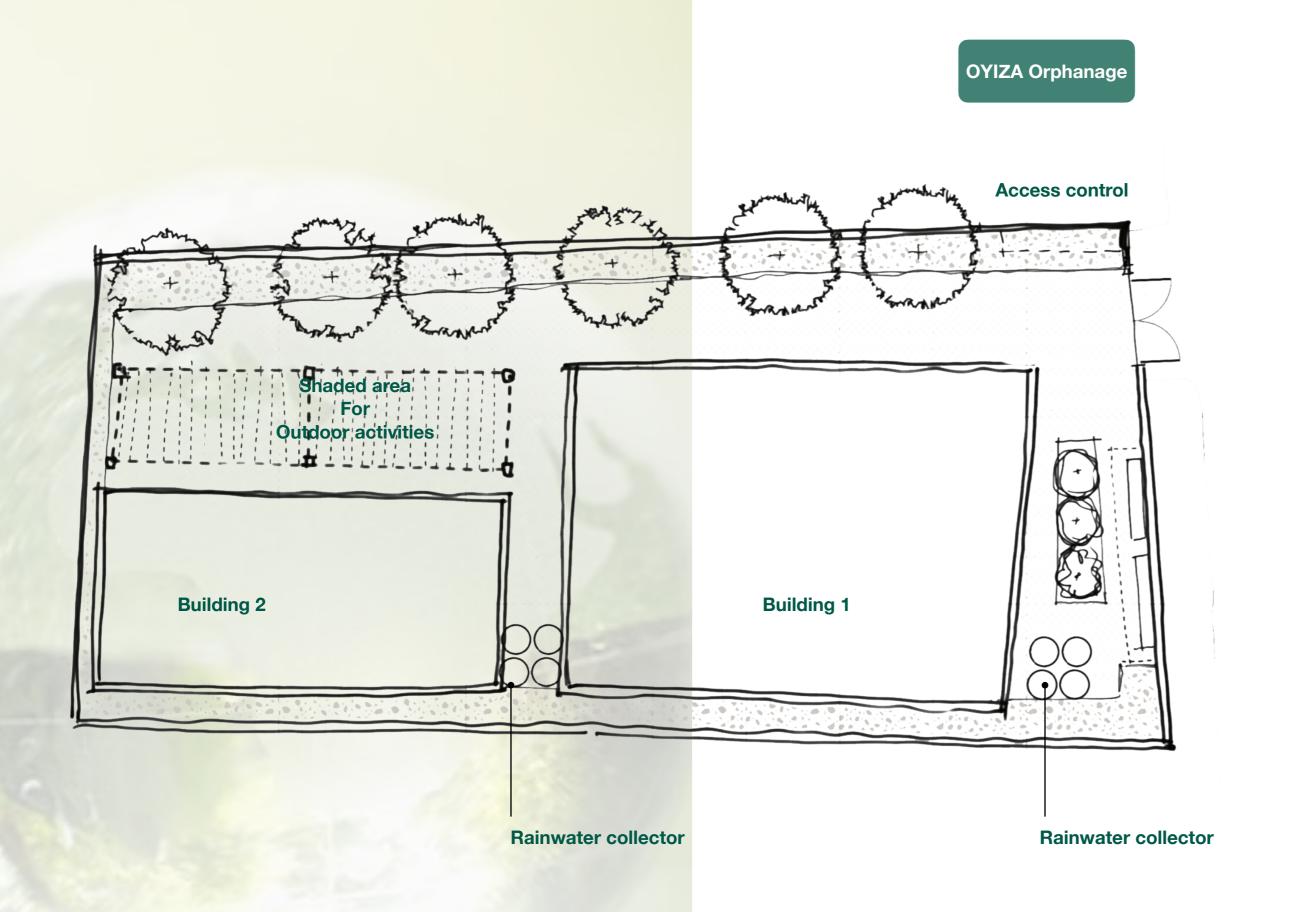
MMERSIVE PLANET DESIGNING EMOTION

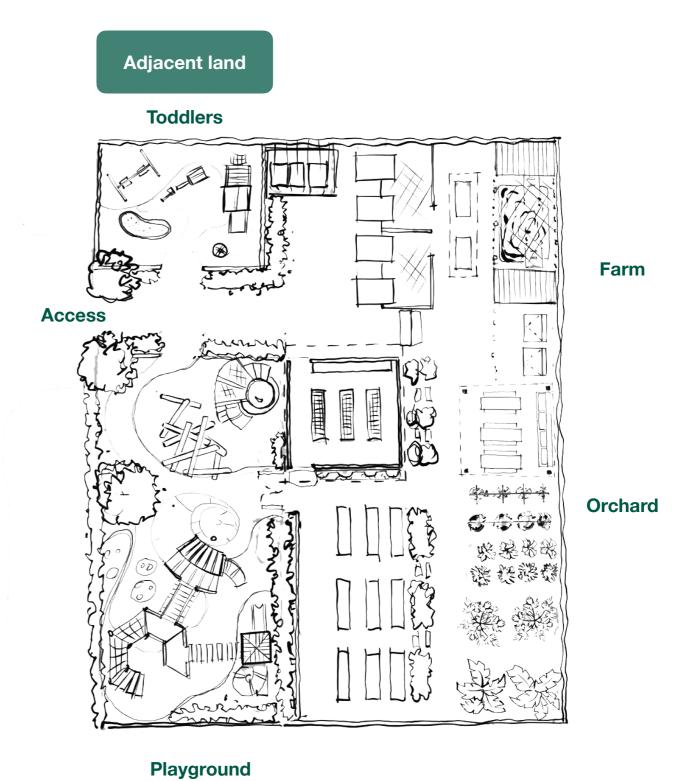


Oladoyinbo Street

Location of elements











### MADC

### **PLAY FOR A FUTURE**

# Michigan Africa Development Council

is a program created by the Michigan Africa Development Council (MADC) to open minds, educate, and elevate hopes for underserved children in support of orphanages, community centers and schools.

Play offers numerous benefits for children, contributing to their physical, cognitive, social, and emotional development. It allows children to explore their environment, develop essential life skills, and build confidence in a fun and engaging way.

The benefits of play are numerous:

#### Physical Development:

Play, especially active play, helps children develop gross and fine motor skills, coordination, balance, and overall physical fitness. Outdoor play also contributes to mental health and self-regulation.

