

# Treehouse Kindergarten - Wander in Nature

## Design Idea

The architectural concept of this kindergarten is designed to harmonize with the existing trees on the site. Inspired by the traditional idea of a treehouse - preserving a tree while creating a space that reconnects with nature and fosters social interaction, creativity, and a sense of belonging—the design seeks to blend seamlessly into the natural landscape. The building is envisioned to nestle among the trees, becoming an integral part of the environment. Central to the concept is the idea of a “treehouse kindergarten,” which stimulates children’s imagination and fosters a sense of adventure. A playful bridge crossing between the trees is incorporated into the design, allowing children to envision themselves exploring a forest. This feature not only enhances their imaginative play but also strengthens their connection to nature, making the kindergarten an inspiring and interactive learning environment.

## Site Context

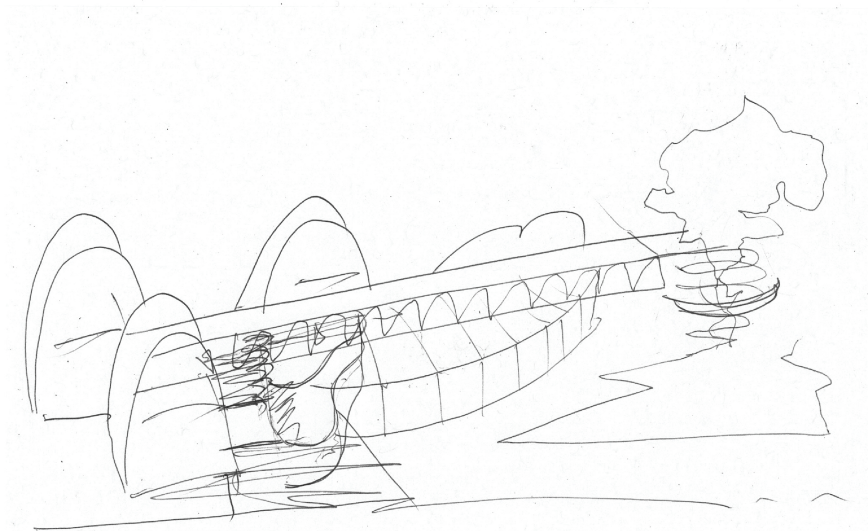
The proposed kindergarten is nestled in between a serene landscape of a park and a lagoon. It is conveniently located near a residential area and is accessible to nearby libraries, stores, and other amenities. Situated on the west end of Vancouver, the neighborhood is enriched by the natural beauty of Lost Lagoon, an urban oasis.

The site is home to mature, long-standing trees, which will be preserved in the design to honor their history and showcase them to the children and the surrounding community. The project aims to revitalize the underutilized space by creating an environment that harmonizes with nature, serving as both a learning space for children and a gathering place for the community.

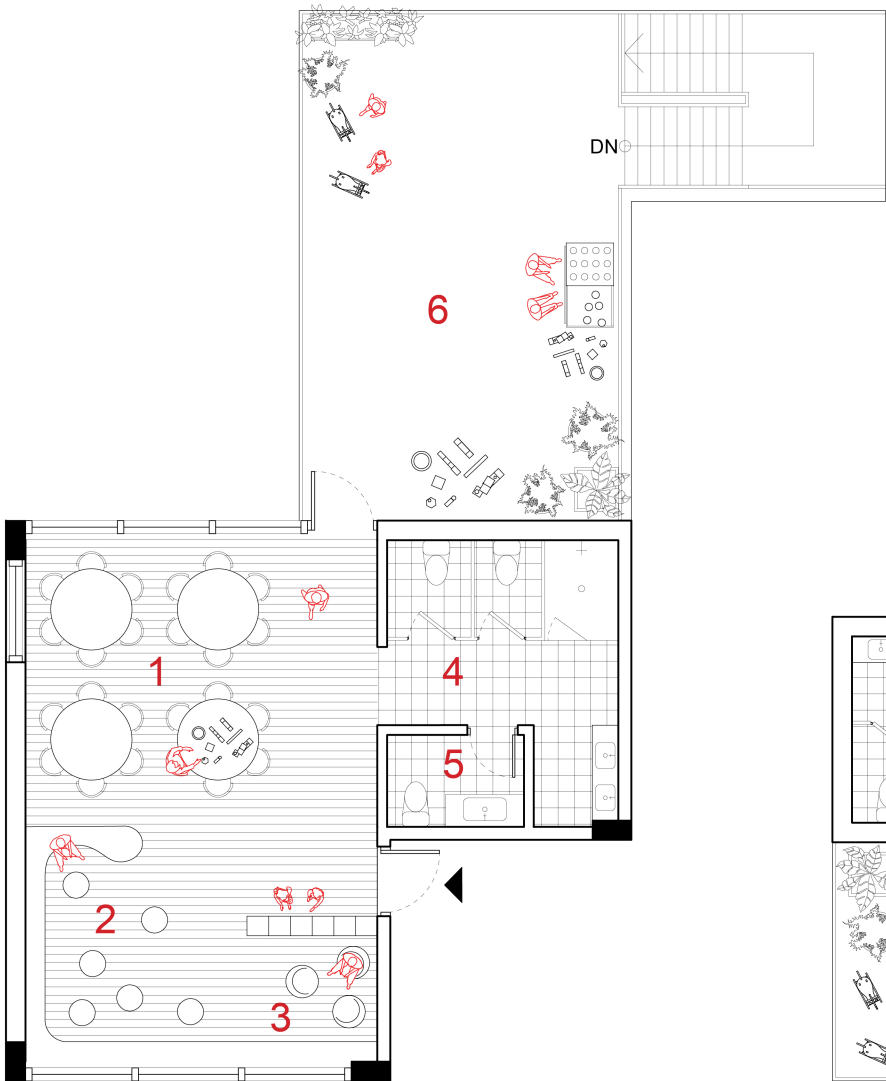
By incorporating natural habitats into the learning environment, the kindergarden will foster an early appreciation and understanding of wildlife in young children, whose minds are still developing. This early exposure to nature is intended to spark curiosity and instill a lifelong appreciation for the importance of wildlife. In addition to providing a nature-focused learning space for children, a portion of the site will be dedicated to community gatherings, enhancing the neighborhood’s sense of connection. This dual-purpose design offers an opportunity for education and enjoyment, creating a shared space where the community can coexist with nature.