#### Cognitive Development:

Play fosters cognitive skills like problem-solving, critical thinking, and decision-making. Children learn to think abstractly, experiment with new ideas, and develop a love for learning through play.

#### Social Development:

Through play, children learn to interact with others, share, negotiate, cooperate, and resolve conflicts. Play allows them to practice social skills, build relationships, and understand group dynamics.

#### Emotional Development:

Play provides a safe space for children to explore and express their emotions, including fear, frustration, and anger. It helps them develop self-control, empathy, and resilience.









### **PLAY FOR A FUTURE**

# Michigan Africa Development Council

#### Creativity and Imagination:

Play encourages children to be creative, use their imaginations, and come up with unique solutions to challenges.

#### Overall Well-being:

Play contributes to a child's overall well-being by reducing stress, promoting a sense of happiness, and building confidence.

#### Brain Development:

Play is crucial for healthy brain development, particularly during early childhood. It helps build neural connections, strengthens cognitive function, and supports language development.

#### Learning and Skill Development:

Play helps children learn about the world around them, develop language and communication skills, and acquire essential skills for future success in academics, work, and relationships.

In essence, play is not just a fun pastime, but a fundamental part of a child's development, shaping their physical, cognitive, social, and emotional well-being.

PLAY FOR A FUTURE program by MADC seeks to combine the benefits of playing and whenever possible market gardens sustainable farms that help provide sustenance to the facility and the local community.

MADC's PLAY FOR A FUTURE selects locations that provide support to underserved or orphan children. The local partners must be committed to maintaining and supporting the values of the designated activities and farms facilities for the benefit of their organizations and the local community. Selection of locations is based on merit and the potential impact that our designs and installations would benefit the local organization.

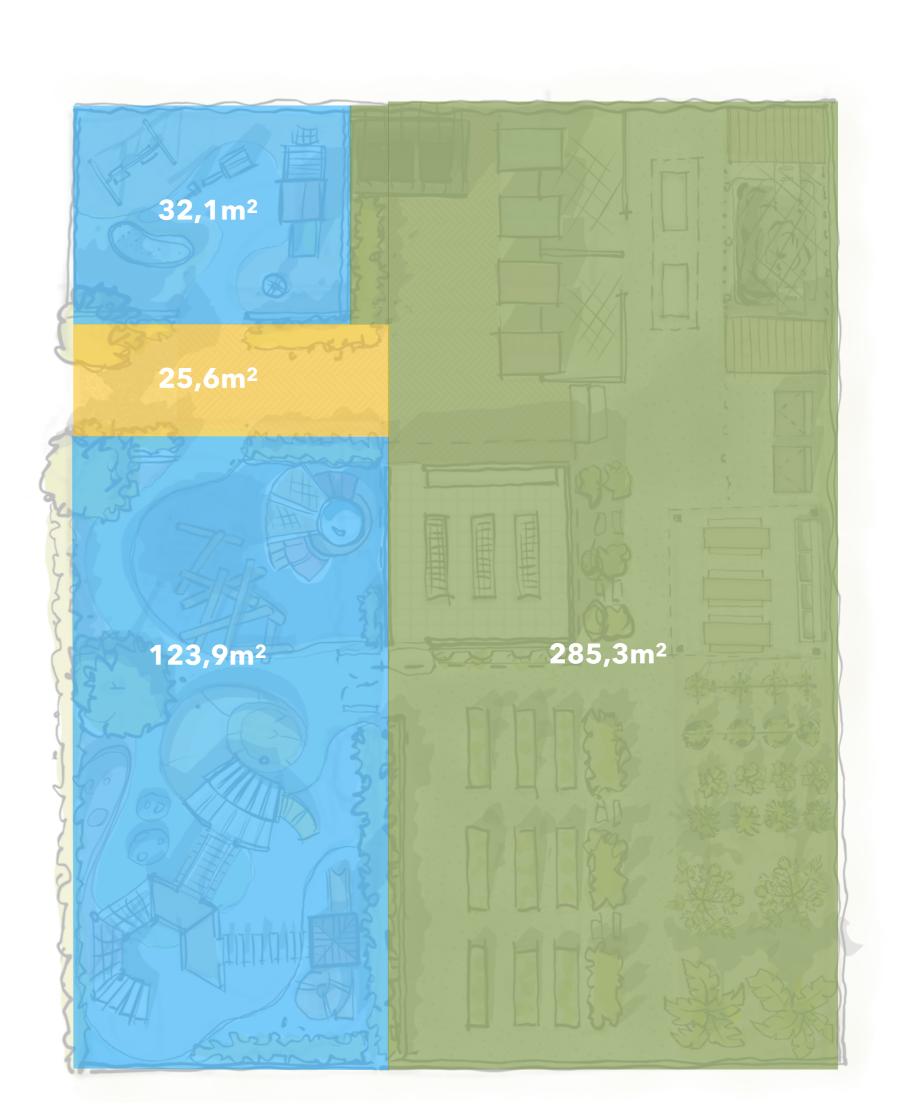






# the orchard and playground

Concept.		Element	Comment	m²	Total
1Playground	1.1 Toddlers area		Sets of pulleys, scales and sandboxes, wooden cabins cognitive development of children	32,1	
	1.2 Children's area		System of motor, musical and sensory skills games, some with interaction with elements such as water extraction to develop cognitive skills	123,9	
200					156 m²
2 ORCHARD	2.1 Orchard	Storage	2 m × 3 m	6	
		Seedbed/nivery	With shade mesh	22,5	
		Raised cultivation Drawers	12 Drawers 2.0 m × 0.5 m	50	
		Cultivation Drawers on floor	2 bancales de 7.5 m × 1.4 m	21	
	7.24	Fruit Trees	Papaya, banana or guava on borders, dwarf species isolated from the terrain	25	
		Crops on the ground	Crops in soil isolated from the land	20	
		Small meeting/workshop area	Area for washing and selection of crops. Cover with shadow mesh	12	
		Compost (2 drawers)	1.2 × 1.2 m² each	2,88	
					159,38 m²
	2.2 Farm	Chicken farm	Free space with open background, there are sheltered rest areas and a purse	12,16	
		Rabbit farm	If several rabbits are housed, it is crucial to provide enough space so that they can move comfortably and avoid conflicts by territory	12,16	
	58 J	Duck Farm	A space of 3 to 4 ducks per square meter is recommended to ensure proper development.	12,5	
		Work tables	Work tables and storage	1,8	
	TO SOME				38,62 m²
	167	Rainwater collector	4 Collector of 200 L (or 1000 L if possible)	6	
		Circulations	Paths of 0.8-1 m, permeable	87,3	87,3 m²
The same of the sa	100				
		Distribution yard		25,6	
TOTAL FINAL		F 41.07 19207			466,9 m <sup>2</sup>