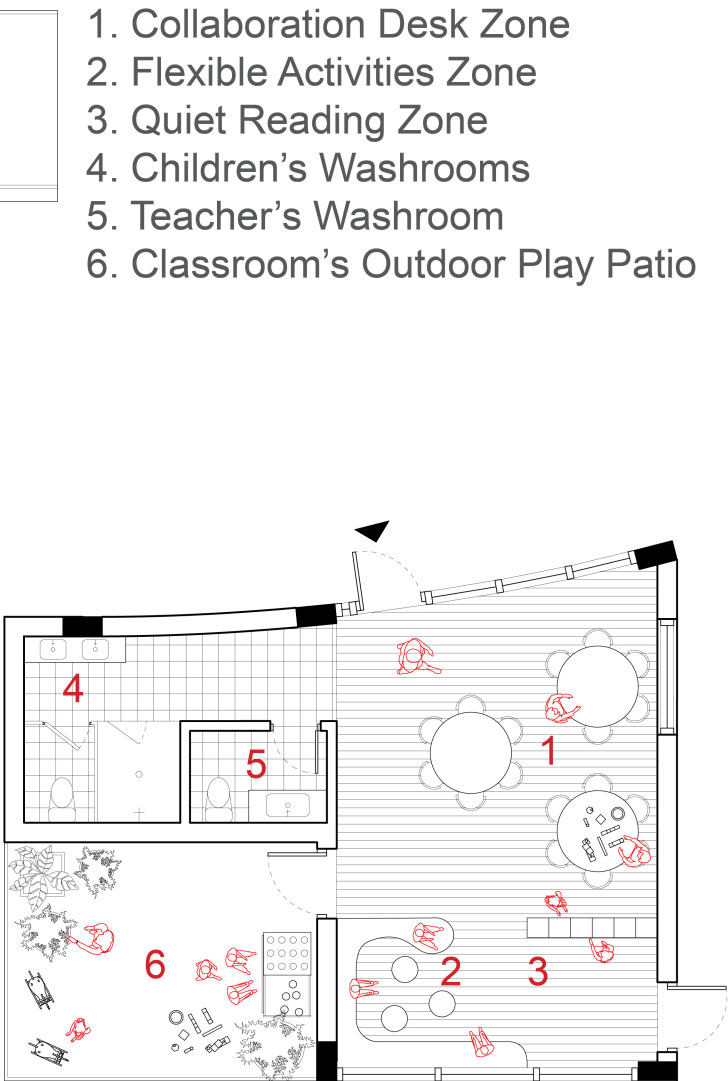
North Elevation



Site Plan

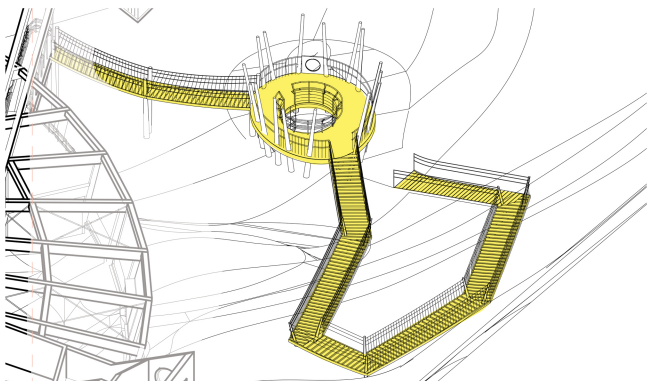


Age 3-4 Classroom & Age 4-5 Classroom

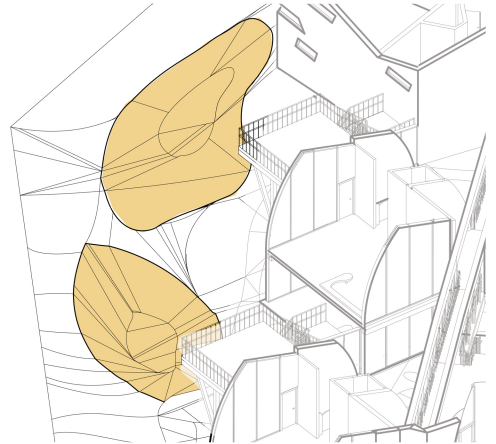


Age 5-6 Classroom

- 1. Collaboration Desk Zone
- 2. Flexible Activities Zone
- 3. Quiet Reading Zone
- 4. Children’s Washrooms
- 5. Teacher’s Washroom
- 6. Classroom’s Outdoor Play Patio



Treehouse Bridge Playground



Mud & Shallow Water Playground

Different outdoor play zones allows touch/hear/sight senses for young children to explore. Exposes to nature stimulates children’s imagination and fosters a sense of adventure.





Classroom Space



Activity/Dining Space



Outdoor Playground Space



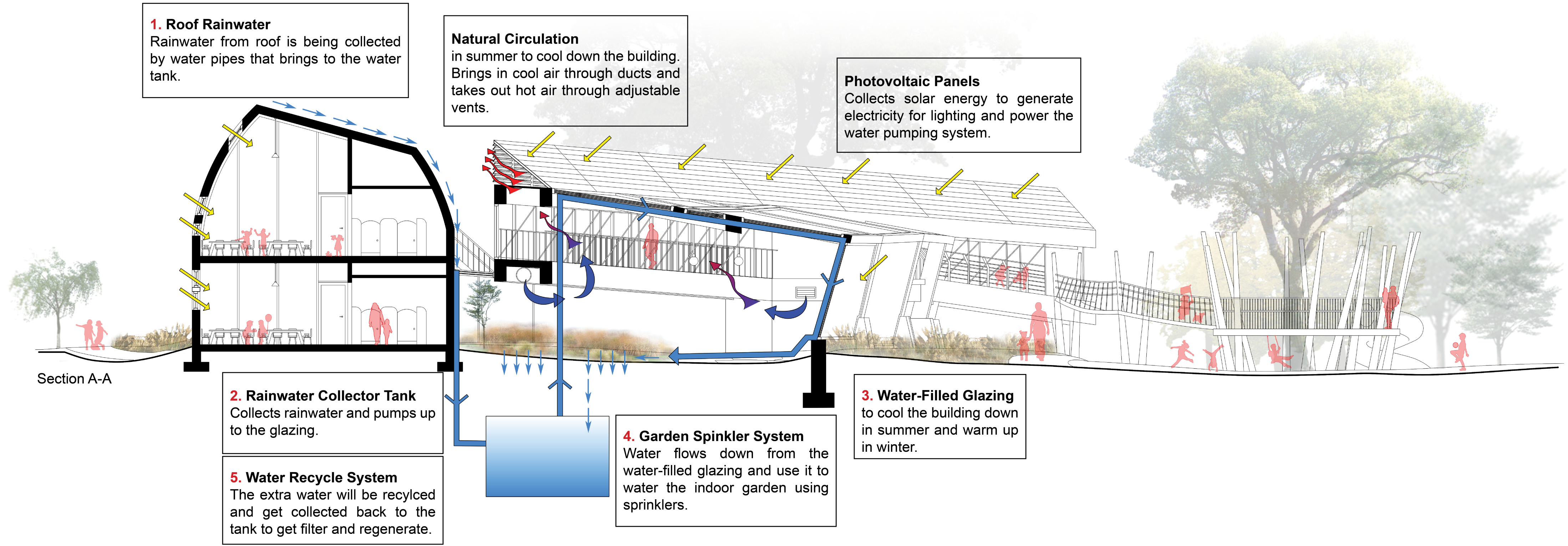
Outdoor Classroom Play Space



# Sustainability

The design incorporates renewable energy systems, beginning with rainwater collection and filtration. A water tank collects rainwater and other water usage, which is filtered and then integrated into the building's systems. Solar panels generate energy for lighting and power the water pumping system, which circulates the filtered water. This water is pumped upward into the glazing envelope, where it flows down between the glazing layers. This innovative system provides a cooling effect during summer and enhances thermal efficiency during winter. Once the water reaches the base of the glazing, it is redirected to both indoor and outdoor gardens for plant irrigation.