Circulation and sequence of activities

#### **Project Introduction**

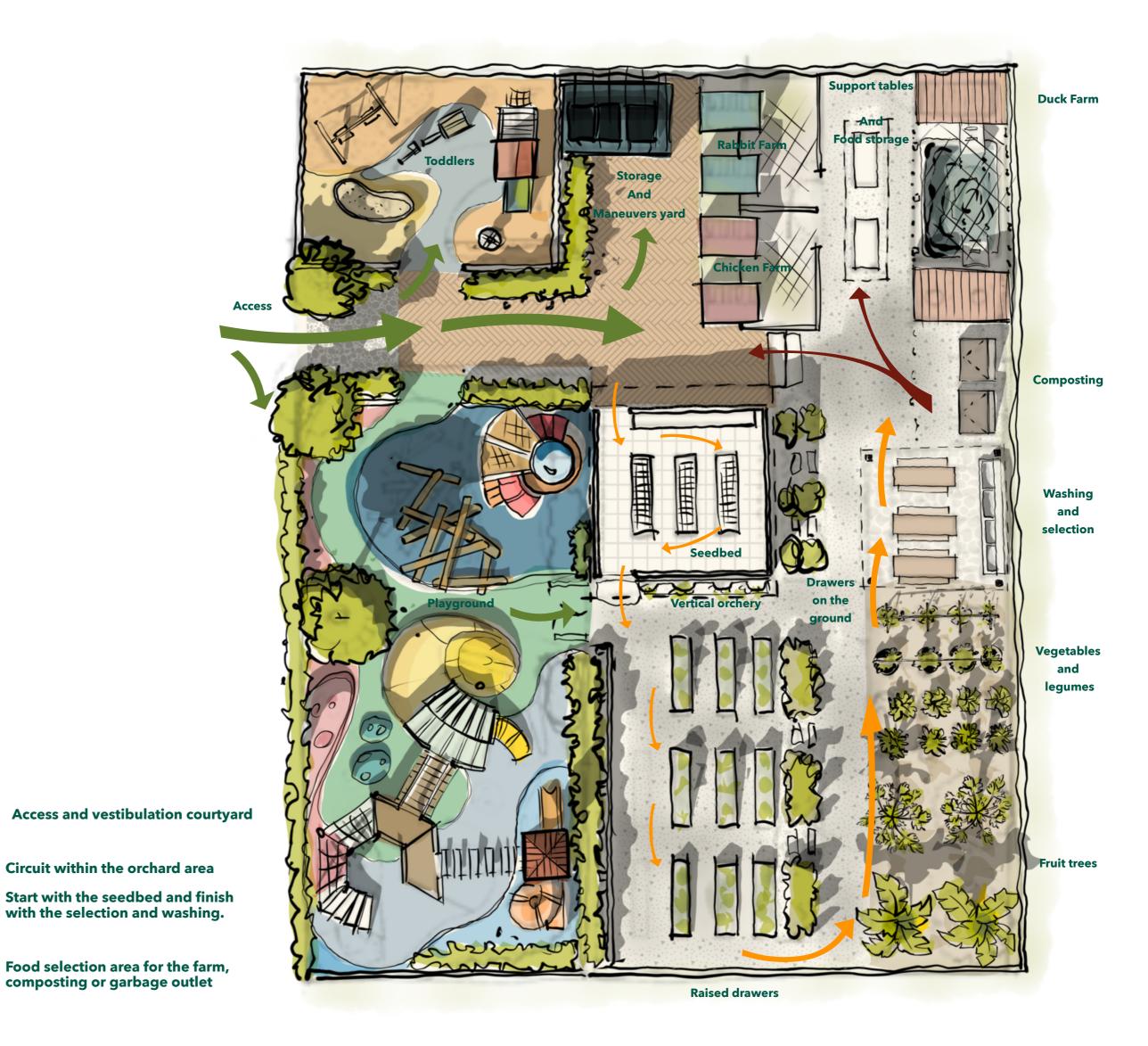
We believe every child deserves a place where learning is as natural as play, and where contact with the earth is part of their growth.

A space that sparks curiosity, engages all the senses, and fosters values that will stay with them for a lifetime.

This project brings together architecture, nature, and education in a proposal that seeks to transform the way children connect with their environment.

Here, imagination meets learning, and play becomes a tool for building the future.













Strategic gamification

## **Learn by playing**

The sequence that drives the project

# Gamification: Learning Through Play, Growing Through Collaboration

In our project, gamification is not just a teaching tool – it's a strategy to transform every activity into a meaningful experience.

It unfolds in four stages

**Educational gamification:** missions on sowing, watering, composting, harvesting.

**Physical cooperative** games based on agriculture that encourage memory, observation and collaboration.

**Practical simulations** To teach basic genetics and environmental care.

**Dynamics of exploration** recognition of plants focused on local culinary or medicinal plants.



Through these four stages, we aim to strengthen teamwork, nurture a sense of belonging, and value the individual as part of a whole – always working together toward a shared goal.



#### **Challenges**

Create challenge-based learning experiences that spark curiosity, motivate action, and stimulate creative problem-solving.



#### Gamification

Apply game-based techniques to learning content, making complex concepts accessible, engaging, and memorable.



#### Cooperation

**E**ncourage teamwork to overcome challenges, forming groups that dialogue, agree on strategies, and celebrate shared achievements.



#### Activities

Design proposals that develop multiple intelligences: weighing and counting harvests, classifying materials, adding and measuring. Practical experiences that connect learning with real life.







# POV Playground

#### 1. Play as a tool for integral development

In this space, play is more than fun — it is the natural language of learning.

Every structure invites climbing, balancing, coordinating, and deciding, planting seeds of confidence and creativity. Here, movement becomes discovery, and every laugh is a step toward full development.

Because when a child plays, their mind grows, their body strengthens, and their imagination learns to fly.

#### 2. Inclusion and sensory stimulation

The ground holds textures that awaken curiosity.

The scents of plants and flowers open doors to inner worlds, offering everyone – especially children on the autism spectrum – a place to explore through the senses, without hurry and with freedom.

This is a space where every child finds their rhythm, their form, and their place.

And so, among aromas and textures, the senses awaken and pave the way for new discoveries.

### 3. The aromatic garden as a bridge to the orchard

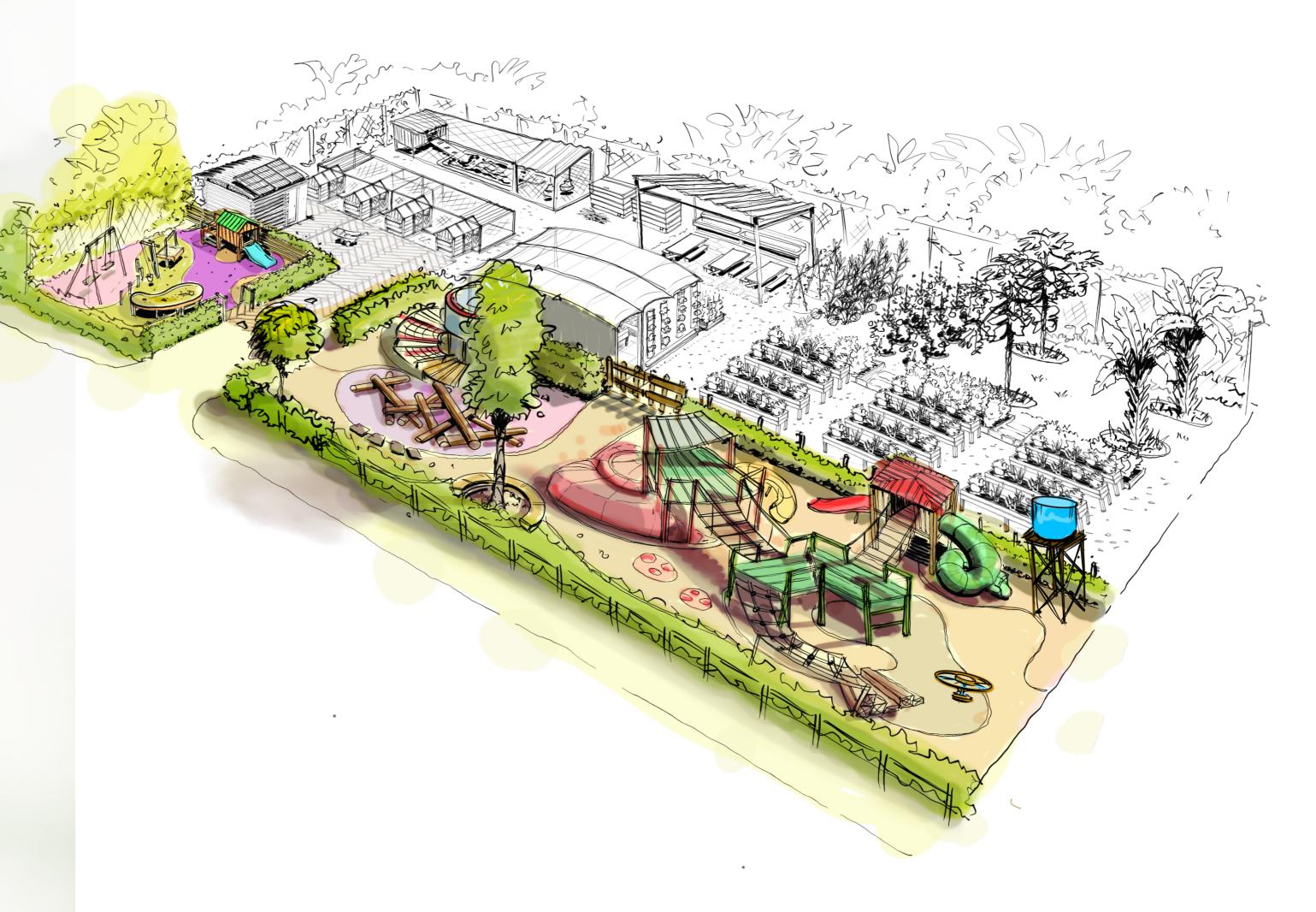
Between the playground and the orchard, a garden blooms with the scent of calm and life.

Its aromatic plants attract butterflies and bees, uniting the joy of play with the magic of pollination.

It is a living bridge, a reminder that every element of nature works together so that all may grow.

Following the flight of a bee, children arrive at the green heart of the project.