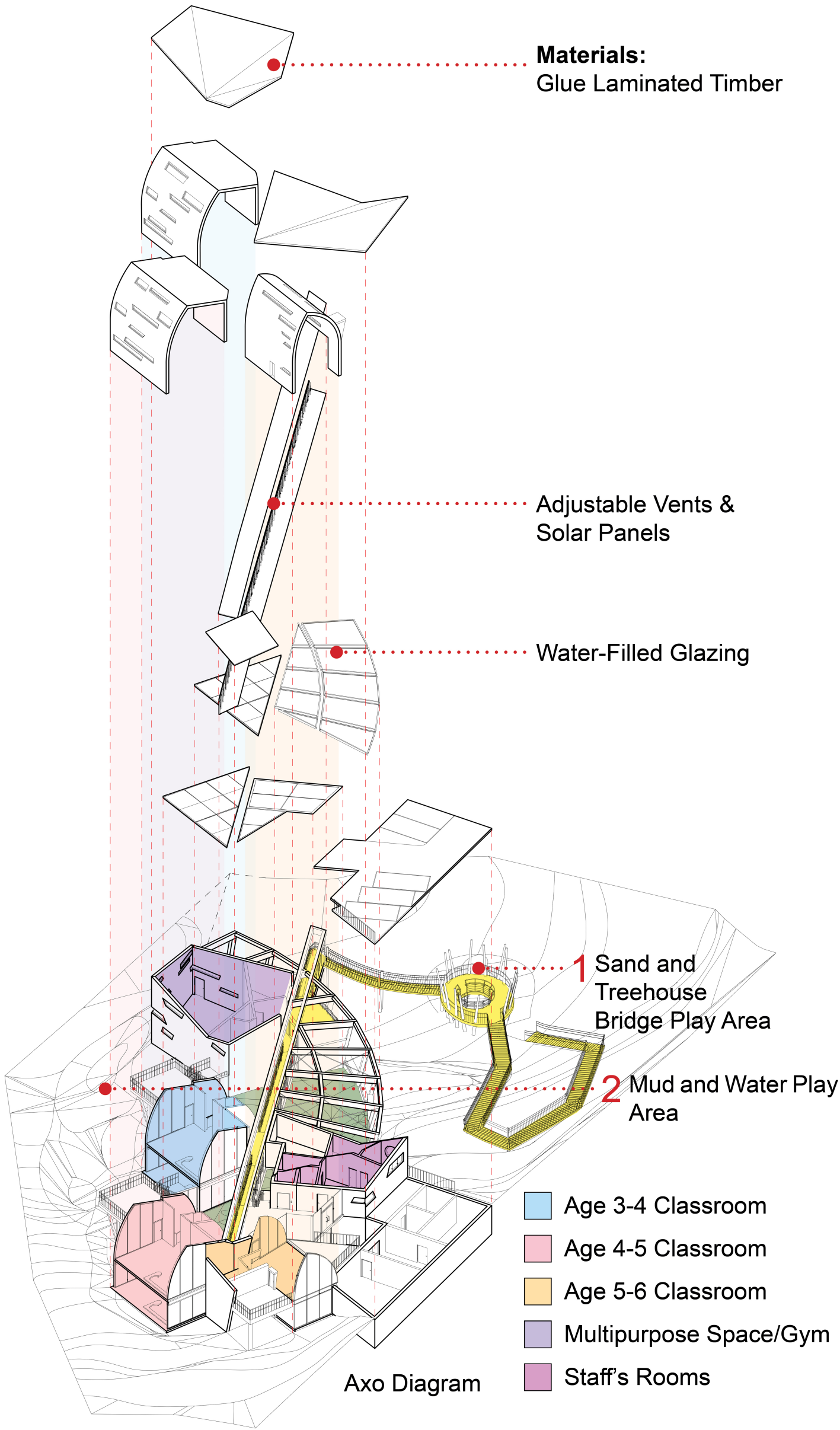
Water serves as the central element of this sustainable energy operation. In conventional designs, fully glazed windows can lead to excessive indoor heat gain. However, the use of water-filled glazing (WFG) mitigates this issue by limiting solar heat gain, thereby reducing energy costs and carbon emissions. This approach allows more natural daylight and unobstructed views, as less shading is required. In addition to WFG, adjustable vents provide natural ventilation, channeling cool breezes through the bridge roof and enhancing comfort during summer months.





Materials

Sustainability is further emphasized through the use of locally sourced materials, particularly glue laminated timber (Glulam). This material enhances energy efficiency and comfort due to its natural insulating properties. Beyond its functional benefits, glulam creates a warm, inviting atmosphere that aligns with the treehouse kindergarten concept. Its connection to the surrounding natural landscape reinforces the design’s harmony with nature and contributes to the overall aesthetic.



Structure & Form

The defining feature of this kindergarten is its high glazed, water-filled greenhouse windows, supported by sculptural glulam columns and beams. These striking structural elements are complemented by a sloped roof, which ensures efficient drainage, facilitates rainwater collection, and prevents the accumulation of snow and rainfall. The dynamic supports are contrasted with a roof that adopts a softer, curved form, lending the building a playful and inviting appearance.

This combination of structural and aesthetic elements reflects the core idea of the design: to create a fun and whimsical environment that inspires children’s imagination and creativity. The inclusion of a bridge stretching from the interior to the exterior further enhances the sense of adventure and connection with nature, making the kindergarten a truly imaginative and engaging space for learning and exploration.