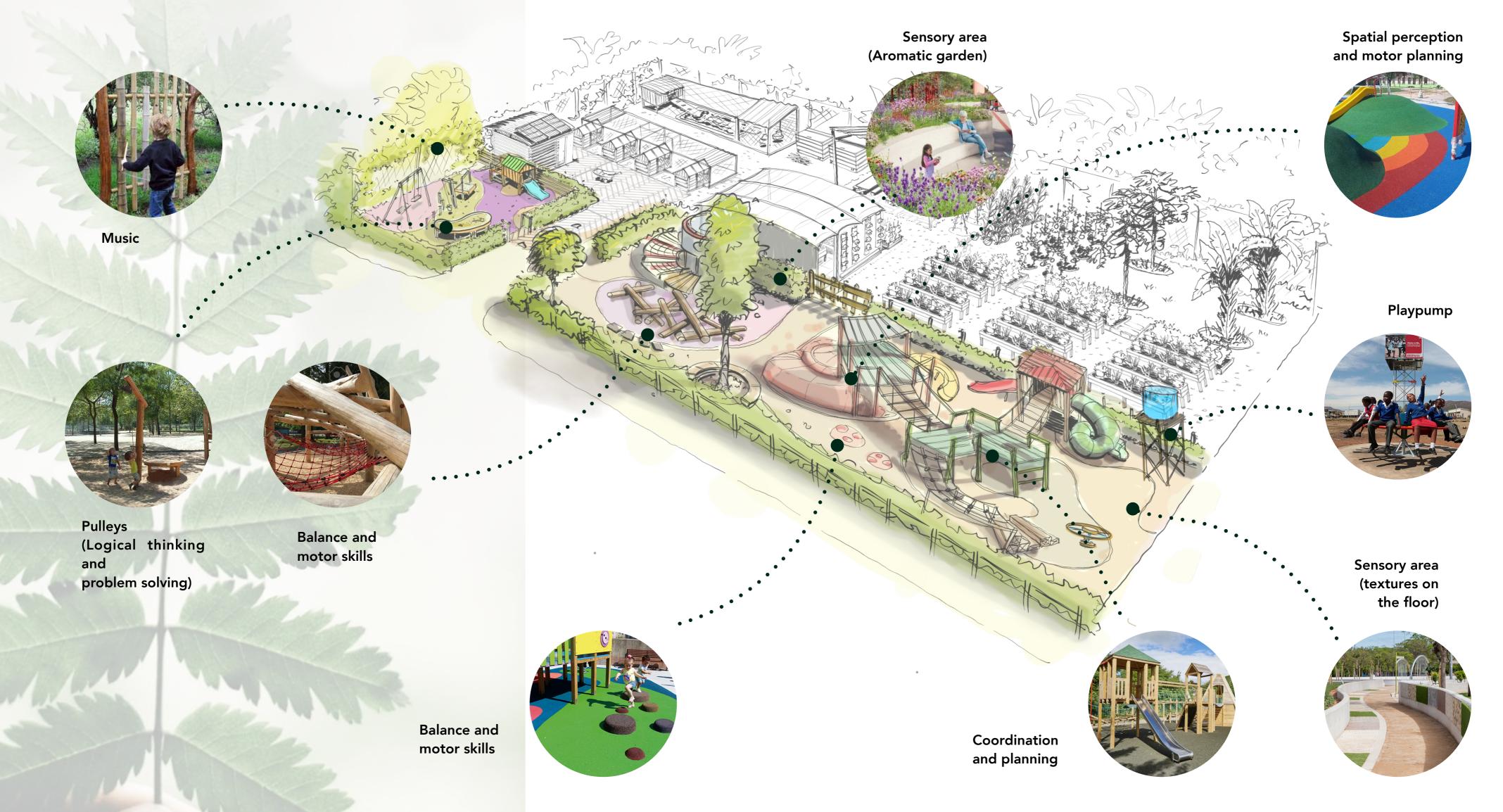






POV Playground









# Design solutions to real problems

# Playing Also Helps!

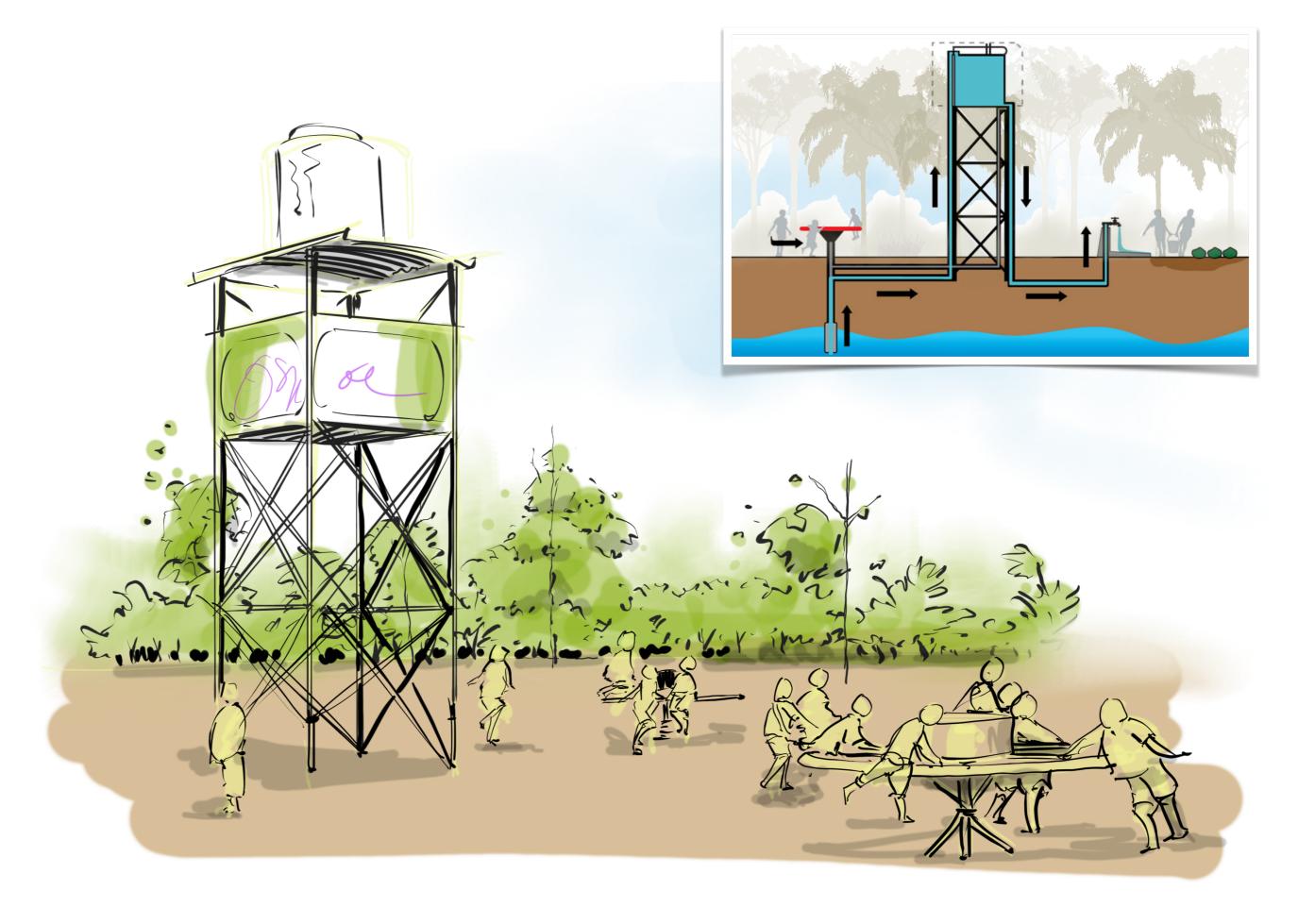
### **Activities in the playground**

In this playground, games are not just for fun:

- **PlayPump**: a merry-go-round that, when spun, pumps water from underground into a tank for drinking.
- **Light Bike**: pedal to generate energy to power lamps or charge devices. (When pedaling, electricity is produced that can be used to turn on lights or charge small devices.)
- **Watering Game**: moving it activates the irrigation of the school garden.( A system where, by activating an up and down or a wheel, the irrigation of plants in the school garden is activated)

Here, every spin, pedal, or jump helps our community.









### POV Orchard and Farm

### 4. The orchard: connecting with nature and food

In the orchard, small hands sink into the soil and eyes learn to wait.

Here, children discover that food doesn't come from shelves, but from cycles of care and patience.

The orchard is a lesson in life: respect for the earth, gratitude for what it gives, and commitment to its care.

And while tending to each sprout, they also cultivate values that will flourish for a lifetime.

#### 5. Gamification and learning through experience

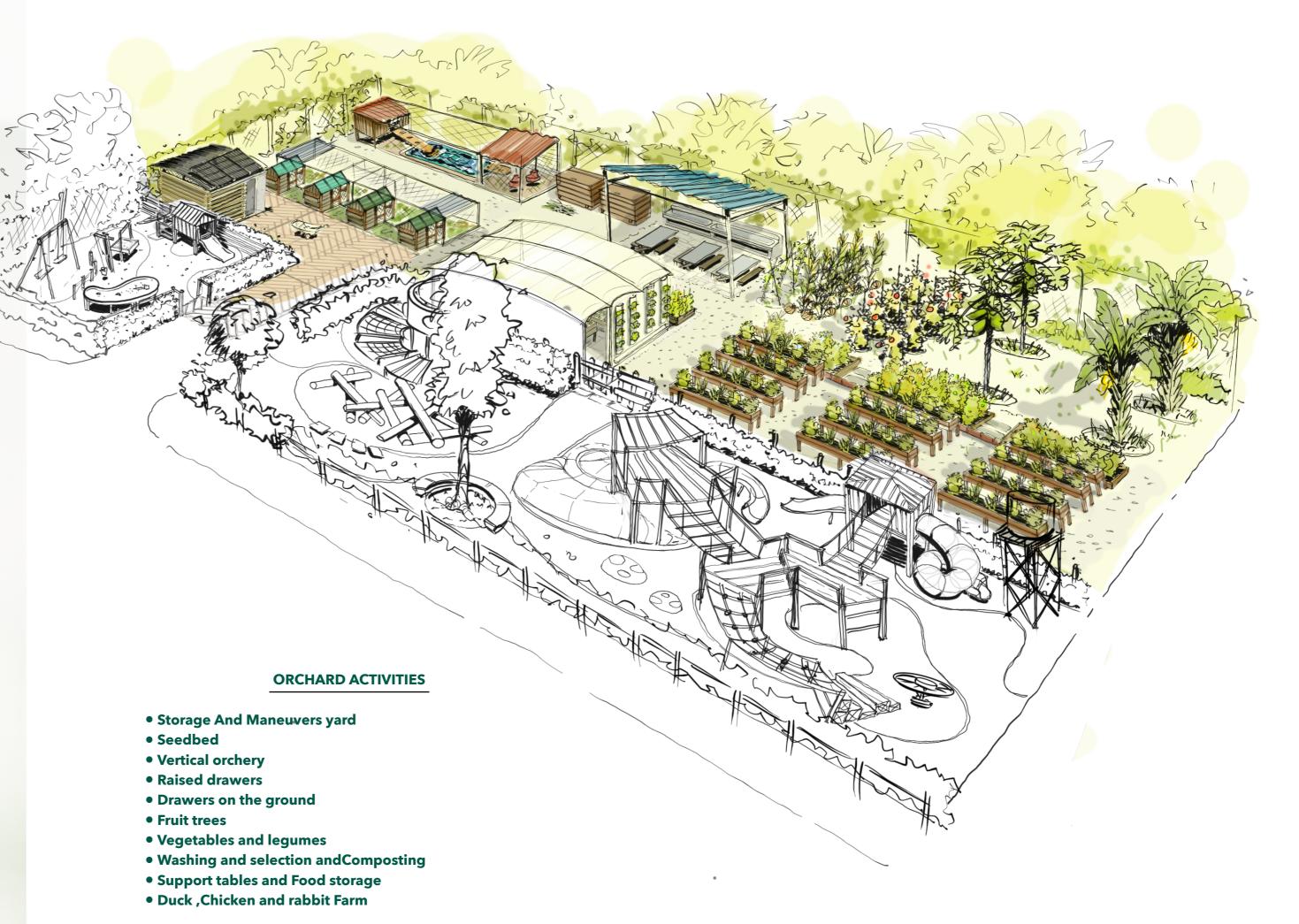
Every task in the orchard can become a game: weighing the harvest, counting seeds, adding fractions when measuring ingredients.

Here, mathematics has the scent of basil and the color of ripe tomatoes.

Gamification transforms work into adventure, and learning into a memory that lasts forever.

Because learning through play is not only possible... it's the best way to sow the future.









## Design solutions to real problems

### The land and its current state

#### **Ogunpa River**

The land intended for the orchard is located near the **Ogunpa River**, a waterway that crosses the center of **Ibadan city** and has historically been affected by pollution due to the accumulation of solid waste and wastewater.

This situation poses significant challenges for the design of the garden, but also offers opportunities to implement innovative solutions that not only mitigate risks, but also take advantage of environmental conditions to create a resilient and sustainable space.

#### **Safe alternatives**

Cultivation in beds or large containers plant banana or papaya in giant raised drawers (1 m deep planter type) with clean soil brought from outside. This limits the roots from reaching the contaminated soil. Requires more initial investment and drainage planning.

#### Physical barriers on the ground

Digging a hole the size of the initial root area (minimum 1.5 m deep and 1-1.5 m in diameter), and placing a high-caliber geo-membrane lining or plastic of  $\geq$ 600 caliber, then filling with clean soil.

#### **Controlled irrigation with clean water**

If the risk of contamination comes only from surface water, but you have access to safe water (rained rain), you can use it for drip irrigation and minimize contact with contaminated sources.

Even so, the initial floor must be safe.

#### **Change of species**

If it is not feasible to isolate roots, consider shallower species (dwarf guava, large potted papaya, dwarf citrus) that can live confined in containers.









### Technical considerations

## Design solutions to real problems

### The land and its current state

#### **The Anti-Weed Mesh**

# Anti-Weed Mesh: Efficient and Sustainable Garden Protection

The Anti-Weed Mesh is an ideal solution for keeping gardens, orchards, or crops free of weeds in an efficient and economical way. Made with a durable 90-gram mesh, it resists the effects of sun exposure and the passage of time.

Beyond blocking weeds, the mesh helps retain soil moisture, reducing water consumption and supporting healthy plant growth. It also improves overall soil conditions, optimizing the development of plants.

A layer of gravel is placed on top of the mesh, serving multiple purposes: it defines and organizes the work area, creates mud-free surfaces during rain, allows water to drain underground, and discourages running—making it ideal for areas where children are expected to be active.

A simple, durable solution that supports plant growth, conserves water, and creates a safe, organized environment for learning and activity.











## Design solutions to real problems

### The land and its current state

### **Vertical Farming: A Safe and Efficient Alternative**

Vertical farming allows us to make the most of limited spaces while protecting plants from contaminated soils, such as those near the Ogunpa River.

By elevating the growing beds, plants avoid contact with soil affected by wastewater, ensuring safer and healthier food.

In addition, vertical systems promote biodiversity, improve air circulation, optimize water use, and allow for more efficient maintenance.

This strategy not only addresses an environmental challenge but also becomes an educational tool: children can learn about innovative urban farming techniques, water conservation, space planning, and the importance of producing food responsibly.

Turning vertical space into cultivation is turning limitations into opportunities for learning and sustainability.

#### **Vertical Farming: Safe & Smart**

- Elevates crops above contaminated soil → safer food
- Maximizes space → perfect for urban areas
- Teaches children about innovation, sustainability, and responsibility
- Promotes biodiversity, water efficiency, and healthy growth

Turning vertical space into opportunity.

















### Technical considerations

### **Insect Hotel**

### Guardians of the Aromatic Garden

A living classroom where children learn to observe, collaborate with pollinators, and understand the importance of biodiversity and coexistence.

#### **Insect Hotel: Guardian of the Aromatic Garden**

The insect hotel is more than just a shelter: it is a living laboratory where children can observe, learn, and connect with the biodiversity surrounding the aromatic garden.

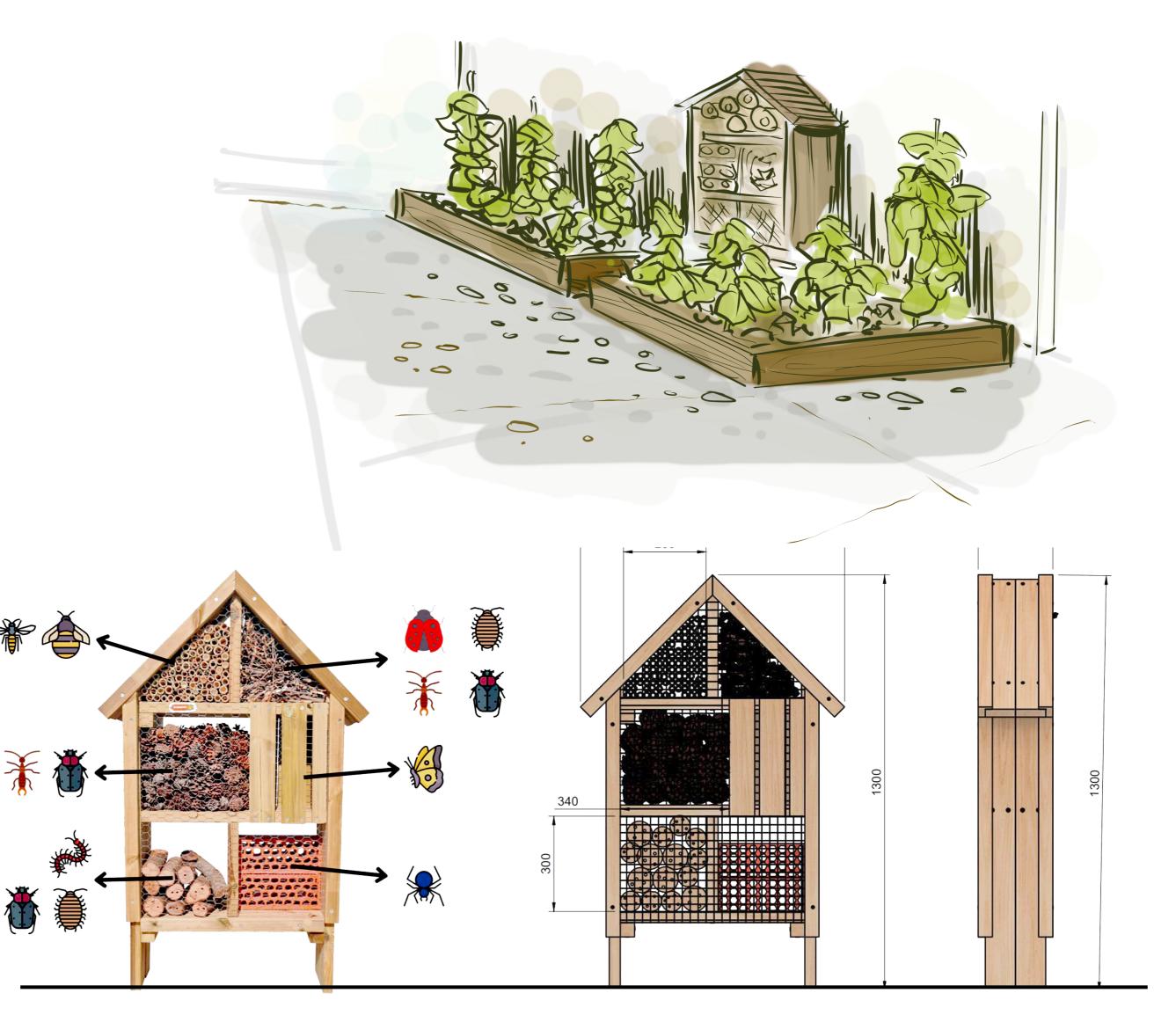
The aromatic plants attract pollinators such as bees, butterflies, and other insects, and the hotel becomes their safe home, promoting pollination and ecological balance in the garden.

This approach does not aim to fight the local inhabitants, but rather to provide them with a proper space and teach children to collaborate with them, understanding their roles and assisting with their "natural tasks."

This strategy fosters environmental education, cooperation, and awareness that every species plays an important part in the ecosystem.

The aromatic garden and the insect hotel work together: cultivating scents, curiosity, and respect for the life around us.









### Technical considerations

### **Animal Area**

# Closing the Garden Cycle

Learning to manage resources responsibly, transforming leftovers into feed, compost, and understanding the importance of expert-guided care.

### **Animal Area: Learning the Garden's Cycles**

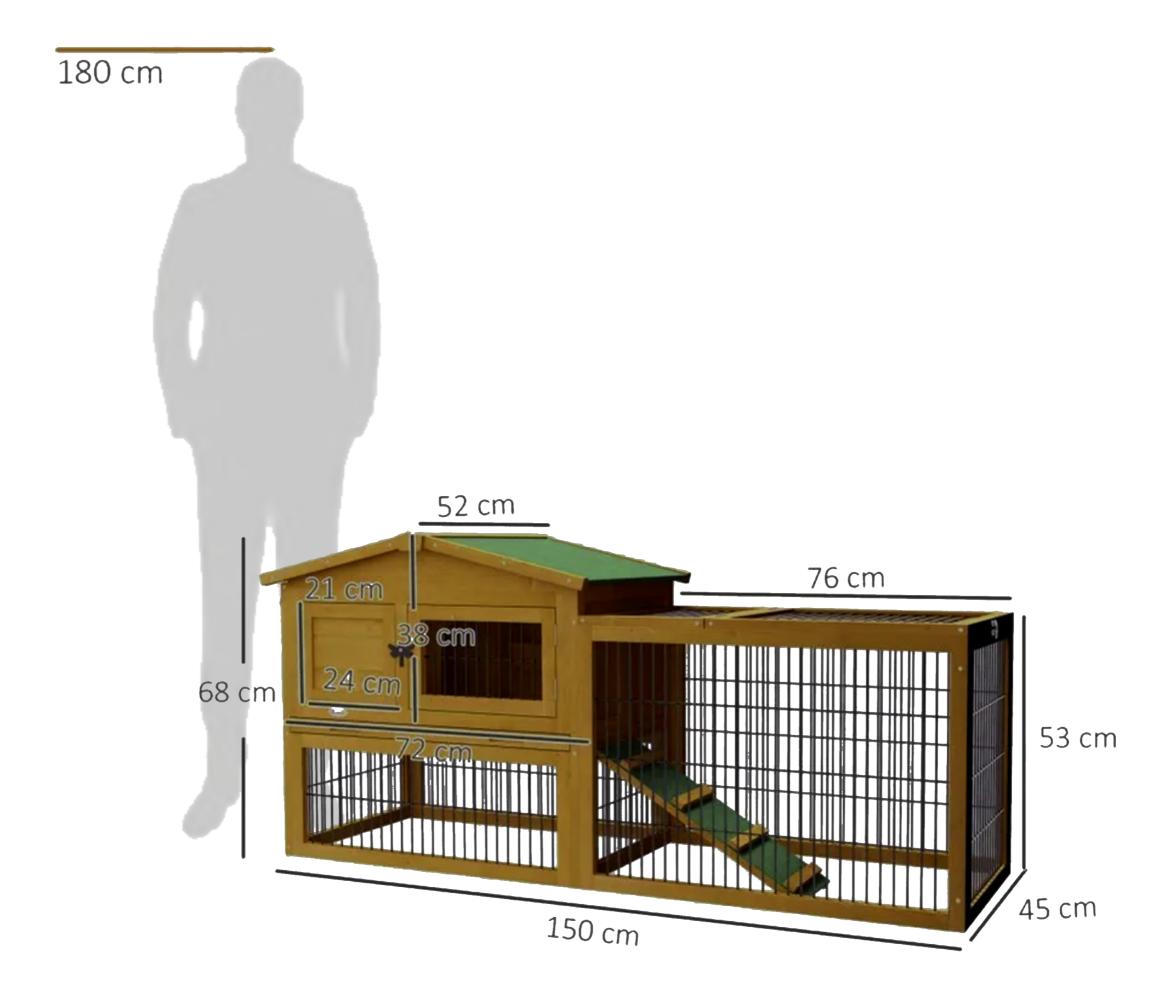
The garden includes a designated space for chickens, rabbits, and ducks, each in their own specific area. This is the final stage of the garden activities, where children learn to manage resources responsibly.

Strategically designed areas store their feed and make use of garden leftovers: leaves and products not used in other activities become food for the animals. After selecting what serves as feed, what goes to compost and what is discarded as waste is decided, teaching children practically about resource cycles and the importance of reducing waste.

It is important to note that the proposed spaces and the number of animals are based on preliminary research. The final decision regarding the number of individuals and their distribution will be made by experts, ensuring the animals' welfare and avoiding risks such as disease from overcrowding or territorial conflicts, especially among rabbits.

Here, children observe how food and waste are transformed, learning to care for resources, animals, and the environment, always under responsible management.









### Join Us in Growing Knowledge & Sustainability

### **Invest in children**

## nature, and community

#### **MADC - MICHIGAN AFRICA DEVELOPMENT COUNCIL**

The Michigan Africa Development Council: Bridging Continents, Building Futures.

As a leading Non-for-Profit 501(c)(3) based in Michigan, we are dedicated to fostering powerful business, educational and humanitarian ties between Michigan and African companies, non-profit organizations and industry associations.

Imagine connecting with untapped markets in Africa through our secure innovative online forum, enhancing economic growth across sectors like agriculture, oil and gas, minerals, manufacturing, and education to enhance the betterment of its humanity. Our mission is credible and clear: to create dynamic partnerships that boost both Michigan and African economies.

Ready to explore the potential? Register Now at no cost and step into a future of endless possibilities for business, education and humanitarian causes. Discover a world of opportunity with the Michigan Africa Development Council (MADC). PLAY FOR A FUTURE is a program created by the Michigan Africa Development Council (MADC) to open minds, educate, and elevate hopes for underserved children in support of orphanages, community centers and schools.







### **Invest in children**

nature, and community



# The MADC/Oyiza Orphanage program seeks to:

Provide a little heaven where Orphanage children can learn and be themselves.

A market garden supporting the food needs of the facility while providing additional financial support by selling the excess produce.

# We appreciate your help bringing this program to completion.

Please visit the following links to learn more about donation drives depot locations in Michigan for the items needed for the construction of this program and support to the Oyiza Orphanage. Your funding is also appreciated to cover the costs of shipping, materials, building and volunteer support as needed.

Please find more information about this program and donate at:

https://www.michiganafricadevelopmentcouncil.org/

or

https://www.facebook.com/people/MADC/61579708010162/ https://www.instagram.com/madc\_nonprofit/





Special thanks to these supporting organizations:

Design of program: www.immersiveplanet.com

OYIZA: https://oyizaorphanageng.org/index.php

MCDC: www.michigancaribbeandevelopmentcouncil.org



